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ANTARCTIC SEISMOLOGICAL BULLETIN

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COAST AND GEODETIC SURVEY—WASHINGTON

H. Arnold Karo, Director

FOR OFFICIAL DISTRIBUTION

U. S. COAST AND GEODETIC SURVEY
ANTARCTIC SEISMOLOGICAL BULLETIN

The Scientific Committee on Antarctic Research of the International Council of Scientific Unions recommended that a bulletin of phase readings be issued from seismological stations in the Antarctic.

The United States Coast and Geodetic Survey has undertaken the publication of the Antarctic Seismological Bulletin to be issued quarterly, based on the readings received by radio from the Antarctic stations. The phase designation shown in this bulletin is the identification given by the station operator.

The epicenters shown in this Bulletin are computed by the United States Coast and Geodetic Survey using the phase readings from many stations in addition to the Antarctic readings shown.

STATION AND INSTRUMENTAL CONSTANTS

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Country, Station and Station Abbreviation	Position Latitude	Longitude	Foundation and Elevation (In Meters)	Instruments and Components	T ₀ Seconds	T ₁ Seconds
ARGENTINA Deception (DEC)	62°59' S	60°43' W	Rock 7 m	Mainka N Mainka E	5.0 5.0	
AUSTRALIA Macquarie (MCQ)	54°29'55" S	156°57'22" E	Weathered Basaltic Lava 14 m	Benloff Z Benloff N Benloff E	1.0 1.0 1.0	0.2 0.2 0.2
Mawson (MAW)	67°36'21" S	62°52'48" E	Pre-Cambrian granite 9 m	Benloff Z Benloff N Benloff E	1.0 1.0 1.0	0.2 14.0 14.0
Wilkes (WIL)	66°15.5' S	110°31.2' E	Rock 9 m	Grenet Z Lehner-Griffith Z Lehner-Griffith N Lehner-Griffith E	1.4 16.4 14.1 14.4	1.0 60.0 92.0 85.0
NEW ZEALAND Hallett (HLL)	72°17.7' S	170°18.5' E	Rock 5 m	Benloff* Z Benloff* N Benloff* E Sprengnether* Z Sprengnether* N Sprengnether* E	1.0 1.0 1.0 30.0 30.0 30.0	0.2 - 25 0.2 - 25 0.2 - 25 100.0 100.0 100.0
Scott Base (SRA)	77°51' S	166°45' E	Rock 15 m	Benloff* Z Benloff* N Benloff* E Sprengnether* Z Sprengnether* N Sprengnether* E	1.0 1.0 1.0 30.0 30.0 30.0	0.2 - 25 0.2 - 25 0.2 - 25 100.0 100.0 100.0
USSR Mirny (MIR)	66°33' S	93°00' E	Rock 30 m	SVKM Z SVK Z SGK N SGK E	2.5 12.5 12.5 12.5	1.0 1.1 1.1 1.1
UNITED KINGDOM Argentine Island (AIA)	65°15' S	64°16' W	Rock 11 m	Willmore Z Willmore N Willmore E	1.0 1.0 1.0	0.25 0.25 0.25
UNITED STATES Byrd (BYR)	60°01' S	119°11' W	Ice 1515 m	Benloff Z Wilson-Lamson N Wilson-Lamson E Sprengnether Z Sprengnether N Sprengnether E	1.0 6.3 5.6 30.0 25.0 16.0	0.5 3.6 Geotech Helicorder 94.0 95.0 13.0
South Pole (SPA)	90° S	0	Ice 2500 m	Benloff* Z Benloff* N Benloff* E Sprengnether* Z Sprengnether* N Sprengnether* E	1.0 1.0 1.0 30.0 30.0 30.0	0.2 - 25 0.2 - 25 0.2 - 25 100.0 100.0 100.0

*World Wide Standard Instruments Operational Feb. 1963
Dumont d'Urville discontinued Feb. 1963

ANTARCTIC SEISMOGRAM DEPOSITORIES

ARGENTINA: Servicio Meteorológico Nacional
Paseo Colon 317, 2° Piso
Buenos Aires, Argentina

USSR: Research Institute of Earth Physics
Academy of Sciences of the USSR
Moscow, USSR

AUSTRALIA: Chief Geophysicist
Bureau of Mineral
Geology and Geophysics
203 Collins Street
Melbourne, Australia

UNITED KINGDOM: Falkland Island Dependency Survey
4 Milbank
London, SW1
England

NEW ZEALAND: Superintendent
Seismological Observatory
DSIR, P. O. Box 6005
Wellington, New Zealand

UNITED STATES: U. S. Coast and Geodetic Survey
Seismology Division
Commerce Building
Washington 25, D. C.

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JAN 01 MAW IP	02 33 28.9	JAN 02 H-05 01	53.5	BYR IP	21 56 20.5	JAN 05 HLL EP	13 32 08.0
Exp	34 00.0	53.0N 159.6E		SBA EP	21 56 40.0	JAN 05 H-16 25	52.6
JAN 01 BYR EP	11 02 30.0	h ABOUT 040KM		ES	22 03 42.0	61.4S 154.9E	
JAN 01 H-12 21	55.4	BYR EP	05 21 08.0	JAN 03 HLL EP	21 53 23.0	h ABOUT 033KM	
6.8S 129.8E		JAN 02 H-06 32	58.9	JAN 03 HLL EP	21 55 52.0	MCQ EP	16 27 36.0
h ABOUT 096KM		21.6S 068.2W		JAN 04 HLL EP	02 46 11.0	SBA EP	16 29 47.0
SBA EP	12 33 20.0	h ABOUT 110KM		I		F	30 17.0
ES	34 05.0	BYR IP	06 43 13.5	JAN 04 HLL EP	02 46 11.0	FS	32 34.0
MAW IP	12 33 28.9	I	43 44.0	JAN 04 MCQ IP	07 09 02.0	WIL IP	16 30 23.0
Exp	34 00.0	JAN 02 BYR IP	14 03 17.0	JAN 04 BYR EP	13 41 49.0	IPP	30 42.0
BYR IP	12 34 31.5	JAN 02 BYR IP	18 45 16.0	JAN 04 HLL EP	11 38 29.0	IS	33 50.0
E	35 01.0	JAN 02 BYR EP	18 45 16.0	JAN 04 BYR EP	13 41 49.0	MAW E(IP)	16 33 07.0
JAN 01 H-14 18	53.9	JAN 02 H-19 15	23.9	JAN 04 H-17 40	23.3	ES	38 47.0
4.3S 105.9W		08.4S 157.1E		5.5S 150.0E		JAN 05 BYR EP	16 31 15.8
h ABOUT 033KM		h ABOUT 033KM		h ABOUT 117KM		JAN 05 H-18 33	54.7
BYR EP	14 30 39.0	HLL EP	19 26 18.0	BYR IP	17 52 46.5	08.0S 074.5W	
JAN 01 MAW EP	14 22 21.0	SBA EP	19 26 33.0	E	53 11.0	h ABOUT 150KM	
JAN 01 MCQ EP	15 02 28.0	Exp	26 41.0	JAN 04 HLL EP	17 52 47.0	SBA EP	18 46 30.0
IS	02 38.0	ES	35 50.0	JAN 04 BYR EP	20 38 18.0	E	47 11.0
JAN 01 H-15 49	47.9	BYR IP	19 27 36.0	JAN 04 H-21 12	09.3	JAN 05 HLL EP	18 44 17.0
55.9S 027.1W		I	28 04.5	52.9S 020.9E		BYR IP	18 45 52.0
h ABOUT 033KM		JAN 02 WIL E(IP)	21 12 50.0	h ABOUT 033KM		I	45 58.0
BYR IP	15 56 47.0	JAN 02 BYR EP	22 09 55.0	JAN 04 H-10 11	53.0	JAN 05 BYR EP	22 49 11.0
MAW IP	15 57 23.0	JAN 02 HLL EP	22 53 14.0	26.6S 175.7W		JAN 05 BYR EP	23 17 47.0
JAN 01 BYR IP	16 42 17.0	JAN 03 H-00 59	33.8	h ABOUT 031KM		JAN 05 H-23 46	10.7
JAN 01 H-17 26	43.5	8.5S 157.4E		JAN 05 H-10 11	53.0	52.3S 028.6E	
45.4N 151.9E		h ABOUT 061KM		26.6S 175.7W		h ABOUT 033KM	
h ABOUT 045KM		BYR IP	01 11 42.0	h ABOUT 031KM		MAW EP	23 51 09.0
BYR EP	17 45 55.0	JAN 03 BYR IP	06 57 17.0	MCQ E(IP)	10 18 45.0	ES	55 15.0
E	49 21.0	JAN 03 BYR EP	07 28 00.0	SBA E(IP)	10 21 15.0	WIL IP	23 53 51.0
E	58 04.0	JAN 03 HLL EP	09 25 42.0	Exp	21 26.0	IPP	54 00.0
WIL EPP	17 46 26.0	JAN 03 HLL IP	09 25 42.0	ES	28 46.0	IS	24 00 04.0
EPS	55 49.0	JAN 03 H-21 24	56.3	BYR IP	10 21 47.0	AIA IP	23 54 25.0
JAN 01 H-20 02	32.5	20.4S 178.2W		I	22 08.0	BYR IP	23 54 36.0
3.2S 139.7E		h ABOUT 520KM		JAN 05 WIL E(IP)	10 21 55.0	SBA IP	23 54 45.2
h ABOUT 033KM		SBA EP	21 34 01.0	ES	30 06.0	EPP	56 37.0
BYR IP	20 15 24.0	BYR IP	21 34 44.0	JAN 05 HLL EP	10 20 45.0	ES	24 01 38.0
JAN 01 BYR IP	23 22 20.0	E	36 36.5	JAN 05 BYR E	10 51 16.0	MCQ IP	23 56 55.0
JAN 02 HLL EP	03 46 51.0	JAN 03 H-21 48	05.6	JAN 05 WIL E(IP)	11 02 15.5	JAN 05 HLL EP	23 53 11.0
		53.0S 021.2E		JAN 06 H-05 54	42.7	JAN 06 H-05 54	42.7
		h ABOUT 033KM		27.2N 127.3E		27.2N 127.3E	
				h ABOUT 110KM		h ABOUT 110KM	

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
BYR EP'	06 13 22.5	MAW EP	10 52 59.0	JAN 08	18 51 02.0	JAN 10	05 47 38.0
JAN 06		BYR IP	10 53 35.0	BYR EP	19 03 15.0	JAN 10	
HLL IP	10 33 53.0	I	58 20.0	BYR EP	21 55 26.0	H-16 52 36.2	
BYR EP	10 34 06.0	JAN 07		JAN 08		15.4S 175.0W	
JAN 06		WIL EP	10 54 29.0	BYR IP	22 43 49.5	h ABOUT 033KM	
H-15 07 09.6		E(S)	57 14.0	JAN 08		BYR E(P)	17 03 47.0
44.2N 082.6E		JAN 07		H-22 30 49.7		JAN 10	
h ABOUT 033KM		BYR EP	12 09 58.0	3.7S 119.4E		H-16 57 26.5	
BYR EP'	15 26 38.0	JAN 07		h ABOUT 090KM		45.4N 150.0E	
JAN 06		H-12 32 54.5		WIL EP	22 41 07.0	h ABOUT 050KM	
HLL EP	20 13 07.0	56.8S 026.1W		EPP	43 24.0	BYR EP'	17 16 35.0
JAN 06		h ABOUT 033KM		ES	49 36.0	JAN 10	
H-23 45 23.4		BYR IP	12 39 48.0	SBA EP	22 42 42.0	HLL EP	16 59 56.0
50.9N 157.3E		MAW E(P)	12 40 15.0	ES	52 42.0	JAN 10	
h ABOUT 033KM		WIL EP	12 42 10.0	BYR IP	22 43 41.0	BYR EP	21 05 43.0
WIL EP'	24 04 13.0	IS	49 44.0	JAN 08		JAN 10	
EPP	05 49.0	JAN 07		BYR IP	22 40 35.0	H-21 52 47.6	
EPS	15 39.0	H-23 12 33.4		HLL IP	22 43 41.0	06.9S 129.4E	
BYR EP'	24 04 35.0	18.3S 173.4W		JAN 08		h ABOUT 117KM	
JAN 06		h ABOUT 033KM		H-23 47 11.4		SBA EP	22 04 09.0
H-23 47 11.4		BYR EP	23 23 16.0	34.4N 116.5W		MAW E(P)	27 04 27.0
h ABOUT 014KM		JAN 07		h ABOUT 101KM		BYR IP	22 05 19.5
SBA EP'	24 06 30.0	SBA IP	23 54 45.2	BYR IP	23 26 08.0	JAN 10	
JAN 07		E	56 37.0	JAN 09		HLL IP	22 15 07.0
BYR EP	00 16 38.0	ES	24 01 38.0	HLL EP	09 34 27.0	JAN 11	
JAN 07		JAN 08		JAN 09		MCO IP	02 02 04.0
H-02 08 19.1		MCO IP	00 15 52.0	MAW E(P)	13 47 55.0	JAN 11	
56.8S 147.7E		JAN 08		HLL EP	16 43 14.0	MAW EP	02 32 42.0
h ABOUT 033KM		BYR EP	03 18 29.0	JAN 09		JAN 11	
BYR EP	02 15 11.0	JAN 08		HLL EP	18 31 04.0	HLL EP	04 22 26.0
JAN 07		H-04 23 46.3		JAN 09		SBA IP	04 23 13.5
H-05 18 24.5		05.0S 144.3E		H-18 31 52.4		JAN 11	
58.8S 149.4E		h ABOUT 072KM		45.5N 150.9E		HLL EP	04 22 35.0
h ABOUT 033KM		BYR IP	04 36 21.5	h ABOUT 040KM		JAN 11	
MCO EP	05 20 04.0	JAN 08		SBA EP'	18 50 34.0	H-06 39 55.4	
HLL E(P)	05 22 17.0	BYR IP	10 06 20.0	WIL IP'	18 51 36.0	15.1S 172.9W	
WIL IP	05 22 46.0	E	07 50.0	ISP	19 01 28.0	h ABOUT 033KM	
IPP	22 57.0	JAN 08		JAN 10		BYR EP	06 50 59.0
IS	26 18.0	BYR IP	11 57 01.0	SBA EP	02 25 45.0	JAN 11	
SBA EP	05 22 55.0	JAN 08		JAN 10		H-09 24 15.6	
E(S)	26 30.0	H-11 58 42.5		H-04 50 53.4		14.1S 169.6E	
BYR EP	05 24 59.0	18.8S 173.8W		42.0N 142.6E		h ABOUT 033KM	
JAN 07		h ABOUT 033KM		h ABOUT 033KM		BYR EP	09 35 43.0
MAW E(P)	05 26 54.0	BYR IP	12 09 22.0	HLL EP'	05 09 24.0	JAN 11	
JAN 07		JAN 08		BYR IP'	05 10 04.0	H-10 23 10.9	
HLL EP	09 34 12.0	BYR EP	16 33 58.0	I	10 19.0	11.4S 090.9E	
JAN 07		JAN 08		I	12 43.0	h ABOUT 033KM	
H-10 40 42.9		BYR EP	16 41 21.0	JAN 10		BYR IP	10 35 57.0
3.0S 139.0E		JAN 08		SBA EP	05 21 04.0	JAN 11	
h ABOUT 047KM		HLL IP	17 28 33.0	ES	27 40.0	HLL EP	10 29 27.0

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JAN 11 AIA EP	16 31 45.0	JAN 12 BYR IP	13 08 22.0	JAN 14 H-15 38 13.8 5.2S 150.8E h ABOUT 169KM		BYR IP	14 46 57.0
JAN 11 SBA FP ES	19 37 11.0 32 59.0	JAN 12 H-14 28 20.0 04.4S 137.3E h ABOUT 022KM		SBA EP E ES	15 49 29.0 50 06.0 58 56.0	JAN 16 HLL IP	20 35 10.0
JAN 11 BYR IP	20 34 32.0	BYR EP	14 41 10.0	MAW EP E ES	15 50 29.0 51 06.0 16 00 36.0	JAN 16 HLL EP	23 19 52.0
JAN 11 HLL EP	21 16 16.0	JAN 12 HLL EP	16 19 06.0	BYR IP	15 50 31.0	JAN 17 HLL EP	00 12 37.0
JAN 11 H-21 23 54.2 40.4S 072.6W h ABOUT 033KM		JAN 12 HLL EP	18 17 44.0	JAN 14 HLL EP	17 34 39.0	JAN 17 H-02 54 26.8 21.6S 169.9E h ABOUT 033KM	
BYR EP	21 31 55.0	JAN 12 HLL EP	21 22 28.0	JAN 14 WIL EP EPP ES	22 41 07.0 43 24.0 49 36.0	BYR IP	03 05 08.0
JAN 11 H-22 02 02.8 8.6S 123.4E h ABOUT 070KM		JAN 13 H-04 00 48.3 28.9S 066.2W h ABOUT 033KM		JAN 15 MAW EP	04 50 06.0	JAN 17 H-03 13 56.3 12.3S 167.1E h ABOUT 230KM	
BYR IP	22 14 37.0	BYR IP	04 10 23.5	JAN 15 MAW EP	06 44 22.0	BYR IP	03 25 14.0
JAN 12 H-06 00 13.2 53.2N 166.3W h ABOUT 033KM		JAN 13 H-18 49 09.8 11.6S 166.2E h ABOUT 059KM		JAN 15 HLL EP	07 57 19.0	JAN 17 MCO EP	06 24 40.0
BYR IP E E	06 19 19.0 22 56.0 31 42.0	HLL E(P)	18 59 12.0	JAN 15 H-18 46 32.9 28.4S 178.4W h ABOUT 211KM		JAN 17 H-09 32 51.6 11.4S 162.4E h ABOUT 033KM	
MAW EP	06 20 06.0	BYR IP	19 00 51.0	SBA FP F	18 55 07.0 56 23.0	BYR EP	09 44 42.0
JAN 12 HLL EP	10 24 07.0	JAN 14 H-01 11 12.6 52.9N 159.6E h ABOUT 050KM		BYR IP	18 55 55.5	JAN 17 HLL IP	11 13 26.0
JAN 12 H-11 13 19.6 5.4S 146.8E h ABOUT 229KM		BYR EP E	01 30 27.0 34 07.0	MAW EP	18 57 44.0	JAN 17 HLL IP	19 39 20.0
WIL IP	11 23 41.0	JAN 14 H-04 17 50.5 28.8S 176.2W h ABOUT 089KM		JAN 15 H-21 36 05.0 29.1N 140.8E h ABOUT 070KM		JAN 18 MAW EP	00 05 18.0
MAW IP	11 25 18.1	BYR EP	04 27 21.0	BYR IP	21 54 49.0	JAN 18 MAW EP	07 08 38.0
BYR IP	11 25 32.0	JAN 14 SBA EP	04 20 59.0	JAN 15 H-22 43 14.3 14.6S 166.8E h ABOUT 055KM		JAN 18 MAW FP	08 08 04.0
JAN 12 MCO IP	11 21 09.0	JAN 14 MAW EP	04 50 06.0	BYR IP	22 54 39.0	JAN 18 H-12 04 40.0 23.1N 120.5E h ABOUT 033KM	
JAN 12 H-12 36 18.7 56.0S 027.6W h ABOUT 033KM		JAN 14 MAW EP	06 44 22.0	JAN 16 BYR EP	05 17 42.0	MCO EP	12 17 13.0
BYR IP	12 43 17.0	JAN 14 H-10 10 44.7 15.9S 173.0W h ABOUT 033KM		JAN 16 HLL EP	09 27 18.0	JAN 18 SBA EP	12 23 00.0
MAW IP	12 43 55.1	BYR EP	10 21 44.0	JAN 16 HLL EP	11 01 40.0	JAN 18 AIA EP E	12 25 04.0 26 52.0
WIL I(P)	12 45 42.0	JAN 14 MCO IP	10 49 34.0	JAN 16 HLL EP	12 22 43.5	JAN 18 MCO EP	16 08 29.0
JAN 12 H-12 45 51.1 31.5N 049.4E h ABOUT 067KM		JAN 14 HLL EP	15 20 18.0	JAN 16 H-14 37 37.3 30.4S 069.5W h ABOUT 033KM		JAN 18 MAW E(P)	21 20 06.0
BYR EP	13 04 57.0					JAN 19 H-06 49 55.9 58.6S 025.1W h ABOUT 033KM	

ANTARCTIC SEISMOLOGICAL BULLETIN

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
AIA EP	06 54 21.0	JAN 21		MAW EP	24 12 04.0	AIA EP	09 18 11.0
BYR IP	06 56 35.0	MAW EP	10 35 27.0	F(S)	22 22.0	EPP	20 06.0
MAW EP	06 57 08.0	JAN 21		AIA EP	24 12 55.0	ES	25 11.0
JAN 19		MCO IP	14 05 37.0	F	14 46.0	BYR IP	09 20 18.0
H-07 00 03.3		IS	05 43.5	JAN 23		SPA IP	09 21 35.0
9.2S 158.2E		JAN 21		MCO EP	01 30 57.0	ES	31 36.0
h ABOUT 032KM		H-18 57 47.3		JAN 23		MAW IP	09 22 21.8
BYR IP	07 12 10.0	41.4S 087.8W		H-05 56 34.0		EPP	25 50.0
JAN 19		h ABOUT 033KM		08.4S 013.3W		ES	32 40.0
H-09 13 53.5		BYR EP	19 05 24.0	h ABOUT 033KM		WIL EPP	09 26 44.0
26.9N 054.0E		JAN 22		BYR EP	06 09 05.0	ESKS	33 24.0
h ABOUT 033KM		SBA EP	00 10 20.0	JAN 23		JAN 27	
BYR EP	09 32 55.0	ES	19 00.0	BYR EP	11 09 17.0	H-01 12 23.5	
JAN 19		JAN 22		JAN 24		.05 017.9W	
H-09 34 11.1		H-02 15 29.1		H-03 52 29.3		h ABOUT 033KM	
4.2S 152.8E		45.8S 075.2W		05.9S 154.0E		BYR IP	01 25 32.0
h ABOUT 033KM		h ABOUT 033KM		h ABOUT 085KM		JAN 27	
BYR IP	09 46 47.0	BYR EP	02 22 43.0	BYR IP	04 04 50.0	MIR E	01 39 22.0
JAN 19		E	32 36.0	JAN 24		JAN 27	
MAW EP	10 59 00.0	JAN 22		MCQ IP	12 49 32.0	H-02 46 33.4	
JAN 19		H-06 46 36.4		ES	49 41.0	60.9S 155.2E	
MCQ IP	17 00 58.0	30.6S 178.0W		JAN 24		h ABOUT 033KM	
JAN 20		h ABOUT 166KM		MAW EP	14 36 22.0	MCQ EP	02 48 11.0
BYR FP	05 52 33.0	BYR EP	06 55 50.0	JAN 24		JAN 27	
JAN 20		JAN-22		H-17 17 45.5		MIR E(P)	02 49 15.0
H-17 08 37.4		H-09 12 03.4		38.7N 129.4E		E	56 34.0
20.7S 169.9E		4.2S 136.2E		h ABOUT 542KM		JAN 27	
h ABOUT 141KM		h ABOUT 071KM		MAW EP	17 35 27.0	WIL EP	02 54 26.0
MCQ IP	17 15 17.0	MAW EP	09 24 09.0	BYR EP	17 35 41.0	JAN 27	
SPA FP	17 18 11.0	BYR EP	09 24 45.0	F	35 55.0	MCQ IP	19 42 13.5
WIL IP	17 18 24.0	JAN 22		I	38 25.0	JAN 28	
ES	25 20.0	H-15 58 46.5		JAN 24		H-05 43 22.1	
BYR IP	17 19 11.0	22.4N 093.6E		MAW EP	17 25 27.0	06.3S 148.7E	
E	19 47.0	h ABOUT 088KM		JAN 24		h ABOUT 033KM	
E	27 55.0	MAW EP	16 11 50.0	H-21 12 23.2		WIL E(P)	05 54 10.0
MAW EP	17 20 17.0	BYR EP	16 17 29.0	21.7S 176.2W		ES	06 02 46.0
ES	29 56.0	JAN 22		h ABOUT 032KM		BYR IP	05 55 52.0
AIA IP	17 20 56.0	H-17 41 50.0		PYR EP	21 22 47.0	JAN 28	
JAN 20		04.0S 133.9E		JAN 25		H-14 09 17.1	
H-23 06 26.2		h ABOUT 033KM		SBA FP	02 22 30.0	36.5N 070.9E	
30.0S 177.9W		BYR EP	17 54 45.0	JAN 25		h ABOUT 207KM	
h ABOUT 044KM		JAN 22		MCQ IP	09 00 04.5	MIR EP	14 22 56.0
BYR IP	23 15 56.0	MAW EP	20 52 46.0	IS	00 12.0	MIR F	14 23 47.0
JAN 20		JAN 22		JAN 25		E	28 20.0
SBA EP	23 30 07.0	MAW P	20 55 46.0	H-23 07 29.3		E	33 02.0
JAN 21		JAN 22		20.8S 178.8W		E	33 19.0
MCQ IP	07 14 21.0	MAW EP	21 49 06.0	h ABOUT 580KM		WIL I	14 24 00.0
JAN 21		JAN 22		BYR EP	23 17 09.0	SBA FP	14 27 56.0
MAW EP	09 40 50.0	H-23 59 43.6		JAN 26		BYR EP	14 28 01.0
		13.7S 165.9E		H-09 09 33.9		E	29 05.0
		h ABOUT 033KM		16.3S 071.7W		I	31 27.0
		BYR EP	24 11 14.0	h ABOUT 116KM			
		E	20 56.0				

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
AIA EP'	14 28 15.0	FFB 03		FER 05		RYR IP	06 43 44.0
E	30 39.0	HLL EP	07 37 03.0	MAW EP	12 27 07.0	I	43 53.0
MAW EP	14 28 20.0	FFB 03		FEB 05		FEB 07	
ES	35 58.0	BYR EP'	09 13 35.0	H-16 15 08.1		HLL EP	07 36 17.0
JAN 29		FEB 03		3.8S 141.3E		FEB 07	
H-08 47 29.9		HLL IP	13 12 06.0	h ABOUT 110KM		H-09 34 27.2	
3.0N 125.7E		FFB 03		MIR IP	16 26 16.0	14.8S 167.5E	
h ABOUT 133KM		AIA EP	14 43 05.0	BYR IP	16 27 48.0	h ABOUT 159KM	
BYR EP	09 00 50.0	FFB 04		FEB 05		JAN 18	
JAN 30		H-10 02 21.4		HLL EP	16 35 31.0	BYR IP	09 45 38.0
MAW EP	14 28 20.0	48.2N 154.4E		FEB 05		FEB 07	
JAN 31		h ABOUT 040KM		H-21 13 19.0		BYR IP	10 58 54.0
MCQ IP	21 51 45.0	BYR EP'	10 21 29.0	23.7S 068.8W		FEB 07	
ES	51 55.0	FEB 04		h ABOUT 090KM		MIR E(P)	11 15 44.0
FEB 01		HLL IP	10 19 53.0	BYR IP	21 23 21.0	FEB 07	
MIR E(P)	04 41 30.6	FEB 04		I	23 43.0	HLL EP	11 23 56.0
FEB 01		H-11 27 29.5		FER 06		FEB 07	
H-11 47 28.8		22.4S 066.1W		BYR IP	01 06 08.0	H-12 58 53.6	
3.5S 078.0W		h ABOUT 201KM		FEB 06		39.8N 142.8E	
h ABOUT 033KM		BYR IP	11 37 30.0	BYR IP	06 20 22.0	h ABOUT 045KM	
BYR IP	11 59 32.0	FEB 04		E	21 11.0	BYR EP'	13 18 03.0
FEB 01		HLL EP	22 11 57.0	FEB 06		F	20 22.0
MCQ IP	13 15 23.0	FEB 04		H-13 07 25.2		FEB 07	
FEB 01		H-22 52 04.3		55.7N 155.8W		HLL IP	23 14 27.0
H-13 17 03.7		05.6S 105.5E		h ABOUT 033KM		FEB 08	
11.3S 162.1E		h ABOUT 033KM		BYR EP'	13 26 35.9	H-11 17 46.5	
h ABOUT 050KM		BYR IP	23 05 05.0	F	29 29.0	52.3N 175.6F	
BYR EP	13 28 52.0	FFB 05		WIL EP'	13 26 40.0	h ABOUT 060KM	
FEB 02		MAW EP	01 14 44.4	MIR IP'	13 27 03.0	BYR EP'	11 36 50.0
AIA EP	02 08 26.0	FEB 05		FEB 06		E	39 48.0
I	08 51.0	MAW EP	08 30 13.0	MIR E(P)	13 27 39.0	E	40 28.0
FEB 02		FEB 05		FEB 06		MAW IP'	11 37 15.0
MIR E	05 06 00.0	H-11 30 15.7		SBA E(P)	13 29 26.0	EPP	37 31.0
FEB 02		36.5N 141.0E		MIR E(P)	13 30 43.0	AIA EP'	11 37 24.0
MIR E(P)	09 44 43.3	h ABOUT 046KM		FEB 06		FEB 08	
FEB 02		HLL EP'	11 48 56.0	MIR E(P)	13 38 11.0	HLL EP	11 38 35.0
HLL EP	11 17 34.0	SBA EP'	11 49 17.0	FEB 06		FEB 08	
FEB 02		E	52 11.0	H-15 19 38.1		HLL EP	14 43 37.0
HLL IP	15 24 07.0	AIA EP'	11 49 56.0	10.5S 120.7E		FEB 08	
FEB 02		FEB 05		h ABOUT 043KM		H-18 54 51.2	
HLL EP	19 04 19.0	H-11 35 18.6		BYR IP	15 32 09.5	28.4S 062.6E	
FEB 03		19.7S 179.8W		FEB 06		h ABOUT 033KM	
RYR FP	00 36 21.0	h ABOUT 414KM		HLL EP	22 54 25.0	BYR EP	19 06 11.0
E	40 05.0	BYR IP	11 45 22.0	BYR EP	22 56 33.0	FEB 09	
FEB 03		E	47 00.0	FEB 07		H-02 00 07.3	
SBA EP	03 20 18.0	MIR EP	11 45 54.0	AIA EP	01 25 38.0	16.5S 179.2W	
FEB 03		E	54 21.3	FEB 07		h ABOUT 480KM	
MIR E	03 47 40.0	MAW EP	11 46 54.0	H-06 31 21.8		BYR IP	02 10 23.5
FEB 03		FEB 05		05.8S 154.0E		E	12 12.0
HLL EP	05 02 41.0	WIL E(P)	11 49 40.0	h ABOUT 077KM		MAW IP	02 11 52.1
FEB 03		BYR EP	05 51 42.0			FEB 09	
BYR EP						HLL EP	05 02 00.0

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
FEB 09 SBA EP	07 33 35.0	BYR I(P)	02 45 00.5	FEB 13 MCQ IP	00 35 19.0	MAW EP	16 45 39.0
FEB 09 BYR EP	07 45 31.0	FEB 11 MCQ IP	05 50 00.0	FEB 13 H-03 25 45.1 03.5S 146.6E h ABOUT 033KM		FEB 15 H-22 01 58.4 08.7S 157.1E h ABOUT 052KM	
FEB 09 BYR E	08 04 38.0	FEB 11 H-18 21 05.5 15.9S 173.1W h ABOUT 033KM		BYR EP	03 38 30.0	BYR IP	22 14 06.5
FEB 09 HLL EP	09 17 45.0	BYR EP	18 32 03.0	FEB 13 BYR EP	10 30 48.0	FEB 16 H-10 03 37.7 07.6S 075.9W h ABOUT 031KM	
FEB 09 HLL IP	13 22 52.0	FEB 11 SBA E(P)	19 05 55.0	FEB 13 H-11 21 46.7 18.1S 056.8W h ABOUT 033KM		BYR EP	10 15 19.0
FEB 09 HLL EP	14 23 09.0	FEB 11 H-21 29 52.4 10.2S 161.3E h ABOUT 095KM		BYR IP	11 32 41.5	FEB 16 H-21 34 32.3 05.6S 152.0E h ABOUT 049KM	
FEB 09 MAW EP	19 18 00.0	BYR IP	21 41 42.0	FEB 13 BYR EP	15 10 47.0	MIR IP E	21 45 57.7 53 18.5
FEB 09 MIR IP	19 23 33.0	FEB 12 MCQ EP ES	03 31 50.0 32 44.0	FEB 13 MAW EP	19 07 15.0	BYR IP	21 47 00.0
FEB 10 MCQ EP	01 45 37.0	FEB 12 MCQ IP ES	05 53 30.0 53 39.0	FEB 14 H-14 35 21.9 19.8S 068.0W h ABOUT 279KM		FEB 17 H-05 50 41.8 23.1N 120.6E h ABOUT 033KM	
FEB 10 HLL EP	05 57 36.0	FEB 12 BYR IP	10 11 09.0	BYR IP	14 45 29.0	AIA EP	06 10 34.0
FEB 10 H-09 56 44.9 20.9S 178.6W h ABOUT 575KM		FEB 12 MAW EP	10 18 00.0	FEB 14 SBA EP	15 37 44.0	FEB 17 H-09 27 59.2 30.0S 072.4W h ABOUT 033KM	
BYR IP	10 06 26.0	FEB 12 MCQ IP	15 41 43.0	FEB 14 MAW IP	16 16 09.0	BYR IP	09 37 17.0
FEB 10 BYR EP	12 06 29.0	FEB 12 MIR EP	17 56 40.0	FEB 14 H-16 29 45.0 05.1S 151.7E h ABOUT 055KM		FEB 18 H-01 31 21.8 16.2S 166.4E h ABOUT 077KM	
FEB 10 HLL EP	14 23 15.0	FEB 12 H-20 31 53.2 03.5S 146.6E h ABOUT 033KM		WIL E(P) ES	16 40 45.0 49 29.0	BYR IP I	01 42 35.0 42 46.5
FEB 10 H-17 27 07.2 6.1S 104.1E h ABOUT 126KM		MCQ IP	20 41 01.0	MIR EP	16 41 10.2	FEB 18 H-04 42 47.7 15.5S 175.0W h ABOUT 289KM	
BYR E(P) I	17 40 13.0 41 18.0	BYR EP	20 44 38.0	BYR I(P)	16 42 06.0	BYR IP E	04 53 24.0 54 30.0
FEB 10 H-23 45 58.4 59.8S 150.3E h ABOUT 033KM		FEB 12 WIL I(P) E(S)	20 44 53.0 51 45.0	MAW IP E(P) ES	16 42 13.5 42 30.0 52 29.0	BYR IP	
MCQ EP	23 47 43.0	FEB 12 SBA EP	20 53 16.0	FEB 14 MAW EP	17 28 08.0	FEB 18 H-10 35 20.1 10.3S 161.2E h ABOUT 073KM	
WIL EP ES	23 50 18.0 53 55.0	FEB 12 H-22 33 59.2 15.3S 174.4W h ABOUT 033KM		FEB 14 MCQ IP	20 46 15.0	BYR IP	10 47 12.0
FEB 11 MCQ IP	00 35 42.0	BYR EP	22 45 05.0	FEB 15 AIA EP	05 13 25.0	FEB 19 BYR IP	01 35 30.0
FEB 11 MCQ IP	00 41 48.0	FEB 12 MCQ IP	22 36 00.0	FEB 15 BYR IP	15 46 52.0	FEB 19 H-09 15 29.4 09.6S 107.3E h ABOUT 048KM	
FEB 11 H-02 34 26.8 19.5S 174.0W h ABOUT 033KM		FEB 12 SBA EP	22 45 20.0	FEB 15 H-16 33 08.0 04.8S 152.4E h ABOUT 071KM		BYR IP E	09 28 13.5 35 39.0
		FEB 13 MCQ EP ES	00 10 55.0 11 15.0	BYR IP	16 45 36.0		

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
FEB 19 MIR E(P)	09 33 14.0	FFB 23 AIA EP I	03 20 23.0 20 51.0	FEB 25 BYR FP	02 30 32.0	WIL IP ES	15 23 30.0 34 01.0
FEB 19 MCQ EP ES	15 20 40.0 20 50.0	FEB 23 H-04 35 18.1 17.2S 074.2W h ABOUT 033KM		FEB 25 H-03 08 23.8 49.7S 112.1E h ABOUT 033KM		MCQ IP SPA IP' I	15 23 56.0 15 29 12.0 35 42.0
FEB 19 H-15 25 58.9 21.4S 070.7W h ABOUT 080KM		BYR IP	04 46 05.0	BYR IP	03 16 56.0	BYR IP' E E	15 29 28.5 32 53.0 39 38.0
BYR IP	15 36 13.5	FFB 23 AIA EP	08 52 25.0	FEB 25 AIA EP I	03 58 18.0 58 38.0	FEB 27 MIR EP	19 20 44.3
FEB 20 BYR EP	08 39 08.0	FEB 23 H-12 26 40.4 15.4S 173.8W h ABOUT 096KM		FEB 25 H-23 23 33.3 30.1S 177.9W h ABOUT 051KM		FFB 28 SPA EP	00 46 46.0
FEB 20 H-09 53 51.1 44.6N 150.0E h ABOUT 050KM		BYR IP	12 37 37.0	BYR EP	23 33 01.0	FEB 28 SPA EP	13 44 26.0
BYR EP'	10 12 59.0	FEB 23 MIR E(P)	14 14 23.0	FEB 25 BYR IP E	23 30 01.0 37 04.0	AIA EP I	13 47 52.0 48 48.0
FEB 20 H-10 57 43.6 14.1S 076.0W h ABOUT 067KM		FFB 23 BYR IP	16 00 22.0	FEB 26 H-08 51 29.5 56.0S 148.4E h ABOUT 033KM		FEB 29 H-04 31 41.4 53.5N 090.9E h ABOUT 033KM	
BYR IP	11 08 44.0	FEB 23 AIA EP	18 15 40.0	MCQ EP	08 53 01.0	SPA IP'	04 51 07.9
FEB 20 BYR EP	21 34 34.0	FFB 24 BYR IP	00 44 00.0	FEB 26 H-18 14 37.9 04.4N 126.2E h ABOUT 132KM		FEB 29 H-07 27 31.9 15.5S 178.7W h ABOUT 407KM	
FEB 20 BYR EP	22 04 19.0	FEB 24 BYR IP	03 16 56.0	BYR EP	18 28 04.0	SPA IP	07 38 29.0
FEB 20 MCQ IP	22 57 52.0	FEB 24 BYR IP	03 16 56.0	FEB 26 H-21 17 08.1 20.7S 174.4W h ABOUT 033KM		FEB 29 H-07 38 49.0 05.9N 082.5W h ABOUT 024KM	
FEB 20 H-23 40 05.9 31.5S 070.0W h ABOUT 078KM		FEB 24 AIA EP	08 48 28.0	BYR EP E	21 27 38.0 56 35.0	SPA E(P)	07 52 27.0
BYR IP	23 49 13.0	FEB 24 BYR EP	11 22 32.0	FEB 26 H-23 11 04.4 11.7S 166.3E h ABOUT 064KM		FEB 29 H-07 51 55.1 38.2S 074.5W h ABOUT 033KM	
FEB 21 H-13 51 47.4 6.8S 080.9W h ABOUT 033KM		FEB 24 BYR IP E	15 02 44.0 03 13.0	BYR IP	23 22 43.5	SPA IP	08 01 03.0
BYR IP	14 03 29.9	FEB 24 BYR EP E	23 33 01.0 37 04.0	FEB 27 MCQ IP	02 33 44.0	FEB 29 SPA EP	15 09 10.9
FEB 22 BYR E	02 29 25.0	FEB 24 BYR EP E	23 33 01.0 37 04.0	FEB 27 H-06 28 35.9 04.5S 143.4E h ABOUT 037KM		FEB 29 H-20 13 41.6 18.2S 172.8W h ABOUT 033KM	
FEB 22 H-08 50 35.0 30.1S 177.3W h ABOUT 033KM		FEB 25 H-00 34 32.0 44.7S 037.5E h ABOUT 033KM		SPA IP	06 41 12.0	SPA IP	20 25 02.5
BYR EP E	09 00 03.0 30 02.0	BYR IP	00 44 00.0	BYR IP	06 41 18.0	FEB 29 H-23 49 40.8 08.5S 112.7E h ABOUT 073KM	
FEB 22 MCQ IP	12 12 49.0	WIL E	00 49 15.0	FEB 27 H-15 10 48.8 21.7N 094.4E h ABOUT 102KM		MCQ IP	23 59 34.0
FEB 22 BYR EP	21 05 28.0	FEB 25 H-02 28 55.5 09.1S 110.7E h ABOUT 081KM		MIR EP FPP E(S)	15 23 28.0 26 54.8 34 41.5	MAW I(P)	24 00 38.0
FEB 23 MCQ IP	03 05 33.0	BYR EP	02 41 35.0			SPA IP I	24 01 51.0 11 54.5

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
BYR IP	24 02 22.5	MAR 03		MAR 04		MIR E(P)	06 05 28.6
MAR 01		H-15 59 08.9		MCO IP	07 02 28.0	I5	09 32.0
H-02 40 21.6		19.5S 173.3E		MAR 04		SBA EP	06 08 32.0
7.1S 155.4E		h ABOUT 071KM		AIA FP	07 12 49.0	SPA IP	06 08 54.0
h ABOUT 100KM		BYR EP	16 09 57.0	E	14 42.0	I	10 41.0
BYR IP	02 52 32.5	SPA IP	16 10 20.5	MAR 04		BYR IP	06 09 57.0
SPA IP	02 52 36.5	MAR 03		H-12 59 10.4		MAR 05	
MAR 01		MIR E(P)	16 18 12.0	42.5N 029.0W		SPA EP	06 02 43.0
AIA EP	04 39 14.0	MAR 03		h ABOUT 033KM		MAR 05	
MAR 01		SPA IP	21 15 17.0	SPA EP'	13 18 25.0	SPA EP	10 03 43.0
MCO EP	13 08 49.0	MAR 03		MAR 04		MAR 05	
MAR 02		H-21 39 31.0		SBA EP	14 25 40.0	H-10 05 37.2	
MAW IP	04 17 55.7	04.8N 125.5E		MAR 04		11.2S 162.2E	
MAR 02		h ABOUT 077KM		H-15 24 07.6		h ABOUT 038KM	
MCO IP	04 35 43.0	MIR I(P)	21 51 04.4	6.3S 130.2E		SBA EP	10 16 27.0
MAR 02		MAW IP	21 51 55.9	h ABOUT 171KM		BYR IP	10 17 28.0
SPA IP	11 56 53.0	I'P	52 14.0	SPA IP	15 36 18.5	SPA IP	10 17 38.5
MAR 02		SBA EP	21 52 01.0	E	37 06.0	MAR 05	
H-11 57 16.8		SPA IP	21 52 48.0	BYR EP	15 36 38.0	SPA IP	13 50 25.0
23.5S 116.6W		I	22 03 02.0	MAR 04		MAR 05	
h ABOUT 033KM		BYR EP	21 53 01.0	H-17 02 59.8		MAR 05	
SPA IP	12 08 07.5	F	55 59.0	10.9S 164.5E		MCO EP	18 19 50.0
MAR 02		MAR 04		h ABOUT 033KM		MAR 05	
SPA EP	16 35 23.0	MAW IP	00 00 30.8	BYR EP	17 14 49.0	SPA EP	19 44 04.5
MAR 02		MAR 04		SPA IP	17 15 05.5	MAR 05	
H-17 19 58.4		BYR IP	03 09 06.0	MAR 04		MAR 05	
1.7S 077.5W		MAR 04		SPA IP	17 29 12.5	SPA EP	19 44 04.5
h ABOUT 082KM		H-03 17 22.7		MAR 04		MAR 05	
BYR EP	17 32 02.0	20.9S 168.6E		SPA EP	17 56 20.0	H-20 31 57.4	
I	43 51.0	h ABOUT 033KM		MAR 04		16.4S 173.0W	
SPA EP	17 32 41.0	BYR IP	03 28 09.5	SBA EP	18 02 30.0	h ABOUT 033KM	
MAR 02		SPA IP	03 28 28.0	MAR 04		SBA E(P)	20 42 26.0
H-19 32 41.7		MAR 04		H-22 34 06.3		MAR 05	
18.9S 174.8W		H-04 06 27.6		06.8S 129.8E		MIR I(P)	23 24 08.2
h ABOUT 105KM		7.1S 129.5E		h ABOUT 108KM		MAR 05	
SBA I(P)	19 42 32.0	h ABOUT 120KM		SPA IP	22 46 21.5	MIR F(P)	23 39 28.2
SPA IP	19 43 50.0	MAW IP	04 17 55.8	I	46 56.0	MAR 06	
I	44 27.0	SPA IP	04 18 39.5	BYR EP	22 46 40.0	H-02 36 36.3	
MAR 02		BYR IP	04 18 58.5	MAR 04		41.1N 142.5F	
SPA EP	19 41 22.0	MAR 04		H-23 34 22.5		h ABOUT 034KM	
BYR E	20 11 53.0	MIR E(P)	04 43 33.0	19.3S 175.6W		SPA IP'	02 55 43.5
MAR 03		MAR 04		h ABOUT 222KM		MAR 06	
SBA EP	11 31 24.0	WIL EP	05 37 12.0	BYR IP	23 44 42.0	SPA IP	06 31 41.5
MAR 03		ES	09 46.0	MAR 05		MAR 06	
AIA EP	13 50 55.0	MAR 04		H-02 23 49.9		SPA IP	14 09 39.0
MAR 03		H-06 08 58.6		50.6N 156.5E		MAR 06	
H-15 12 14.9		33.8S 179.6W		h ABOUT 060KM		SBA EP	15 10 39.0
30.4S 177.9W		h ABOUT 047KM		SPA EP'	02 43 03.0	MAR 06	
h ABOUT 033KM		SPA IP	06 18 38.0	MAR 05		SBA EP	15 31 15.0
SPA IP	15 22 22.0			H-06 00 41.3		MAR 06	
				45.2S 096.4E		SBA EP	16 05 05.0
				h ABOUT 040KM			

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h m s		h m s		h m s		h m s	
MAR 06		MAR 07		MAR 08		BYR EP	07 15 06.0
H-18 57 16.1		H-11 01 12.1		H-11 55 49.7		MAR 10	
6.1S 154.4E		04.1S 130.3E		46.0S 146.8E		SPA IP	09 58 36.0
h ABOUT 074KM		h ABOUT 033KM		h ABOUT 033KM		MAR 10	
MCQ EP	19 05 55.0	SPA IP	11 13 49.0	MCQ EP	11 58 35.0	H-11 26 57.4	
MIR EP	19 08 38.0	BYR EP	11 14 07.0	MAR 08		25.0S 069.2W	
BYR IP	19 09 26.0	MAR 07		AIA EP	13 15 44.0	h ABOUT 046KM	
MAW IP	19 09 44.5	BYR EP	12 18 33.0	MAR 08		BYR E(P)	11 37 01.0
MAR 06		MAR 07		MCQ IP	14 08 51.0	SPA IP	11 37 35.0
WIL EP	19 17 08.0	SBA EP	12 54 29.0	MAR 08		MAR 10	
E(S)	24 44.0	MAR 07		H-17 51 06.5		H-13 59 54.8	
MAR 06		H-21 06 06.9		04.6S 152.6E		01.9N 127.5E	
SPA IP	20 17 01.5	05.6S 152.7E		h ABOUT 069KM		h ABOUT 117KM	
MAR 06		h ABOUT 062KM		BYR EP	18 03 36.0	SBA EP	14 12 06.0
H-20 42 55.8		SPA EP	21 18 34.5	MAR 08		SPA IP	14 12 51.0
19.5S 174.5E		MAR 07		SBA EP	20 17 10.0	I	16 30.0
h ABOUT 056KM		H-23 13 25.4		MAR 08		I	22 12.0
BYR IP	20 53 43.0	19.9S 177.9W		SBA EP	20 34 22.0	BYR IP	14 13 09.5
SPA IP	20 54 06.5	h ABOUT 534KM		SBA EP	21 33 42.0	E	17 00.0
MAR 06		BYR EP	23 23 15.5	MAR 09		MAR 10	
H-21 05 50.2		MAR 08		SBA EP	08 30 20.0	MAW I(P)	14 05 45.6
19.7S 070.5W		MIR E(P)	01 33 57.5	MAR 09		MAR 10	
h ABOUT 050KM		SPA IP	01 34 59.0	SBA EP	08 34 37.0	BYR EP	16 18 21.0
BYR IP	21 16 21.5	I	36 00.0	MAR 09		SPA IP	16 18 38.0
MAR 06		I	44 10.0	H-09 48 49.8		MAR 10	
H-23 51 28.5		MCQ EP	01 36 56.0	04.8N 032.8W		SBA EP	19 15 08.0
22.9S 173.1E		BYR EP	01 37 05.0	h ABOUT 033KM		MAR 10	
h ABOUT 054KM		MAR 08		SPA EP	10 02 09.0	H-20 11 32.8	
BYR EP	24 01 56.0	H-01 35 48.1		MAR 09		17.9S 168.2E	
SPA IP	24 02 20.0	44.0S 168.4E		BYR IP	10 08 10.0	h ABOUT 031KM	
MAR 06		h ABOUT 033KM		MAR 09		SPA IP	20 22 56.0
AIA IP	23 54 18.0	MCQ E(P)	01 38 56.0	H-12 11 30.6		MAR 10	
MAR 07		SBA E(P)	01 42 38.0	22.0S 179.1W		MIR E(P)	20 27 33.0
H-01 46 21.1		BYR IP	01 43 53.5	h ABOUT 492KM		MAR 11	
21.4S 179.3W		I	45 45.5	SPA IP	12 21 42.0	H-01 06 00.4	
h ABOUT 593KM		MAR 08		MAR 09		1.8N 127.1E	
SPA IP	01 56 27.5	SPA EP	02 26 42.0	SBA EP	17 37 27.0	h ABOUT 058KM	
MAR 07		MAR 08		MAR 09		MAW IP	01 18 15.8
H-03 34 25.2		H-04 55 28.1		SBA EP	18 08 01.0	SBA IP	01 18 17.6
20.2S 177.8W		60.4N 153.3W		MCQ IP	18 09 11.0	SPA IP	01 19 03.0
h ABOUT 481KM		h ABOUT 158KM		IS	09 27.0	I	29 28.0
SPA IP	03 44 47.5	SPA IP'	05 14 57.5	MAR 10		BYR IP	01 19 21.0
MAR 07		MAR 08		MIR E(P)	00 49 22.0	E	23 09.0
MIR E(P)	04 21 33.5	H-10 37 19.9		MAR 10		MAR 11	
MAR 07		6.7S 125.9E		SPA IP	06 15 15.5	H-04 59 45.6	
SPA IP	10 40 04.0	h ABOUT 540KM		BYR IP	06 15 32.0	54.7N 169.9W	
I	41 11.0	SPA I(P)	10 49 49.0	MAR 10		h ABOUT 033KM	
BYR EP	10 40 23.0	MAR 08		H-07 02 08.2		SPA IP'	05 19 38.5
MAR 08		MCQ IP	11 53 43.0	6.3S 104.4E			
MCQ IP				h ABOUT 062KM			

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAR 11		MAR 12		BYR IP	15 16 23.0	MAR 15	
H-05 50 51.9		H-22 32 56.7		MIR EP	15 16 25.9	SPA EP	13 49 10.0
38.2S 074.3W		13.5N 122.9E		SPA IP	15 16 43.0	BYR EP	13 50 29.0
h ABOUT 033KM		h ABOUT 033KM		MAW EP	15 17 26.0	MAR 15	
BYR EP	05 59 07.0	MIR E(P)	22 45 17.0			SPA EP	14 10 44.0
SPA IP	05 59 59.5	MAR 13		MAR 14		MAR 15	
MAR 11		H-12 57 26.0		H-16 36 52.1		SPA IP	21 20 24.0
MIR IP	11 17 21.3	37.1S 074.9W		01.9S 012.9W		MAR 15	
MAR 11		h ABOUT 054KM		h ABOUT 033KM		SBA EP	21 49 43.0
MCQ IP	16 39 24.0	BYR EP	13 05 47.0	BYR IP	16 49 55.0	MAR 15	
MAR 11		SPA IP	13 06 40.0	MAR 14		H-22 30 26.0	
SBA EP	21 24 29.0	MAR 13		H-18 43 27.4		36.2N 007.6W	
MAR 11		H-13 35 33.3		01.8S 013.2W		h ABOUT 027KM	
MAW EP	22 47 00.0	07.0S 155.5E		h ABOUT 033KM		SBA EP'	22 49 43.0
MAR 11		h ABOUT 095KM		SPA IP	18 56 16.5	MIR EP'	22 49 47.3
BYR EP	23 08 50.0	BYR IP	13 47 46.0	BYR EP	18 56 29.0	MAR 16	
MAR 12		SPA IP	13 47 50.0	MAR 14		WIL IP'	00 39 45.0
AIA EP	00 36 40.0	MAR 13		SPA IP	19 04 35.5	MAR 16	
I	39 28.5	SBA EP	15 13 44.0	I	06 44.5	H-01 05 17.6	
MAR 12		MAR 13		EIS	24 23.0	36.9N 095.5E	
MCQ IP	02 02 59.0	AIA EP	15 43 05.0	MAR 14		h ABOUT 033KM	
MAR 12		MAR 13		SPA IP	19 48 50.0	SPA IP'	01 24 19.0
SPA P	04 14 40.0	MCQ EP	17 19 20.0	MAR 15		MAR 16	
MAR 12		MAR 13		SBA EP	01 34 07.0	SPA IP	02 25 46.0
SPA EP	04 25 18.0	SBA EP	17 56 06.0	MAR 15		MAR 16	
MAR 12		MAR 14		SBA EP	01 56 55.0	SPA IP	05 38 04.0
H-04 30 21.1		MCQ IP	01 08 14.0	MAR 15		MAR 16	
22.9S 179.2W		MAR 14		H-03 18 13.6		H-08 44 32.8	
h ABOUT 378KM		SBA EP	01 44 08.0	01.2N 126.2E		44.8N 146.8E	
SPA IP	04 40 37.0	MAR 14		h ABOUT 043KM		h ABOUT 140KM	
E	42 10.0	BYR IP	04 25 02.5	SBA EP	03 30 31.0	SPA EP'	09 03 22.0
MAR 12		SPA IP	04 25 47.0	BYR EP	03 31 35.0	I	06 51.0
AIA EP	06 09 39.0	MAR 14		E	35 03.0	E	14 28.0
E	10 19.0	MAR 14		MAR 15		BYR EP'	09 03 35.0
MAR 12		H-11 44 53.8		SPA EP	04 30 04.0	MAR 16	
H-16 12 15.5		20.6S 178.5W		BYR IP	04 31 16.5	SBA EP	10 14 45.0
18.2S 167.4E		h ABOUT 561KM		MAR 15		ES	25 10.0
h ABOUT 033KM		BYR IP	11 54 37.0	H-07 59 58.0		MAR 16	
SPA EP	16 23 38.0	SPA IP	11 55 07.5	49.7N 078.0E		MCQ IP	12 59 43.0
MAR 12		I	57 05.0	h ABOUT 000KM		MAR 16	
SBA EP	17 04 22.0	MAR 14		SPA EP'	08 19 17.0	MCQ IP	14 16 42.0
MAR 12		SBA EP	12 53 51.0	BYR IP'	08 19 48.0	MAR 16	
SBA EP	18 15 22.0	MAR 14		MAR 15		H-14 55 55.2	
MAR 12		SBA EP	14 14 35.0	H-09 49 42.4		08.3S 118.6E	
SBA EP	18 50 22.0	MAR 14		53.0N 157.3E		h ABOUT 033KM	
MAR 12		SPA IP	14 39 40.5	h ABOUT 170KM		BYR EP	15 08 39.0
AIA EP	19 19 36.0	MAR 14		SPA IP'	10 08 54.0	I	11 02.0
MAR 12		H-15 05 54.4		MAR 15		MAR 16	
MIR E(P)	20 32 12.0	13.7S 172.3E		BYR IP	10 12 12.0	H-14 58 23.4	
		h ABOUT 611KM		MAR 15		11.5S 166.1E	
		SBA EP	15 15 32.0	SPA EP	12 16 14.0	h ABOUT 069KM	

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	h m s		h m s		h m s		h m s
SBA EP	15 09 06.0	MAR 18		MAR 18		WIL EP	21 55 20.0
ES	15 16.0	SPA IP	01 33 24.5	WIL EP'	23 49 45.0	ES	22 04 34.0
SPA IP	15 10 17.5	MAR 18		MAR 19		SPA IP	21 55 42.0
MAW E(P)	15 11 02.0	SPA IP	02 40 43.5	SBA E	00 15 06.0	MAW I(P)	21 56 54.1
MAR 16		MAR 18		MAR 19		MAR 20	
MCQ IP	17 22 38.0	H-04 37 26.9		SBA EP	00 45 55.0	H-01 16 12.8	
MAR 16		52.5N 153.6E		MAR 19		62.25 155.8E	
SPA EP	19 24 16.0	h ABOUT 440KM		MAW I(P)	02 51 27.2	h ABOUT 033KM	
I	25 46.5	BYR EP'	04 55 57.5	MAR 19		MCQ IP	01 18 06.0
MAR 16		E	59 59.0	MAW IP	02 58 40.0	WIL EP	01 20 41.0
H-21 39 42.5		E	05 07 01.0	MAR 19		ES	24 14.0
20.65 178.7W		MAW IP'	04 56 05.7	MCQ IP	04 07 01.0	SPA IP	01 22 01.5
h ABOUT 578KM		MAR 18		MAR 19		I	25 34.0
SBA EP	21 48 41.0	SBA IP	04 48 29.3	SPA IP	04 31 29.0	BYR EP	01 22 09.0
BYR IP	21 49 24.5	MAR 18		SBA EP	04 31 49.0	MAR 20	
SPA IP	21 49 54.0	MIR E(P)	04 57 24.3	MAR 19		MAW IP	03 20 07.6
I	52 57.5	MAW IP	04 58 52.0	H-04 45 50.9		MAR 20	
E	55 17.0	MAR 18		21.95 179.5E		MAW IP	03 53 21.1
MAR 17		SPA I	05 07 23.5	h ABOUT 613KM		MAR 20	
WIL EP	02 00 01.0	MAW E(P)	05 07 44.5	SBA EP	04 54 38.0	H-04 21 08.1	
MAR 17		MAR 18		BYR IP	04 55 24.5	06.15 150.4E	
WIL EP	02 00 02.0	H-05 17 13.2		I	57 29.5	h ABOUT 034KM	
MAR 17		20.25 178.4W		SPA IP	04 55 52.5	SPA I(P)	04 33 25.5
H-05 01 56.8		h ABOUT 566KM		MAR 19		BYR EP	04 33 37.0
8.95 108.8W		SPA IP	05 27 29.0	SPA IP	05 33 24.0	MAR 20	
h ABOUT 033KM		MAR 18		MAR 19		SPA IP	05 35 45.0
SPA IP	05 14 10.0	SBA EP	14 15 33.0	SPA IP	08 30 05.5	MAR 20	
MAR 17		E	30 41.0	BYR EP	08 30 21.0	H-06 55 28.1	
H-07 41 04.1		MAR 18		MAR 19		02.05 079.7W	
23.95 065.9W		SPA IP	15 02 32.0	H-08 43 40.5		h ABOUT 071KM	
h ABOUT 076KM		MAR 18		20.35 178.3W		BYR IP	07 07 33.0
BYR IP	07 51 08.5	MIR E(P)	15 08 50.0	h ABOUT 504KM		SPA IP	07 08 11.5
SPA I	07 51 47.0	MAR 18		BYR IP	08 53 30.0	MAR 20	
MAR 17		H-16 43 23.7		SPA IP	08 54 00.5	BYR IP	09 06 57.5
SPA EP	07 48 45.0	45.7N 014.1E		MAR 19		MAR 20	
MAR 17		h ABOUT 033KM		SPA IP	10 00 26.5	AIA EP	09 45 59.0
SPA IP	09 38 28.5	BYR EP'	17 02 48.0	I	08 20.5	MAR 20	
MAR 17		MAR 18		MAR 19		MAW IP	16 38 52.0
SPA EP	11 42 40.0	SPA IP	17 56 50.5	MAW I(P)	13 56 19.6	MAR 20	
MAR 17		MAR 18		MAR 19		H-18 55 10.8	
SPA IP	20 29 39.0	AIA EP	18 47 41.0	BYR IP	16 01 59.0	07.05 115.2E	
MAR 17		MAR 18		MAR 19		h ABOUT 121KM	
MIR EP	20 59 38.0	H-18 57 27.3		SBA EP	17 32 50.0	MAW IP	19 06 11.7
MAR 17		29.95 071.0W		E	36 33.0	SPA IP	19 07 25.0
SPA IP	22 10 07.0	h ABOUT 050KM		MAR 19		I	19 20.5
MAR 18		SPA IP	19 07 33.0	H-21 44 03.8		I	26 27.0
SPA IP	00 36 36.5	MAR 18		15.15 172.6W		MAR 20	
MAR 18		H-19 52 39.3		h ABOUT 033KM		MAW IP	19 09 17.7
MIR EP	01 23 50.9	10.55 161.6E		SBA IP	21 54 3.4	MAR 20	
		h ABOUT 085KM		BYR IP	21 55 06.0	MAW I(P)	20 07 12.6
		SPA IP	20 04 37.0				

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h m s		h m s		h m s		h m s	
MAR 20		BYR EP'	01 11 56.0	MAR 23		MAR 25	
BYR EP	21 32 55.0			H-09 17 47.3		SPA IP	04 29 01.5
MAR 21		MAR 22		31.8S 179.5E		MAR 25	
WIL IP	02 45 15.7	MAW E(P)	01 43 00.0	h ABOUT 464KM		H-07 48 35.9	
ES	59 46.0					08.7S 108.1W	
MAR 21		MAR 22		SPA IP	09 26 58.0	h ABOUT 033KM	
WIL IP	02 51 57.0	SPA IP	04 06 57.5	E	28 41.0		
I	52 13.0	MAR 22		MAR 23		SPA IP	08 00 50.5
ES	59 46.0	H-05 32 07.7		H-11 20 51.5		MAR 25	
MAR 21		02.7S 126.4E		27.8S 072.4W		H-08 57 11.7	
H-03 42 19.6		h ABOUT 033KM		h ABOUT 037KM		31.6S 069.5W	
6.4S 127.9E		SPA IP	05 44 51.5	BYR EP	11 30 28.0	h ABOUT 123KM	
h ABOUT 367KM				SPA IP	11 31 11.5		
MAR 21		MAR 22		MAR 23		SPA IP	09 06 56.5
MCQ IP	03 51 10.0	H-06 22 15.1		H-13 40 26.3		MAR 25	
SBA IP	03 53 18.5	61.3N 147.8W		38.3N 073.7E		H-10 08 06.8	
MAW IP	03 53 21.1	h ABOUT 062KM		h ABOUT 126KM		07.7N 075.3W	
MAR 21		SPA EP'	06 41 58.0	SPA IP'	13 59 18.5	h ABOUT 048KM	
SPA I	04 03 53.0			BYR EP'	13 59 30.0	BYR EP	10 21 02.0
MAR 21		MAR 22		MAR 23		MAR 25	
SPA IP	04 54 08.5	H-07 05 39.7		H-22 41 15.8		SPA EP	10 21 09.0
I	55 35.0	05.5S 077.1W		17.6S 123.2E		MAR 25	
MAR 21		h ABOUT 147KM		h ABOUT 033KM		H-11 33 48.4	
H-05 50 02.5		BYR IP	07 17 18.0	SPA EP	22 51 46.0	19.7S 175.9W	
8.7S 109.2W		SPA IP	07 17 56.5	SPA IP	22 52 40.0	h ABOUT 170KM	
h ABOUT 033KM		MAR 22		BYR IP	22 53 08.0	BYR EP	11 44 13.0
SPA IP	06 02 17.0	H-08 35 06.4		MAR 24		SPA IP	11 44 45.5
MAR 21		35.7S 072.9W		SPA IP	01 59 53.0	MAR 25	
H-07 02 24.7		h ABOUT 033KM		MAR 24		SPA IP	13 15 07.0
34.2S 070.7W		BYR IP	08 43 43.5	H-11 57 09.2		MAR 25	
h ABOUT 090KM		SPA IP	08 44 33.0	24.7S 065.0W		SPA EP	14 00 27.0
SPA IP	07 11 55.5	SBA EP	08 45 21.0	h ABOUT 095KM		MAR 25	
MAR 21		MAW IP	08 46 27.7	BYR IP	12 07 07.5	H-15 32 26.0	
SPA IP	11 33 17.5	MAR 22		SPA IP	12 07 43.5	20.1S 168.8E	
BYR IP	11 33 28.0	SBA EP	13 30 04.0	MAR 24		h ABOUT 033KM	
MAR 21		MAR 22		MAR 24		BYR IP	15 43 18.0
H-16 27 11.7		H-17 51 19.5		SPA IP	12 01 10.0	SPA IP	15 43 36.5
27.6S 177.2W		14.2S 075.6W		MAR 24		MAR 25	
h ABOUT 033KM		h ABOUT 086KM		H-17 38 08.2		SBA EP	16 06 48.0
SBA IP	16 36 12.6	BYR IP	18 02 16.0	27.7S 068.7W		MAR 25	
I	36 28.1	MAR 23		h ABOUT 076KM		AIA EP	23 14 21.0
SPA IP	16 37 34.0	SPA IP	00 45 28.0	SPA IP	17 48 25.5	MAR 26	
MAW IP	16 38 52.0	MAR 23		MAR 25		WIL IP	02 17 04.9
MAR 21		H-01 02 36.1		MCQ IP	02 24 04.0	I	17 18.5
SPA EP	17 06 09.0	09.3S 108.2E		MAR 25		MAR 26	
MAR 21		h ABOUT 050KM		H-02 43 23.5		SPA IP	04 15 28.5
SPA IP	19 35 48.0	SPA EP	01 14 44.0	36.3N 140.9E		MAR 26	
MAR 21		BYR EP	01 15 20.0	h ABOUT 067KM		H-05 25 02.8	
SBA EP	19 50 18.0	MAR 23		SPA EP'	03 02 20.0	05.1S 076.6W	
MAR 22		BYR EP	02 03 59.0	BYR EP'	03 02 34.0	h ABOUT 100KM	
H-00 52 38.8		MAR 25		MAR 25		SPA IP	05 37 27.5
54.0N 160.5E		AIA EP	03 54 41.0	AIA EP	03 54 41.0	MAR 26	
h ABOUT 030KM						SBA EP	07 58 39.0

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h m s		h m s		h m s		h m s	
MAR 26 SBA EP	08 59 13.0	SPA IP	08 13 23.0	MAR 28 H-07 10 21.4 58.8N 149.5W h ABOUT 020 KM		MAR 28 H-11 30 09.8 00.5N 122.3E h ABOUT 140KM	
MAR 26 H-12 15 47.4 6.85 129.3E h ABOUT 156KM		MAR 27 SBA EP	17 06 22.0	BYR EP' E F	07 29 37.0 32 41.0 49 49.0	MCO IP	11 40 21.0
WIL I(P)	12 25 44.6	MAR 27 H-20 22 10.6 23.75 179.9E h ABOUT 520KM		SPA IP' I I	07 30 05.0 47 59.0 50 10.0	SBA IP	11 42 14.1
SPA IP	12 27 56.5	SBA IP	20 30 52.0	MAW I(P')	07 30 21.0	BYR IP	11 43 18.0
BYR IP	12 28 15.5	BYR IP I	20 31 39.0 33 27.0	MAR 28 MAP 28 MAW EP	07 51 12.0	E	43 52.0
MAR 26 H-13 29 56.2 4.45 104.7W h ABOUT 033KM		SPA IP I I	20 32 09.5 33 58.0 37 29.5	MAR 28 H-07 55 08.4 58.4N 150.1W h ABOUT 025KM		MAR 28 MIR IP	11 41 48.0
BYR IP	13 41 38.5	MAW IP IS	20 33 15.1 42 25.1	SPA IP'	08 14 50.0	MAR 28 H-12 20 49.8 56.5N 154.0W h ABOUT 025KM	
SPA IP	13 42 33.0	AIA IP	20 33 18.0	BYR EP' I	12 40 03.0 42 58.0	BYR EP'	12 40 03.0
MAR 26 SPA IP	13 37 08.0	MAR 27 SPA IP	21 00 26.0	MIR IP'	12 40 32.0	MIR IP'	12 40 32.0
MAR 26 H-15 42 48.3 4.75 104.6W h ABOUT 033KM		MAR 28 H-03 36 12.7 61.1N 147.6W h ABOUT 020KM		MAW EP'	12 40 45.5	MAW EP'	12 40 45.5
SPA EP	15 55 23.0	BYR E(P')	03 55 17.0	MAR 28 H-08 39 54.9 57.5N 151.6W h ABOUT 020KM		MAR 28 H-13 01 14.2 60.1N 147.0W h ABOUT 020KM	
MAR 26 SPA IP	17 48 24.5	SPA E(P') I	03 55 35.0 56 01.0	BYR EP'	08 59 10.0	BYR EP'	13 20 34.0
MAR 26 AIA EP F E	19 09 35.0 10 09.0 20 42.0	AIA EP'	03 55 38.5	SPA IP' I I	08 59 36.0 09 18 40.0 20 36.0	MAR 28 H-14 47 37.1 60.4N 146.5W h ABOUT 010KM	
MAR 26 SBA EP	21 20 19.0	SBA EP'	03 55 39.0	MAW EP'	09 00 37.5	BYR EP'	15 07 00.0
MAR 26 SBA EP	22 59 58.0	MCO E(P')	03 55 50.0	MAR 28 H09 01 00.5 56.5N 152.0W h ABOUT 020KM		MAR 28 AIA EP I	18 44 46.0 45 46.0
MAR 26 SBA EP	23 06 23.0	MAW EP'	03 56 17.5	MAW EP'	09 21 12.0	MAR 28 AIA EP E I	19 14 22.0 16 09.0 17 20.0
MAR 27 H-03 37 40.8 30.45 071.5W h ABOUT 048KM		MAR 28 WIL EP' E	03 54 14.0 56 00.0	MAR 28 MAW E(P)	09 28 05.0	MAR 28 AIA EP E I	19 14 22.0 16 09.0 17 20.0
BYR EP	03 46 57.0	MIR EP' I	03 54 33.4 56 32.0	MAR 28 H-09 52 55.7 59.7N 146.6W h ABOUT 030KM		MAR 28 H-20 29 08.6 59.8N 148.7W h ABOUT 040KM	
SPA IP	03 47 44.0	MAR 28 MAW E(P) I	04 31 13.0 32 06.0	BYR IP'	10 12 15.0	WIL E(P') E	20 48 12.0 21 11 00.0
MAR 27 H-04 30 33.0 25.9N 095.8E h ABOUT 093KM		MAR 28 H-04 54 07.9 59.8N 149.4W h ABOUT 025KM		MAR 28 H-10 35 38.9 57.2N 152.4W h ABOUT 033KM		BYR IP'	20 48 31.0
SPA IP'	04 49 04.0	MAW IP'	05 14 07.0	BYR EP' I	10 54 52.0 57 10.0	MIR E(P')	20 49 36.0
BYR IP'	04 49 19.0	MAR 28 MAW I(P)	05 56 19.0	MIR IP'	10 55 22.7	MAR 29 MCO IP	01 08 14.0
MAR 27 H-08 01 30.5 11.55 166.2E h ABOUT 093KM		MAR 28 MAW I(P)	07 02 24.5	MAR 28 H-11 08 26.0 60.2N 148.4W h ABOUT 015KM		MAR 29 H-01 09 36.4 59.8N 149.2W h ABOUT 020KM	
BYR IP	08 13 07.5	MAR 28 MAW I(P)	07 14 25.0	SBA EP'	11 29 10.0	BYR EP'	01 28 57.0

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h m s		h m s		h m s		h m s	
MAR 29		BYR EP'	16 28 38.0	MAR 30		SPA IP'	05 52 12.5
H-01 29 33.7				H-00 53 55.8			
57.5N 151.3W		MAR 29		60.0N 146.3W		MAR 30	
h ABOUT 020KM		H-16 40 57.9		h ABOUT 015KM		H-07 09 34.0	
		59.7N 147.0W				59.9N 145.7W	
BYR EP'	01 48 58.0	h ABOUT 015KM		SPA EP'	01 13 39.0	h ABOUT 015KM	
MAR 29		BYR EP'	17 00 20.0	MAR 30		BYR EP'	07 28 55.0
MAW EP	01 30 32.5	E	03 24.0	H-01 41 38.6		E	31 55.0
				60.6N 144.3W			
MAR 29		SPA EP'	17 00 24.0	h ABOUT 033KM		WIL EP'	07 29 16.0
H-03 07 19.5							
59.7N 148.8W		WIL IP'	17 00 37.8	SPA IP'	02 01 24.5	SPA IP'	07 29 17.0
h ABOUT 030KM		I	01 04.8				
				MAR 30		MIR EP'	07 29 26.0
BYR EP'	03 26 40.0	MIR EP'	17 00 49.0	SPA EP'	01 51 24.0	E	32 26.0
				I	51 29.0		
MAR 29		MAW EP'	17 01 04.0			MAR 30	
H-03 38 38.1				MAR 30		MAW IP	07 30 36.4
60.7N 149.1W		MAR 29		MIR EP	02 07 29.0		
h ABOUT 040KM		H-16 53 26.6				MAR 30	
		60.3N 146.1W		MAR 30		H-07 37 01.3	
BYR EP'	03 58 07.0	h ABOUT 015KM		H-02 18 06.3		59.7N 145.3W	
				56.6N 152.9W		h ABOUT 033KM	
MAR 29		BYR EP'	17 12 50.0	h ABOUT 025KM		SPA EP'	07 56 37.0
H-04 12 15.7							
60.2N 145.5W		MAR 29		BYR IP'	02 37 24.0	MAR 30	
h ABOUT 015KM		BYR EP	19 00 14.0	E	40 17.0	H-07 56 29.1	
				E	49 23.0	56.3N 154.4W	
BYR EP'	04 31 39.0	MAR 29				h ABOUT 020KM	
		MAW EP	19 40 45.0	SPA EP'	02 37 28.0		
MAR 29						SPA IP'	08 16 07.5
H-06 04 44.5		MAR 29		WIL EP'	02 37 44.0		
56.1N 154.3W		H-21 40 32.7				MAR 30	
h ABOUT 030KM		06.7S 155.1E		MIR EP'	02 37 50.0	H-09 23 05.0	
		h ABOUT 068KM				59.9N 145.6W	
BYR EP'	06 24 08.0			SPA EP'	02 22 10.0	h ABOUT 033KM	
E	26 48.0	WIL IP	21 51 20.0	I	22 48.5		
E	27 36.0	I	51 31.5			SPA EP'	09 42 44.0
		E(S)	22 01 00.0	BYR EP	02 22 19.0	I	42 50.0
MAR 29							
MAW EP	06 25 29.5	SPA IP	21 51 48.4	MAR 30		MAR 30	
				BYR EP	02 22 19.0	BYR EP	09 37 23.0
MAR 29		MIR IP	21 51 57.0	MAR 30			
MIR EP	06 31 05.0	ES	22 01 24.0	MIR E	02 32 26.0	MAR 30	
						H-09 57 32.5	
MAR 29		BYR IP	21 52 50.0	MAR 30		60.9N 145.1W	
H-10 08 02.4				SPA EP'	02 37 11.0	h ABOUT 015KM	
60.0N 148.6W		MAW EP	21 53 01.0				
h ABOUT 020KM				MAW EP	02 38 29.5	SPA IP'	10 17 24.5
		MAR 29					
BYR EP'	10 27 23.0	MIR EP	22 01 24.0	MAR 30		MAR 30	
				SPA IP	03 01 37.0	H-10 15 51.7	
WIL IP'	10 27 40.3	MAR 29		I	06 23.5	60.4N 146.6W	
		H-23 49 28.6				h ABOUT 015KM	
MAR 29		59.9N 147.1W		MAR 30			
H-10 49 40.3		h ABOUT 020KM		AIA EP	03 30 46.0	SPA IP'	10 35 39.0
58.2N 150.4W							
h ABOUT 025KM		SPA IP'	24 09 16.0	MAR 30		MAR 30	
				SPA IP	04 52 29.0	MCQ EP	10 22 18.0
BYR EP'	11 08 57.0	MAR 29					
E	14 09.0	H-23 55 51.9		MAR 30		MAR 30	
		58.9N 150.0W		H-05 14 21.5		H-10 59 27.6	
MAR 29		h ABOUT 020KM		56.2N 154.4W		58.4N 149.2W	
MIR EP	12 26 59.8			h ABOUT 033KM		h ABOUT 025KM	
		SPA IP'	24 15 36.0				
MAR 29				SPA IP'	05 33 56.5	SPA IP'	11 19 07.0
MAW EP	15 04 23.0	MAR 30					
		H-00 26 15.7		MAR 30		MAR 30	
MAR 29		58.9N 150.2W		H-05 32 29.8		H-11 05 47.4	
H-16 09 15.3		h ABOUT 020KM		56.9N 151.7W		60.4N 146.8W	
60.3N 146.6W				h ABOUT 033KM		h ABOUT 015KM	
h ABOUT 015KM		SPA IP'	00 46 01.5				

ANTARCTIC SEISMOLOGICAL BULLETIN

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAR 31		MAR 31					
H-10 13 29.1		H-17 04 39.0					
58.8N 148.4W		17.75 178.8W					
h ABOUT 020KM		h ABOUT 540KM					
SPA IP'	10 33 12.5	BYR IP	17 14 43.0				
		E	16 39.0				
MAR 31		SPA IP	17 15 11.5				
H-11 03 35.4							
58.9N 149.9W		MAR 31					
h ABOUT 020KM		H-18 37 36.8					
BYR EP'	11 22 57.0	60.4N 146.0W					
		h ABOUT 033KM					
SPA IP'	11 23 20.5	SPA EP'	18 57 22.0				
MAR 31							
H-11 19 17.9		MAR 31					
60.0N 146.5W		SBA EP	20 20 20.0				
h ABOUT 015KM							
SPA IP'	11 39 06.0	MAR 31					
MAR 31		H-20 29 40.8					
H-11 24 57.4		57.3N 150.7W					
58.2N 150.3W		h ABOUT 033KM					
h ABOUT 033KM		SPA IP'	20 49 18.5				
SPA IP'	11 44 39.0						
MAR 31		MAR 31					
H-11 52 13.9		H-21 04 01.1					
60.1N 146.4W		58.2N 150.3W					
h ABOUT 015KM		h ABOUT 020KM					
SPA IP'	12 12 06.5	BYR EP'	21 23 18.0				
I	13 24.5	SPA IP'	21 23 44.0				
MAR 31		MIR EP'	21 23 47.6				
AIA EP	12 37 36.0	MAR 31					
I	38 43.0	SPA EP	21 06 29.0				
I	39 15.5						
MAR 31		MAR 31					
H-15 20 28.9		H-21 20 38.2					
22.8S 066.8W		56.3N 152.7W					
h ABOUT 219KM		h ABOUT 015KM					
BYR IP	15 30 24.0	SPA IP'	21 40 18.5				
SPA IP	15 31 01.5						
MAR 31		MAR 31					
H-15 53 51.4		H-22 50 36.5					
57.0N 152.6W		56.8N 152.2W					
h ABOUT 033KM		h ABOUT 033KM					
SPA IP'	16 13 33.0	SPA IP'	23 10 14.0				
MAR 31		MAR 31					
H-16 32 07.2		SPA IP	23 22 50.0				
57.3N 152.0W							
h ABOUT 033KM		MAR 31					
SPA IP'	16 51 46.5	H-23 36 56.0					
MAR 31		59.9N 145.8W					
H-16 43 45.5		h ABOUT 030KM					
59.7N 148.7W		SPA IP'	23 56 41.5				
h ABOUT 033KM							
SPA IP'	17 03 30.5						

ANTARCTIC SEISMOLOGICAL BULLETIN

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U.S. DEPARTMENT OF COMMERCE

Luther H. Hodges, Secretary

COAST AND GEODETIC SURVEY—WASHINGTON

H. Arnold Karo, Director

FOR OFFICIAL DISTRIBUTION

U. S. COAST AND GEODETIC SURVEY
ANTARCTIC SEISMOLOGICAL BULLETIN

The Scientific Committee on Antarctic Research of the International Council of Scientific Unions recommended that a bulletin of phase readings be issued from seismological stations in the Antarctic.

The United States Coast and Geodetic Survey has undertaken the publication of the Antarctic Seismological Bulletin to be issued quarterly, based on the readings received by radio from the Antarctic stations. The phase designation shown in this bulletin is the identification given by the station operator.

The epicenters shown in this Bulletin are computed by the United States Coast and Geodetic Survey using the phase readings from many stations in addition to the Antarctic readings shown.

STATION AND INSTRUMENTAL CONSTANTS

1

Country, Station and Station Abbreviation	Position		Foundation and Elevation (In Meters)	Instruments and Components	To Seconds	T _g Seconds
	Latitude	Longitude				
ARGENTINA Deception (DEC)	62°59' S	60°43' W	Rock 7 m	Mainka H Mainka E	5.0 5.0	
AUSTRALIA Macquarie (MCQ)	54°29'55" S	158°57'22" E	Weathered Basaltic Lava 14 m	Benioff Z Benioff N Benioff E	1.0 1.0 1.0	0.2 0.2 0.2
Mawson (MAW)	67°36'21" S	62°52'48" E	Pre-Cambrian granite 9 m	Benioff Z Benioff N Benioff E	1.0 1.0 1.0	0.2 14.0 14.0
Wilkes (WIL)	66°15.5' S	110°31.2' E	Rock 9 m	Grenet Z Lehner-Griffith Z Lehner-Griffith N Lehner-Griffith E	1.4 16.4 14.1 14.4	1.0 60.0 92.0 85.0
NEW ZEALAND Hallett (HLL)	72°17.7' S	170°18.5' E	Rock 5 m	Benioff* Z Benioff* N Benioff* E Sprengnether* Z Sprengnether* N Sprengnether* E	1.0 1.0 1.0 30.0 30.0 30.0	0.2 - 25 0.2 - 25 0.2 - 25 100.0 100.0 100.0
Scott Base (SBA)	77°51' S	166°45' E	Rock 15 m	Benioff* Z Benioff* N Benioff* E Sprengnether* Z Sprengnether* N Sprengnether* E	1.0 1.0 1.0 30.0 30.0 30.0	0.2 - 25 0.2 - 25 0.2 - 25 100.0 100.0 100.0
USSR Mirny (MIR)	66°33' S	93°00' E	Rock 30 m	SVKM Z SVK Z SGK N SGK E	2.5 12.5 12.5 12.5	1.0 1.1 1.1 1.1
UNITED KINGDOM Argentine Island (AIA)	65°15' S	64°16' W	Rock 11 m	Willmore Z Willmore N Willmore E	1.0 1.0 1.0	0.25 0.25 0.25
UNITED STATES Byrd (BYR)	80°01' S	119°31' W	Ice 1515 m	Benioff Z Wilson-Lamison N Wilson-Lamison E Sprengnether Z Sprengnether N Sprengnether E	1.0 6.3 5.6 30.0 25.0 16.0	0.5 3.6 Geotech Helicorder 94.0 95.0 13.0
South Pole (SPA)	90° S	0	Ice 2800 m	Benioff* Z Benioff* N Benioff* E Sprengnether* Z Sprengnether* N Sprengnether* E	1.0 1.0 1.0 30.0 30.0 30.0	0.2 - 25 0.2 - 25 0.2 - 25 100.0 100.0 100.0

*World Wide Standard Instruments Operational Feb. 1963
Dumont d'Urville discontinued Feb. 1963

ANTARCTIC SEISMOGRAM DEPOSITORIES

ARGENTINA: Servicio Meteorologico Nacional
Paseo Colon 317, 2° Piso
Buenos Aires, Argentina

AUSTRALIA: Chief Geophysicist
Bureau of Mineral
Geology and Geophysics
203 Collins Street
Melbourne, Australia

NEW ZEALAND: Superintendent
Seismological Observatory
DSIR, P. O. Box 6005
Wellington, New Zealand

USSR: Research Institute of Earth Physics
Academy of Sciences of the USSR
Moscow, USSR

UNITED KINGDOM: Falkland Island Dependency Survey
4 Milbank
London, SW1
England

UNITED STATES: U. S. Coast and Geodetic Survey
Seismology Division
Commerce Building
Washington 25, D. C.

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
APR 01 H-00 01 10.6 60.4N 146.4W h ABOUT 010KM		APR 01 H-06 16 21.4 60.2N 147.1W h ABOUT 015KM		SPA IP' 15 42 20.5		APR 02 AIA IP 06 38 04.0 I 38 55.0	
SPA IP' 00 21 00.0		SPA IP' 06 36 08.0		APR 01 H-16 29 09.0 59.7N 146.5W h ABOUT 015KM		APR 02 H-06 53 31.5 6.9S 125.5E h ABOUT 485KM	
APR 01 H-00 36 32.4 58.3N 150.4W h ABOUT 020KM		APR 01 H-06 39 48.5 60.4N 146.7W h ABOUT 010KM		SPA IP' 16 48 57.5		SBA EP 07 04 18.0	
SPA IP' 00 56 16.5		SPA IP' 06 59 38.5		APR 01 SPA IP 17 20 56.5		SPA IP 07 05 05.0	
APR 01 MIR IP 01 23 10.0 IS 32 36.0		APR 01 H-07 26 02.6 59.6N 150.1W h ABOUT 033KM		APR 01 H-17 23 12.1 56.1N 155.4W h ABOUT 020KM		APR 02 H-07 38 30.7 02.0N 125.6E h ABOUT 082KM	
APR 01 H-01 54 09.3 59.7N 146.1W h ABOUT 015KM		SPA IP' 07 45 51.0		SPA IP' 17 42 54.5		MAW EP 07 50 41.0	
SPA IP' 02 13 47.0		APR 01 H-08 28 09.4 60.0N 147.6W h ABOUT 020KM		APR 01 H-20 07 24.2 56.6N 153.0W h ABOUT 033KM		SBA EP 07 50 47.0	
APR 01 H-03 05 49.9 60.1N 146.1W h ABOUT 015KM		SPA EP' 08 48 02.0		SPA IP' 20 26 56.5		BYR IP 07 51 51.0 E 55 40.0	
SPA IP' 03 25 37.5		APR 01 H-08 33 22.0 59.9N 146.6W h ABOUT 010KM		APR 01 H-20 13 08.3 58.3N 149.6W h ABOUT 020KM		APR 02 H-07 57 17.8 60.1N 147.9W h ABOUT 033KM	
APR 01 H-03 23 17.2 57.2N 151.3W h ABOUT 025KM		SPA IP' 08 53 10.0		SPA IP' 20 32 49.0		SPA IP' 08 17 04.5	
BYR EP' 03 42 40.0		APR 01 H-08 54 03.8 56.7N 152.3W h ABOUT 025KM		APR 01 H-22 00 58.7 58.9N 150.0W h ABOUT 020KM		APR 02 H-08 31 36.5 55.8N 154.3W h ABOUT 033KM	
SPA IP' 03 42 57.0		SPA IP' 09 13 45.0		SPA IP' 22 20 43.0		SPA IP' 08 51 31.0	
MIR EP' 03 43 06.0		APR 01 MAW EP 09 07 10.0		APR 02 SPA IP 00 40 25.5		APR 02 H-09 04 51.9 57.9N 151.1W h ABOUT 033KM	
APR 01 H-04 26 52.7 2.8S 080.1W h ABOUT 035KM		APR 01 H-11 01 25.5 60.4N 146.5W h ABOUT 010KM		APR 02 H-01 11 54.7 C5.9N 095.7E h ABOUT 132KM		SPA IP' 09 24 29.5	
BYR EP 04 38 57.0		SPA IP' 11 21 15.0 I 27 11.0		WIL EP 01 23 12.0 I 23 25.3 ES 32 34.0		APR 02 H-09 57 54.5 56.5N 152.8W h ABOUT 020KM	
APR 01 H-04 32 40.7 58.7N 150.1W h ABOUT 020KM		APR 01 H-13 33 23.4 59.7N 148.2W h ABOUT 020KM		MAW IP 01 23 36.5 ES 33 28.5		SPA IP' 10 17 33.0	
SPA IP' 04 52 25.0		SPA IP' 13 53 05.5		SBA EP 01 24 48.0		APR 02 H-10 58 09.1 59.3N 150.0W h ABOUT 025KM	
APR 01 H-04 49 26.3 57.2N 151.4W h ABOUT 020KM		APR 01 SBA EP 13 37 19.0		SPA IP 01 25 09.5 I 28 27.5 I 35 39.0		SPA IP' 11 17 58.0	
SPA IP' 05 09 03.0		APR 01 H-13 54 31.9 57.5N 151.3W h ABOUT 020KM		BYR EP 01 25 48.0 S 30 03.0		APR 02 H-11 41 10.7 58.8N 149.6W h ABOUT 020KM	
APR 01 H-05 33 02.9 59.9N 146.0W h ABOUT 015KM		SPA IP' 14 14 12.0		APR 02 H-04 43 17.2 25.8S 013.8W h ABOUT 033KM		BYR EP' 12 00 35.0	
BYR EP' 05 52 25.0		APR 01 H-15 22 38.3 57.3N 152.9W h ABOUT 015KM		SPA IP 04 53 52.0		SPA IP' 12 00 53.5	
SPA IP' 05 52 51.5				BYR IP 04 54 12.0		APR 02 MAW IP 12 02 08.3	
				SBA EP 04 55 05.0		APR 02 SPA IP 12 10 22.0	

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
APR 02 H-12 20 25.2 60.9N 148.1W h ABOUT 010KM		APR 02 H-21 09 36.3 58.8N 144.8W h ABOUT 015KM		APR 03 H-09 04 33.5 04.9S 152.1E h ABOUT 002KM		APR 03 H-22 33 42.2 61.6N 147.6W h ABOUT 040KM	
SPA IP' 12 40 22.0		SPA IP' 21 29 09.5		BYR IP 09 17 00.5		MIR EP' 22 53 50.0	
APR 02 H-13 28 38.6 60.2N 147.6W h ABOUT 020KM		APR 02 SBA EP 21 10 21.0		SPA IP 09 17 01.0		APR 03 MIR E 23 46 01.0	
SPA IP' 13 48 24.5		APR 02 H-22 07 20.6 60.4N 147.2W h ABOUT 010KM		APR 03 H-09 48 15.7 57.1N 150.5W h ABOUT 033KM		APR 04 SPA IP 00 52 18.0	
APR 02 AIA EP 13 33 23.1		SPA IP' 22 27 12.0		SPA IP' 10 07 54.0		APR 04 SBA EP 01 24 33.0	
APR 02 SBA EP 13 55 13.0		APR 02 H-22 34 31.7 59.8N 144.3W h ABOUT 020KM		APR 03 SPA EP 12 34 24.0		APR 04 BYR IP 01 30 09.0 E 35 39.0	
APR 02 AIA EP 14 54 10.0 I 54 36.0		SPA IP' 22 54 18.0		APR 03 H-12 53 36.4 60.3N 147.1W h ABOUT 015KM		SPA IP 01 30 38.5	
APR 02 H-15 56 52.6 5.8N 125.8E h ABOUT 179KM		APR 03 H-00 37 38.5 58.2N 148.9W h ABOUT 033KM		SPA IP' 13 13 23.0		APR 04 H-01 58 40.9 58.4N 146.8W h ABOUT 033KM	
WIL IP 16 08 03.5 I 08 08.3 ES 17 26.0		SPA IP' 00 57 19.0		APR 03 H-13 46 38.0 08.7S 078.7W h ABOUT 082KM		SPA EP' 02 18 15.0	
MIR IP 16 08 21.0		APR 03 H-04 12 41.9 04.0N 096.6E h ABOUT 070KM		BYR EP 13 58 05.0		APR 04 SPA EP 03 54 49.0	
MAW IP 16 09 10.4 ES 19 34.0		WIL EP 04 23 54.7		SPA IP 13 58 47.5		APR 04 H-04 34 56.9 60.3N 146.5W h ABOUT 005KM	
SBA EP 16 09 17.0		MIR E(P) 04 24 07.5		APR 03 SBA EP 14 52 07.0		SPA EP' 04 54 40.0 I 54 48.0	
SPA IP 16 10 04.0 I 14 56.0 I 20 37.5		MAW EP 04 24 17.5		APR 03 SPA EP 16 28 06.0		APR 04 H-04 54 01.7 60.1N 146.7W h ABOUT 040KM	
BYR EP 16 10 23.0 E 13 55.0 E 14 27.0		SBA IP 04 25 34.6		APR 03 SPA IP 18 55 20.0		SBA EP' 05 13 23.0 E 13 26.0	
APR 02 H-18 25 21.0 60.0N 147.8W h ABOUT 040KM		SPA IP 04 26 25.0		APR 03 H-19 08 15.2 14.9S 167.1E h ABOUT 095KM		BYR EP' 05 13 29.0	
SPA IP' 18 45 06.5		BYR IP 04 26 31.0		BYR IP 19 19 32.0		SPA IP' 05 13 39.5	
APR 02 SPA IP 19 24 39.0		APR 03 H-06 23 11.3 60.0N 149.5W h ABOUT 033KM		SPA IP 19 19 47.5 I 22 25.0		WIL IP' 05 13 39.7 E 14 14.0	
APR 02 H-19 38 24.7 60.7N 145.8W h ABOUT 015KM		SPA EP' 06 42 56.0		APR 03 H-19 57 53.3 60.1N 148.0W h ABOUT 020KM		APR 04 H-05 10 34.4 57.3N 149.4W h ABOUT 020KM	
SPA IP' 19 58 14.0		APR 03 SPA IP 07 31 11.5		SPA IP' 20 17 40.5		SPA IP' 05 30 14.5	
APR 02 SBA EP 19 55 54.0		APR 03 H-08 47 34.8 27.9S 178.1W h ABOUT 033KM		APR 03 H-20 23 25.0 57.0N 146.1W h ABOUT 025KM		APR 04 H-06 53 25.9 60.4N 146.0W h ABOUT 015KM	
APR 02 H-20 09 42.0 59.8N 147.0W h ABOUT 010KM		BYR IP 08 57 22.0		SPA EP' 20 43 07.0		SPA IP' 07 13 15.5	
SPA IP' 20 29 31.0		SPA IP 08 57 55.5 I 58 31.0 I 59 08.0		APR 03 SPA IP 22 25 30.5		APR 04 H-08 40 29.8 56.5N 152.6W h ABOUT 015KM	

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
BYR EP'	08 59 44.0	APR 04 WIL EP'	18 22 04.0	APR 05 SBA P	07 13 27.6	APR 05 H-17 40 43.1	
SPA IP'	09 00 08.0	APR 04 H-20 01 44.8		APR 05 H-07 29 03.5		56.3N 152.9W	
MIR EP'	09 00 14.0	59.5N 147.6W		60.4N 146.7W		h ABOUT 010KM	
APR 04 H-09 10 55.1		h ABOUT 033KM		h ABOUT 015KM		SPA IP' 18 00 20.5	
56.9N 152.7W		SPA IP' 20 21 36.0		SPA IP' 07 48 52.5		I 01 55.0	
h ABOUT 015KM		APR 04 AIA EP	21 47 19.0	APR 05 H-07 44 50.6		APR 05 H-19 28 18.1	
BYR EP' 09 30 09.0		APR 04 H-22 16 54.5		60.0N 144.8W		60.2N 146.7W	
E 41 51.0		59.4N 145.2W		h ABOUT 015KM		h ABOUT 015KM	
SBA EP' 09 30 18.0		h ABOUT 010KM		SPA EP' 08 04 37.0		BYR EP' 19 47 41.0	
MIR EP' 09 30 38.0		SPA IP' 22 36 42.0		APR 05 SPA IP	08 42 42.5	E 50 44.0	
E 34 06.0		APR 05 H-01 22 13.3		APR 05 H-08 59 02.0		SBA EP' 19 47 41.0	
E 34 27.0		56.2N 153.5W		56.2N 154.5W		WIL IP' 19 47 59.0	
APR 04 H-10 37 36.2		h ABOUT 025KM		h ABOUT 015KM		SPA IP' 19 47 59.5	
59.8N 150.0W		SBA EP' 01 41 28.0		SPA IP' 09 18 40.5		MIR EP' 19 48 14.0	
h ABOUT 010KM		BYR EP' 01 41 31.0		APR 05 SBA EP	09 46 42.0	MAW EP' 19 48 18.0	
SPA EP' 10 57 29.0		E 44 18.0		APR 05 H-11 18 38.9		APR 05 H-19 50 41.3	
APR 04 SBA IP	14 42 23.2	SPA IP' 01 41 51.0		41.9S 083.7W		57.0N 152.3W	
APR 04 H-15 08 12.3		MIR EP' 01 41 57.7		h ABOUT 033KM		h ABOUT 020KM	
59.6N 146.9W		MAW EP' 01 42 51.5		BYR IP	11 26 15.0	SPA IP' 20 10 21.5	
h ABOUT 015KM		APR 05 H-01 41 45.0		SPA IP	11 27 18.5	APR 05 H-21 26 32.1	
SPA IP' 15 28 00.5		56.2N 153.3W		I 28 44.0		60.6N 145.6W	
APR 04 SBA EP	17 34 40.0	h ABOUT 035KM		SBA EP	11 27 58.0	h ABOUT 020KM	
APR 04 H-17 46 08.6		BYR EP' 02 01 05.0		APR 05 MIR E	11 33 46.0	SPA EP' 21 46 20.0	
56.3N 154.4W		E 03 55.0		APR 05 SPA IP	11 51 36.5	APR 05 H-22 22 45.0	
h ABOUT 025KM		SPA IP' 02 01 20.0		APR 05 H-13 48 47.3		28.1S 178.2W	
BYR EP' 18 05 21.0		APR 05 H-04 11 48.2		60.2N 145.6W		h ABOUT 031KM	
E 08 15.0		59.9N 148.0W		h ABOUT 015KM		SPA IP 22 33 04.5	
SBA EP' 18 05 28.0		h ABOUT 015KM		SPA IP' 14 08 37.5		APR 05 SBA IP	23 54 16.4
SPA IP' 18 05 45.5		SPA EP' 04 31 35.0		APR 05 MAW EP	15 30 53.5	APR 06 H-01 51 48.6	
I 12 17.5		APR 05 SBA EP	04 54 33.0	APR 05 H-16 49 04.0		59.4N 146.8W	
MIR EP' 18 05 50.5		APR 05 H-04 57 15.4		58.7N 151.7W		h ABOUT 015KM	
MAW EP' 18 06 18.0		60.1N 147.7W		h ABOUT 020KM		SPA IP' 02 11 42.5	
APR 04 H-17 59 43.3		h ABOUT 010KM		SPA EP' 17 08 49.0		APR 06 MAW EP	07 10 44.5
56.4N 154.5W		SPA IP' 05 17 08.0		APR 05 MIR EP	17 07 15.8	SPA IP	07 11 53.0
h ABOUT 025KM		APR 05 H-07 13 24.4		APR 05 SBA EP	17 28 12.0	MIR EP	07 12 25.0
SPA IP' 18 19 21.5		56.5N 154.7W				EpP	13 54.0
MIR EP' 18 19 27.0		h ABOUT 025KM				ES	21 22.0
MAW EP' 18 19 50.0		SPA IP' 07 33 01.5				BYR IP	07 12 51.0
APR 04 H-18 15 52.4						SBA IP	07 13 26.6
56.2N 154.5W						APR 06 H-08 21 24.8	
h ABOUT 025KM						57.4N 152.3W	
SPA IP' 18 35 29.0						h ABOUT 005KM	

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SPA IP'	08 41 07.0	SPA IP'	18 23 33.0	APR 07		APR 07	
APR 06		APR 06		H-08 57 08.2		H-19 28 24.7	
H-09 03 12.9		H-18 59 11.9		12.25 167.1E		55.7N 151.9W	
59.5N 145.3W		60.0N 147.1W		h ABOUT 260KM		h ABOUT 020KM	
h ABOUT 015KM		h ABOUT 033KM		BYR IP	09 08 23.0	SPA IP'	19 47 59.0
SPA IP'	09 23 02.5	SPA EP'	19 18 55.0	SPA IP	09 08 38.0	APR 07	
APR 06		APR 06		APR 07		MCQ IP	19 34 32.0
SBA EP	09 45 42.0	H-19 40 44.5		H-10 41 29.3		APR 07	
APR 06		56.0N 153.9W		17.9N 068.0W		BYR EP	22 37 47.0
H-10 42 36.3		h ABOUT 025KM		h ABOUT 098KM		APR 08	
59.9N 145.6W		SPA IP'	20 00 22.5	BYR I(P)	10 55 04.0	BYR IP	01 53 37.0
h ABOUT 015KM		APR 06		APR 07		APR 08	
SPA IP'	11 02 24.0	H-22 57 53.3		SPA IP	10 53 59.5	H-08 08 11.8	
APR 06		57.1N 153.3W		APR 07		06.8S 068.9E	
H-10 56 29.2		h ABOUT 015KM		H-13 18 18.9		h ABOUT 033KM	
59.8N 147.9W		SPA EP'	23 17 34.5	00.1N 123.2E		MAW EP	08 18 23.0
h ABOUT 033KM		APR 06		h ABOUT 150KM		MIR EP	08 18 29.0
SPA IP'	11 16 22.5	H-23 43 01.7		MIR EP	13 29 14.0	ES	15 25.0
APR 06		5.1S 154.0E		I	29 50.0	BYR EP	08 21 25.0
H-10 59 05.9		h ABOUT 116KM		MAW IP	13 30 09.1	APR 08	
56.3N 154.4W		MCQ EP	23 51 42.0	SBA IP	13 30 20.1	MIR EP	11 09 50.0
h ABOUT 033KM		SBA IP	23 54 16.4	SPA IP	13 31 03.5	APR 08	
SPA IP'	11 18 42.5	SPA IP	23 55 25.0	I	31 32.5	AIA EP	12 08 40.0
APR 06		I	55 51.0	I	41 14.0	APR 08	
WIL E(P)	13 36 14.0	APR 07		BYR IP	13 31 25.0	AIA EP	17 54 35.0
APR 06		H-01 43 28.7		I	32 03.0	APR 08	
H-13 45 10.5		58.5N 154.5W		APR 07		H-19 33 19.0	
52.5N 173.9W		h ABOUT 030KM		MCQ IP	13 30 02.0	59.6N 147.0W	
h ABOUT 115KM		SPA IP'	02 03 13.0	APR 07		h ABOUT 015KM	
SPA EP'	14 04 24.0	APR 07		H-14 22 30.1		BYR EP'	19 52 43.0
APR 06		H-04 35 18.6		06.8S 155.1E		I	55 10.0
H-15 12 28.7		58.3N 149.7W		h ABOUT 035KM		APR 08	
21.8S 068.8W		h ABOUT 015KM		BYR IP	14 34 50.0	MAW IP	19 48 17.1
h ABOUT 114KM		SPA IP'	04 55 02.5	SPA IP	14 34 53.5	APR 08	
BYR IP	15 22 39.0	APR 07		APR 07		H-19 50 16.8	
SPA IP	15 23 18.0	H-04 54 42.0		H-16 19 58.8		60.4N 145.9W	
APR 06		58.1N 157.4W		60.7N 148.0W		h ABOUT 010KM	
SPA EP	15 48 25.0	h ABOUT 033KM		h ABOUT 033KM		BYR EP'	20 09 40.0
APR 06		SPA IP'	05 14 26.0	SPA IP'	16 39 59.5	E	13 22.0
H-16 07 48.3		I	15 08.0	APR 07		APR 08	
5.4N 075.8W		APR 07		H-16 28 38.2		MAW I(P)	19 54 56.7
h ABOUT 054KM		H-06 01 59.7		59.6N 145.0W		APR 08	
BYR EP	16 20 34.0	60.0N 145.7W		h ABOUT 033KM		MAW IP	20 11 51.0
APR 06		h ABOUT 033KM		SPA IP'	16 48 22.5	APR 08	
H-17 35 50.6		SPA IP'	06 21 45.0	APR 07		MIR E	21 07 09.0
59.9N 147.8W		APR 07		H-18 02 24.7		APR 08	
h ABOUT 015KM		H-08 10 48.1		57.3N 151.1W		H-23 27 12.7	
SPA EP'	17 55 23.0	60.0N 146.9W		h ABOUT 020KM		37.8S 073.6W	
I	55 39.0	h ABOUT 033KM		SPA IP'	18 22 04.5	h ABOUT 033KM	
APR 06		SPA IP'	08 30 28.5	APR 09		BYR EP	23 35 33.0
H-18 03 56.4		APR 09		MAW E(P)	07 49 48.5	APR 09	
56.4N 151.8W		MAW E(P)	07 49 48.5				
h ABOUT 020KM							

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
APR 09 MIR EP	07 54 00.0	APR 10 MAW EP	22 05 01.0	BYR IP	06 12 20.0	BYR IP'	08 49 28.0
APR 09 BYR IP	08 45 11.5	APR 11 SBA EP	00 57 54.0	APR 12 H-09 34 44.1 56.6N 152.1W h ABOUT 020KM		E	52 36.0
APR 09 MAW EP	14 05 33.5	APR 11 H-01 04 30.2 29.0S 178.9W h ABOUT 302KM		MIR EP'	09 54 29.3	SBA EP'	08 49 38.0
APR 09 BYR EP	15 47 17.0	BYR IP	01 13 39.0	APR 12 H-11 10 54.8 33.9S 179.8W h ABOUT 089KM		APR 13 H-08 41 53.9 58.4N 151.2W h ABOUT 033KM	
APR 09 H-19 43 15.9 22.1S 069.8W h ABOUT 054KM		I	14 50.5	WIL IP	11 19 49.1	SPA IP'	09 01 34.0
BYR I(P)	19 53 44.0	MIR EP	01 14 26.0	I	20 00.0	APR 13 H-11 24 04.2 07.1S 129.2E h ABOUT 126KM	
APR 09 H-21 54 42.1 18.5S 071.5W h ABOUT 039KM		MAW IP	01 15 31.0	ES	26 57.0	MAW EP	11 35 31.0
BYR IP	22 05 23.0	APR 11 BYR EP	01 43 24.0	BYR IP	11 19 56.0	APR 13 H-11 26 52.1 06.9N 126.6E h ABOUT 110KM	
MAW EP	22 07 29.5	APR 11 H-11 36 00.5 60.4N 146.4W h ABOUT 015KM		EP	21 10.0	MIR EP	11 38 35.3
APR 09 AIA EP	23 18 53.0	BYR EP'	11 55 29.0	IS	24 52.0	APR 13 H-12 25 36.0 59.4N 143.9W h ABOUT 040KM	
I	19 44.0	APR 11 AIA EP	14 49 21.0	MIR IP	11 20 39.5	SPA IP'	12 45 20.0
APR 10 H-01 08 00.2 58.4N 150.6W h ABOUT 015KM		APR 11 MIR EP	16 05 08.0	ES	28 32.5	APR 13 MIR E	13 20 19.0
BYR EP'	01 27 20.0	APR 11 MCQ IP	20 22 22.0	APR 12 SBA IP	11 24 19.8	APR 13 H-14 05 00.0 57.6N 151.2W h ABOUT 025KM	
I	30 20.0	APR 12 H-01 24 31.2 56.6N 152.2W h ABOUT 022KM		APR 12 AIA EIP	12 21 51.0	APR 13 H-16 14 06.3 56.6N 152.1W h ABOUT 033KM	
MIR IP'	01 27 50.0	SBA EP'	01 43 40.0	APR 12 H-12 36 22.7 56.4N 151.4W h ABOUT 030KM		SPA EP'	14 24 23.0
APR 10 MAW E(P)	01 28 47.5	BYR EP'	01 43 44.0	MIR EP'	12 56 14.2	BYR EP'	14 24 26.0
APR 10 SBA IP	04 03 15.4	E	46 43.0	APR 12 H-12 48 02.2 56.6N 151.3W h ABOUT 033KM		SPA IP'	14 24 39.5
APR 10 BYR IP	06 20 09.5	WIL EP'	01 44 07.0	MIR EP'	13 07 45.7	I	24 47.0
APR 10 H-19 05 52.6 59.7N 148.2W h ABOUT 015KM		MIR EP'	01 44 16.0	APR 13 SBA EP	04 34 45.0	MIR EP'	14 24 46.5
BYR EP'	19 25 17.7	MAW EP'	01 44 29.0	APR 13 MIR E	05 59 40.0	APR 13 H-17 43 26.3 61.1N 147.4W h ABOUT 035KM	
MIR EP'	19 25 34.5	APR 12 MAW IP	03 32 15.1	APR 13 H-06 23 34.1 19.5S 177.7W h ABOUT 574KM		SPA IP'	16 33 41.5
APR 10 MAW IP	19 26 54.2	BYR IP	03 33 52.0	SBA EP	06 32 41.0	APR 13 H-18 14 21.4 59.2N 147.1W h ABOUT 020KM	
APR 10 H-21 44 06.7 60.1N 153.7W h ABOUT 010KM		APR 12 MIR EP	05 39 29.0	BYR IP	06 33 23.0	SPA IP'	18 03 13.5
BYR EP'	22 03 34.0	MAW I(P)	05 40 35.2	SPA IP	06 33 53.0	APR 13 H-08 30 03.6 45.3N 018.1E h ABOUT 033KM	
E	06 40.0	BYR IP	05 42 11.0	APR 13 H-08 30 03.6 45.3N 018.1E h ABOUT 033KM		SPA IP'	18 34 07.0
MIR EP'	22 04 00.4	APR 12 H-06 00 46.4 13.6S 166.0E h ABOUT 033KM		APR 13 H-08 30 03.6 45.3N 018.1E h ABOUT 033KM		SPA EP'	08 49 18.0
		SBA IP	06 11 20.4				
		MIR IP	06 12 00.7				

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
APR 13 H-19 16 48.6 57.3N 153.2W h ABOUT 023KM		SPA IP'	08 19 13.5	BYR EP' E	23 14 46.0 17 45.0	SPA EP	02 46 40.0
SPA IP' I	19 36 29.5 36 37.0	APR 14 MCQ IP	08 20 24.0	SPA IP'	23 15 11.5	APR 16 H-03 19 34.8 57.2N 151.4W h ABOUT 010KM	
APR 13 H-21 25 33.0 57.5N 153.9W h ABOUT 030KM		APR 14 H-08 58 41.9 17.5S 167.9E h ABOUT 033KM		APR 14 SPA IP	23 49 17.5	SPA IP' I	03 39 17.0 39 29.5
BYR EP'	21 44 49.0	BYR EP E E	09 09 50.0 28 53.0 31 23.0	APR 15 H-08 23 27.4 57.4N 149.5W h ABOUT 015KM		APR 16 H-07 37 35.8 59.6N 146.9W h ABOUT 033KM	
APR 13 MIR EP	21 30 16.0	SPA IP	09 10 06.5	SPA EP'	08 43 09.0	SPA EP'	07 57 21.0
APR 13 H-21 43 16.5 59.4N 143.1W h ABOUT 033KM		APR 14 SBA EP	09 08 21.0	APR 15 WIL EP	09 20 28.0	APR 16 WIL EP E	11 18 16.0 19 13.0
WIL EP'	22 02 59.0	APR 14 SPA IP	09 31 40.0	APR 15 H-14 19 24.5 58.6N 149.9W h ABOUT 033KM		APR 16 H-12 11 15.7 58.2N 152.5W h ABOUT 033KM	
SPA IP'	22 03 01.5	APR 14 MCQ IP	11 20 53.0	SPA EP'	14 39 08.0	SPA EP'	12 30 56.0
APR 13 MAW EP	21 46 21.5	APR 14 H-15 55 10.9 61.3N 147.3W h ABOUT 030KM		APR 15 H-15 30 47.1 56.5N 154.4W h ABOUT 035KM		APR 16 SPA EP	12 15 05.0
APR 13 MIR E	23 10 05.0	BYR EP'	16 14 35.0	BYR EP' E E	15 50 00.0 52 54.0 53 38.0	APR 16 H-13 43 08.9 52.1N 169.4W h ABOUT 033KM	
APR 14 WIL E(P)	01 19 16.0	SPA IP'	16 15 00.0	SPA IP' I	15 50 23.5 54 02.0	SPA EP'	14 02 31.0
APR 14 BYR IP	04 56 58.0	APR 14 H-16 05 46.1 59.9N 146.0W h ABOUT 033KM		APR 15 MAW EP	15 51 22.0	MAW EP'	14 03 05.0
APR 14 H-05 01 59.1 41.0S 080.8E h ABOUT 033KM		SPA IP'	16 25 32.0	APR 15 BYR E	16 02 10.0	APR 16 H-14 05 14.9 07.0S 155.7E h ABOUT 078KM	
MIR EP	05 07 37.0	APR 14 H-16 18 54.0 8.6S 117.3E h ABOUT 058KM		APR 15 SPA IP	16 10 41.5	WIL E(P)	14 16 12.0
MAW EP	05 07 51.0	SPA IP	16 31 07.0	APR 15 SBA EP	16 26 02.0	SBA EP	14 16 28.0
SPA IP	05 10 44.5	BYR E(P)	16 31 35.0	APR 15 H-16 52 26.0 37.7S 177.5E h ABOUT 041KM		BYR IP IP	14 17 30.0 17 42.0
APR 14 MCQ IP	06 00 34.0	APR 14 H-16 59 30.1 61.4N 150.8W h ABOUT 035KM		SPA IP	17 01 37.5	SPA IP	14 17 33.5
APR 14 H-06 07 20.3 20.8S 069.1W h ABOUT 116KM		SPA IP'	17 19 19.5	APR 15 SPA IP	17 54 34.0	MAW IP	14 17 41.8
BYR IP	06 17 38.0	APR 14 BYR P E	17 05 27.0 18 53.0	APR 15 H-20 30 35.9 56.8N 154.2W h ABOUT 020KM		APR 16 H-14 21 36.2 57.6N 150.9W h ABOUT 033KM	
APR 14 H-06 19 38.2 60.2N 146.8W h ABOUT 033KM		APR 14 H-21 33 37.3 61.0N 147.3W h ABOUT 040KM		SPA EP'	20 50 14.0	SPA IP'	14 41 16.0
SPA IP'	06 39 23.5	SPA IP'	21 53 23.0	APR 15 SPA EP' I	22 19 13.0 20 14.5	APR 16 H-14 31 16.3 61.4N 149.2W h ABOUT 033KM	
APR 14 WIL E(P)	07 19 16.0	APR 14 H-22 55 31.3 58.0N 152.6W h ABOUT 030KM		APR 16 H-02 35 48.9 21.5S 170.5E h ABOUT 110KM		SPA EP'	14 51 05.0
APR 14 H-07 59 25.4 61.4N 147.0W h ABOUT 033KM						APR 16 SBA E	14 47 41.0

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
APR 16		APR 17		APR 18		SPA EP'	19 44 58.0
H-17 08 27.2		H-09 09 07.8		H-03 06 43.5		APR 18	
59.5N 147.8W		57.7N 151.4W		56.7N 148.9W		H-20 08 19.7	
h ABOUT 033KM		h ABOUT 020KM		h ABOUT 033KM		56.1N 153.7W	
SPA EP'	17 28 03.0	BYR EP'	09 28 22.0	SPA IP'	03 26 21.5	h ABOUT 015KM	
		E	39 50.0	APR 18		SPA IP'	20 27 57.5
APR 16		SPA IP'	09 28 49.5	H-05 27 44.6		APR 18	
H-19 26 57.4		APR 17		45.5N 151.1E		SPA EP	20 25 51.0
56.4N 152.9W		MAW E(P)	10 01 55.0	h ABOUT 033KM		I	35 59.0
h ABOUT 030KM		APR 17		SPA EP'	05 47 03.0	APR 18	
SPA IP'	19 46 33.5	APR 17		BYR EP'	05 47 09.0	BYR EP	20 39 09.0
APR 16		SPA EP	10 19 00.0	APR 18		E	40 26.0
SBA E(P)	19 49 47.0	APR 17		SPA IP	07 03 44.5	APR 18	
WIL EP'	19 49 50.0	SPA EP	10 55 50.0	APR 18		AIA EP	20 51 02.0
APR 16		APR 17		H-07 16 36.4		APR 18	
AIA EP	22 02 08.0	H-11 48 44.7		59.1N 147.7W		SBA EP	21 31 08.0
I	03 56.0	60.0N 145.5W		h ABOUT 033KM		APR 19	
APR 16		h ABOUT 033KM		SPA IP'	07 36 19.5	SBA EP	03 01 27.0
SPA IP	22 35 47.5	SPA IP'	12 08 29.5	APR 18		APR 19	
APR 17		APR 17		SPA EP	07 43 38.0	H-03 44 55.2	
H-04 16 59.4		H-12 05 59.9		APR 18		55.1S 128.5W	
59.6N 144.7W		60.4N 145.0W		H-07 44 03.4		h ABOUT 033KM	
h ABOUT 033KM		h ABOUT 033KM		60.2N 147.6W		SBA E	03 51 15.0
SPA IP'	04 36 44.0	SPA EP'	12 25 45.0	h ABOUT 033KM		APR 19	
APR 17		APR 17		WIL IP'	08 03 48.0	SPA IP	03 51 05.0
SPA IP	04 22 22.5	SPA EP	13 35 40.0	I	03 59.5	APR 19	
APR 17		BYR EP	13 35 45.0	SPA IP'	08 03 49.5	H-03 56 13.7	
H-04 44 37.3		APR 17		APR 18		15.4S 173.7W	
22.5S 010.8W		H-14 44 20.8		H-07 45 47.6		h ABOUT 051KM	
h ABOUT 033KM		16.2S 167.7E		56.5N 153.0W		SBA EP	04 06 40.2
MAW EP	04 55 04.5	h ABOUT 065KM		h ABOUT 033KM		BYR IP	04 07 17.0
APR 17		BYR EP	14 55 35.0	SPA IP'	08 05 23.5	SPA IP	04 07 49.5
H-04 49 30.5		APR 17		APR 18		MAW IP	04 08 58.0
56.4N 152.9W		H-20 52 16.1		H-07 47 03.3		APR 19	
h ABOUT 025KM		24.8S 070.3W		57.4N 149.8W		H-05 13 01.6	
BYR EP'	05 08 50.0	h ABOUT 065KM		h ABOUT 030KM		41.7S 083.9W	
SPA IP'	05 09 07.7	BYR EP	21 02 11.0	SPA IP'	08 06 42.0	h ABOUT 033KM	
APR 17		MAW IP	21 04 27.1	APR 18		BYR IP	05 20 40.0
SBA EP	05 49 42.0	APR 18		H-15 14 42.9		MAW IP	05 24 00.0
APR 17		H-00 13 24.4		57.4N 152.3W		APR 19	
H-06 00 00.2		59.6N 144.8W		h ABOUT 033KM		SPA IP	05 21 22.5
6.6S 154.9E		h ABOUT 033KM		SPA IP'	15 34 21.0	APR 19	
h ABOUT 085KM		SPA IP'	00 33 07.5	APR 18		H-06 34 14.4	
WIL EP	06 10 46.0	APR 18		SBA EP	16 01 14.0	60.6N 147.4W	
SBA EP	06 11 14.0	H-01 32 18.4		APR 18		h ABOUT 015KM	
BYR IP	06 12 17.0	56.4N 152.8W		AIA EP	18 39 37.0	SPA IP'	06 54 03.0
SPA IP	06 12 19.5	h ABOUT 033KM		APR 18		APR 19	
MAW IP	06 12 26.0	SPA EP'	01 51 54.0	SPA EP	19 01 07.0	BYR IP	06 50 17.0
ES	22 45.0	APR 18		APR 18		APR 19	
APR 17		SPA EP	02 05 51.0	H-19 25 23.5		WIL EP	08 03 48.0
WIL EP	07 10 46.0	APR 18		58.9N 148.7W		I	03 59.5
		SPA I	02 35 59.0	h ABOUT 033KM			

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
APR 19		APR 20		APR 20		APR 22	
H-08 35 31.6		H-03 34 45.1		H-16 39 30.0		MCO EP	17 06 22.0
17.7S 167.8E		59.7N 144.6W		59.9N 145.1W		ES	06 29.0
h ABOUT 015KM		h ABOUT 030KM		h ABOUT 010KM			
BYR EP	08 46 47.0	SPA IP'	03 54 30.0	SPA EP'	16 59 18.0	APR 22	
SPA IP	08 46 58.0	APR 20		APR 20		H-19 37 53.2	
APR 19		H-08 07 54.8		H-20 31 23.0		16.1S 173.4W	
AIA EP	12 05 22.0	60.2N 147.0W		04.7S 143.1E		h ABOUT 033KM	
APR 19		h ABOUT 015KM		h ABOUT 098KM		BYR IP	19 48 51.0
H-14 12 21.9		SPA EP'	08 27 41.0	SPA EP	20 43 49.0	SPA IP	19 49 25.0
60.5S 058.3W		APR 20		APR 20		APR 22	
h ABOUT 033KM		H-10 51 13.3		SPA IP	21 42 36.0	H-20 00 22.8	
AIA IP	14 13 43.0	22.9S 069.2W		APR 20		15.5S 167.5E	
ES	17 07.0	h ABOUT 078KM		SPA EP	22 27 52.0	h ABOUT 123KM	
BYR IP	14 17 55.0	BYR IP	11 01 21.0	APR 21		SBA IP	20 10 34.3
ES	23 00.0	E	01 57.0	SBA EP	02 12 48.0	WIL EP	20 10 37.0
SPA IP	14 18 23.0	SPA IP	11 02 01.0	APR 21		BYR IP	20 11 34.0
SBA EP	14 19 47.0	I	02 26.5	H-05 01 35.7		E	39 17.0
WIL EP	14 21 41.0	APR 20		61.5N 147.4W		SPA IP	20 11 49.5
ES	29 06.0	H-11 14 48.9		h ABOUT 040KM		MAW IP	20 12 26.4
APR 19		56.7N 148.1W		BYR EP'	05 20 59.0	APR 22	
SBA EP	16 05 08.0	h ABOUT 030KM		SPA IP'	05 21 24.0	H-20 29 20.3	
APR 19		SPA EP'	11 34 23.0	WIL EP'	05 21 25.0	58.6N 150.0W	
AIA EP	18 35 18.0	APR 20		MIR EP'	05 21 30.5	h ABOUT 033KM	
APR 19		H-11 56 41.6		APR 21		SPA IP'	20 48 59.5
H-18 51 10.9		61.4N 147.3W		H-07 01 52.8		APR 22	
h ABOUT 033KM		h ABOUT 030KM		04.8S 142.8E		SBA EP	22 05 59.0
SPA IP'	19 10 56.5	SBA EP'	12 16 05.0	h ABOUT 062KM		APR 22	
APR 19		BYR EP'	12 16 05.0	SPA EP	07 14 23.0	MIR IP	22 11 20.8
H-19 41 31.3		WIL EP'	12 16 22.0	BYR EP	07 14 31.0	APR 22	
13.8S 075.3W		I	16 34.2	APR 21		H-23 04 13.8	
h ABOUT 096KM		SPA IP'	12 16 31.0	SPA IP	10 13 54.0	13.2S 167.1E	
BYR IP	19 52 30.0	APR 20		APR 21		h ABOUT 218KM	
SPA IP	19 53 11.5	H-13 43 40.5		SPA EP	10 32 51.0	MIR E(P)	23 15 07.5
I	53 46.5	07.3S 128.1E		APR 21		BYR IP	23 15 27.0
APR 19		h ABOUT 128KM		AIA EP	17 50 31.0	MAW IP	23 16 16.3
SPA IP	21 06 26.5	SPA IP	13 55 50.5	APR 21		APR 23	
APR 19		APR 20		MIR EP	17 59 04.5	SPA IP	00 15 42.5
SBA EP	21 22 34.0	SPA IP	15 40 14.5	APR 22		MAW E(P)	01 19 05.0
APR 19		APR 20		MAW E(P)	03 37 43.5	APR 23	
SBA EP	21 23 24.0	H-15 40 28.0		APR 22		H-01 31 40.3	
APR 20		61.5N 147.3W		H-09 46 54.2		06.7S 155.0E	
SPA EP	00 23 12.0	h ABOUT 030KM		56.1N 034.9W		h ABOUT 072KM	
APR 20		BYR EP'	15 59 52.0	h ABOUT 033KM		MIR EP	01 43 06.0
SPA EP	00 52 53.0	SPA IP'	16 00 16.5	BYR EP'	10 06 28.0	BYR IP	01 43 57.5
APR 20		APR 20		SPA EP'	10 06 29.0	IPP	44 06.5
SPA EP	02 01 24.0	H-16 18 26.4		APR 22		SPA IP	01 44 00.5
APR 20		60.7N 145.3W		SPA EP	11 19 18.0	MAW IP	01 44 07.2
SPA EP		h ABOUT 015KM		APR 22			
		BYR EP'	16 37 55.0	SPA IP	15 10 11.0		
		SPA IP'	16 38 16.5				

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
APR 23 H-03 32 50.3 5.3S 134.0E h ABOUT 033KM		BYR EP	15 03 24.0	SBA IP E	06 07 34.3 17 06.0	SPA EP	03 57 50.0
MCQ IP	03 42 06.5	APR 23 MAW EP	15 32 11.5	MAW IP ES	06 08 20.2 18 24.0	APR 25 H-05 36 42.2 06.7S 155.0E h ABOUT 072KM	
WIL IP ES	03 43 17.1 51 43.0	APR 23 MIR EP	15 56 28.5	SPA IP	06 08 34.0	BYR IP	05 48 59.0
MIR IP IS	03 43 44.5 52 37.0	APR 23 MAW IP	16 00 37.9	BYR IP IS	06 08 41.0 19 10.0	SPA IP	05 49 02.5
SBA IP	03 44 27.7	APR 23 H-18 58 52.5 35.2S 069.5W h ABOUT 033KM		APR 24 H-08 57 09.8 58.7N 149.5W h ABOUT 033KM		APR 25 SPA EP	06 42 05.0
MAW IP IS	03 44 47.1 54 38.5	SPA IP	19 08 19.5	SPA EP'	09 16 52.0	APR 25 MIR EP	07 31 50.0
SPA IP I I	03 45 22.0 46 02.0 46 25.5	MAW IP	19 10 10.8	APR 24 H-11 13 23.1 23.1S 175.9W h ABOUT 033KM		APR 25 H-11 46 14.0 15.6S 070.4W h ABOUT 215KM	
BYR IP EP ES	03 45 38.0 55 38.0 56 20.0	APR 23 MAW IP	19 18 01.4	SPA IP	11 24 13.0	SPA IP	11 57 31.0
APR 23 WIL E(P)	05 48 19.0	APR 23 MCQ EP	20 45 14.0	APR 24 SBA EP	14 11 20.0	APR 25 H-18 11 24.4 60.7N 145.3W h ABOUT 033KM	
MIR IP	05 48 59.0	APR 23 SPA IP I	20 55 28.0 56 13.0	APR 24 H-14 40 28.3 13.3N 088.8W h ABOUT 158KM		SPA EP'	18 31 04.0
APR 23 H-07 03 21.6 60.8S 019.8W h ABOUT 033KM		MAW EP	20 56 32.5	MAW IP' I	14 59 08.5 15 02 32.9	APR 25 H-18 37 58.1 24.4N 125.3E h ABOUT 033KM	
SPA IP I E	07 09 23.0 09 58.0 14 56.0	APR 23 MCQ EP	20 59 54.0	APR 24 SBA EP	15 01 13.0	MIR EP	18 51 12.8
BYR IP I	07 09 50.5 10 47.0	APR 23 MCQ EP	21 20 32.0	APR 24 SPA EP	14 58 28.0	SPA EP'	18 56 34.0
MAW IP	07 10 04.0	APR 24 H-00 42 33.9 52.7N 160.9E h ABOUT 033KM		SBA EP	15 01 13.0	BYR EP'	18 56 45.0
MIR EP	07 11 24.3	SPA EP'	01 01 57.0	APR 24 MIR EP	18 16 06.0	APR 25 WIL E(P)	22 55 24.0
APR 23 H-10 32 47.9 6.6S 155.1E h ABOUT 060KM		APR 24 MAW IP	02 26 49.1	APR 24 H-19 50 22.3 51.7N 176.9W h ABOUT 050KM		APR 26 MIR EP	07 29 23.0
BYR IP	10 45 06.5	APR 24 H-03 51 05.0 59.5N 144.5W h ABOUT 033KM		SPA EP'	20 09 43.0	APR 26 SPA EP	09 59 06.0
SPA IP	10 45 09.5	SPA IP'	04 10 49.5	MAW IP'	20 10 01.0	APR 26 SPA IP	12 22 01.0
MAW IP	10 45 16.3	APR 24 H-04 23 05.1 56.6N 151.7W h ABOUT 020KM		APR 24 SPA EP	20 20 16.0	APR 26 H-13 59 27.7 05.8S 105.0E h ABOUT 090KM	
APR 23 H-11 25 54.8 60.9N 144.6W h ABOUT 033KM		APR 24 SPA EP'	04 42 42.0	APR 24 SPA EP'	20 29 05.0	MIR EP	14 09 39.5
SPA EP'	11 45 42.0	APR 24 H-05 56 10.1 5.1S 144.2E h ABOUT 106KM		MAW EP'	20 29 51.0	MAW I(P)	14 10 24.5
APR 23 H-14 56 30.9 57.3N 151.9W h ABOUT 025KM		APR 24 H-05 56 10.1 5.1S 144.2E h ABOUT 106KM		APR 24 SBA EP	22 42 37.0	SBA EP	14 11 20.0
SPA IP'	15 16 10.5	MCQ IP	06 05 01.0	APR 24 WIL E(P)	22 55 24.0	SPA IP	14 11 48.0
APR 23 MIR EP	15 01 16.0	WIL EP ES	06 06 44.0 15 21.0	APR 25 MIR EP	03 29 15.0	APR 26 H-14 52 07.6 20.6S 178.0W h ABOUT 490KM	
		MIR EP IS	06 07 16.2 16 22.2	APR 25 H-03 48 35.8 37.3S 094.5W h ABOUT 033KM		SBA EP	15 01 13.0

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
WIL EP	15 01 51.0	SPA IP	06 50 32.0	SPA IP	15 07 21.5	SPA IP	05 59 26.0
SPA IP	15 02 26.5	I	51 12.0	E	12 27.0	APR 29	
I	04 10.0	I	53 20.5	APR 28		H-07 21 30.2	
E	10 51.0	BYR EP	06 50 46.0	H-15 11 30.4		07.2S 155.7E	
MIR EP	15 02 34.0	ES	58 23.0	12.3S 166.1E		h ABOUT 078KM	
MAW IP	15 03 34.5	MAW IP	06 51 28.0	h ABOUT 072KM		SPA IP	07 33 48.0
APR 26		APR 27		SPA EP	15 23 21.0	APR 29	
MAW IP	16 03 34.5	SPA IP	06 44 45.5	APR 28		MAW IP	08 13 52.0
APR 26		APR 27		BYR IP	17 43 38.0	I	19 32.5
MIR EP	18 46 43.5	SPA IP	06 45 44.5	I _{PP}	44 47.5	APR 29	
APR 26		APR 27		APR 28		MAW IP	16 16 01.0
H-22 17 02.2		SPA EP	17 25 13.0	BYR IP	20 46 52.5	APR 29	
28.1S 178.2W		APR 27		APR 28		H-17 37 43.1	
h ABOUT 037KM		SPA EP	17 47 45.0	SBA EP	21 01 45.0	58.2S 015.7W	
SPA EP	22 27 21.0	APR 27		APR 28		h ABOUT 033KM	
APR 26		H-19 09 39.0		BYR IP	21 32 42.0	SPA IP	17 44 06.0
H-22 34 48.6		60.5N 146.5W		APR 28		MAW IP	17 44 29.5
60.4S 024.6W		h ABOUT 033KM		SPA IP	22 43 15.5	SBA EP	17 45 49.0
h ABOUT 033KM		SPA IP'	19 29 25.5	APR 28		APR 29	
SPA IP	22 40 53.0	APR 27		H-22 56 18.8		SPA IP	18 28 23.5
BYR IP	22 41 13.0	H-20 25 04.1		56.7N 152.0W		APR 29	
MAW IP	22 41 47.7	59.8N 148.4W		h ABOUT 033KM		SPA EP	19 05 25.0
SBA EP	22 42 37.0	h ABOUT 033KM		SPA EP'	23 15 56.0	APR 29	
MIR EP	22 43 02.0	SPA EP'	20 44 51.0	APR 29		SPA IP	19 18 16.5
ES	49 48.0	APR 28		H-00 44 43.8		APR 29	
WIL EP	22 43 36.0	SPA IP	00 42 17.0	32.4S 071.1W		SPA EP	21 32 25.0
APR 27		APR 28		h ABOUT 079KM		APR 30	
H-01 37 12.1		BYR IP	00 53 42.5	SPA IP	00 54 29.0	AIA IP	01 24 52.0
.3N 098.1E		APR 28		I	55 01.0	APR 30	
h ABOUT 033KM		BYR IP	04 20 04.0	APR 29		H-03 41 42.3	
SPA EP	01 50 12.0	E	40 05.0	H-02 11 36.6		15.5S 174.7W	
APR 27		APR 28		h ABOUT 033KM		h ABOUT 224KM	
H-03 53 47.1		SPA IP	10 47 29.5	SPA EP'	02 30 27.0	SPA IP	03 52 58.5
57.4N 152.4W		APR 28		APR 29		APR 30	
h ABOUT 020KM		H-12 21 25.6		MIR EP	03 51 07.0	H-03 49 57.6	
SPA IP'	04 13 26.9	59.0N 138.7W		APR 29		58.9N 139.0W	
APR 27		h ABOUT 033KM		H-03 52 43.1		h ABOUT 020KM	
SBA E	06 39 13.0	SPA IP'	12 41 08.5	60.0N 147.4W		SPA IP'	04 09 42.5
APR 27		APR 28		h ABOUT 033KM		APR 30	
H-06 44 25.1		H-13 34 10.4		SPA EP'	04 12 29.0	H-04 01 26.1	
60.1S 151.0E		57.6N 150.0W		APR 29		59.0N 137.8W	
h ABOUT 033KM		h ABOUT 033KM		SPA IP	04 20 22.5	h ABOUT 033KM	
MCO EP	06 46 06.5	SPA EP'	13 53 51.0	APR 29		SPA IP'	04 21 06.6
ES	48 45.0	APR 28		H-04 21 06.7		APR 30	
SBA EP	06 48 38.0	SPA EP	14 14 28.0	39.3N 023.7E		H-04 49 48.0	
E	52 24.0	APR 28		h ABOUT 033KM		19.7S 177.8W	
WIL EP	06 48 43.0	APR 28		SPA IP'	04 40 09.0	h ABOUT 339KM	
ES	52 04.0	H-14 55 25.5		I	40 32.5	SPA IP	05 00 27.0
MIR EP	06 49 54.0	11.9S 166.2E		APR 29		APR 30	
ES	54 32.0	h ABOUT 042KM		H-05 47 44.5		H-05 31 51.1	
BYR IP	15 07 07.0	BYR IP	15 07 07.0	12.8S 167.1E		56.8N 152.7W	
				h ABOUT 150KM		h ABOUT 033KM	

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SPA EP'	05 51 26.0	SPA EP'	17 46 14.0	MAY 01		MAY 02	
APR 30		I	46 39.5	SPA IP	08 22 48.0	H-10 56 00.2	
WIL EP	05 49 18.0	APR 30		I	22 57.5	14.9S 167.3E	
APR 30		SPA EP	18 25 21.0	MAY 01		h ABOUT 108KM	
H-08 06 23.5		APR 30		SPA IP	08 34 51.0	BYR IP	11 07 17.0
56.2S 027.6W		H-19 03 08.0		MAY 01		SPA IP	11 07 32.5
h ABOUT 088KM		11.8S 166.0E		SPA EP	09 57 56.0	MAY 02	
SPA IP	08 13 00.5	h ABOUT 040KM		MAY 01		SPA IP	11 31 40.5
I	13 09.0	SPA EP	19 15 03.0	SBA EP	12 43 43.0	MAY 02	
I	13 22.0	APR 30		MAY 01		SBA EP	13 15 48.0
BYR IP	08 13 14.0	H-21 37 04.3		H-14 39 58.2		MAY 02	
I	19 14.0	12.5S 165.1E		60.4N 145.1W		H-16 11 00.2	
MAW IP	08 13 52.0	h ABOUT 033KM		h ABOUT 033KM		45.5N 150.3E	
I	19 32.5	SPA E(P)	21 48 51.0	SPA IP'	14 59 44.0	h ABOUT 035KM	
MIR IP	08 15 06.5	APR 30		MAY 01		MIR EP'	16 29 47.6
APR 30		SBA EP	21 52 34.0	SPA IP	15 46 15.0	EPP	32 29.2
H-10 49 13.5		MAY 01		I	46 58.0	SBA EP'	16 29 53.0
24.4S 071.6W		SPA IP	00 29 23.0	MAY 01		SPA EP'	16 30 04.0
h ABOUT 033KM		MAY 01		SPA EP	16 02 02.0	I	30 16.5
BYR IP	10 59 08.0	SPA IP	00 51 56.5	MAY 01		I	33 49.5
SPA IP	10 59 51.0	MAY 01		SPA EP	16 06 04.0	BYR EP'	16 30 06.0
APR 30		SPA IP	01 19 38.0	MAY 01		I	33 41.0
H-11 50 47.4		MAY 01		SPA EP	20 39 40.0	MAW IP'	16 30 08.0
61.3N 147.0W		H-03 13 03.5		MAY 01		I	33 28.0
h ABOUT 033KM		57.4N 150.0W		SPA EP	20 41 25.0	MAY 02	
SPA IP'	12 10 36.0	h ABOUT 030KM		I	41 35.0	WIL EP	16 30 39.0
APR 30		SPA IP'	03 32 20.5	MAY 01		ES	40 19.0
H-16 03 31.4		MIR EP'	03 32 48.5	H-21 24 22.7		MAY 02	
4.6S 153.2E		MAY 01		06.4S 127.3E		SPA IP	17 13 43.0
h ABOUT 078KM		H-03 40 36.2		h ABOUT 472KM		I	13 56.0
WIL E(P)	16 14 43.5	59.7N 144.1W		SPA IP	21 36 01.0	MAY 02	
E	14 56.0	h ABOUT 020KM		MAY 01		H-21 01 44.8	
ES	23 23.0	SPA IP'	04 00 23.0	H-23 47 35.3		08.6S 110.4E	
MIR EP	16 15 02.0	MAY 01		32.3S 179.5W		h ABOUT 102KM	
BYR IP	16 16 01.0	H-06 01 55.4		h ABOUT 033KM		SPA IP	21 13 51.0
EPP	16 20.0	60.5N 145.6W		BYR EP	23 56 53.0	MAY 03	
ES	26 20.0	h ABOUT 020KM		SPA IP	23 57 24.5	MAW I(P)	03 21 49.3
MAW IP	16 16 01.0	BYR EP'	06 21 19.0	MAY 02		MAY 03	
SPA IP	16 16 02.0	SPA EP'	06 21 35.0	H-05 15 51.1		H-04 43 12.4	
APR 30		I	21 42.5	04.0S 102.8E		17.9S 178.3W	
H-16 25 30.6		I	22 15.5	h ABOUT 106KM		h ABOUT 569KM	
59.0N 148.6W		MAY 01		SPA EP	05 28 20.0	SPA IP	04 53 41.0
h ABOUT 033KM		H-07 08 12.2		BYR EP	05 28 57.0	MAY 03	
SPA IP'	16 45 09.0	57.5N 150.6W		MAY 02		SBA EP	06 23 02.0
MIR IP'	16 45 20.4	h ABOUT 020KM		WIL EP	06 58 42.0	MAY 03	
ES	24 30.5	SPA IP'	07 27 56.5	MAY 02		H-07 32 56.3	
APR 30		MAY 01		H-10 02 42.4		56.5N 154.8W	
SBA EP	16 29 58.0	H-07 44 44.9		59.4N 146.5W		h ABOUT 030KM	
APR 30		59.7N 147.1W		h ABOUT 033KM		SPA IP'	07 52 32.0
H-17 26 29.9		h ABOUT 035KM		SPA IP'	10 22 26.5	I	52 41.0
60.1N 142.2W		SPA IP'	08 04 30.0	MAY 02		I	52 49.5
h ABOUT 033KM		MAY 02		MIR EP	10 34 46.8		

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAY 03		MAY 04		SPA IP	03 38 12.5	SPA IP'	23 00 38.0
SPA FP	07 56 08.0	SPA IP	12 19 28.5	MAY 05		MAY 06	
I	56 21.0	I	19 37.5	H-04 05 08.3		H-00 02 06.8	
MAY 03		MAY 04		59.7N 148.9W		08.45 121.7E	
H-07 5B 44.6		SPA IP	15 50 33.0	SPA IP	12 05.5	h ABOUT 033KM	
58.1N 151.6W		MAY 04		h ABOUT 033KM		BYR IP	00 14 49.0
h ABOUT 033KM		WIL EP	16 26 06.0	SPA IP'	04 24 55.0	MAY 06	
SPA EP'	08 18 23.0	MAY 04		MAY 05		H-04 27 02.4	
MAY 03		H-17 05 19.8		H-08 01 48.4		60.75 025.2W	
WIL EP	11 38 54.0	55.8S 004.4W		45.5N 150.1E		h ABOUT 033KM	
MAY 03		h ABOUT 033KM		h ABOUT 040KM		AIA EP	04 31 15.0
H-13 31 14.1		MAW IP	17 11 46.0	BYR EP'	08 21 04.0	BYR IP	04 33 23.5
23.9S 066.6W		ES	16 03.0	E	24 26.0	MAW IP	04 33 58.7
h ABOUT 210KM		SPA IP	17 12 05.5	SPA IP'	08 21 05.0	MIR E(P)	04 35 26.0
SPA IP	13 41 41.0	SBA E(P)	17 13 46.0	MAY 05		ES	41 51.7
MAW FP	13 43 09.0	WIL IP	17 14 00.0	H-08 44 59.1		WIL EP	04 35 50.0
MAY 03		ES	21 15.0	09.0S 156.6E		ES	43 00.0
SPA EP	13 34 13.0	MAY 04		h ABOUT 033KM		MAY 06	
I	35 55.0	SPA IP	17 09 55.5	BYR EP	08 57 08.0	H-08 10 47.5	
MAY 03		SBA E	17 11 41.0	SPA IP	08 57 12.5	11.1S 162.2E	
MAW I	14 20 32.0	MAY 04		MAY 05		h ABOUT 040KM	
SPA IP	14 34 21.0	SPA IP	19 32 25.0	WIL EP	10 50 07.0	WIL EP	08 21 25.0
MAY 03		MAY 04		MAY 05		ES	30 08.0
H-21 31 53.2		SPA EP	20 50 03.0	BYR IP	11 03 26.0	MIR EP	08 22 03.5
59.0N 148.5W		SPA IP	20 52 23.5	MAY 05		ES	31 25.9
h ABOUT 025KM		MAY 04		H-11 12 52.4		BYR IP	08 22 38.5
SPA IP'	21 51 38.0	SPA IP	21 19 45.0	55.8S 004.3W		E(S)	32 33.0
MAY 03		SBA EP	21 22 30.0	h ABOUT 033KM		MAY 06	
H-21 39 30.4		MAY 04		MAW IP	11 19 18.8	AIA IP	08 45 12.0
61.0N 145.8W		SPA IP	22 43 17.5	SPA IP	11 19 36.0	MAY 06	
h ABOUT 033KM		MAY 05		I	19 47.0	BYR IP	08 53 32.0
SPA EP'	21 59 13.0	H-00 21 56.9		BYR IP	11 20 22.5	MAY 06	
MAY 04		60.7N 147.6W		SBA EP	11 21 18.0	AIA IP	11 15 41.0
SPA IP	00 34 04.0	h ABOUT 033KM		WIL EP	11 21 36.0	I	16 44.0
MAY 04		SPA EP'	00 41 47.0	MAY 05		MAY 06	
SPA EP	02 49 08.0	MAY 05		WIL EP	16 26 06.0	H-15 26 35.5	
MAY 04		H-02 04 17.9		SPA IP	16 27 29.0	56.7N 152.1W	
SBA EP	04 22 12.0	57.4N 149.5W		I	30 39.0	h ABOUT 015KM	
MAY 04		h ABOUT 033KM		BYR IP	16 27 39.0	MIR IP'	15 46 21.4
SPA IP	04 38 43.0	SPA IP'	02 23 58.0	MAY 05		MAY 06	
MAY 04		MAY 05		H-18 03 30.0		SBA EP	16 53 19.0
H-09 00 10.1		H-02 32 42.3		39.0S 175.2E		MAY 06	
61.3N 141.8W		60.4N 147.1W		h ABOUT 170KM		SBA EP	20 40 00.0
h ABOUT 033KM		h ABOUT 015KM		SPA IP	18 12 16.0	BYR EP	20 40 56.0
SPA EP'	09 19 55.0	SPA IP'	02 52 22.0	MAY 05		MIR EP	20 41 47.8
MAY 04		MAY 05		AIA IP	21 45 54.0	MAY 07	
SPA IP	10 09 44.5	H-03 26 46.1		I	46 13.0	H-00 15 48.9	
MAY 04		17.7S 068.9W		MAY 05		60.1N 147.4W	
WIL EP	10 50 07.0	h ABOUT 033KM		H-22 41 07.1		h ABOUT 033KM	
MAY 04		BYR IP	03 37 33.0	61.8N 156.7W		SPA IP'	00 35 37.0
WIL EP	11 21 36.0			h ABOUT 033KM			

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
MAY 07 H-00 34 57.2 18.2S 176.6W h ABOUT 300KM		SBA IP'	08 17 00.5	BYR IP'	20 32 00.0	MAY 08	
		MAW IP'	08 17 05.1	EP	32 10.0	H-09 23 33.1	
		SPA EP'	08 17 07.0	E	35 16.0	59.4N 145.4W	
BYR IP	00 45 17.0	I	17 20.5			h ABOUT 020KM	
SPA IP	00 45 48.0	ES	20 48.0	MAY 07		SPA IP'	09 43 19.5
I	46 01.5	BYR IP'	08 17 24.0	H-23 12 21.3		MAY 08	
I	47 02.0	EP	17 46.0	32.9S 178.3W		MAW EP	10 02 34.2
MAY 07		E	20 53.0	h ABOUT 033KM		MAY 08	
SPA IP	01 37 27.0	MIR E(P')	08 17 33.0	BYR EP	23 21 35.0	MAW EP	10 23 42.0
MAY 07		SBA E(P')	08 18 12.0	SPA IP	23 22 13.0	MAY 08	
BYR IP	02 57 00.0	MAY 07		I	22 31.0	SPA EP	10 45 47.0
MAY 07		MAW E(P)	08 27 05.0	MAY 08		MAY 08	
H-03 49 53.8		MAY 07		AIA EP	01 21 24.0	SPA IP	14 35 05.0
4.6S 153.5E		MAW E(P)	08 30 57.5	MAY 08		BYR IP	14 35 52.0
h ABOUT 053KM		MAY 07		SPA EP	03 01 18.0	MAY 08	
BYR IP	04 02 26.0	H-11 11 04.9		MAY 08		H-16 21 49.8	
SPA IP	04 02 26.5	30.6N 137.7E		H-03 35 59.9		56.7N 154.0W	
I	02 46.0	h ABOUT 469KM		32.7S 178.3W		h ABOUT 025KM	
MAY 07		SPA IP'	11 29 01.5	h ABOUT 040KM		SPA IP'	16 41 28.0
H-04 02 28.7		I	31 03.5	BYR EP	03 45 16.0	I	41 31.0
51.6N 177.3W		I	31 51.0	SPA EP	03 45 46.0	I	41 41.5
h ABOUT 025KM		BYR IP'	11 29 06.0	I	45 56.0	MIR EP'	16 41 35.0
MAW IP'	04 22 08.8	E	39 04.0	MAY 08		MAY 08	
MAY 07		MAY 07		H-03 57 50.1		MIR EP	17 27 21.0
MAW EP	04 08 36.5	MIR EP	11 22 44.3	33.1S 178.3W		MAY 08	
MAY 07		MAY 07		h ABOUT 047KM		H-20 36 54.1	
SPA EP	04 36 50.0	MIR EP	11 34 58.0	SPA EP	04 07 33.0	24.2S 069.3W	
MAY 07		MAY 07		I	07 44.0	h ABOUT 078KM	
BYR EP	05 09 31.0	SPA IP	11 39 11.0	MAY 08		BYR IP	20 46 51.5
MAY 07		MAY 07		H-04 10 31.9		MAW IP	20 49 05.2
H-05 45 29.5		SPA IP	13 23 26.5	32.8S 178.4W		MAY 08	
4.0S 034.9E		MAY 07		h ABOUT 033KM		SPA IP	21 04 00.5
h ABOUT 033KM		SPA IP	14 07 45.5	SPA EP	04 20 21.0	MAY 08	
MAW IP	05 56 16.3	MAY 07		I	20 28.5	H-21 34 40.6	
MIR IP	05 57 03.1	SPA IP	18 30 49.0	MAY 08		60.8N 143.6W	
ES	06 06 42.0	E	35 21.0	SPA EP	05 19 41.0	h ABOUT 035KM	
WIL EP	05 57 40.0	MAY 07		MAY 08		BYR EP'	21 54 01.0
ES	06 07 51.0	H-19 12 37.8		H-05 56 13.7		SBA EP'	21 54 04.0
SPA IP	05 58 08.5	60.4N 144.8W		59.2N 153.9W		E	58 09.0
I	58 30.5	h ABOUT 015KM		h ABOUT 025KM		WIL EP'	21 54 23.0
ES	06 08 09.0	SPA IP'	19 32 23.5	SPA IP'	06 15 59.0	SPA IP'	21 54 28.5
SBA IP	05 58 48.0	MAY 07		MAY 08		I	54 39.0
E	06 02 35.0	H-20 12 49.3		H-06 05 46.8		I	58 53.0
E(S)	23 18.0	40.5N 139.0E		56.7N 154.2W		MIR EP'	21 54 52.5
BYR IP	05 58 52.5	h ABOUT 033KM		h ABOUT 033KM		MAY 08	
MAY 07		SBA EP'	20 31 36.0	SPA EP'	06 25 23.0	H-21 54 41.8	
MAW EP	06 24 52.0	SPA E(P')	20 31 38.0	MAY 08		61.1N 143.0W	
MAY 07		I	31 57.0	BYR EP	07 25 04.0	h ABOUT 033KM	
H-07 58 14.3		I	32 03.0	SPA EP	07 25 06.0	SPA IP'	22 14 27.0
40.4N 139.0E		MAW EP'	20 31 42.0	MAY 08		MAY 08	
h ABOUT 033KM		WIL EP'	20 31 49.0	MAW EP		MAW EP	21 58 26.5

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAY 08 SPA EP	22 20 04.0	MAY 09 SPA EP	20 40 47.0	MAY 10 SPA IP	14 16 54.5	MAY 11 MIR EP	09 26 35.8
MAY 08 H-23 40 44.1 52.2N 169.5W h ABOUT 020KM		MAY 09 H-21 06 12.2 61.7N 152.0W h ABOUT 025KM		BYR IP	14 17 22.5	MAY 11 SPA EP	10 03 54.0
SPA EP'	24 00 09.0	SPA PP'	21 26 03.0	MAW EP	14 17 34.0	MAY 11 SBA EP	10 12 24.0
MAW EP'	24 00 37.0	MAY 09 H-21 07 41.6 09.2S 156.7E h ABOUT 026KM		MAY 10 H-14 46 15.3 59.9N 147.1W h ABOUT 015KM		MAY 11 SPA IP	11 41 02.5
MAY 09 SPA EP	01 25 57.0	WIL EP	21 18 21.0	SPA IP'	15 06 03.0	MAY 11 SBA EP	12 07 22.0
MAY 09 H-02 02 28.8 52.2N 169.6W h ABOUT 025KM		BYR IP	21 19 51.0	MAY 10 SPA IP	14 47 15.5	MAY 11 MIR EP	13 11 10.8
SPA IP'	02 21 53.0	SPA IP	21 19 54.5	MAY 10 H-15 40 53.3 60.1N 146.3W h ABOUT 015KM		MAY 11 H-14 39 04.4 22.5S 175.8W h ABOUT 050KM	
MAW EP'	02 22 18.5	MAW IP	21 20 06.1	SPA IP'	16 00 39.0	BYR IP	14 49 22.0
MAY 09 SPA IP	06 23 19.5	MAY 09 SBA EP	21 33 46.0	MAY 10 BYR EP	17 31 14.6	SPA IP	14 49 56.0
BYR IP	06 23 35.0	MAY 10 H-02 00 27.5 59.9N 146.5W h ABOUT 033KM		SPA I	17 32 06.5	I	50 07.0
MAY 09 SPA EP	07 45 11.0	SPA EP'	02 20 16.0	MAY 11 SPA EP	00 19 21.0	MIR EP	14 50 10.8
MAY 09 MAW EP	09 11 18.0	MAY 10 BYR IP	03 56 03.0	I	19 33.5	MAW IP	14 51 11.0
MAY 09 SBA EP	11 51 27.0	SPA IP	03 56 21.5	MAY 11 SPA IP	01 13 02.0	MAY 11 SBA EP	14 48 13.0
SPA IP	11 52 03.5	MAY 10 H-05 39 42.6 29.0N 141.5E h ABOUT 062KM		MAY 11 SBA IP	01 46 15.7	MAY 11 H-14 57 16.6 04.3N 127.9E h ABOUT 060KM	
MAY 09 H-12 13 04.9 21.6S 174.6W h ABOUT 033KM		BYR IP'	05 58 28.0	MAY 11 H-02 17 01.5 60.8N 142.2W h ABOUT 033KM		MIR EP	15 08 52.3
SPA EP	12 24 03.0	MAY 10 H-06 27 45.6 04.6S 153.2E h ABOUT 077KM		SPA EP'	02 36 41.0	BYR IP	15 10 48.0
MAY 09 H-18 16 17.5 13.7S 166.6E h ABOUT 041KM		BYR IP	06 40 16.0	I	36 50.0	E	14 11.0
WIL E(P)	18 26 40.0	MAW EP	06 40 18.0	MAY 11 SPA EP	02 18 20.0	MAY 11 SBA EP	17 53 16.0
SBA IP	18 26 49.2	SPA P	06 40 18.5	MAY 11 H-03 31 38.7 60.2N 147.2W h ABOUT 033KM		MAY 11 H-18 22 47.2 56.6N 154.0W h ABOUT 033KM	
BYR IP	18 27 49.0	I	40 32.0	SPA EP'	03 51 22.0	SPA EP'	18 42 24.0
E+P	28 08.0	I	40 36.0	MAY 11 H-05 29 16.6 24.6S 179.9E h ABOUT 515KM		MAY 11 H-20 10 36.5 60.3N 146.1W h ABOUT 033KM	
SPA IP	18 28 03.5	MAY 10 SBA EP	06 37 14.0	SPA IP	05 39 10.0	SPA IP'	20 30 25.0
MAW IP	18 28 37.1	MAY 10 BYR P	06 40 33.5	MIR EP	05 39 14.3	I	33 15.0
MAY 09 SPA EP	18 58 13.0	MAY 10 MAW I(P)	06 52 53.6	MAW IP	05 40 17.0	MAY 11 H-20 38 11.5 17.1S 174.4W h ABOUT 104KM	
MAY 09 H-20 06 37.7 5.8S 081.3W h ABOUT 104KM		MAY 10 H-07 50 44.4 01.6N 126.3E h ABOUT 033KM		MAY 11 H-06 07 41.5 28.3N 057.4E h ABOUT 062KM		SPA IP	20 49 31.0
BYR EP	20 18 21.0	SPA EIP)	08 03 50.0	SPA IP'	06 26 22.0	MAY 11 SBA EP	22 42 28.0

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAY 12 SPA IP	01 23 48.5	MAY 12 H-16 55 46.9 59.5N 144.8W h ABOUT 033KM		MAY 13 H-00 07 01.8 14.8S 176.7W h ABOUT 033KM		MAY 13 SPA EP	10 00 20.0
MAY 12 H-01 37 59.5 26.2S 178.3E h ABOUT 607KM		SPA IP'	17 15 32.0	SPA IP	00 18 44.0	MAY 13 SPA EP	10 51 02.0
SBA IP	01 46 15.7	MAY 12 H-18 16 41.9 56.6N 152.4W h ABOUT 010KM		MAY 13 H-00 07 42.1 56.2N 152.7W h ABOUT 033KM		MAY 13 H-11 06 16.4 21.8S 179.6W h ABOUT 578KM	
RYR IP	01 47 07.5	SPA IP'	18 36 22.5	SPA EP'	00 27 19.0	SPA IP	11 16 20.5
SPA IP	01 47 34.5	I	36 54.5	MAY 13 SPA IP	00 12 37.5	I	18 22.5
MAY 12 SPA IP'	01 47 10.5	I	42 05.0	MAY 13 SPA EP	11 36 07.0	MAY 13 SPA EP	11 36 07.0
MAY 12 SPA EP	02 06 13.0	MAY 12 H-18 17 07.7 19.9S 173.9W h ABOUT 033KM		MAY 13 WIL EP	02 41 31.0	MIR EP	11 36 47.7
MAY 12 MIR EP	02 59 36.2	SBA EP	18 27 04.0	MAY 13 MIR EP	04 52 52.7	MAY 13 MIR EP	11 59 09.6
MAY 12 H-07 08 44.6 11.0S 126.0E h ABOUT 033KM		BYR IP'	18 27 42.5	MAY 13 H-05 25 26.1 32.8S 178.3W h ABOUT 033KM		MAY 13 SPA EP	13 32 41.0
SPA IP	07 20 47.0	WIL EP	18 27 55.0	SBA EP	05 33 46.0	MAY 13 SPA IP	15 25 29.5
MAY 12 H-10 02 27.1 19.9S 173.9W h ABOUT 033KM		SPA IP	18 28 18.5	BYR EP	05 34 37.0	E	28 06.0
SBA EP	10 12 24.0	I	28 40.5	WIL EP	05 34 40.0	MAY 13 SPA EP	16 01 39.0
SPA EP	10 13 37.0	MIR IP	18 28 36.0	SPA IP	05 35 13.0	E	02 53.0
MIR EP	10 13 54.0	MAY 12 H-18 28 57.5 56.6N 152.2W h ABOUT 020KM		I	35 33.5	MAY 13 H-16 42 48.3 32.7S 178.6W h ABOUT 033KM	
MAY 12 BYR IP	10 27 42.5	SPA EP'	18 48 35.0	MIR EP	05 35 28.2	SBA EP	16 51 08.0
MAY 12 SPA IP	10 30 16.0	MAY 12 MIR EP	18 34 29.5	ES	43 41.2	E	58 51.0
MAY 12 SPA EP	11 21 05.0	MAY 12 SPA EP	19 36 07.0	MAW EP	05 36 34.0	WIL EP	16 52 02.0
MAY 12 H-11 47 32.2 60.1N 147.0W h ABOUT 015KM		MAY 12 WIL E(P)	22 22 56.0	MAY 13 SPA EP	07 21 54.0	BYR EP	16 52 05.0
SPA IP'	12 07 20.5	MIR EP	22 24 36.0	MAY 13 SPA IP	07 37 29.5	SPA IP	16 52 37.5
I	07 27.0	MAY 12 SBA EP	22 42 28.0	MAY 13 H-07 43 00.4 56.8N 153.8W h ABOUT 025KM		E	17 00 18.0
SBA EP'	12 07 22.0	MAY 12 WIL E(P)	22 54 24.0	SPA EP'	08 02 36.0	E	02 44.0
MAY 12 SPA IP	13 42 44.0	MAY 12 H-23 37 50.4 59.4N 143.1W h ABOUT 020KM		MAY 13 SPA EP	08 05 49.0	MIR EP	16 52 50.7
MAY 12 SPA EP	14 03 27.0	SPA EP'	23 57 37.0	MAY 13 H-08 11 00.3 33.1S 178.3W h ABOUT 015KM		MAW EP	16 53 58.0
MAY 12 MIR EP	15 16 50.5	MAY 12 H-23 42 23.0 59.5N 143.1W h ABOUT 025KM		SPA EP	08 20 48.0	MAY 13 MAW EP	17 01 41.0
MAY 12 MIR EP	15 55 49.0	SPA EP'	24 02 08.0	MIR EP	08 21 07.2	MAY 13 SPA IP	17 43 01.0
		MAY 12 WIL EP	23 59 32.0	MAY 13 SPA EP	08 32 38.0	MAY 13 SPA EP	20 02 38.0
		E	59 47.0	MAY 13 SPA EP	08 37 59.0	BYR IP	20 03 00.0
						MAY 13 H-20 37 53.8 32.4S 178.3W h ABOUT 070KM	
						SBA EP	20 46 13.0
						WIL EP	20 47 06.0
						BYR EP	20 47 06.0

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SPA EP	20 47 39.0	BYR IP	09 11 54.5	BYR IP	20 10 38.0	MAY 15	
I	47 49.0					MIR EP	20 31 14.5
MIR IP	20 47 56.2	MAY 14		SPA IP	20 11 06.5	MAY 15	
MAW EP	20 49 00.0	MCO IP	09 23 49.0	I	13 13.0	MAW IP	20 49 25.0
MAY 13		MAY 14		MAY 14		MAY 15	
SPA IP	20 52 58.5	H-11 30 13.9		SPA EP	21 27 22.0	MAW IP	23 57 54.0
MAY 13		15.35 070.6W		MAY 14		MAY 16	
SPA IP	22 46 28.0	h ABOUT 167KM		SPA IP	22 14 07.0	H-01 58 36.4	
MAY 14		BYR IP	11 40 58.5	BYR IP	22 14 52.0	10.55 161.9E	
H-00 52 09.8		MAY 14		MAY 15		h ABOUT 033KM	
33.35 178.3W		H-11 55 28.2		H-04 02 39.3		BYR EP	02 10 32.0
h ABOUT 033KM		62.8N 152.3W		57.6N 152.2W		SPA IP	02 10 40.5
SPA EP	01 01 55.0	h ABOUT 015KM		h ABOUT 020KM		MAY 16	
MAY 14		SPA IP'	12 15 23.0	SPA EP'	04 22 19.0	MAW IP	05 01 42.0
H-01 05 47.6		MAY 14		MAY 15		MAY 16	
32.9S 178.8W		MIR EP	11 57 20.4	SPA EP	04 48 30.0	H-06 00 58.1	
h ABOUT 309KM		MAY 14		BYR EP	04 48 46.0	49.9N 078.3E	
SBA EP	01 13 39.0	SPA IP	12 06 03.5	MAY 15		h ABOUT 000KM	
BYR EP	01 14 30.0	MAY 14		MIR EP	06 10 02.0	SPA IP'	06 20 17.0
SPA EP	01 15 04.0	SPA EP	12 33 50.0	MAY 15		BYR IP'	06 20 48.0
I	16 16.0	MAY 14		MIR EP	06 31 44.0	MAY 16	
MIR EP	01 15 19.2	SBA IP	13 12 53.0	MAY 15		SBA E(P)	06 07 22.0
MAY 14		MAY 14		SPA EP	09 10 39.0	MAY 16	
H-01 52 47.3		SPA EP	13 24 21.0	MAY 15		SPA EP	08 30 27.0
33.4S 071.2W		MAY 14		SPA IP	09 43 48.5	MAY 16	
h ABOUT 069KM		H-13 23 29.0		MAY 15		H-08 38 54.0	
SPA EP	02 02 27.0	32.5S 178.2W		H-10 50 20.6		36.3N 071.5E	
MAY 14		h ABOUT 029KM		03.5S 149.1E		h ABOUT 122KM	
H-02 30 32.2		SPA EP	13 33 20.0	h ABOUT 044KM		SPA IP'	08 57 41.5
4.5S 152.9E		MIR EP	13 33 35.4	WIL E(P)	11 01 22.0	I	58 19.5
h ABOUT 032KM		MAY 14		MIR EP	11 01 51.0	I	59 17.5
WIL EP	02 41 31.0	H-13 52 14.4		MAW IP	11 02 58.0	MAY 16	
SBA IP	02 42 05.7	65.3N 086.5W		SPA EP	11 03 00.0	H-09 51 41.0	
MIR EP	02 42 06.9	h ABOUT 033KM		BYR EP	11 03 01.0	54.0N 164.1W	
BYR IP	02 43 07.0	BYR IP'	14 11 52.0	E	19 14.0	h ABOUT 033KM	
SPA IP	02 43 08.5	MAY 14		MAY 15		SPA EP'	10 11 09.0
I	43 19.0	H-14 19 05.1		SPA EP	10 57 20.0	MAY 16	
MAW IP	02 43 10.0	59.7N 144.4W		MAY 15		H-10 27 36.4	
MAY 14		h ABOUT 033KM		MIR EP	12 10 42.0	59.3N 152.0W	
MCO IP	06 01 24.0	SPA IP'	14 38 51.5	MAY 15		h ABOUT 035KM	
ES	01 30.0	MAY 14		MIR EP	13 08 26.0	SPA EP'	10 47 21.0
MAY 14		H-15 12 04.5		MAY 15		MAY 16	
SPA EP	06 17 34.0	59.8N 147.0W		MIR EP	13 08 26.0	SPA EP	12 48 44.0
MAY 14		h ABOUT 033KM		MAY 15		MAY 16	
SPA EP	08 15 40.0	SPA EP'	15 31 49.0	H-14 02 41.1		SBA EP	13 12 53.0
MAY 14		MAY 14		57.1S 058.9W		E	34 26.0
H-08 59 41.2		SPA EP	15 15 13.0	h ABOUT 033KM		MAY 16	
7.6S 155.9E		MAY 14		SPA IP	14 09 15.0	H-14 33 16.6	
h ABOUT 033KM		SPA EP	17 29 49.0	MAW IP	14 11 21.0	13.6S 165.6E	
		MAY 14		MAY 15		h ABOUT 062KM	
		H-20 01 01.0		SPA EP	17 13 40.0	BYR EP	14 44 47.0
		21.3S 179.3W				SPA EP	14 45 01.0
		h ABOUT 606KM					

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAY 16 H-14 44 54.3 57.6N 151.0W h ABOUT 033KM		MAY 17 WIL EP 07 55 43.0		MAY 18 SPA EP 06 24 19.0		MAY 18 SBA EP 18 43 21.0	
SPA IP' 15 04 33.0		MAY 17 H-11 15 03.7 19.5S 176.7W h ABOUT 266KM		MAY 18 MCQ IP 06 44 40.0		MAY 18 H-21 12 46.2 59.5N 142.7W h ABOUT 025KM	
MAY 16 SRA E(P) 16 07 22.0		SPA IP 11 25 51.0		MAY 18 AIA EP 09 07 17.0		SPA IP' 21 32 32.5	
MAY 16 H-16 07 46.2 32.8S 178.3W h ABOUT 033KM		MAY 17 WIL E(P) 12 57 20.0		MAY 18 SPA IP 10 56 12.5		MAY 19 WIL E 00 23 22.5	
SBA E(P) 16 16 10.0		MAY 17 WIL E(P) 14 49 00.0		MAY 18 AIA EP 12 10 18.0 I 11 17.0		MAY 19 H-01 44 33.6 60.4N 147.5W h ABOUT 015KM	
BYR EP 16 16 59.0 ES 24 36.0		MAY 17 H-17 05 24.8 33.2S 178.4W h ABOUT 033KM		MAY 18 MCQ IP 13 21 03.0		SPA EP' 02 04 30.0	
SPA IP 16 17 31.5 I 17 46.5 I 19 46.5		BYR EP 17 14 35.0		MAY 18 H-13 47 22.7 59.6N 145.0W h ABOUT 020KM		MAY 19 SPA IP 05 14 43.5	
MIR EP 16 17 48.5 FS 26 05.0		WIL EP 17 14 35.0		SPA EP' 14 07 05.0		MAY 19 H 05 30 08.0 19.5S 067.4W h ABOUT 293KM	
MAW IP 16 18 54.0 ES 28 14.0		SPA IP 17 15 09.5 I 15 20.0 I 15 29.0		MAY 18 H-14 12 10.1 21.2S 174.5W h ABOUT 033KM		SPA EP 05 40 54.0	
MAY 16 SPA IP 17 03 52.0		MIR EP 17 15 24.6		BYR IP 14 22 36.5 E 51 30.0		MAY 19 SPA EP 07 40 16.0	
MAY 16 SPA FP 20 15 12.0		MAW EP 17 16 36.0		WIL EP 14 22 46.0		MAY 19 H-10 39 24.8 45.5N 150.3E h ABOUT 033KM	
WIL E(P) 20 17 03.0 FpP 17 13.0 ES 24 32.0		MAY 17 MAW EP 17 45 22.0		SPA IP 14 23 12.5 I 23 25.5 I 23 39.0		BYR EP' 10 58 31.0 E 11 02 02.0	
MAY 16 SPA IP 20 34 38.5		MAY 17 H-19 26 20.6 35.2N 035.9W h ABOUT 033KM		MIR EP 14 23 30.8		MAY 19 SPA IP 10 52 18.5	
MAY 17 H-00 50 17.9 59.4N 142.7W h ABOUT 035KM		SPA EP' 19 45 15.0 E 47 08.0		MAW IP 14 24 28.0		MAY 19 MAW IP 10 56 01.0 I 58 32.0	
WIL EP' 01 09 58.0		BYR EP' 19 45 18.0		MAY 18 SPA IP 14 51 22.5 AIA EP 14 53 23.0		MAY 19 H-13 19 20.7 59.7N 152.3W h ABOUT 033KM	
SPA IP' 01 10 02.0 I 10 19.5		MIR EP' 19 45 36.5		MAY 18 H-16 01 17.8 49.6S 123.1E h ABOUT 033KM		SPA EP' 13 39 09.0	
MAY 17 SPA EP 01 07 14.0 I 07 24.5		WIL EP' 19 45 56.0		WIL EP 16 05 26.0		MAY 19 SPA IP 15 08 08.0	
MAY 17 SRA EP 01 56 18.0		MAY 17 BYR EP 19 55 18.0		MIR EP 16 06 18.3		MAY 19 H-15 37 35.9 57.0N 152.8W h ABOUT 025KM	
MAY 17 SPA EP 04 36 35.0		MAY 17 SPA EP 23 16 18.0		SPA IP 16 08 54.5 I 09 07.0		SPA IP' 15 57 15.5 I 57 22.5	
MAY 17 H-04 41 43.9 53.9N 159.7W h ABOUT 033KM		MAY 18 MCQ EP 00 22 23.0 IS 22 37.0		BYR IP 16 09 38.5		MAY 19 SPA IP 15 46 54.0	
BYR EP' 05 00 58.0		MAY 18 MAW E(P) 02 17 12.0		MAY 18 H-18 14 48.7 59.7N 145.0W h ABOUT 033KM		MAY 19 H-20 27 24.8 01.2S 133.8E h ABOUT 033KM	
SPA IP' 05 01 11.0 I 01 17.0		MAY 18 SPA IP 04 30 07.0		SPA EP' 18 34 32.0			
MAW EP' 05 01 42.0		AIA EP 04 30 15.0 I 30 48.0 I 31 54.0		MAY 18 BYR EP 18 17 05.0			

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
BYR E(P)	20 40 31.0	MCQ I(P)	06 10 30.0	BYR EP'	15 55 23.0	MAY 22	
MAY 19		WIL IP	06 12 00.0	SPA IP'	15 55 46.0	AIA I	12 15 08.0
SPA EP	22 12 39.0	I	12 15.0	MIR IP'	15 55 47.5	MAY 22	
MAY 19		MIR IP	06 12 29.5	ES	16 07 35.5	SPA IP	16 14 09.0
H-23 03 41.8		I _{PP}	12 46.0	MAY 21		MAY 22	
.75 080.2W		IS	21 44.7	SPA EP	17 10 49.0	MAW IP	19 35 33.5
h ABOUT 054KM		SBA IP	06 13 00.5	MAY 21		MAY 22	
BYR E(P)	23 15 50.0	MAW IP	06 13 31.9	MIR EP	20 57 30.5	SPA EP	21 49 52.0
E	26 00.0	ES	23 47.0	MAY 21		MAY 23	
SPA IP	23 16 30.5	SPA IP	06 13 55.5	SPA EP	21 30 49.0	SBA EP	02 52 39.0
I	16 55.0	I	14 13.0	MAY 21		MAY 23	
I	17 11.5	BYR IP	06 14 05.0	H-22 30 11.0		SBA EP	03 03 46.0
MAY 19		E _{PP}	14 22.0	59.3N 145.3W		MAY 23	
SBA EP	23 16 37.0	MAY 20		h ABOUT 038KM		H-06 29 24.4	
MAY 19		WIL E	06 52 09.0	SPA EP'	22 49 56.0	57.3N 150.7W	
WIL EP	23 22 55.0	MAY 20		MAY 22		h ABOUT 020KM	
MAY 19		WIL EP	06 58 42.0	H-00 26 44.8		SPA EP'	06 49 08.0
MIR E	23 32 28.5	MAY 20		34.7S 179.6W		MAY 23	
E	38 47.5	H-09 28 38.5		h ABOUT 058KM		H-11 22 33.3	
MAY 20		60.2N 147.4W		WIL EP	00 35 41.0	28.6N 139.4E	
SPA IP	02 14 19.0	h ABOUT 033KM		BYR EP	00 35 41.0	h ABOUT 409KM	
MAY 20		SPA IP'	09 48 25.0	SPA IP	00 36 16.0	SPA IP'	11 40 32.5
H-03 25 05.1		MAY 20		I	36 26.0	I	48 27.0
.95 080.4W		WIL EP	12 54 53.0	I	46 46.0	BYR IP'	11 40 36.5
h ABOUT 033KM		MAY 20		MIR EP	00 36 31.3	MAY 23	
BYR IP	03 37 19.0	WIL EP	16 30 39.0	MAY 22		BYR EP	11 50 46.0
SPA IP	03 37 58.5	ES	40 19.0	BYR EP	01 52 56.0	SPA IP	11 50 51.5
I	38 03.5	MAY 20		MAY 22		MAY 23	
MAY 20		SBA EP	17 54 13.0	H-02 38 23.5		SPA EP	12 28 22.0
H-04 53 30.3		MAY 20		33.2N 116.7W		MAY 23	
31.4S 178.2W		SPA ER	22 33 04.0	h ABOUT 033KM		SPA EP	15 09 33.0
h ABOUT 033KM		MAY 21		SPA EP'	02 56 20.0	MAY 23	
BYR IP	05 02 53.0	H-01 11 23.4		MAY 22		H-16 42 06.1	
WIL E(P)	05 02 54.0	60.4N 145.9W		H-04 59 26.2		16.0S 069.0W	
SPA IP	05 03 28.0	h ABOUT 015KM		20.3S 169.4E		h ABOUT 231KM	
I	03 34.0	SPA IP'	01 31 12.5	h ABOUT 144KM		BYR IP	16 52 41.5
MIR IP	05 03 42.5	MAY 21		BYR IP	05 10 03.0	SPA IP	16 53 20.0
MAW IP	05 04 47.0	SPA EP	07 50 42.0	SPA IP	05 10 22.0	MAY 23	
MAY 20		MAY 21		I	10 41.0	SPA IP	17 34 47.0
WIL EP	05 18 03.0	SPA EP	10 41 58.0	MAW IP	05 11 07.8	BYR EP	17 35 03.0
MAY 20		MAY 21		MAY 22		MAY 23	
H-05 32 13.7		H-13 31 50.9		WIL EP	06 09 13.0	SPA IP	17 51 17.0
58.0N 149.6W		60.2N 147.2W		MAY 22		MAY 23	
h ABOUT 020KM		h ABOUT 033KM		BYR EP	06 17 37.0	H-21 31 03.4	
SPA IP'	05 51 57.0	SPA IP'	13 51 31.0	E	19 31.0	18.4S 069.2W	
MAY 20		MAY 21		MAY 22		h ABOUT 128KM	
SPA EP	05 44 44.0	BYR E	15 18 22.0	AIA EP	06 30 27.0	BYR IP	21 41 36.0
MAY 20		MAY 21		MAY 22		SPA IP	21 42 14.0
H-06 01 14.8		H-15 36 01.5		SPA IP	10 52 43.0		
2.7S 139.3E		59.0N 153.5W		I	52 49.5		
h ABOUT 061KM		h ABOUT 015KM		I	53 00.5		

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAY 24 H-00 40 21.9 60.2N 148.0W h ABOUT 015KM		MAY 24 H-16 36 05.4 35.8N 070.8E h ABOUT 164KM		MAY 25 WIL E(P) 08 07 22.0		SPA EP' 05 53 19.0 I 53 30.5	
SPA EP' 01 00 10.0 I 00 16.0		SPA IP' 16 54 49.5		MAY 25 H-08 32 49.0 15.7S 174.9W h ABOUT 269KM		MAY 26 SPA EP 10 24 10.0	
MAY 24 SPA EP 03 00 38.0		MAY 24 H-18 01 34.8 23.2S 071.6W h ABOUT 033KM		BYR IP 08 43 26.0		MAY 26 H-10 59 12.3 56.2S 027.8W h ABOUT 120KM	
MAY 24 H-04 13 05.3 22.6S 174.1W h ABOUT 033KM		BYR IP 18 11 42.0		SPA IP 08 43 58.0		AIA EIP 11 03 35.0 E 22 46.0	
BYR IP 04 23 24.5 E 24 04.0 E 52 30.0		SPA IP 18 12 24.5		MAW EP 08 45 05.0		SPA IP 11 05 45.5 I 05 46.0 I 15 16.0	
WIL IP 04 23 36.5		MAW IP 18 14 00.0		MAY 25 AIA EP 09 06 35.0		BYR IP 11 05 58.0	
SPA IP 04 24 00.5		MAY 24 H-20 32 36.3 19.1S 177.9W h ABOUT 441KM		MAY 25 H-10 58 51.2 52.5N 167.2W h ABOUT 033KM		MAW IP 11 06 36.8 I 12 18.0 ES 12 39.0	
MIR IP 04 24 20.0 EPCP 24 42.5		SPA IP 20 43 10.0		MAW IP' 11 18 34.0		SBA IP 11 07 24.9	
MAW IP 04 25 17.8		MAY 24 H-20 57 38.3 15.9S 167.6E h ABOUT 029KM		MAY 25 BYR EP 14 20 08.0		MIR IP 11 07 52.1	
MAY 24 AIA EP 04 30 42.0		BYR IP 21 08 57.5		MAY 25 SPA IP 17 49 31.0		WIL IP 11 08 25.5 E(S) 15 55.0	
MAY 24 SBA IP 04 52 45.1		SPA EP 21 09 13.0		MAY 25 H-19 44 07.0 09.1S 088.9E h ABOUT 033KM		MCQ I(P) 11 10 04.5	
MAY 24 H-06 52 44.4 59.7N 148.5W h ABOUT 020KM		MAY 24 SRA EP 22 23 38.0 E(S) 24 11.0		MIR EP 19 53 54.1 ES 20 02 00.3		MAY 26 MAW IP 11 26 33.0	
SPA IP' 07 12 30.5		MAY 24 H-22 22 27.6 37.0S 177.8E h ABOUT 149KM		WIL EP 19 54 03.0 ES 20 02 20.0		MAY 26 MAW IP 11 41 57.0	
MAY 24 H-09 04 57.0 56.7N 152.9W h ABOUT 033KM		WIL EP 22 30 50.0		MAW IP 19 54 19.0		MAY 26 MAW IP 11 49 32.5	
SPA IP' 09 24 31.5		BYR IP 22 31 05.0 I 31 40.0		SBA EP 19 56 08.0		MAY 26 SPA IP 12 20 42.5	
MAY 24 H-10 16 21.5 59.9N 145.5W h ABOUT 015KM		SPA IP 22 31 33.5 I 32 30.5		SPA IP 19 56 20.0 I 56 25.5 I 57 20.5		MAY 26 H-12 23 27.5 56.1S 027.7W h ABOUT 149KM	
SPA EP' 10 36 09.0		MAW IP 22 32 52.0		BYR IP 19 57 05.0 ES 20 07 48.0		SPA IP 12 29 59.5 I 36 06.5	
MAY 24 H-10 31 24.1 34.3N 141.1E h ABOUT 033KM		MAY 24 MAW EP 23 53 00.5		MAY 25 MAW EP 19 45 19.0		BYR IP 12 30 12.0	
SPA IP' 10 50 20.0		MAY 25 SPA EP 01 35 03.0		MAY 25 SPA IP 20 21 17.5		MAW IP 12 30 50.0 I 36 28.0	
BYR IP' 10 50 23.0 E 51 16.0 E 52 15.0		MAY 25 H-04 59 39.6 30.6S 178.0W h ABOUT 033KM		MAY 26 H-02 37 04.8 02.9S 130.3E h ABOUT 033KM		MAY 26 SPA IP 13 36 28.0	
MAY 24 BYR E 11 04 16.0		BYR EP 05 09 09.0		BYR EP 02 50 07.0		MAW IP 13 37 19.5	
MAY 24 BYR IP 11 10 17.0		SPA IP 05 09 43.0 I 09 49.0		MAY 26 WIL E(P) 03 11 50.0		MAY 26 SPA IP 13 46 14.0	
		MAW EP 05 11 02.0		MAY 26 H-05 33 44.6 60.3N 145.5W h ABOUT 033KM		BYR IP 13 46 29.5	
		MAY 25 MIR EP 06 42 52.5				MAW IP 13 46 57.5	
						MAY 26 SPA IP 13 49 54.0	

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAY 26 SPA IP	14 02 01.0	MAY 27 H-00 54 52.0 15.6S 167.8E h ABOUT 157KM		MAY 27 H-08 14 41.3 06.7S 130.6E h ABOUT 033KM		BYR IP	19 08 51.0
MAY 26 SPA IP	14 20 48.5	SBA IP	01 04 57.5	SPA EP	08 27 07.0	ES	14 52.0
MAY 26 MAW IP	14 21 41.0	ES	11 36.0	MAY 27 H-09 50 02.7 55.9S 027.4W h ABOUT 052KM		MAW EP	19 09 34.0
MAY 26 SPA IP	14 38 18.0	MAY 27 H-00 56 42.5 56.1S 027.6W h ABOUT 105KM		SPA IP	09 56 44.5	MAY 27 SPA EP	19 35 27.0
MAY 26 BYR IP	14 38 32.0	AIA EIP	01 01 09.0	I	57 13.5	MAY 27 BYR I	23 43 43.0
MAY 26 SPA IP	14 47 50.0	ES	04 50.0	I	10 02 49.0	MAY 28 MIR IP	01 05 25.5
MAY 26 H-15 42 34.0 56.1S 027.4W h ABOUT 082KM		BYR IP	01 03 32.5	BYR IP	09 56 59.0	IS	12 23.9
SPA IP	15 49 12.0	EPP	04 59.0	MAY 27 SPA EP	10 30 06.0	MAY 28 SPA IP	01 56 16.0
BYR IP	15 49 26.0	ES	09 30.0	MAY 27 SPA EP	10 30 06.0	I	56 25.5
MAW IP	15 50 03.0	MAW IP	01 04 09.8	MAY 27 H-11 06 22.0 06.8N 073.1W h ABOUT 139KM		BYR IP	01 56 30.0
MAY 26 MAW IP	15 55 43.0	IPP	05 52.0	BYR IP	11 19 05.0	MAY 28 H-01 56 58.9 24.5N 122.0E h ABOUT 041KM	
MAY 26 SPA IP	16 11 48.5	ES	10 08.0	SPA IP	11 19 37.0	SPA EP	02 15 34.0
MAY 26 MAW IP	16 12 40.0	WIL IP	01 05 57.5	MAY 27 H-11 20 26.8 18.4S 173.1W h ABOUT 033KM		MAY 28 H-03 57 19.0 16.8S 177.7W h ABOUT 388KM	
MAY 26 SPA IP	16 54 44.0	I	07 01.5	SPA EP	11 31 47.0	SPA IP	04 08 10.0
BYR IP	16 54 58.5	ES	13 26.0	MAY 27 SPA EP	14 45 06.0	MAY 28 SPA EP	04 15 24.0
MAY 26 MAW IP	16 54 58.5	MAY 27 SPA IP	02 43 50.0	BYR IP	14 45 19.5	MAY 28 SPA EP	04 31 27.0
MAY 26 SPA IP	16 54 58.5	BYR IP	02 44 04.0	MAY 27 H-15 48 17.3 21.0S 174.5W h ABOUT 033KM		MAY 28 MAW IP	05 46 30.8
BYR IP	16 54 58.5	I	45 51.0	SPA EP	15 59 20.0	MAY 28 SPA EP	06 01 37.0
MAY 26 BYR IP	17 53 14.5	I	46 29.0	MAY 27 AIA EIP	15 57 54.0	MAY 28 SPA EP	10 56 53.0
MAY 26 SPA IP	22 35 41.5	MAY 27 SPA EP	03 55 43.0	MAY 27 SPA EP	17 24 47.0	MAY 28 MCQ EP	11 33 10.0
MAY 26 SPA IP	23 14 15.5	MAY 27 H-06 30 57.7 56.2S 027.4W h ABOUT 116KM		MAY 27 SPA EP	17 41 02.0	MAY 28 H-12 33 10.2 00.8S 024.7W h ABOUT 033KM	
MAY 26 BYR IP	23 41 19.0	AIA EIP	06 31 24.0	BYR IP	17 45 09.0	SPA IP	12 46 03.0
MAY 26 H-23 43 26.3 56.1S 026.6W h ABOUT 153KM		ES	31 03.0	IS	48 16.0	BYR IP	12 46 07.0
BYR IP	23 50 12.5	BYR IP	06 37 45.0	SBA IP	06 39 11.0	MAY 28 H-12 49 57.5 13.4S 074.9W h ABOUT 103KM	
MAW EP	23 50 46.0	EPP	39 14.0	MAY 27 SPA EP	18 56 27.0	BYR IP	13 00 59.0
MIR IP	23 52 02.3	IS	43 45.0	MAY 27 H-19 02 02.4 56.4S 028.4W h ABOUT 061KM		I	01 37.0
WIL EP	23 52 34.0	MAW IP	06 38 23.0	SPA IP	19 08 42.5		
MAY 27 BYR IP	00 46 07.0	IS	48 16.0				
MAY 27 MAW IP	00 46 44.0	SBA IP	06 39 11.0				
		MIR IP	06 39 39.0				
		EPP	40 09.2				
		ES	47 24.0				
		MAY 27 SPA I	07 07 20.5				
		MAY 27 SPA IP	07 15 10.0				

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SPA IP	13 01 39.5	SPA EP'	05 27 06.0	SPA IP	14 52 18.5	MAY 30	
I	14 06.5	MAY 29		I	52 47.0	WIL ESKS	00 05 49.0
I	14 18.5	SPA IP	05 12 00.0	BYR IP	14 52 32.5	MAY 30	
MAY 28		BYR IP	05 12 12.0	IS	58 29.0	SPA IP	01 03 34.0
H-14 06 58.2		MAY 29		MAY 29		MAY 30	
60.2N 147.7W		SPA EP	05 19 52.0	H-15 33 05.5		H-03 18 08.3	
h ABOUT 033KM		MAY 29		56.3S 028.0W		59.5N 148.5W	
SPA EP'	14 26 45.0	H-05 35 10.6		h ABOUT 120KM		h ABOUT 015KM	
MAY 28		32.4S 067.3W		AIA EP	15 37 24.0	SPA EP'	03 37 46.0
SPA EP	15 41 36.0	h ABOUT 132KM		SPA IP	15 39 38.0	I	37 54.5
MAY 28		BYR IP	05 44 09.0	I	40 24.5	I	38 00.0
AIA EP	15 51 40.0	SPA IP	05 44 49.5	BYR IP	15 39 53.0	MAY 30	
MAY 28		MAW IP	05 46 30.8	ES	45 49.0	SPA EP	04 37 49.0
SPA EP	18 03 36.0	MAY 29		SBA IP	15 41 17.9	MAY 30	
MAY 28		MIR EP	06 40 49.8	MIR IP	15 41 45.0	SPA EP	04 55 12.0
SPA IP	18 18 27.0	MAY 29		WIL I(P)	15 42 17.5	MAY 30	
BYR IP	18 18 41.0	H-09 04 27.1		MAY 29		H-14 30 45.3	
MAY 28		56.2S 027.7W		H-18 35 02.3		36.2N 141.1E	
SPA EP	18 54 11.0	h ABOUT 033KM		26.2S 178.3E		h ABOUT 049KM	
MAY 28		AIA EP	09 08 55.0	h ABOUT 614KM		MIR EP'	14 49 25.6
SPA EP	19 15 22.0	SPA IP	09 11 10.0	SBA IP	18 43 18.8	SPA IP'	14 49 33.0
MAY 28		I	11 19.0	BYR IP	18 44 10.5	I	49 43.0
H-21 09 09.5		I	11 26.5	SPA IP	18 44 38.0	BYR IP'	14 49 46.0
3.6S 102.7W		BYR IP	09 11 24.5	MIR IP	18 44 39.5	MAY 30	
h ABOUT 033KM		EP	11 31.0	MAW IP	18 45 43.3	SBA E(P)	14 33 03.0
SPA IP	21 21 49.5	EPP	12 52.0	MAY 29		MAY 30	
MAY 28		SBA IP	09 12 49.5	H-18 42 19.3		SPA IP	16 04 31.0
H-23 28 27.9		MIR EP	09 13 16.8	26.2S 178.3E		BYR IP	16 04 45.0
1.6N 127.2E		MAY 29		h ABOUT 605KM		MAW IP	16 05 23.0
h ABOUT 103KM		H-10 17 34.5		SPA IP	18 51 55.0	MAY 30	
WIL EP	23 39 22.0	60.2N 146.3W		MAW IP	18 53 00.6	SPA EP	16 50 22.0
MIR IP	23 39 42.8	h ABOUT 005KM		MAY 29		MAY 30	
MAW IP	23 40 36.7	BYR IP'	10 37 00.0	H-19 01 57.0		H-17 23 17.3	
SBA IP	23 40 38.7	WIL EP'	10 37 17.0	26.1S 178.3E		09.3N 126.4E	
BYR IP	23 41 43.5	SPA IP'	10 37 24.5	h ABOUT 613KM		h ABOUT 091KM	
MAY 29		I	37 32.0	SPA IP	19 11 32.5	MAW E(P)	17 36 02.0
SPA IP	01 16 22.0	MIR EP'	10 37 25.5	MAW IP	19 12 36.6	MAY 30	
MAY 29		MAY 29		MAW IP	19 12 37.6	MIR EP	17 35 15.0
H-02 47 38.0		H-12 25 16.9		MAY 29		MAY 30	
53.7N 167.8W		18.6S 177.8W		H-20 09 00.6		SPA EP	18 48 38.0
h ABOUT 033KM		h ABOUT 462KM		00.5S 134.7E		MAY 30	
MAW IP'	03 07 29.8	SPA IP	12 35 28.5	h ABOUT 033KM		SPA IP	19 15 17.0
MAY 29		MAY 29		MIR E(P)	20 20 21.3	MAY 30	
H-03 34 51.8		MIR EP	13 39 42.0	MAW E(P)	20 21 25.5	H-19 24 41.3	
60.1N 146.5W		MAY 29		SPA IP	20 21 54.0	28.4S 069.8W	
h ABOUT 015KM		H-14 45 49.6		BYR E(P)	20 22 07.0	h ABOUT 084KM	
SPA IP'	03 54 40.0	56.1S 027.9W		MAY 29		BYR IP	19 34 10.0
MAY 29		h ABOUT 170KM		H-05 08 02.2		SPA IP	19 34 52.5
H-05 08 02.2				44.7N 149.4E		I	35 17.5
h ABOUT 050KM				h ABOUT 050KM		MAW IP	19 36 32.4

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MAY 30 SPA IP	19 29 26.0	SPA IP'	13 38 42.5	MAW IP	02 20 59.4	JUN 02 SPA EP	05 49 12.0
BYR EP	19 29 44.0	MAY 31 SPA IP	16 43 10.0	I pP	23 00.5	JUN 02 H-08 06 41.8	
MAY 30 MIR EP	19 36 50.6	I	45 43.5	JUN 01 MAW E(P)	04 42 21.0	37.7S 073.3W	
MAY 30 H-22 34 33.3		E	49 14.0	JUN 01 MAW EP	04 42 21.6	h ABOUT 033KM	
56.6N 152.3W		BYR IP	16 43 23.0	JUN 01 H-06 05 07.6		SPA IP	08 15 53.5
h ABOUT 015KM		IS	49 20.0	14.6S 167.4E		JUN 02 AIA EP	11 29 22.0
SPA IP'	22 54 12.5	MAY 31 SPA IP	17 04 41.0	h ABOUT 176KM		JUN 02 AIA EP	11 29 40.0
MAY 31 H-00 40 36.4		BYR IP	17 04 55.0	WIL I(P)	06 15 12.0	JUN 02 SPA IP	12 50 11.0
43.5N 146.8E		MAW IP	17 05 32.6	SBA IP	06 15 19.6	JUN 02 SPA IP	13 05 09.0
h ABOUT 048KM		I pP	07 33.5	SPA IP	06 16 33.0	JUN 02 BYR IP	14 48 13.0
WIL EP'	00 59 11.0	MAY 31 H-17 15 26.8		I	16 44.0	JUN 02 SPA IP	14 57 59.0
EPP	59 57.0	13.6S 172.1E		I	17 16.5	JUN 02 H-08 49 37.1	
MIR EP'	00 59 16.6	h ABOUT 073KM		MAW IP	06 17 09.5	04.6N 125.9E	
EsP	01 12 45.5	WIL EP	17 26 10.0	JUN 01 SPA EP	08 11 09.0	h ABOUT 113KM	
SBA EP'	00 59 26.0	ES	35 09.0	JUN 01 H-08 49 37.1		59.7N 144.4W	
SPA E(P')	00 59 31.0	BYR IP	17 26 49.0	04.6N 125.9E		h ABOUT 015KM	
I	59 48.0	MIR EP	17 26 51.5	h ABOUT 113KM		SBA EP'	16 28 51.0
I	01 00 06.5	ES	36 29.7	MAW IP	09 01 58.6	SPA IP'	16 29 10.5
MAW IP'	00 59 36.0	MAW EP	17 27 54.0	JUN 01 SPA EP	09 01 29.6	JUN 02 WIL EP	16 19 05.0
BYR EP'	00 59 38.0	MAY 31 H-18 34 15.5		JUN 01 AIA EP	11 26 00.0	JUN 02 SPA IP	16 27 06.5
E pP	01 00 09.0	13.3S 171.8E		JUN 01 SPA EP	12 51 27.0	MAW EP	16 27 30.5
ES	11 00.0	h ABOUT 111KM		JUN 01 H-13 17 20.7		BYR IP	16 27 35.0
AIA EP'	01 00 29.0	MIR EP	18 45 37.0	21.0S 175.7W		I	27 35.8
MAY 31 MAW EP	01 12 28.0	MAY 31 SPA EP	18 51 50.0	h ABOUT 035KM		JUN 02 H-16 29 41.5	
MAY 31 MIR E	02 32 56.6	MAY 31 H-19 58 09.9		SPA I(P)	13 28 14.0	59.7N 144.2W	
MAY 31 SPA EP	04 28 17.0	9.2S 079.5W		MAW EP	13 29 38.0	h ABOUT 010KM	
MAY 31 H-04 54 11.1		h ABOUT 040KM		JUN 01 WIL EP	17 02 27.0	SPA IP'	16 49 27.5
30.6S 070.8W		SPA EP	20 10 21.0	JUN 01 SPA EP	20 34 09.0	I	49 33.5
h ABOUT 069KM		MAY 31 MIR EP	21 54 18.5	JUN 01 H-21 25 41.9		JUN 02 SPA IP	16 59 15.5
SPA IP	05 04 09.5	MAY 31 SPA IP	22 08 51.0	28.2S 065.9W		JUN 02 SPA IP	18 00 15.0
MAY 31 H-10 24 53.5		BYR IP	22 09 04.0	h ABOUT 041KM		JUN 02 SPA EP	21 30 08.0
53.7N 158.7E		IS	14 58.0	SPA IP	21 36 00.0	JUN 02 H-23 12 37.8	
h ABOUT 110KM		MAW IP	22 09 43.1	MAW IP	21 37 33.3	14.7S 167.0E	
SPA IP'	10 44 10.5	MAY 31 MIR IP	23 23 44.3	I	37 41.5	h ABOUT 082KM	
MAY 31 SPA IP	12 27 43.5	E	33 29.5	JUN 02 SPA EP	03 53 34.0	WIL EP	23 23 02.0
MAW IP	12 28 35.5	JUN 01 MAW IP	00 23 20.8				
I pP	30 36.5	SPA EP	00 25 05.0				
MAY 31 H-13 19 46.5		JUN 01 SPA IP	02 20 07.5				
35.3N 103.1E							
h ABOUT 033KM							

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
BYR IP	23 23 58.0	SPA IP'	14 09 56.5	JUN 04		JUN 04	
SPA IP	23 24 14.0	BYR I(P')	14 10 10.0	H-04 28	54.7	SPA EP	12 23 06.0
I	24 38.5	E	16 05.0	17.5N	100.8W	JUN 04	
MAW EP	23 24 49.0	JUN 03		h ABOUT	022KM	MAW EP	12 52 43.5
JUN 03		H-14 03	42.4	MAW EP'	04 48 00.5	SPA EP	12 53 18.0
SPA IP	00 14 22.5	59.9N	143.9W	JUN 04		JUN 04	
JUN 03		h ABOUT	020KM	SPA IP	05 03 44.0	H-12 56	02.6
H-00 44	02.8	WIL EP'	14 23 21.0	JUN 04		04.9S	134.2E
55.4S	024.8W	SPA IP'	14 23 27.5	SPA EP	05 27 47.0	h ABOUT	033KM
h ABOUT	033KM	I	23 37.0	JUN 04		MIR EP	13 06 59.5
SPA IP	00 50 52.0	I	23 51.5	SPA EP	09 36 07.0	SBA EP	13 07 40.0
BYR IP	00 51 06.0	JUN 03		JUN 04		MAW EP	13 08 02.0
IS	57 04.0	SBA EP	16 43 15.0	SPA IP	09 46 00.0	SPA IP	13 08 36.5
JUN 03		JUN 03		BYR IP	09 46 13.0	BYR IP	13 08 52.0
AIA IP	00 46 44.0	H-17 54	14.7	ES	52 08.0	JUN 05	
JUN 03		18.8S	173.7W	JUN 04		SPA EP	00 26 17.0
MAW EP	00 57 22.5	h ABOUT	033KM	H-1C 18	15.3	JUN 05	
JUN 03		BYR IP	18 04 55.0	07.8S	117.6E	SPA IP	00 42 01.5
SPA IP	01 50 54.5	SPA IP	18 05 31.0	h ABOUT	047KM	JUN 05	
JUN 03		MIR EP	18 05 52.5	MIR EP	10 28 25.5	SPA IP	02 56 20.0
H-02 27	45.5	MAW EP	18 06 45.0	SBA E(P)	10 29 41.0	JUN 05	
15.5S	167.9E	JUN 03		SPA EP	10 30 33.0	H-01 03	25.8
h ABOUT	126KM	BYR IP	21 12 49.5	BYR IP	10 31 01.5	25.6S	176.5W
BYR IP	02 38 56.0	JUN 03		JUN 04		h ABOUT	033KM
SPA IP	02 39 12.0	SPA IP	22 12 35.5	MIR EP	10 59 37.5	BYR IP	01 13 24.0
JUN 03		JUN 03		JUN 04		SPA IP	01 14 03.0
H-02 49	14.9	SPA EP	22 56 26.0	H-11 17	11.8	JUN 05	
25.9N	095.8E	JUN 04		06.1S	149.9E	SPA EP	02 56 20.0
h ABOUT	100KM	H-00 15	29.8	h ABOUT	054KM	JUN 05	
SPA IP'	03 07 45.5	33.5S	177.8W	MIR EP	11 28 29.5	SPA IP	03 23 43.0
BYR IP'	03 08 01.0	h ABOUT	031KM	EsS	37 44.5	JUN 05	
JUN 03		SPA EP	00 25 22.0	SBA EP	11 28 33.0	SPA IP	04 02 09.5
SPA IP	03 18 18.0	MAW E(P)	00 26 57.0	MAW EP	11 29 33.5	BYR IP	04 02 23.0
JUN 03		E	27 01.0	SPA IP	11 29 37.0	MAW IP	04 03 00.8
SPA IP	05 20 11.0	JUN 04		I	29 48.0	I P	05 01.0
JUN 03		SPA EP	01 11 38.0	BYR IP	11 29 39.0	JUN 05	
SPA IP	06 21 15.0	JUN 04		JUN 04		H-04 08	30.6
JUN 03		H-02 57	07.6	H-11 46	01.7	56.2S	027.5W
SPA EP	07 34 18.0	36.4N	069.3E	09.6S	076.1W	h ABOUT	033KM
JUN 03		h ABOUT	033KM	h ABOUT	124KM	SPA IP	04 15 13.0
SPA EP	08 13 30.0	SPA EP'	03 16 05.0	BYR IP	11 57 20.5	BYR IP	04 15 27.0
JUN 03		JUN 04		I	12 04 30.0	IS	21 25.0
H-11 25	45.5	H-03 27	04.6	SPA IP	11 58 01.5	MAW IP	04 16 04.6
61.1N	151.2W	59.7N	147.3W	JUN 04		JUN 05	
h ABOUT	033KM	h ABOUT	045KM	H-11 53	50.2	H-04 44	48.6
SPA EP'	11 45 30.0	SPA EP'	03 46 47.0	14.7S	176.0W	47.8N	027.3W
JUN 03		JUN 04		h ABOUT	303KM	h ABOUT	033KM
H-13 50	15.5	SPA IP	04 17 14.0	SPA IP	12 05 02.0	SPA EP'	05 04 08.0
40.3N	126.1W	JUN 04		MAW IP	12 06 05.5	MIR EP'	05 04 18.3
h ABOUT	033KM	SPA IP					

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUN 05 SPA P	04 53 00.0	JUN 05 SPA IP	16 36 05.0	SPA IP	19 18 19.5	JUN 07 SPA EP	16 57 56.0
JUN 05 SPA IP	05 27 01.5	JUN 05 SPA EP	16 43 17.0	WIL EP ES	19 20 06.0 30 18.0	JUN 07 SBA EP	20 06 24.0
JUN 05 BYR IP	06 52 10.0	JUN 05 SBA EP	20 28 30.0	MIR EP	19 20 22.0	JUN 07 H-20 10 15.9 30.4S 067.6W h ABOUT 029KM	
MAW IP I pP	06 52 48.0 54 49.0	JUN 05 H-22 06 53.0 58.1N 152.1W h ABOUT 015KM		MAW EP ES	19 20 29.0 31 08.0	SPA IP I I	20 20 20.5 20 32.0 20 58.0
SBA EP	06 53 34.0	BYR EP'	22 26 13.0	JUN 06 SPA IP	19 09 40.5 19 46 59.0	MAW E(P)	20 22 13.0
SPA IP	06 53 58.0	MIR EP'	22 26 41.5	JUN 06 SPA EP	21 21 31.0	MIR E(P)	20 22 48.5
JUN 05 H-09 13 20.0 16.2S 177.3E h ABOUT 025KM		JUN 05 SPA IP I	22 27 37.0 27 43.5	JUN 06 H-27 01 45.2 56.0S 027.4W h ABOUT 033KM		WIL E(P)	20 22 58.0
WIL E(P)	09 24 05.0	MAW EP	22 27 38.0	SPA IP	22 08 28.5	JUN 07 SPA EP	20 49 42.0
BYR EP	09 24 25.0	JUN 06 H-02 14 17.9 16.8S 167.4E h ABOUT 041KM		BYR IP	22 08 43.0	JUN 07 SPA IP	22 20 22.0
MAW EP	09 25 50.0	SPA E(P)	02 25 37.0	MAW IP	22 09 20.0	BYR IP I	22 20 37.5 20 36.0
JUN 05 SPA IP	09 25 49.5	JUN 06 H-02 33 16.1 08.9S 108.7W h ABOUT 033KM		JUN 07 SPA EP	07 02 51.0	JUN 07 SPA IP	22 29 20.5
MIR EP	09 30 25.1	SPA IP	02 45 29.5	JUN 07 H-08 22 55.9 03.0S 130.3E h ABOUT 033KM		JUN 07 SPA EP	23 00 03.0
JUN 05 H-09 50 35.0 60.4N 146.0W h ABOUT 015KM		JUN 06 H-03 44 27.8 08.3S 079.3W h ABOUT 047KM		SPA IP	08 35 40.0	JUN 08 WIL E(P)	00 48 08.0
WIL EP'	10 10 18.0	SPA IP	03 56 42.5	BYR EP	08 35 58.0	JUN 08 H-02 26 42.3 22.1S 179.5W h ABOUT 554KM	
JUN 05 SPA EP	10 03 56.0	JUN 06 SPA IP	06 13 47.0	JUN 07 SPA EP	08 32 11.0	SPA IP E E	02 36 47.5 38 45.0 39 55.0
BYR IP E	10 04 11.0 10 05.0	JUN 06 SPA EP	08 00 16.0	JUN 07 H-13 07 53.2 18.4S 173.7W h ABOUT 033KM		JUN 08 H-04 22 30.1 51.6N 175.9W h ABOUT 027KM	
JUN 05 SPA IP I I	10 11 25.0 11 29.5 11 37.5	JUN 06 SPA EP	08 25 23.0	BYR EP	13 18 43.0	SPA EP'	04 41 52.0
JUN 05 H-11 18 18.1 4.7N 075.8W h ABOUT 062KM		AIA EIP	08 26 29.0	SPA EP	13 19 11.0	MAW IP' E	04 42 11.8 42 26.0
SPA EP	11 31 32.0	JUN 06 SPA P	09 35 16.0	JUN 07 SPA IP	13 40 14.0	JUN 08 SPA IP	05 42 48.5
MAW EP'	11 36 54.0	JUN 06 SBA EP	12 01 04.0	BYR IP	13 42 02.0	JUN 08 H-05 44 31.0 57.4N 149.2W h ABOUT 033KM	
JUN 05 SPA IP	14 28 27.5	JUN 06 SPA IP	18 26 42.0	JUN 07 H-14 49 31.2 36.3N 141.0E h ABOUT 036KM		SPA IP'	06 04 08.5
JUN 05 MAW IP	14 31 20.2	JUN 06 MCQ IP	18 35 43.0	SPA EP'	15 08 29.0	JUN 08 SPA IP	07 04 16.0
SPA IP	14 31 14.5	JUN 06 H-19 07 51.4 26.6S 114.4W h ABOUT 033KM		JUN 07 SPA EP	16 41 56.0	JUN 08 WIL E(P)	10 44 13.0
JUN 05 H-16 08 03.3 6.5S 125.8E h ABOUT 033KM		BYR IP	19 17 10.5	MAW IP	16 42 27.2		

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUN 08 SPA EP	12 10 44.0	SPA IP I	04 32 28.0 32 38.0	JUN 10 BYR IP IS	02 20 21.0 26 18.0	SPA IP MAW EP	19 25 13.0 19 25 53.5
JUN 08 SBA EP	13 16 29.0	JUN 09 SPA IP I	04 40 50.5 41 03.0	JUN 10 BYR IP E	06 16 17.0 17 00.0	JUN 10 MIR EP	19 23 34.0
JUN 08 SPA IP	14 39 33.5	JUN 09 SPA IP	05 20 44.0	JUN 10 SPA IP	08 36 06.0	JUN 10 H-19 48 30.5 06.1S 104.9E h ABOUT 084KM	
JUN 08 H-15 47 60.0 4.9S 151.3E h ABOUT 221KM		JUN 09 H-09 24 17.8 59.6N 145.1W h ABOUT 033KM		JUN 10 BYR EP	08 36 21.0	MAW EP	19 59 18.0
SPA EP	16 00 12.0	SPA IP'	09 44 01.5	JUN 10 SPA IP	09 04 09.5	SPA EP I	20 00 51.0 30 14.5
JUN 08 SPA IP	17 07 48.5	JUN 09 SBA EP	10 26 52.0	JUN 10 MAW IP	10 38 39.5	BYR IP I	20 01 28.5 01 45.0
JUN 08 H-17 56 18.5 6.1S 153.6E h ABOUT 059KM		JUN 09 SPA IP I	12 18 21.0 18 28.5	JUN 10 MAW IP	11 01 17.9	JUN 10 SPA I	20 33 37.0
SPA I(P) I E	18 08 29.0 08 46.5 14 33.0	BYR IP	12 18 28.5	JUN 10 MAW EP IP	11 02 42.0 04 43.0	JUN 10 ATA IP E	21 32 29.5 36 15.0
BYR IP	18 08 42.0	MAW EP	12 19 23.0	JUN 10 SPA IP	11 05 51.0	MAW IP IPCP	21 35 34.0 37 35.5
JUN 08 MAW IP IP	18 09 20.6 11 22.0	JUN 09 SPA EP	14 00 39.0	JUN 10 SPA EP	12 04 56.0	BYR IP	21 35 52.2
MIR EP	18 10 35.5	JUN 09 H-15 02 21.6 19.2S 177.6W h ABOUT 556KM		JUN 10 BYR IP	13 27 50.0	JUN 10 MAW EP	21 58 06.0
JUN 08 SPA EP	18 46 27.0	BYR IP	15 12 14.0	JUN 10 MAW EP	13 32 11.0	JUN 10 H-22 16 44.8 5.0N 127.4E h ABOUT 146KM	
JUN 08 H-22 53 21.7 17.7N 145.7E h ABOUT 163KM		SPA IP	15 12 43.5	JUN 10 MAW E(P) E	13 34 57.0 35 55.5	MCQ EP	22 27 12.0
SPA EP'	23 11 30.0	JUN 09 SPA IP	15 44 03.0	JUN 10 AIA IP I E	15 10 53.0 11 44.0 21 18.0	MIR IP EP ES	22 28 15.4 28 52.0 37 48.0
JUN 08 MAW EP	23 11 24.0	SPA IP I	17 25 19.5 25 25.5	JUN 10 MAW EP	17 14 17.0	MAW EP	22 29 06.5
JUN 08 WIL EP ES	23 27 53.0 37 12.0	JUN 09 H-18 16 13.7 00.2S 078.9W h ABOUT 048KM		JUN 10 MAW EP	17 59 29.0	SBA IP	22 29 08.5
JUN 09 BYR EP	01 11 12.0	BYR IP	18 28 31.5	JUN 10 MAW EP	18 25 02.5	JUN 10 MIR IP EP ES	22 28 15.4 28 52.0 37 48.0
JUN 09 H-02 33 39.4 38.2N 002.5W h ABOUT 033KM		SPA IP	18 29 08.5	JUN 10 H-18 26 54.5 09.4S 117.6E h ABOUT 033KM		MAW EP	22 29 06.5
SPA IP'	02 52 39.0	JUN 09 SPA IP	19 15 44.0	MAW EP	18 37 53.5	SBA IP	22 29 08.5
JUN 09 BYR IP	04 04 15.0	SPA EP I	21 16 28.0 16 38.0	SPA IP	18 39 04.5	JUN 10 MAW P	23 00 14.0
SPA IP	04 04 47.0	JUN 09 SPA IP	21 46 19.5	BYR IP	18 39 34.5	JUN 10 SBA EP	23 48 10.0
JUN 09 H-04 22 59.8 35.4S 105.9W h ABOUT 033KM		JUN 10 SPA EP	00 17 52.0	JUN 10 H-19 13 52.0 18.0S 167.9E h ABOUT 047KM		JUN 11 H-01 05 20.2 19.5S 175.4W h ABOUT 272KM	
BYR IP	04 31 15.0	JUN 10 MAW IP	02 13 45.0	BYR IP	19 24 57.0	BYR IP	01 15 34.0

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SPA IP	01 16 08.0	WIL EP	13 30 37.0	JUN 11		JUN 12	
MAW IP	01 17 19.0	MIR P	13 31 11.0	SPA IP	18 21 46.5	H-00 23 04.6	
JUN 11		SBA EP	13 31 36.0			60.1N 142.9W	
MAW IP	02 13 45.0	MAW E(P)	13 32 11.0	JUN 11		h ABOUT 033KM	
SPA IP	02 14 06.5	E	35 55.5	H-18 32 17.9		SPA EP'	00 42 50.0
BYR IP	02 14 16.0	BYR IP	13 32 42.0	33.1N 137.6E		JUN 12	
JUN 11		JUN 11		h ABOUT 330KM		MAW EP	01 18 48.0
H-03 11 56.6		SPA IP	13 35 18.5	SPA IP'	18 50 35.0	JUN 12	
65.5N 168.1W		JUN 11		JUN 11		H-03 33 39.9	
h ABOUT 033KM		SPA IP	14 12 49.0	MIR EP	18 44 27.0	43.9N 113.8W	
BYR EP'	03 31 38.0	JUN 11		JUN 11		h ABOUT 033KM	
SPA EP'	03 31 44.0	SPA IP	14 43 55.0	H-19 42 12.8		SPA EP'	03 52 44.0
I	32 32.5	JUN 11		02.1S 141.2E		WIL EP'	03 53 16.0
JUN 11		SPA IP	15 33 35.5	h ABOUT 033KM		JUN 12	
MIR EP	10 01 15.5	BYR IP	15 33 46.0	WIL EP	19 53 12.0	SBA IP	05 16 15.1
JUN 11		JUN 11		MIR EP	19 53 37.0	JUN 12	
H-10 26 16.8		H-15 20 48.4		MAW IP	19 54 39.5	SPA EP	06 09 51.0
2.2S 141.2E		02.0S 141.2E		SPA IP	19 55 00.5	JUN 12	
h ABOUT 067KM		h ABOUT 033KM		BYR IP	19 55 10.0	H-06 43 51.5	
WIL IP	10 37 08.0	SPA IP	17 12 46.0	JUN 11		35.0S 111.8W	
MIR EP	10 37 38.0	ES	22 01.0	SBA EP	20 03 48.0	h ABOUT 033KM	
SBA EP	10 38 04.0	MIR IP	17 13 15.0	JUN 11		SPA IP	06 53 23.0
MAW IP	10 38 39.5	ES	22 40.0	SBA EP	20 03 48.0	JUN 12	
SPA IP	10 39 01.0	BYR IP	17 13 40.2	JUN 11		SBA EP	08 10 00.0
BYR IP	10 39 11.0	MAW EP	17 14 17.0	H-21 28 08.2		JUN 12	
IS	45 13.0	SPA IP	17 14 38.5	55.9S 027.7W		SBA EP	09 29 05.0
JUN 11		BYR IP	17 14 48.0	h ABOUT 135KM		JUN 12	
SPA IP	10 34 36.0	JUN 11		SPA IP	21 34 42.5	H-10 50 09.1	
BYR IP	10 34 46.0	SPA IP	17 24 38.0	I	35 25.0	02.1S 141.1E	
JUN 11		JUN 11		BYR IP	21 34 57.0	h ABOUT 033KM	
H-10 55 06.2		H-17 27 13.4		EP	35 28.0	WIL EP	11 01 07.0
56.0S 027.3W		58.1N 152.9W		IS	40 52.0	MAW EP	11 02 36.0
h ABOUT 033KM		h ABOUT 030KM		MAW IP	21 35 35.0	SPA IP	11 02 55.0
SPA IP	11 01 50.0	SPA IP'	17 47 05.5	IPCP	37 35.5	I	03 06.5
I	04 24.0	JUN 11		SBA IP	21 36 19.9	BYR IP	11 03 05.0
BYR IP	11 02 04.0	JUN 11		MIR IP	21 36 50.0	JUN 12	
ES	08 01.0	H-17 51 51.5		IP	37 19.0	SBA IP	11 23 22.7
MAW IP	11 02 42.0	9.2S 089.5E		ES	43 49.0	JUN 12	
IP	04 43.0	h ABOUT 033KM		WIL IP	21 37 21.0	SPA IP	14 09 55.0
SBA EP	11 03 28.0	SPA IP	17 37 45.0	ES	44 50.0	I	12 29.0
MIR EP	11 03 57.0	JUN 11		JUN 11		BYR IP	14 10 09.5
WIL EP	11 04 29.0	SPA IP	17 50 42.0	MAW EP	21 58 06.0	SBA IP	14 12 23.2
JUN 11		JUN 11		SPA IP	21 58 27.0	JUN 12	
SBA EP	11 18 12.0	H-17 51 51.5		BYR IP	21 58 37.0	H-15 56 21.3	
JUN 11		9.2S 089.5E		JUN 11		11.4N 124.9E	
H-13 19 44.0		h ABOUT 033KM		H-22 18 19.8		h ABOUT 183KM	
1.9S 141.0E		SBA EP	18 03 48.0	40.3N 126.5W		SPA EP	16 09 51.0
h ABOUT 040KM		SPA EP	18 04 01.0	h ABOUT 033KM		JUN 12	
		BYR IP	18 04 48.0	SPA EP'	22 37 26.0	SPA EP	16 26 01.0

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h m s		h m s		h m s		h m s	
JUN 12 H-16 44 35.4 2.2N 083.0W h ABOUT 052KM		JUN 13 H-04 20 53.5 53.6N 172.1E h ABOUT 033KM		SPA EP'	08 47 49.0	MIR EP	22 42 23.5
SPA IP	16 57 41.5	SPA EP'	04 40 20.0	JUN 13 SPA IP	08 37 51.5	ES	52 58.3
JUN 12 SPA EP	18 06 43.0	MAW EP'	04 40 27.0	JUN 13 SPA IP	08 51 54.5	MAW E(P)	22 43 26.0
JUN 12 H-18 12 20.5 26.5S 178.3E h ABOUT 648KM		JUN 13 SPA EP	05 02 12.0	JUN 13 H-11 14 26.5 27.3S 178.0W h ABOUT 034KM		JUN 13 SPA EP	23 30 09.0
SBA IP	18 20 31.1	JUN 13 H-05 04 23.5 1.9S 141.2E h ABOUT 033KM		SBA I(P)	11 23 22.7	JUN 13 H-23 46 44.5 19.3S 176.5W h ABOUT 285KM	
BYR IP	18 21 23.0	WIL EP	05 15 20.0	SPA I(P)	11 24 45.5	SPA IP	23 57 31.5
I	23 20.0	MIR EP	05 15 49.0	I	25 04.5	JUN 14 SPA EP	00 48 21.0
I	25 05.5	ES	25 22.0	E	28 11.0	JUN 14 H-00 56 56.8 48.2N 154.3E h ABOUT 040KM	
SPA IP	18 21 50.5	SBA IP	05 16 15.1	MAW EP	11 26 12.5	SPA EP'	01 16 07.0
I	22 02.5	MAW EP	05 16 52.0	JUN 13 MIR IP	12 21 12.7	JUN 14 H-01 19 57.7 27.5S 177.5W h ABOUT 033KM	
JUN 12 MAW EP	18 25 02.5	SPA IP	05 17 12.0	JUN 13 H-14 01 40.2 03.9S 154.3E h ABOUT 474KM		SBA IP	01 28 54.9
JUN 12 SPA IP	18 49 58.0	JUN 13 MAW EP	05 12 47.0	WIL IP	14 12 00.0	BYR IP	01 29 44.5
JUN 12 SBA EP	19 14 01.0	JUN 13 MAW EP	06 15 59.0	SBA I(P)	14 12 23.2	SPA I(P)	01 30 17.0
JUN 12 AIA EP	22 00 27.0	MIR EP	06 16 29.0	MIR IP	14 12 34.1	I	30 23.5
E	01 21.0	ES	23 56.4	SPA IP	14 13 30.5	I	30 35.0
I	02 54.0	JUN 13 MAW EP	07 17 53.5	MAW I(P)	14 13 35.0	JUN 14 SPA EP	04 30 03.0
JUN 12 SBA EP	22 40 42.0	SPA IP	07 18 13.0	JUN 13 SPA EP	16 02 18.0	JUN 14 SPA IP	05 23 58.5
JUN 12 H-22 47 47.2 6.6S 154.7E h ABOUT 080KM		JUN 13 WIL EP	08 09 04.0	JUN 13 SPA IP	16 48 27.5	JUN 14 SPA IP	09 38 15.5
BYR IP	23 00 05.0	MIR IP	08 09 35.1	JUN 13 H-17 35 57.8 23.0N 094.0E h ABOUT 061KM		JUN 14 SBA EP	10 40 50.0
MAW EP	23 00 14.0	ES	20 25.0	MAW EP	17 49 09.0	JUN 14 SPA EP	11 11 44.0
JUN 13 H-01 13 31.9 58.8N 149.9W h ABOUT 033KM		SBA EP	08 10 00.0	SPA EP'	17 54 28.0	JUN 14 BYR IP	11 13 23.0
SPA IP'	01 33 16.5	MAW IP	08 10 37.5	JUN 13 SPA EP	18 05 25.0	JUN 14 SPA EP	12 13 43.0
JUN 13 MAW EP	01 18 48.0	SPA IP	08 10 58.0	JUN 13 SPA EP	18 50 55.0	JUN 14 H-12 15 31.3 38.0N 038.5E h ABOUT 008KM	
JUN 13 MAW E(P)	01 31 35.0	JUN 13 WIL EP	08 15 20.0	JUN 13 SBA EP	19 14 01.0	SPA IP'	12 34 38.5
JUN 13 MAW EP	01 34 35.0	SPA IP	08 17 14.0	JUN 13 H-22 31 53.5 27.6S 178.3W h ABOUT 094KM		SBA EP'	12 34 54.0
JUN 13 SPA IP	03 14 42.0	JUN 13 MAW EP	08 35 55.5	SPA EP'	17 54 28.0	BYR EP'	12 35 01.0
JUN 13 SPA IP	04 02 00.0	JUN 13 SPA EP	08 25 58.0	JUN 13 SBA EP	19 14 01.0	I	38 31.0
		JUN 13 H-08 28 38.7 46.4N 153.3E h ABOUT 033KM		JUN 13 H-22 31 53.5 27.6S 178.3W h ABOUT 094KM		SBA E(P)	22 40 42.0
		MAW EP	08 35 55.5	SPA IP	22 42 06.5	SPA IP	22 42 06.5

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUN 14		JUN 15		JUN 16		SPA IP	11 28 54.0
H-12 38 03.7		MAW EP	00 06 05.5	AIA EIP	04 27 29.0	BYR IP	11 29 03.0
38.1N 038.3E				E	23 36.0	E(S)	38 34.0
h ABOUT 031KM		JUN 15		JUN 16		JUN 16	
SPA IP'	12 57 03.0	MAW EP	00 59 36.5	H-06 52 20.5		BYR IP	14 05 21.0
JUN 14		JUN 15		55.7N 134.8E		SPA IP	14 05 26.5
SPA EP	12 52 18.0	MAW EP	01 11 51.5	h ABOUT 033KM		MAW IP	14 05 57.4
JUN 14		JUN 15		SPA IP'	07 11 39.0	JUN 16	
MIR EP	16 40 36.2	MAW EP	01 18 54.5	I	12 11.5	MAW EP	16 04 46.0
JUN 14		JUN 15		I	14 19.5	JUN 16	
H-17 20 17.5		MAW IP	01 20 18.6	JUN 16		H-17 23 30.4	
56.7N 152.1W		JUN 15		H-06 53 05.0		5.8S 154.0E	
h ABOUT 033KM		MAW IP	01 21 54.8	38.7N 139.0E		h ABOUT 060KM	
SPA EP'	17 39 54.0	JUN 15		h ABOUT 015KM		MIR E(P)	17 34 56.7
JUN 14		MAW IP	02 01 28.0	SBA EP'	07 11 51.0	SPA I(P)	17 35 45.0
MAW IP	19 03 50.1	JUN 15		E	13 04.0	I	36 07.5
SPA IP	19 04 34.5	JUN 15		BYR IP'	07 12 15.0	BYR IP	17 35 54.0
JUN 14		H-02 05 37.1		I	14 27.0	MAW IP	17 36 00.4
H-19 27 59.4		17.4S 174.9W		JUN 16		JUN 16	
6.8S 129.8E		h ABOUT 148KM		H-07 14 57.1		SPA IP	18 18 02.5
h ABOUT 081KM		MAW EP	02 17 59.0	38.5N 139.2E		JUN 16	
MAW IP	19 39 34.2	JUN 15		h ABOUT 016KM		H-19 54 46.5	
SPA IP	19 40 17.5	SBA EP	04 59 25.0	MAW EP'	07 33 46.5	19.6N 066.8W	
BYR IP	19 40 37.5	JUN 15		BYR IP'	07 34 07.0	h ABOUT 030KM	
JUN 14		SPA EP	06 01 48.0	E	36 15.0	MAW IP'	20 13 40.7
WIL EP	20 38 20.0	JUN 15		JUN 16		JUN 16	
I	38 32.0	SPA EP	11 15 38.0	SPA IP	07 53 26.5	MAW EP	20 08 11.0
JUN 14		JUN 15		JUN 16		JUN 16	
SPA EP	22 04 33.0	WIL EP	13 48 41.0	H-08 34 08.7		JUN 16	
JUN 14		E	48 57.0	22.0S 175.8W		SPA IP	20 52 08.5
H-23 56 29.9		JUN 15		h ABOUT 033KM		BYR IP	20 52 23.0
56.1S 025.0W		SPA EP	23 20 47.0	BYR P	08 44 32.0	JUN 16	
h ABOUT 033KM		JUN 16		SPA IP	08 45 06.0	JUN 16	
AIA EIP	24 01 10.0	MIR EP	00 27 08.0	I	45 20.5	H-22 03 14.3	
JUN 15		JUN 16		JUN 16		15.3S 172.8W	
H-00 05 31.1		H-04 01 44.3		H-09 00 41.6		h ABOUT 033KM	
5.4N 097.0E		38.3N 139.1E		20.0S 170.2E		BYR EP	22 14 18.0
h ABOUT 033KM		h ABOUT 057KM		h ABOUT 033KM		MIR EP	22 15 07.7
MIR IP	00 16 52.6	WIL E(P)	04 15 06.0	SPA IP	09 11 50.5	MAW EP	22 16 02.5
JUN 15		ES	20 27.0	JUN 16		JUN 16	
H-00 05 31.1		MAW EP'	04 20 29.5	SPA EP	09 07 47.5	JUN 16	
5.4N 097.0E		E	43 04.4	JUN 16		SPA EP	22 30 07.0
h ABOUT 033KM		JUN 16		H-10 23 39.7		JUN 16	
MIR IP	00 16 54.5	MAW EP	04 07 33.0	61.2N 146.8W		MIR EP	23 23 28.4
ES	26 18.0	JUN 16		h ABOUT 040KM		JUN 17	
MAW IP	00 17 20.8	MIR EP	04 16 20.5	SPA IP'	10 43 25.5	SPA IP	03 10 27.0
ES	27 08.0	SBA EP	04 16 56.0	I	43 33.5	JUN 17	
SBA EP	00 18 35.0	SPA IP'	04 17 04.5	JUN 16		WIL E(P)	04 05 23.0
JUN 15		I	20 46.5	H-11 16 03.1		JUN 17	
H-00 05 31.1		ISKS	23 03.0	02.0S 141.1E		BYR EP	06 09 45.2
5.4N 097.0E		BYR IP	04 17 19.0	h ABOUT 013KM			
h ABOUT 033KM		I	20 49.0	MIR IP	11 27 31.6		
MIR IP	00 16 52.6	E	22 33.0	MAW IP	11 28 32.9		
ES	26 18.0						
MAW IP	00 17 20.8						
ES	27 08.0						
SBA EP	00 18 35.0						

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUN 17 H-07 48 58.5 19.6S 169.0E h ABOUT 058KM		BYR IP	08 05 41.0	JUN 19 H-10 05 36.4 38.8N 139.3E h ABOUT 030KM		JUN 20 SPA IP	10 29 40.5
BYR IP	07 59 51.0	JUN 18 H-08 24 26.6 59.9N 147.2W h ABOUT 033KM		SPA IP'	10 24 40.5	I	32 14.5
SPA IP	08 00 08.0	SPA IP'	08 44 12.0	BYR IP'	10 24 44.0	JUN 20 BYR IP	10 49 55.0
JUN 17 BYR EP	08 29 32.8	JUN 18 MCQ IP	09 54 11.0	JUN 19 WIL EP	12 30 07.0	MAW IP	10 50 32.1
JUN 17 BYR EP	08 34 37.1	ES	54 15.0	JUN 19 MAW EP	14 15 34.0	MAW IP	10 50 32.5
JUN 17 SPA EP	09 28 13.0	JUN 18 SPA IP	13 00 45.5	JUN 19 H-15 06 07.0 24.4S 068.7W h ABOUT 049KM		JUN 20 H-12 31 49.7 21.2S 179.2W h ABOUT 600KM	
JUN 17 H-10 59 27.2 60.1N 149.5W h ABOUT 072KM		JUN 18 SPA EP	14 55 15.0	SPA I(P)	15 16 44.5	BYR IP	12 41 28.0
SPA EP'	11 19 10.0	JUN 18 MAW IP	15 46 40.0	JUN 19 MAW EP	15 46 40.0	SPA IP	12 41 56.5
JUN 17 BYR EP	13 45 23.3	JUN 18 MCQ IP	16 04 46.0	JUN 19 WIL E(P)	19 26 46.0	JUN 20 SPA EP	15 48 28.0
JUN 17 SPA IP	13 52 44.0	JUN 18 SPA EP	16 25 02.0	JUN 19 MIR EP	23 38 32.0	JUN 20 MCQ EP	16 03 04.0
JUN 17 SPA IP	15 30 49.0	MIR E(P)	16 28 51.5	JUN 19 MIR EP	23 38 32.0	JUN 20 H-16 06 44.3 03.3S 142.4E h ABOUT 033KM	
SBA EP	15 31 50.0	JUN 18 SPA IP	17 50 33.0	JUN 20 SPA EP	02 00 09.0	SPA IP	16 19 25.0
JUN 17 SPA IP	15 45 49.0	JUN 18 H-18 01 47.6 47.5N 154.9E h ABOUT 033KM		JUN 20 SPA EP	02 41 40.0	BYR IP	16 19 34.0
JUN 17 WIL EP	16 23 23.8	SPA EP'	18 21 00.0	JUN 20 H-03 44 30.5 08.7S 148.2E h ABOUT 119KM		JUN 20 H-16 59 09.0 40.5N 142.2E h ABOUT 035KM	
JUN 17 WIL E(P)	16 29 18.0	JUN 18 MAW EP	19 41 29.5	SPA IP	03 56 35.5	SPA EP'	17 18 13.0
JUN 17 SPA EP	17 14 12.0	JUN 18 H-20 33 53.3 39.3S 074.7W h ABOUT 026KM		JUN 20 H-04 15 47.0 60.9N 142.9W h ABOUT 040KM		JUN 20 H-18 40 46.8 05.3N 032.6W h ABOUT 033KM	
JUN 17 BYR EP	18 11 36.4	SPA IP	20 42 54.0	SPA EP'	04 35 19.0	SPA EP	18 54 08.0
ES	19 36.0	SBA EP	20 43 43.0	JUN 20 SBA EP	04 41 07.0	JUN 20 SPA EP	20 34 44.0
JUN 17 BYR EP	20 47 01.4	MAW EP	20 44 55.5	JUN 20 SPA IP	04 59 39.5	JUN 20 SPA IP	21 12 51.0
JUN 17 H-22 17 37.9 23.8S 179.7W h ABOUT 504KM		MIR EP	20 45 27.0	JUN 20 SPA EP	05 06 27.0	JUN 20 SPA EP	22 59 42.5
SPA EP	22 27 37.0	WIL EP	20 45 34.0	JUN 20 WIL E(P)	06 33 10.0	JUN 20 SPA EP	23 14 50.0
I	29 30.5	JUN 19 H-01 34 10.9 56.8N 151.5W h ABOUT 033KM		JUN 20 SPA EP	07 58 41.0	JUN 21 H-01 33 11.2 51.0N 157.0E h ABOUT 051KM	
JUN 17 WIL EP	23 23 58.0	SPA EP'	01 53 45.0	JUN 20 H-09 59 08.9 19.9S 174.1W h ABOUT 033KM		BYR IP'	01 52 24.0
JUN 18 MIR E(P)	00 15 20.5	JUN 19 SPA EP	03 24 07.0	SPA IP	10 10 18.0	SPA IP'	01 52 27.5
JUN 18 SPA IP	02 18 31.0	JUN 19 WIL E(P)	10 00 04.0			I	52 30.0
JUN 18 SPA IP	08 05 27.0					I	52 45.0
						JUN 21 SPA IP	03 42 19.0

ANTARCTIC SEISMOLOGICAL BULLETIN

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUN 21 SPA IP	05 31 28.5	JUN 21 SPA EP	22 18 10.0	JUN 22 SPA EP	05 41 49.0	SPA EP	17 29 35.0
JUN 21 SPA IP	05 48 31.5	JUN 21 H-22 21 22.7 16.3S 178.0E h ABOUT 018KM		JUN 22 SPA IP I	05 43 49.0 44 14.5	JUN 22 SPA IP	21 10 53.5
JUN 21 H-06 54 46.2 14.9S 073.3W h ABOUT 080KM		SBA EP	22 31 39.0	JUN 22 SPA IP	06 42 09.5	JUN 22 H-21 23 33.6 13.6N 120.3E h ABOUT 056KM	
RYS IP	07 05 39.0	WIL EP	22 32 10.0	JUN 22 H-07 30 59.5 18.0S 167.6E h ABOUT 033KM		MIR EP	21 35 52.1
SPA I(P) I	07 06 28.5 06 52.5	BYR IP	22 32 32.0	BYR IP	07 42 07.0	MAW IP	21 36 33.8
SBA EP	07 06 54.0	SPA IP	22 32 56.0	SPA EP	07 42 22.0	JUN 22 SPA EP	21 40 38.0
JUN 21 H-07 42 55.2 30.0S 091.6W h ABOUT 033KM		MIR EP	22 32 57.5	JUN 22 H-07 42 02.5 24.3S 176.8W h ABOUT 075KM		JUN 22 SBA EP	22 59 44.0
SPA IP	07 53 01.5	JUN 21 MIR E(P)	22 52 21.9	SPA IP	07 52 42.0	JUN 23 SPA IP	00 27 51.5
JUN 21 SPA EP	08 51 52.0	JUN 21 SPA IP	23 07 57.5	JUN 22 H-08 32 02.1 62.1N 148.5W h ABOUT 033KM		JUN 23 SPA IP	01 20 39.5
JUN 21 SPA IP	12 30 27.0	JUN 21 SPA EP	23 21 22.0	SPA IP'	08 51 40.0	JUN 23 H-01 26 37.0 43.3N 146.1E h ABOUT 077KM	
JUN 21 SPA IP I I	13 21 20.5 23 36.5 27 15.0	JUN 22 H-00 16 27.4 15.7S 172.8W h ABOUT 033KM		JUN 22 MCQ IP ES	10 33 28.5 33 39.0	MIR EP' ES	01 45 16.7 52 00.3
JUN 21 SPA IP	13 45 05.5	SBA EP	00 26 50.0	JUN 22 H-12 11 09.4 60.0N 146.7W h ABOUT 033KM		SBA EP'	01 45 29.0
JUN 21 SPA EP	15 14 45.0	BYR IP	00 27 25.0	SPA EP'	12 30 56.0	BYR EP' EPP ES	01 45 36.0 48 14.0 55 02.0
JUN 21 H-15 40 01.9 31.5S 068.7W h ABOUT 118KM		WIL E(P) ES	00 27 35.0 36 50.0	JUN 22 H-13 40 02.8 25.1S 177.4W h ABOUT 121KM		MAW IP'	01 45 55.0
SPA EP	15 49 49.0	SPA IP	00 28 00.0	BYR EP	13 50 00.0	JUN 23 WIL EP' ES	01 45 54.0 51 45.0
JUN 21 SPA EP	16 16 39.0	MIR EP ES	00 28 17.0 38 07.2	SPA IP	13 50 33.0	JUN 23 MIR EP' ESKS	01 55 27.7 02 02 23.7
JUN 21 SBA EP	17 12 30.0	JUN 22 H-02 20 35.0 36.2N 139.6E h ABOUT 055KM		JUN 22 H-03 03 37.9 10.4S 161.1E h ABOUT 070KM		JUN 23 SPA EP I I	02 45 30.0 45 45.0 46 41.5
JUN 21 SPA EP	18 08 12.0	SPA IP'	02 39 32.0	WIL EP ES	03 14 14.0 22 56.0	MIR E(P)	02 46 54.7
JUN 21 SPA EP	18 23 50.0	JUN 22 H-03 03 37.9 10.4S 161.1E h ABOUT 070KM		SBA IP	03 14 29.4	JUN 23 SPA IP I	03 27 49.0 30 12.0
JUN 21 SPA IP	20 51 06.5	WIL EP ES	03 14 14.0 22 56.0	MIR IP	03 14 55.4	JUN 23 MIR EP	04 09 38.2
JUN 21 WIL EP E	21 49 28.0 49 43.0	BYR IP	03 15 31.0	BYR IP	03 15 31.0	JUN 23 H-05 25 36.8 53.9N 163.2W h ABOUT 060KM	
JUN 21 BYR EP	22 01 02.0	SPA IP I	03 15 38.5 16 01.5	SPA IP	03 15 38.5 16 01.5	SPA EP'	05 45 01.0
SPA IP	22 01 17.0	MAW IP	03 16 00.0	BYR IP	14 29 04.0		
		JUN 22 SPA EP	04 32 04.0	SPA IP	14 29 17.5		
				JUN 22 H-17 16 57.0 3.0S 139.6E h ABOUT 078KM			

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUN 23		JUN 24		JUN 25		SBA EP	13 43 57.0
H-08 42 52.7		SPA IP	01 28 28.0	H-11 47 02.2		MIR EP	13 44 14.3
60.5N 144.9W				22.8S 063.5W		MAW EP	13 45 22.5
h ABOUT 033KM		JUN 24		h ABOUT 525KM			
SPA IP ¹	09 02 34.5	SPA EP	05 20 48.0	SPA IP	11 57 06.5	JUN 26	
JUN 23						AIA EP	15 26 00.0
H-09 18 56.2		JUN 24		JUN 25			
18.4S 173.6W		WIL EP	06 30 45.0	H-11 53 03.2		JUN 26	
h ABOUT 033KM				12.2S 165.6E		AIA EP	15 45 17.0
SPA EP	09 30 14.0	JUN 24		h ABOUT 086KM			
JUN 23		SPA IP	11 39 27.0	BYR EP	12 04 39.0	JUN 26	
SPA IP	11 20 25.0			SPA EP	12 04 53.0	SBA EP	16 28 21.0
I	20 35.5	JUN 24					
I	21 04.5	WIL EP	12 51 53.0	JUN 25		JUN 26	
JUN 23				SPA EP	12 34 51.0	SBA EP	17 25 39.0
H-13 53 51.4		JUN 24					
2.6S 077.7W		H-12 56 26.0		JUN 25		JUN 26	
h ABOUT 033KM		32.2N 129.4E		MAW IP	17 04 24.0	MAW EP	19 50 02.0
SPA IP	14 06 37.0	h ABOUT 048KM					
JUN 23		SPA EP ¹	13 15 15.0	JUN 25		JUN 27	
SPA EP	14 20 31.0			MCQ IP	20 12 59.0	MIR E(P)	00 55 00.5
JUN 23		JUN 24					
SPA EP	14 33 35.0	H-14 59 58.7		JUN 25		JUN 27	
JUN 23		07.1S 155.6E		SBA EP	23 57 05.0	AIA EP	02 22 54.0
MAW IP	16 35 57.6	h ABOUT 123KM				E	23 54.0
JUN 23		SPA IP	15 12 12.0	JUN 26			
SPA EP	17 11 54.5			AIA EP	00 44 32.0	JUN 27	
JUN 23		JUN 24				H-02 28 57.1	
H-17 01 28.9		SPA IP	18 23 31.5	JUN 26		40.4N 077.5E	
18.9S 175.8W				H-01 32 51.5		h ABOUT 033KM	
h ABOUT 204KM		BYR IP	18 23 47.0	55.9S 027.6W		SPA EP ¹	02 48 03.0
BYR IP	17 11 54.5			h ABOUT 055KM			
SPA IP	17 12 26.5	JUN 24		AIA EP	01 37 22.0	JUN 27	
JUN 23		SPA IP	19 45 38.0			SPA IP	07 36 26.0
H-19 10 11.4				BYR IP	01 39 48.0		
3.0N 126.6E		JUN 24		IS	45 43.0	JUN 27	
h ABOUT 033KM		SPA EP	19 45 38.0	MAW IP	01 40 25.5	SPA EP	09 54 40.0
MIR EP	19 21 43.3			SBA EP	01 41 13.0		
SPA IP	19 23 23.5	JUN 25				JUN 27	
BYR IP	19 23 44.0	SPA IP	03 31 19.5	JUN 26		SPA IP	10 11 21.0
JUN 23				H-05 20 03.8			
SPA IP	20 21 14.5	JUN 25		15.7S 167.8E		JUN 27	
JUN 23		SPA EP	03 54 57.0	h ABOUT 134KM		SBA EP	11 18 01.0
SPA IP	23 29 55.0			BYR IP	05 31 13.0		
JUN 24		JUN 25				JUN 27	
SPA IP	00 14 08.5	SPA EP	06 13 46.2	JUN 26		SPA IP	11 54 30.5
JUN 24				MCQ IP	05 23 12.0		
H-00 58 19.7		JUN 25		IS	23 28.0	JUN 27	
4.1S 139.1E		MIR E(P)	06 13 46.2			SPA EP	12 10 45.0
h ABOUT 060KM				JUN 26			
SPA I(P)	01 10 49.0	JUN 25		AIA EP	10 09 53.0	JUN 27	
JUN 24		AIA EP	09 40 18.0	I	16 23.0	SBA EP	13 03 31.0
WIL E(P)	01 07 37.0	I	40 50.0				
JUN 25				JUN 26		SPA IP	13 04 27.0
H-11 23 00.6		JUN 25		MIR EP	12 05 13.0		
60.3N 149.1W		SPA IP	11 12 23.5			JUN 27	
h ABOUT 070KM				JUN 26		SBA IP	15 02 25.3
SPA IP ¹	11 42 42.5	JUN 25		H-13 10 28.9			
		H-11 23 00.6		12.6S 169.4E		SPA IP	15 03 37.0
		60.3N 149.1W		h ABOUT 648KM		I	03 56.0
		h ABOUT 070KM		MAW EP	13 21 56.5		
		SPA IP ¹	11 42 42.5			JUN 27	
				JUN 26		SBA E(P)	15 27 10.0
				H-13 32 52.3			
				09.2S 158.9E		SPA IP	15 29 20.0
				h ABOUT 017KM			

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUN 27		MIR EP	15 03 07.8	JUN 29		JUN 30	
H-16 43 47.0		BYR IP	15 03 22.5	SPA IP	08 41 15.0	SPA EP	06 50 47.0
11.5S 013.8W		E	29 27.0	I	41 24.0		
h ABOUT 033KM		MAW IP	15 04 11.8	JUN 29		JUN 30	
MAW EP	16 55 22.5	JUN 28		H-08 50 57.1		H-08 51 51.2	
BYR IP	16 56 03.0	SRA E(P)	15 27 10.0	1.8S 078.4W		06.9S 129.6E	
JUN 27		JUN 28		h ABOUT 158KM		h ABOUT 099KM	
SPA IP	16 56 30.5	MAW EP	15 30 36.0	SPA IP	09 03 31.0	MAW EP	09 03 24.8
JUN 27		JUN 28		JUN 29		SPA IP	09 04 08.5
MIR E(P)	17 06 53.0	MAW IP	16 34 50.4	MIR EP	09 20 04.9	BYR IP	09 04 28.5
JUN 27		JUN 28		JUN 29		JUN 30	
SPA IP	17 20 26.5	MAW EP	16 55 22.5	SPA IP	09 40 08.5	AIA EP	09 47 14.0
JUN 27		JUN 28		JUN 29		BYR IP	09 50 45.5
SPA IP	17 41 18.0	H-17 27 59.8		SPA EP	09 48 35.0	JUN 30	
I	41 29.0	4.0N 032.4W		MAW EP	09 50 35.0	H-10 14 45.8	
JUN 27		h ABOUT 033KM		JUN 29		19.8S 173.9W	
SPA IP	18 42 11.5	BYR IP	17 41 17.0	H-10 42 46.1		h ABOUT 033KM	
JUN 27		JUN 28		56.7N 151.4W		SBA EP	10 24 40.0
SPA EP	19 28 40.0	H-19 09 05.4		h ABOUT 033KM		BYR I(P)	10 25 13.0
I	28 45.0	58.3N 150.2W		SPA EP'	11 02 21.0	JUN 30	
I	29 05.5	h ABOUT 023KM		JUN 29		H-11 28 57.5	
JUN 27		BYR E(P')	19 28 07.0	MIR EP	10 44 02.6	23.3S 066.6W	
SBA EP	20 00 21.0	MIR EP'	19 28 53.0	JUN 29		h ABOUT 353KM	
JUN 27		JUN 29		SPA IP	12 10 09.0	BYR IP	11 38 35.0
SPA EP	20 16 09.0	SPA IP	02 14 54.0	JUN 29		SPA IP	11 39 14.5
JUN 28		JUN 29		SPA EP	13 49 38.0	I	39 42.5
MIR IP	07 48 55.5	H-03 54 01.2		JUN 29		JUN 30	
JUN 28		22.6S 065.5W		SPA IP	17 08 31.0	MIR IS	13 06 27.8
AIA IP	08 55 03.0	h ABOUT 238KM		JUN 29		JUN 30	
I	08 18.0	SPA IP	04 04 33.5	H-19 04 49.9		H-13 46 21.6	
JUN 28		JUN 29		61.0N 143.7W		00.8S 122.5E	
BYR IP	10 11 35.0	MAW IP	05 18 37.0	h ABOUT 033KM		h ABOUT 036KM	
ES	17 31.0	JUN 29		SPA IP'	19 24 26.0	MCQ E(P)	13 56 43.0
JUN 28		H-07 12 05.9		JUN 29		WIL EP	13 57 05.0
H-12 51 34.6		17.5S 173.5W		WIL EP	20 31 38.0	ES	14 05 52.0
1.7S 149.6E		h ABOUT 033KM		JUN 29		MIR EP	13 57 22.5
h ABOUT 007KM		BYR IP	07 22 56.0	MIR EP	23 38 19.5	MAW EP	13 58 17.0
WIL EP	13 02 47.0	SPA IP	07 23 30.5	JUN 30		SBA EP	13 58 32.0
ES	11 58.0	JUN 29		WIL EP	03 08 04.0	BYR EP	13 59 38.0
MIR IP	13 03 20.9	H-07 21 32.8		JUN 30		EPP	14 03 28.0
SBA EP	13 03 31.0	62.7N 152.0W		BYR IP	05 05 06.0	ES	10 12.0
MAW IP	13 04 22.3	h ABOUT 033KM		JUN 30		JUN 30	
BYR IP	13 04 29.0	BYR IP'	07 41 02.0	H-05 27 28.7		MIR EP	13 52 35.5
E(S)	15 00.0	WIL EP'	07 41 09.0	29.8S 178.7W		JUN 30	
JUN 28		JUN 29		h ABOUT 214KM		SPA I	14 00 43.5
H-14 52 08.4		MAW EP	07 37 08.5	SBA IP	05 35 54.0	I	02 29.0
13.2S 167.1E		JUN 29		BYR IP	05 36 45.0	JUN 30	
h ABOUT 215KM		MAW EP	07 42 26.5	SPA IP	05 37 17.0	MIR EP	14 25 36.3
SBA IP	15 02 25.3	JUN 29		MAW EP	05 38 33.1		
WIL EP	15 02 26.0						
EPP	06 30.0						

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUN 30		JUN 30					
H-15 47 41.1		H-22 11 38.5					
44.7N 150.4E		11.15 162.4E					
h ABOUT 033KM		h ABOUT 009KM					
SPA IP ¹	16 06 58.0	SPA IP	22 23 44.0				
I	11 43.0	JUN 30					
E	18 53.0	SPA EP	22 17 38.0				
BYR EP ¹	16 07 10.0	JUN 30					
JUN 30		H-23 14 32.9					
H-15 48 43.3		00.35 122.6E					
45.9N 150.4E		h ABOUT 056KM					
h ABOUT 033KM		WIL EP	23 25 17.0				
MIR EP ¹	16 07 36.8	MIR EP	23 25 36.3				
JUN 30		SBA EP	23 26 43.0				
SPA I	16 20 21.5	SPA IP	23 27 26.0				
JUN 30		BYR EP	23 27 44.0				
H-16 24 07.9		JUN 30					
33.0S 070.1W		SPA EP	23 17 14.0				
h ABOUT 115KM							
BYR IP	16 33 01.0						
SPA IP	16 33 45.0						
I	34 12.5						
JUN 30							
SPA EP	17 38 52.0						
JUN 30							
H-17 52 35.6							
14.3S 173.6E							
h ABOUT 607KM							
BYR IP	18 03 01.0						
SPA IP	18 03 21.0						
JUN 30							
SPA EP	18 24 12.0						
JUN 30							
SPA IP	18 42 11.0						
BYR IP	18 42 25.0						
JUN 30							
H-19 47 22.5							
.0S 122.9E							
h ABOUT 033KM							
SPA IP	20 00 19.5						
JUN 30							
MIR EP	19 58 29.6						
BYR EP	20 00 42.0						
JUN 30							
H-20 08 28.5							
46.6N 144.6E							
h ABOUT 383KM							
SBA EP ¹	20 26 44.0						
BYR EP ¹	20 26 58.0						
JUN 30							
SPA IP	22 10 47.0						

ANTARCTIC SEISMOLOGICAL BULLETIN

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U.S. DEPARTMENT OF COMMERCE

Luther H. Hodges, Secretary

COAST AND GEODETIC SURVEY—WASHINGTON

H. Arnold Karo, Director

FOR OFFICIAL DISTRIBUTION

U. S. COAST AND GEODETIC SURVEY
ANTARCTIC SEISMOLOGICAL BULLETIN

The Scientific Committee on Antarctic Research of the International Council of Scientific Unions recommended that a bulletin of phase readings be issued from seismological stations in the Antarctic.

The United States Coast and Geodetic Survey has undertaken the publication of the Antarctic Seismological Bulletin to be issued quarterly, based on the readings received by radio from the Antarctic stations. The phase designation shown in this bulletin is the identification given by the station operator.

The epicenters shown in this Bulletin are computed by the United States Coast and Geodetic Survey using the phase readings from many stations in addition to the Antarctic readings shown.

STATION AND INSTRUMENTAL CONSTANTS

1

Country, Station and Station Abbreviation	Position		Foundation and Elevation (In Meters)	Instruments and Components	To Seconds	T _g Seconds
	Latitude	Longitude				
ARGENTINA Deception (DEC)	62°59' S	60°43' W	Rock 7 m	Mainka N Mainka E	5.0 5.0	
AUSTRALIA Macquarie (MCQ)	54°29'55" S	158°57'22" E	Weathered Basaltic Lava 14 m	Benioff Z Benioff N Benioff E	1.0 1.0 1.0	0.2 0.2 0.2
Mawson (MAW)	67°36'21" S	62°52'48" E	Pre-Cambrian granite 9 m	Benioff Z Benioff N Benioff E	1.0 1.0 1.0	0.2 14.0 14.0
Wilkes (WIL)	66°15.5' S	110°31.2' E	Rock 9 m	Grenet Z Lehner-Griffith Z Lehner-Griffith N Lehner-Griffith E	1.4 16.4 14.1 14.4	1.0 60.0 92.0 85.0
NEW ZEALAND Hallett (HLL)	72°17.7' S	170°18.5' E	Rock 5 m	Benioff Z Benioff N Benioff E Sprengnether Z Sprengnether N Sprengnether E	1.0 1.0 1.0 30.0 30.0 30.0	0.2-25 0.2-25 0.2-25 100.0 100.0 100.0
Scott Base (SBA)	77°51' S	166°45' E	Rock 15 m	Benioff Z Benioff N Benioff E Sprengnether Z Sprengnether N Sprengnether E	1.0 1.0 1.0 30.0 30.0 30.0	0.2-25 0.2-25 0.2-25 100.0 100.0 100.0
USSR Mirny (MIR)	66°33' S	93°00' E	Rock 30 m	SVKM Z SVK Z SGK N SGK E	2.5 12.5 12.5 12.5	1.0 1.1 1.1 1.1
UNITED KINGDOM Argentine Islands (AIA)	65°15' S	64°16' W	Rock 11 m	Willmore Z Willmore N Willmore E	1.0 1.0 1.0	0.25 0.25 0.25
UNITED STATES Byrd (BYR)	60°01' S	119°31' W	Ice 1515 m	Benioff Z Wilson-Lamison N Wilson-Lamison E Sprengnether Z Sprengnether N Sprengnether E	1.0 6.3 5.8 30.0 30.0 30.0	0.5 3.6 Geotech Helicorder 90.0 90.0 90.0
South Pole (SPA)	90° S	0	Ice 2800 m	Benioff Z Benioff N Benioff E Sprengnether Z Sprengnether N Sprengnether E	1.0 1.0 1.0 30.0 30.0 30.0	0.2-25 0.2-25 0.2-25 100.0 100.0 100.0

ANTARCTIC SEISMOGRAM DEPOSITORIES

ARGENTINA: Servicio Meteorologico Nacional
Paseo Colon 317, 2° Piso
Buenos Aires, Argentina

USSR: Research Institute of Earth Physics
Academy of Sciences of the USSR
Moscow, USSR

AUSTRALIA: Chief Geophysicist
Bureau of Mineral
Geology and Geophysics
203 Collins Street
Melbourne, Australia

UNITED KINGDOM: Falkland Island Dependency Survey
4 Milbank
London, SW1
England

NEW ZEALAND: Superintendent
Seismological Observatory
DSIR, P.O. Box 8005
Wellington, New Zealand

UNITED STATES: U.S. Coast and Geodetic Survey
Seismology Division
Washington Science Center
Rockville, Maryland 20852
U.S.A.

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUL 01 WIL E(P)	00 50 19.0	JUL 02 SPA IP	04 46 46.5	JUL 2 H-22 09 37.3 20.2S 175.6W h ABOUT 157KM		SPA IP	22 09 07.5
JUL 01 BYR IP	01 36 08.5	JUL 2 H-05 03 35.4 1.2N 118.9E h ABOUT 133KM		SPA IP	22 20 33.0	JUL 04 SPA EP	06 18 31.0
JUL 01 WIL EP	01 54 13.0	MIR E(P) E	05 14 31.7 14 40.5	JUL 2 H-22 51 35.9 39.0S 074.6W h ABOUT 033KM		JUL 04 BYR IP	08 21 23.5
JUL 01 SBA EP	02 45 35.0	SBA EP	05 15 47.0	SPA IP	23 00 37.5	JUL 04 MIR E(P)	10 10 14.9
JUL 1 H-09 25 54.5 2.0S 141.2E h ABOUT 033KM		SPA IP	05 16 26.5	JUL 3 H-01 23 02.5 06.5S 105.3E h ABOUT 057KM		JUL 04 SPA IP	10 32 09.0
WIL E(P)	09 36 52.0	JUL 2 H-05 55 28.4 39.1S 074.7W h ABOUT 033KM		SPA IP	01 35 25.5	BYR IP	10 32 23.5
MIR EP	09 37 21.0	SPA IP	06 04 30.0	JUL 03 SPA EP	01 59 46.0	JUL 04 AIA EIP	10 37 57.0
SBA EP	09 37 48.0	JUL 2 H-06 35 18.3 53.4N 167.8W h ABOUT 045KM		JUL 03 MAW EP	06 37 51.0	JUL 4 H-10 49 28.8 11.7N 144.5E h ABOUT 033KM	
BYR IP	09 38 53.0	SPA IP'	06 54 44.0	JUL 03 SPA IP	07 59 15.0	WIL EP	11 01 45.0
JUL 1 H-13 33 10.4 1.8N 127.1E h ABOUT 033KM		JUL 02 MAW EP	08 26 47.5	JUL 03 AIA EP	08 43 19.0	MIR IP E	11 02 10.4 05 34.8
MAW IP	13 45 29.0	JUL 02 SPA EP	09 18 46.0	JUL 03 MIR EP	09 44 04.0	SPA IP	11 03 20.0
SBA EP	13 45 30.0	JUL 2 H-12 11 22.5 01.0N 124.3E h ABOUT 160KM		JUL 03 AIA EP I	12 19 28.0 19 53.0	BYR EP E	11 03 25.0 19 26.0
JUL 01 MIR EP	19 48 42.0	WIL E(P)	12 22 05.0	JUL 03 WIL EP	13 59 05.0	JUL 04 SPA EP	11 19 26.0
JUL 1 H-20 20 56.6 17.1S 069.1W h ABOUT 147KM		SBA EP	12 23 26.0	MIR EP	13 59 35.3	JUL 4 H-12 13 56.9 15.5S 072.5W h ABOUT 148KM	
SBA E(P)	20 32 45.0	SPA IP	12 24 10.0	SPA IP	14 00 41.0 I 00 57.0	BYR I(P)	12 24 29.0
MAW I(P)	20 33 27.2	JUL 2 H-14 11 31.5 18.0S 168.1E h ABOUT 015KM		JUL 03 I	19 53.0	SPA I(P) I	12 25 09.0 25 41.0
JUL 01 BYR IP	22 08 44.0	SPA IP	14 22 57.0	JUL 03 WIL EP	13 59 05.0	JUL 4 H-13 58 45.9 21.8S 065.1W h ABOUT 193KM	
JUL 1 H-22 46 18.7 31.1N 139.6E h ABOUT 147KM		JUL 2 H-17 03 42.4 47.7N 128.3W h ABOUT 033KM		SPA EP'	14 29 22.0	SPA IP	14 09 28.0
SBA E(P)	23 00 32.0	SPA EP'	17 23 02.0	JUL 03 WIL EP	17 25 00.0	JUL 04 AIA EP I E	16 57 43.0 58 34.0 17 00 23.0
JUL 02 WIL IP	01 08 42.5	JUL 2 H-17 17 34.4 47.7N 128.8W h ABOUT 014KM		JUL 03 WIL EP	17 25 11.0	JUL 04 SBA EP	22 11 18.0
JUL 2 H-01 19 02.7 60.1N 146.0W h ABOUT 014KM		SPA EP'	17 36 58.0	MIR EP	17 26 06.0	JUL 05 SPA IP	00 14 49.0
SPA IP'	01 38 41.5	JUL 02 SPA EP	18 10 06.0	JUL 03 SPA IP	18 38 54.0	JUL 05 BYR IP	01 05 03.0
I	38 49.0	JUL 02 SPA EP	18 10 06.0	JUL 03 SPA IP	18 59 06.0	MAW EP E	01 08 47.6 09 02.0
I	39 15.5	JUL 02 SPA EP	21 15 37.0	JUL 3 H-21 58 08.1 21.9S 170.1E h ABOUT 045KM			

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUL 5 H-03 14 33.3 60.8N 144.9W h ABOUT 030KM		JUL 05 SPA IP 20 58 33.0		JUL 6 H-07 22 11.7 18.3N 100.4W h ABOUT 100KM		JUL 6 H-12 34 35.8 17.8S 167.5E h ABOUT 033KM	
SPA IP' 03 34 20.5 I 34 28.0		JUL 05 WIL E(P) 21 28 32.0		AIA IP 07 34 50.0 E 45 19.0		SBA EP 12 44 43.0	
JUL 05 WIL E(P) 05 39 04.0		JUL 05 WIL EP 23 35 53.6		BYR IP' 07 35 41.0 E 39 42.0 I 46 22.0		MIR EP 12 45 33.4	
JUL 05 SBA EP 07 35 14.0		JUL 5 H-23 36 01.5 44.8N 149.6E h ABOUT 054KM		SPA EP 07 36 27.0 I 39 41.0		BYR IP 12 45 44.0	
JUL 05 SPA EP 09 20 15.0		SBA EP' 23 54 52.0		WIL EP' 07 41 07.0 EPP 43 33.0 ES 48 14.0		SPA IP 12 46 00.5	
JUL 05 SPA IP 09 37 35.5		SPA EP' 23 55 03.0 I 55 30.5 I 59 38.5		MAW EP' 07 41 10.5 E 41 31.0		SBA EP 13 01 05.0	
BYR IP 09 37 44.0		BYR EP' 23 55 11.0 E 58 38.0		MIR EP' 07 41 13.2 EPP 43 46.1		JUL 06	
JUL 5 H-12 36 27.5 51.2N 179.1E h ABOUT 033KM		JUL 05 WIL EP 23 55 36.0		JUL 06 SBA E(P) 07 41 05.0		JUL 06 MIR EP 13 12 42.1	
SPA EP' 12 55 51.0		JUL 06 SPA IP 01 14 39.5		JUL 06 MIR E(P) 07 51 25.4		JUL 06 SPA IP 13 16 22.5	
JUL 05 WIL EP 14 27 17.0		JUL 06 SBA E 01 48 25.0		SBA E(P) 07 51 42.0		BYR E 13 16 37.0	
JUL 05 SBA EP 15 27 29.0		JUL 6 H-02 14 36.0 26.2N 110.4W h ABOUT 033KM		JUL 6 H-09 47 26.0 18.0S 174.7W h ABOUT 080KM		JUL 06 WIL E(P) 13 33 20.0	
SPA EP 15 29 16.0		SPA EP' 02 33 16.0		SPA IP 09 58 43.5		JUL 6 H-14 06 32.6 24.2S 069.7W h ABOUT 128KM	
JUL 05 SBA EP 17 24 39.0		MAW EP' 02 34 02.0		JUL 6 H-10 06 02.3 06.3S 154.7E h ABOUT 049KM		BYR IP 14 16 12.5	
JUL 5 H-17 58 59.7 60.2N 146.2W h ABOUT 027KM		JUL 06 SBA E(P) 02 14 54.0		WIL E(P) 10 16 52.0		SPA I(P) 14 16 55.0	
BYR EP' 18 18 22.0		JUL 06 MIR E 02 37 40.6 E 39 14.6 E 40 04.8		SBA EP 10 17 22.0		JUL 6 H-14 19 46.3 06.9S 129.6E h ABOUT 100KM	
SPA EP' 18 18 31.0 I 18 45.0		JUL 06 SPA EP 02 43 48.0		MIR EP 10 17 30.3		WIL IP 14 29 49.0	
JUL 05 SPA EP 18 30 44.0		JUL 6 H-03 20 59.4 56.7N 152.3W h ABOUT 033KM		SPA IP 10 18 26.0 I 18 39.0		MIR IP 14 30 15.1	
JUL 05 SPA IP 18 40 21.5		SPA IP' 03 40 36.5		MAW EP 10 18 32.5		SBA IP 14 31 09.6	
JUL 05 SPA IP 19 00 08.5		JUL 06 SPA IP 03 30 22.0		JUL 6 H-10 13 45.2 37.1N 071.4E h ABOUT 100KM		MAW IP 14 31 18.3	
BYR EP 19 01 17.0		JUL 06 SPA IP 03 44 16.0		SPA IP' 10 32 36.0		SPA IP 14 32 01.5	
JUL 5 H-19 07 57.8 26.2N 110.2W h ABOUT 029KM		JUL 06 SBA E(P) 04 46 01.0		JUL 06 SPA EP 10 45 13.0		BYR IP 14 32 20.0 E 50 14.0	
SPA EP' 19 26 41.0		JUL 06 MIR EP 06 57 13.6		JUL 06 SPA IP 11 36 58.0		JUL 06 SPA IP 15 16 04.5	
WIL EP' 19 27 17.0				JUL 06 SPA EP 12 27 30.0		JUL 06 SBA EP 16 25 01.0	
JUL 05 SBA EP 19 27 38.0						JUL 06 MIR EP 17 55 53.8	
						JUL 06 MAW IP 19 42 37.4	
						JUL 6 H-19 50 42.1 21.2S 173.8E h ABOUT 022KM	
						SBA EP 20 00 27.0	
						WIL EP 20 00 48.0	

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
MIR E(P)	20 01 43.0	JUL 07		MIR IP	12 06 07.0	JUL 09	
SPA IP	20 01 45.5	SPA EP	20 00 19.0	IS	14 39.0	MAW IP	11 23 09.2
MAW EP	20 02 40.5	JUL 07		SBA IP	12 07 02.0	JUL 09	
JUL 06		SPA IP	20 42 08.5	MAW IP	12 07 09.2	BYR EP	12 01 19.0
SBA EP	21 36 28.0	JUL 7		IS	16 35.0	JUL 9	
JUL 06		H-21 12 33.6		JUL 08		H-12 02 11.9	
MIR EP	22 15 56.6	35.8N 073.4E		SPA IP	14 06 10.0	34.2N 140.9E	
JUL 07		h ABOUT 019KM		JUL 08		h ABOUT 049KM	
SPA EP	05 45 44.0	SPA EP'	21 31 33.0	SPA IP	14 30 30.5	BYR IP'	12 21 08.5
JUL 7		JUL 07		JUL 8		JUL 09	
H-06 44 49.2		SBA EP	22 42 01.0	H-15 24 08.3		BYR ES	16 18 44.0
8.8S 110.7E		JUL 08		18.0S 178.5W		JUL 9	
h ABOUT 060KM		SPA EP	01 13 23.0	h ABOUT 558KM		H-16 39 49.3	
MAW EP	06 55 40.0	JUL 08		SPA IP	15 34 38.0	15.5S 167.6E	
E	55 53.0	SPA EP	01 46 25.0	JUL 08		h ABOUT 121KM	
SBA EP	06 56 24.0	JUL 08		MAW EP	16 27 05.3	MCQ IP	16 47 11.0
SPA IP	06 57 00.5	SPA IP	05 38 20.0	JUL 08		SBA IP	16 50 00.2
I	57 18.5	I	38 29.0	MAW EP	16 27 06.0	WIL EP	16 50 03.0
I	57 35.0	JUL 08		JUL 08		ES	58 23.0
JUL 07		MIR E	05 44 37.5	AIA EP	17 13 35.0	BYR IP	16 51 00.0
MIR P	06 55 00.6	JUL 08		JUL 9		MAW IP	16 51 52.6
JUL 7		MIR EP	06 30 22.1	H-05 47 09.2		IS	17 01 54.5
H-07 39 04.2		JUL 8		15.4N 119.8E		AIA IP	16 52 38.0
23.6S 179.9W		H-07 45 48.6		h ABOUT 053KM		E	17 03 26.0
h ABOUT 462KM		03.2N 128.4E		MAW EP	06 00 16.0	JUL 09	
SBA IP	07 47 50.6	h ABOUT 050KM		SBA EP	06 00 38.0	SBA EP	17 19 02.0
SPA IP	07 49 08.0	SBA EP	07 58 13.0	BYR EP'	06 05 35.0	JUL 9	
I	49 32.0	MAW IP	07 58 13.1	E	16 38.0	H-21 43 46.3	
I	49 47.0	SPA P	07 58 57.5	JUL 09		01.8S 141.6E	
MAW IP	07 50 14.8	JUL 08		MAW EP	06 31 39.0	h ABOUT 033KM	
JUL 07		AIA EP	10 06 28.0	JUL 09		SBA EP	21 55 39.0
SPA IP	08 02 46.5	I	07 27.0	MIR E	07 22 55.0	MAW EP	21 56 15.0
JUL 07		E	09 15.0	JUL 09		BYR IP	21 56 44.5
SPA EP	08 17 24.0	JUL 08		MAW EP	09 21 24.5	JUL 10	
JUL 07		MIR E(P)	10 17 04.0	JUL 9		H-01 17 53.3	
MIR EP	10 07 30.6	JUL 8		H-11 22 05.4		00.6S 019.8W	
JUL 07		H-11 49 23.7		23.3S 175.7W		h ABOUT 033KM	
MIR E	12 05 38.1	6.4S 154.8E		h ABOUT 043KM		SPA EP	01 30 48.0
JUL 07		h ABOUT 073KM		MCQ EP	11 29 12.0	BYR E(P)	01 31 09.0
SPA IP	12 49 32.5	SBA E(P)	12 00 32.0	SBA IP	11 31 36.9	JUL 10	
JUL 07		MAW IP	12 01 51.5	BYR IP	11 32 19.0	SPA IP	02 12 09.5
SPA IP	15 06 17.0	I	02 07.1	ES	40 44.0	JUL 10	
JUL 7		I	02 25.8	WIL EP	11 32 27.0	BYR IP	04 13 18.5
H-16 28 42.9		JUL 8		ES	40 51.0	SPA EP	04 14 16.0
11.2S 163.2E		H-11 55 39.1		MIR P	11 33 15.0	JUL 10	
h ABOUT 013KM		05.5S 129.8E		IS	42 22.0	SBA EP	05 10 11.0
SPA EP	16 40 48.0	h ABOUT 165KM		AIA EP	11 33 58.0	JUL 10	
I	41 02.0	MCQ IP	12 04 51.0	MAW IP	11 34 09.2	SPA EP	05 13 18.0
I	41 11.5	WIL EP	12 05 43.0	JUL 10		BYR EP	05 14 21.0
MAW EP	16 41 13.0	EPP	08 00.0				
		ES	13 52.0				

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUL 10 BYR IP	05 53 38.0	JUL 11 MCQ IP	05 53 24.0	JUL 11 BYR I	16 02 57.0	JUL 11 H-22 34 43.8	
SPA IP	05 53 52.5	IS	53 45.0	JUL 11 SBA EP	16 26 11.0	41.7N 029.9W	
JUL 10 SPA EP	07 50 39.0	JUL 11 H-05 53 53.4		JUL 11 SPA EP	16 31 18.0	h ABOUT 033KM	
JUL 10 MAW IP	08 47 04.7	23.8S 177.4W		JUL 11 SPA IP	17 04 07.0	SBA EP'	22 54 05.0
JUL 10 SPA IP	10 12 32.0	h ABOUT 215KM		JUL 11 BYR IP	17 18 31.0	JUL 12 SPA EP	00 19 30.0
JUL 10 SBA EP	10 40 54.0	SBA EP	06 03 03.0	JUL 11 H-17 07 38.9		JUL 12 SPA IP	01 00 20.0
JUL 10 SBA EP	11 25 55.0	BYR IP	06 03 49.0	16.9S 172.8W		BYR IP	01 01 09.0
JUL 10 SPA EP	13 18 16.0	SPA IP	06 04 20.5	h ABOUT 033KM		JUL 12 H-01 45 25.6	
JUL 10 SPA EP	15 10 19.0	JUL 11 SBA EP	06 31 32.0	SBA EP	17 17 56.0	38.6N 139.2E	
JUL 10 SBA EP	16 31 33.0	JUL 11 H-06 40 45.6		BYR IP	17 18 31.0	h ABOUT 013KM	
JUL 10 BYR IP	18 53 49.0	11.7S 166.6E		JUL 11 H-17 32 16.8		SBA EP'	02 04 11.0
JUL 10 H-19 16 43.5		h ABOUT 033KM		15.5S 167.7E		SPA IP'	02 04 32.0
16.0S 071.6W		BYR IP	06 52 30.5	h ABOUT 143KM		I	06 32.0
h ABOUT 134KM		I	53 07.0	SPA IP	17 43 41.5	E	17 13.0
BYR IP	19 27 29.0	SPA IP	06 52 44.0	BYR IP	17 43 26.0	BYR IP'	02 04 35.0
SPA IP	19 28 07.0	I	52 59.0	JUL 11 BYR EP	17 41 03.0	E	06 48.0
JUL 10 H-21 16 26.4		I	53 22.0	JUL 11 SPA EP	18 04 50.0	MIR EP'	02 04 37.0
20.1S 174.2W		JUL 11 H-06 48 14.5		JUL 11 H-18 53 15.8		JUL 12 WIL E(P)	02 03 00.0
h ABOUT 033KM		19.3S 169.6E		12.2N 141.6E		JUL 12 MIR E(P)	07 20 25.9
SPA E(P)	21 27 23.0	h ABOUT 143KM		h ABOUT 061KM		I	20 32.7
JUL 10 H-21 48 42.5		SPA IP	06 59 17.0	SPA EP	19 07 06.0	JUL 12 H-09 00 39.9	
8.5S 147.9E		JUL 11 H-09 44 18.7		JUL 11 H-20 25 40.3		60.1N 146.1W	
h ABOUT 127KM		59.7N 146.1W		59.7N 146.2W		h ABOUT 033KM	
SPA IP	22 00 47.0	h ABOUT 033KM		h ABOUT 040KM		SPA EP'	09 20 20.0
JUL 11 H-00 15 51.6		BYR EP'	10 03 37.0	SBA EP'	20 45 07.0	JUL 12 SPA IP	09 50 48.0
53.2N 168.6W		SPA EP'	10 03 56.0	WIL EP'	20 45 17.0	JUL 12 MIR IP	11 11 33.7
h ABOUT 061KM		I	04 03.5	SPA EP'	20 45 17.0	JUL 12 SBA EP	12 02 03.0
SPA EP'	00 35 21.0	I	04 09.0	I	45 24.5	JUL 12 BYR IP	12 13 45.5
JUL 11 H-01 36 16.3		JUL 11 H-11 52 25.0		MIR EP'	20 45 24.2	JUL 12 SPA IP	12 51 25.5
7.3S 148.0E		01.0N 029.3W		JUL 11 AIA EP	20 31 30.0	JUL 12 SPA IP	13 08 07.5
h ABOUT 058KM		h ABOUT 033KM		JUL 11 BYR EP	20 44 17.0	JUL 12 SPA IP	13 43 16.0
MIR E	01 47 21.7	BYR EP	12 05 28.0	H-21 05 49.9		I	43 19.5
SPA IP	01 48 35.0	JUL 11 SBA EP	11 57 55.0	59.7N 146.5W		JUL 12 H-16 48 21.7	
I	48 48.0	h ABOUT 152KM		h ABOUT 033KM		24.5S 066.9W	
BYR IP	01 48 40.0	SBA EP	15 48 21.0	SPA IP'	21 25 35.5	h ABOUT 164KM	
		SPA IP	15 49 03.5	JUL 12 BYR IP	16 58 12.5		
		BYR IP	15 49 23.0	I	58 55.5		
		I	16 02 57.0				

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SPA IP	16 58 50.0	JUL 13		SPA IP'	16 11 43.0	MIR EP	23 50 45.5
I	17 01 11.0	H-06 28 28.4		JUL 13		WIL E(P)	23 51 44.0
SBA E(P)	16 59 27.0	11.8S 166.0E		SPA IP	16 04 25.0	BYR IP	23 52 47.5
MAW IP	17 00 19.5	h ABOUT 066KM		JUL 13		SBA EP	23 52 48.0
JUL 12		SPA IP	06 40 20.0	H-16 49 38.8		JUL 14	
H-20 00 59.6		MAW EP	06 40 51.5	08.3S 113.7E		SPA IP	01 57 31.0
53.8N 081.3E		JUL 13		h ABOUT 153KM		JUL 14	
h ABOUT 020KM		H-10 03 45.3		WIL EP	16 59 15.0	SBA EP	04 00 48.0
SPA IP'	20 20 30.5	25.0S 179.9W		MIR IP	16 59 30.1	JUL 14	
JUL 12		h ABOUT 424KM		SBA IP	17 01 04.3	H-04 04 18.2	
AIA EP	20 13 16.0	SPA IP	10 13 44.5	I	17 01 42.5	53.6N 172.0E	
JUL 12		I	19 43.0	BYR IP	17 02 15.0	h ABOUT 033KM	
H-20 15 59.0		MAW IP	10 14 52.0	I	02 43.0	SPA EP'	04 23 47.0
24.9N 095.3E		JUL 13		JUL 13		JUL 14	
h ABOUT 155KM		H-10 08 07.2		H-17 12 01.3		H-05 22 20.0	
SPA IP'	20 34 21.0	15.9S 167.9E		08.0N 126.8E		60.4N 142.9W	
BYR EP'	20 34 37.0	h ABOUT 033KM		h ABOUT 104KM		h ABOUT 010KM	
JUL 12		BYR IP	10 19 26.5	MIR E(P)	17 23 50.7	SPA IP'	05 42 09.5
H-21 08 52.6		JUL 13		SBA EP	17 24 45.0	JUL 14	
55.9S 027.6W		H-10 58 47.7		SPA IP	17 25 27.0	H-05 33 55.1	
h ABOUT 135KM		23.7N 094.7E		JUL 13		57.0N 007.3E	
SPA IP	21 15 27.0	h ABOUT 117KM		SPA EP	18 57 13.0	h ABOUT 036KM	
I	15 44.0	MIR IP	11 11 33.7	JUL 13		SPA EP'	05 53 35.0
I	16 37.5	MAW IP	11 11 52.8	SPA EP	19 25 32.0	JUL 14	
BYR IP	21 15 40.0	E	12 21.0	JUL 13		BYR IP	07 44 44.0
I(S)	21 37.0	BYR IP'	11 17 28.5	SPA IP	20 45 57.0	SPA IP	07 44 45.5
MAW IP	21 16 18.7	SPA IP'	11 17 41.0	JUL 13		MAW IP	07 44 48.9
SBA IP	21 17 05.6	JUL 13		AIA EP	20 45 57.0	JUL 14	
MIR EP	21 17 33.7	SPA EP	11 13 28.0	JUL 13		H-12 47 25.6	
E(S)	24 35.7	I	18 12.0	H-21 02 33.3		41.8N 125.7W	
JUL 12		JUL 13		07.7N 034.7W		h ABOUT 033KM	
MAW I(P)	21 21 54.7	MIR EP	11 30 18.2	h ABOUT 033KM		SPA EP'	13 06 41.0
JUL 13		JUL 13		SPA EP	21 16 06.0	MIR EP'	13 07 09.2
BYR IP	00 22 47.0	H-11 54 50.7		JUL 13		JUL 14	
MAW IP	00 23 24.3	42.5N 126.7W		H-21 41 02.6		SPA EP	12 51 17.0
SPA IP	00 23 33.5	h ABOUT 033KM		55.2N 156.5W		JUL 14	
JUL 13		SPA EP'	12 14 02.0	h ABOUT 033KM		SPA IP	13 09 51.0
H-01 14 33.5		MAW EP'	12 15 01.0	SPA EP'	22 00 32.0	JUL 14	
20.7S 178.7W		JUL 13		JUL 13		SPA EP	13 41 48.0
h ABOUT 575KM		MIR E(P)	14 21 11.7	SBA EP	21 46 44.0	MIR EP	13 43 06.7
BYR IP	01 24 16.0	JUL 13		JUL 13		JUL 14	
SPA IP	01 24 45.0	H-14 53 27.0		H-22 47 26.9		H-13 58 28.5	
JUL 13		20.9S 169.9E		41.8S 084.3W		53.3N 159.7E	
SBA EP	06 03 02.0	h ABOUT 089KM		h ABOUT 033KM		h ABOUT 040KM	
BYR IP	06 03 19.5	SBA IP	15 03 04.1	SPA EP	22 56 07.0	BYR IP'	14 17 46.0
SPA IP	06 04 28.0	MAW IP	15 05 11.7	JUL 13		I	21 25.0
JUL 13		I	05 34.4	H-23 43 48.1		MAW EP'	14 17 52.5
H-15 52 04.8		JUL 13		48.3S 032.0E		SPA IP'	14 17 53.5
56.6N 154.0W		H-15 52 04.8		h ABOUT 033KM			
h ABOUT 025KM		MAW IP	23 49 08.8	MAW IP	23 49 08.8		
		I	53 31.5	IS	53 31.5		

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUL 14 SPA EP	15 20 20.0	MAW IP	23 23 04.4	JUL 15 MAW IP	19 25 50.4	JUL 16 H-10 37 23.1 44.0N 148.3E h ABOUT 033KM	
JUL 14 MAW EP	15 50 08.5	JUL 14 SBA EP	23 45 28.0	JUL 15 MAW IP	19 25 50.5	SPA EP'	10 56 35.0
SPA EP	15 50 41.0	JUL 15 SPA IP	00 36 31.0	JUL 15 MCQ EP	21 34 31.0	JUL 16 H-11 27 04.5 17.9S 179.5W h ABOUT 625KM	
BYR IP	15 50 47.0	JUL 15 AIA EP	04 03 03.0	ES	34 40.0	SBA IP	11 36 16.1
JUL 14 H-17 19 23.3 45.3N 150.2E h ABOUT 033KM		E	04 46.0	JUL 15 SPA IP	23 02 53.0	BYR IP	11 37 00.5
SPA EP'	17 38 26.0	BYR IP	04 07 01.0	JUL 16 H-00 52 51.2 15.6S 167.6E h ABOUT 125KM		SPA IP	11 37 27.5
JUL 14 WIL EP	18 20 09.0	SPA IP	04 07 22.5	BYR IP	01 04 02.0	JUL 16 H-16 07 18.3 00.3N 067.0E h ABOUT 033KM	
SPA EP	18 22 51.0	I	07 33.0	SPA EP	01 04 17.0	MAW EP	16 18 15.5
JUL 14 H-18 38 39.1 52.7S 139.4E h ABOUT 036KM		JUL 15 SPA IP	04 27 47.0	JUL 16 SBA EP	02 22 26.0	MIR EP	16 18 23.1
WIL EP	18 43 08.0	JUL 15 BYR IP	04 35 01.0	JUL 16 H-04 21 05.3 1.5N 126.4E h ABOUT 069KM		SPA IP	16 20 18.0
SBA E(P)	18 44 15.0	SPA IP	04 35 16.5	SPA EP	04 34 06.0	JUL 16 MIR E(P)	17 02 22.9
MIR EP	18 44 18.5	JUL 15 WIL E(P)	05 20 19.0	JUL 16 H-04 51 36.5 15.6S 167.7E h ABOUT 121KM		JUL 16 SPA EP	19 47 03.0
SPA EP	18 45 50.0	JUL 15 SPA EP	05 57 30.0	MIR E(P)	05 02 23.9	JUL 16 SPA IP	21 31 29.0
MAW EP	18 45 56.0	JUL 15 SPA EP	07 07 20.0	BYR I	05 02 47.5	BYR IP	21 31 43.5
BYR EP	18 46 17.0	JUL 15 H-07 26 01.4 52.1N 170.6W h ABOUT 030KM		SPA IP	05 03 03.0	JUL 16 MIR EP	23 56 20.0
JUL 14 WIL EP	19 34 27.0	SPA IP'	07 45 24.0	MAW IP	05 03 40.4	JUL 17 SBA EP	00 44 09.0
MAW EP	19 37 34.5	MAW IP'	07 45 49.1	JUL 16 SPA EP	04 52 39.0	JUL 17 H-02 34 26.9 38.2N 023.7E h ABOUT 150KM	
JUL 14 MAW IP	20 03 50.3	JUL 15 H-08 24 56.5 11.3S 166.1E h ABOUT 130KM		JUL 16 SPA EP	04 59 54.0	MAW IP'	02 52 38.6
JUL 14 AIA EP	21 36 46.0	SBA IP	08 35 34.0	JUL 16 MAW IP	05 30 40.4	MIR IP'	02 52 52.4
JUL 14 SBA EP	22 07 22.0	BYR IP	08 36 32.0	JUL 16 SPA IP	08 10 27.5	SPA IP'	02 53 12.5
JUL 14 SPA EP	22 15 14.0	SPA IP	08 36 45.0	BYR IP	08 46 00.0	I	55 17.5
JUL 14 H-22 59 09.2 59.5N 144.8W h ABOUT 020KM		JUL 15 SPA EP	09 28 44.0	JUL 16 MAW P	09 13 23.5	SBA EP'	02 53 20.0
SPA EP'	23 18 52.0	JUL 15 H-09 49 05.8 35.2N 004.5E h ABOUT 039KM		JUL 16 H-09 19 45.8 29.9N 138.0E h ABOUT 461KM		I	53 34.0
JUL 14 H-23 12 12.7 34.3S 179.1E h ABOUT 075KM		SPA EP'	10 08 04.0	SPA EP'	09 37 42.0	E	56 14.0
SBA EP	23 20 15.0	JUL 15 SPA EP	14 14 36.0	JUL 17 MIR EP	02 54 03.8	BYR IP'	02 53 20.5
BYR IP	23 21 13.5	JUL 15 SPA IP	15 30 11.0	JUL 17 SPA EP	02 50 22.0	MCQ IP'	02 53 47.5
E	22 20.0	JUL 15 SPA EP	16 11 32.0	JUL 17 MIR EP	02 56 11.7	JUL 17 MIR EP	02 56 11.7
SPA IP	23 21 43.5						

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUL 17 MIR E(P)	03 18 08.9	JUL 17 H-22 54 42.2 44.6N 149.2E h ABOUT 033KM		MIR IP E	12 56 50.6 57 15.5	MAW EP	07 02 21.5
JUL 17 H-04 41 05.1 49.3N 158.6E h ABOUT 050KM		MAW EP'	23 13 49.0	MAW IP I	12 57 44.6 58 12.5	JUL 19 SPA IP	07 09 42.0
BYR EP' I	05 00 12.0 04 28.5	SPA EP'	23 13 56.0	SBA IP	12 57 55.2	BYR IP	07 09 57.0
SPA EP'	05 00 16.0	BYR EP'	23 13 56.0	SPA IP I E	12 58 38.5 59 10.0 13 13 53.0	JUL 19 SPA EP	08 03 13.0
JUL 17 H-04 54 59.8 24.3S 179.6E h ABOUT 495KM		JUL 17 SBA EP	23 44 27.0	BYR IP E	12 59 01.0 13 15 58.0	JUL 19 SPA EP	08 11 34.0
SPA IP	05 04 57.0	JUL 18 SPA EP	00 36 56.0	JUL 18 MCQ IP	12 48 08.0	JUL 19 SPA EP	10 45 31.0
JUL 17 SPA EP	06 36 16.0	JUL 18 MAW IP	00 46 27.4	SBA E(P)	12 49 14.0	JUL 19 SBA EP	11 56 14.0
JUL 17 MIR EP	07 25 40.3	JUL 18 SPA EP	02 23 27.0	MIR E	12 50 35.3	JUL 19 H-13 40 06.6 15.1S 173.4W h ABOUT 033KM	
JUL 17 SPA EP	10 06 15.0	JUL 18 H-03 40 21.5 36.3N 026.1E h ABOUT 115KM		SPA IP	12 50 59.5	SBA EP	13 50 37.0
JUL 17 SBA EP	10 33 35.0	SPA EP'	03 59 09.0	MAW IP	12 52 03.4	BYR IP	13 51 11.0
SPA EP	10 35 51.0	BYR IP'	03 59 27.5	JUL 18 WIL EP	15 16 54.0	SPA IP	13 51 46.0
JUL 17 MIR EP	11 26 32.7	JUL 18 SPA EP	05 03 21.0	SPA EP	15 19 55.0	JUL 19 H-15 33 57.6 09.4S 113.0E h ABOUT 080KM	
JUL 17 SPA IP	14 23 01.5	JUL 18 SPA IP	06 25 48.0	JUL 18 SPA EP	15 28 46.0	SPA IP	15 46 02.5
BYR IP	14 23 16.0	JUL 18 MIR I(P)	07 43 21.1	JUL 18 H-17 30 50.6 53.1N 158.4E h ABOUT 095KM		JUL 19 H-18 10 48.2 07.5N 121.8E h ABOUT 051KM	
JUL 17 H-18 39 45.9 57.1N 150.9W h ABOUT 033KM		JUL 18 SPA IP	08 45 06.5	SPA EP'	17 50 07.0	MIR E	18 22 35.3
SPA EP'	18 59 23.0	MIR E(P)	08 45 21.1	JUL 18 SPA IP	23 13 56.0	SBA EP	18 23 39.0
JUL 17 AIA EP E	19 02 46.0 04 04.0	MAW IP	08 46 27.4	JUL 18 H-23 36 21.0 60.0N 143.4W h ABOUT 033KM		SPA EP	18 24 19.0
JUL 17 H-19 09 16.4 24.3S 177.1W h ABOUT 093KM		JUL 18 SPA EP	11 24 36.0	BYR EP'	23 55 43.0	JUL 19 SPA EP	18 45 38.0
BYR IP	19 19 21.0	MAW EP	11 26 03.0	JUL 19 H-05 59 58.9 49.9N 078.1E h ABOUT 000KM		JUL 19 AIA EP I	19 56 05.0 20 00 11.0
SPA IP	19 19 53.0	JUL 18 AIA EP	11 49 00.0	SPA EP'	06 19 16.0	JUL 19 SPA IP	20 14 00.0
JUL 17 SPA IP	21 11 36.5	JUL 18 AIA E	12 02 05.0	BYR IP'	06 19 49.0	JUL 19 H-20 26 31.3 03.1S 126.8E h ABOUT 030KM	
JUL 17 H-21 49 58.3 44.5N 149.9E h ABOUT 039KM		JUL 18 MAW IP	12 42 03.4	JUL 19 HLL IP	06 07 42.0	SPA EP	20 39 14.0
SPA EP'	22 09 13.0	JUL 18 H-12 45 47.7 00.2N 123.5E h ABOUT 097KM		JUL 19 H-06 50 22.3 13.8S 167.0E h ABOUT 232KM		JUL 19 BYR IP	23 19 51.0
JUL 17 SPA IP	22 31 09.0	WIL IP	12 56 32.0	SBA EP	07 00 34.0	SPA IP	23 20 32.5
				MIR E	07 01 17.0	MAW IP	23 22 08.3
				SPA IP	07 01 46.0	JUL 20 MIR EP	03 36 30.6

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUL 20 SPA EP	03 49 05.0	JUL 20 SPA IP	15 06 40.5	BYR IP	03 58 39.0	JUL 21 MIR E	12 44 50.2
JUL 20 HLL EP	04 08 24.0	JUL 20 SPA EP	16 59 29.0	IP	59 23.0	JUL 21 SBA EP	13 11 22.0
I	08 32.0	JUL 20 SPA IP	17 48 28.5	IS	04 06 37.0	JUL 21 H-13 13 00.2	
I	08 44.0	JUL 20 SPA IP	19 15 25.0	ES	08 58.8	11.5N 121.9E	
JUL 20 H-04 29 28.2		JUL 20 MAW IP	19 16 31.3	MAW IP	04 00 25.5	h ABOUT 034KM	
6.7S 154.6E		JUL 20 WIL E(P)	19 42 51.0	IS	09 56.0	WIL EP	13 24 57.0
h ABOUT 078KM		JUL 20 WIL E(P)	19 42 51.0	ISKS	10 18.0	MIR EP	13 25 15.8
BYR IP	04 41 47.0	JUL 20 SBA EP	22 50 50.0	JUL 21 SPA EP	06 19 36.0	E	35 30.0
SPA IP	04 41 47.5	E	51 03.0	JUL 21 SPA EP	06 19 36.0	MAW EP	13 25 56.0
JUL 20 SPA EP	05 03 22.0	WIL EP	22 51 45.0	JUL 21 SBA EP	06 32 11.0	SPA E(P)	13 27 02.0
JUL 20 MAW EP	07 04 57.0	IP	51 56.5	JUL 21 SBA EP	06 32 11.0	BYR EP'	13 31 24.0
JUL 20 MIR EP	08 03 05.0	MIR EP	22 52 36.6	JUL 21 SBA EP	06 32 11.0	JUL 21 HLL E	13 26 13.0
JUL 20 H-09 34 21.7		MAW IP	22 53 47.1	JUL 21 H-07 01 59.3		JUL 21 SPA EP	15 50 23.0
64.5S 176.7E		JUL 20 SPA EP'	22 51 49.0	13.1N 088.4W		JUL 21 SPA EP	17 40 44.0
h ABOUT 033KM		JUL 20 SBA E(P)	23 03 55.0	h ABOUT 068KM		JUL 21 MIR EP	17 49 32.2
SBA E(P)	09 37 33.0	BYR IP	23 04 53.0	BYR EP	07 15 12.0	JUL 21 H-21 01 49.5	
SPA IP	09 39 50.5	I	05 31.0	JUL 21 SPA IP	07 44 24.5	04.6S 153.3E	
I	39 57.5	MIR EP	23 05 33.8	JUL 21 SBA EP	08 48 50.0	h ABOUT 060KM	
WIL EP	09 39 57.0	MAW EP	23 06 41.0	JUL 21 BYR IP	07 34 00.0	WIL EP	21 12 47.0
MIR I	09 40 48.5	JUL 21 SBA E	02 00 12.0	JUL 21 SPA EP	07 35 00.0	SBA EP	21 13 19.0
MAW IP	09 41 55.5	JUL 21 H-02 47 48.6		JUL 21 SPA EP	08 48 50.0	MIR EP	21 13 21.3
JUL 20 MAW EP	09 36 38.5	31.3S 180.0W		JUL 21 SBA EP	08 48 50.0	ES	22 50.8
JUL 20 SPA IP	09 53 32.0	h ABOUT 162KM		JUL 21 H-09 56 16.6		BYR IP	21 14 21.0
MAW IP	09 54 23.4	SPA IP	02 57 06.5	72.1N 130.2E		SPA IP	21 14 21.5
JUL 20 H-10 22 53.4		JUL 21 SBA IP	03 57 52.3	h ABOUT 033KM		I	14 41.0
35.2S 179.8W		IPP	58 37.2	JUL 21 SBA IP'	10 16 07.2	E	24 47.0
h ABOUT 108KM		E(S)	04 05 10.0	JUL 21 SPA EP	09 57 33.0	MAW EP	21 14 23.5
WIL EP	10 31 39.0	WIL EP	03 58 36.0	JUL 21 HLL IP	10 05 05.0	JUL 21 HLL IP	21 20 42.0
MAW EP	10 33 38.5	E	58 49.0	JUL 21 SPA IP	10 17 00.5	JUL 21 SBA EP	21 50 03.0
JUL 20 SPA EP'	10 31 43.0	SPA IP	23 05 24.0	BYR IP	10 17 05.0	JUL 21 SBA E(P)	21 57 03.0
JUL 20 SPA IP	11 02 06.0	JUL 21 H-03 48 59.1		JUL 21 SPA IP	10 42 45.5	JUL 22 SPA IP	00 16 56.0
JUL 20 MIR EP	12 30 11.0	26.0S 178.0W		MIR EP	10 42 55.2	JUL 22 H-01 06 43.8	
I	30 14.4	h ABOUT 222KM		JUL 21 SPA EP	12 17 30.0	41.8S 075.9W	
JUL 20 SPA IP	13 53 17.5	JUL 21 H-01 06 43.8		JUL 21 SPA EP	12 17 30.0	h ABOUT 033KM	
JUL 20 SPA IP	13 58 34.0	41.8S 075.9W		JUL 21 SPA EP	12 17 30.0	BYR IP	01 14 30.0
JUL 20 SPA IP	13 58 34.0	h ABOUT 033KM		JUL 21 SPA EP	12 17 30.0	EPCP	13 32.8

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SPA IP	01 15 23.5	JUL 22		JUL 23		SBA EP'	19 27 21.0
MAW IP	01 17 30.8	MIR E	11 06 20.4	AIA EP	01 46 19.0	I	29 57.2
WIL E(P)	01 18 07.0	JUL 22		I	46 26.0	BYR EP'	19 27 22.0
JUL 22		SBA EP	11 11 45.0	I	46 25.0	I	28 29.0
H-02 04 52.5		JUL 22		JUL 23		WIL EP'	19 27 39.0
1.9S 149.6E		H-12 19 38.5		H-01 53 11.4		SPA IP'	19 27 41.5
h ABOUT 078KM		22.2S 175.4W		28.8S 070.3W		I	27 49.5
MAW EP	02 17 29.0	h ABOUT 033KM		h ABOUT 037KM		JUL 23	
JUL 22		SPA IP	12 30 33.5	SPA IP	02 03 25.5	H-19 18 56.8	
SBA EP	02 39 19.0	MIR E(P)	12 30 50.7	SBA EP	02 04 11.0	27.8S 066.4W	
JUL 22		MAW IP	12 31 49.8	JUL 23		h ABOUT 130KM	
H-03 50 51.6		JUL 22		SPA EP	06 30 14.0	MAW IP	19 30 40.9
14.3S 167.4E		SBA EP	12 27 29.0	JUL 23		JUL 23	
h ABOUT 203KM		JUL 22		SBA EP	06 36 30.0	HLL IP	19 19 01.0
MAW IP	04 02 51.5	SPA EP	12 47 51.0	SPA EP	06 37 48.0	JUL 23	
JUL 22		JUL 22		I	37 58.0	MAW EP	19 28 56.0
SBA EP	06 49 54.0	WIL E(P)	13 20 15.0	I	38 10.0	JUL 23	
JUL 22		JUL 22		JUL 23		MAW EP	19 28 56.0
H-07 04 34.5		MIR E	13 40 02.0	SPA IP	06 44 44.0	JUL 23	
54.2S 132.4W		JUL 22		JUL 23		AIA EP	20 07 23.0
h ABOUT 033KM		WIL E(P)	16 31 08.0	SBA EP	08 11 26.0	JUL 23	
BYR IP	07 10 08.0	JUL 22		JUL 23		SBA EP	20 13 35.0
SPA IP	07 11 32.5	H-17 51 14.8		SPA IP	09 21 40.0	JUL 23	
MAW E(P)	07 14 26.0	59.7N 153.4W		SPA IP	09 35 18.0	MIR E	22 04 55.2
JUL 22		h ABOUT 033KM		JUL 23		SPA EP	22 07 55.0
H-07 37 52.4		SPA EP'	18 10 57.0	SPA IP	10 10 20.5	JUL 23	
16.3S 167.7E		JUL 22		BYR EP	10 10 35.0	SBA EP	22 44 30.0
h ABOUT 006KM		SBA EP	19 02 18.0	E(S)	16 34.0	JUL 23	
SBA EP	07 48 13.0	JUL 22		SBA EP	10 12 04.0	SBA EP	22 29 50.0
E	48 22.0	SBA EP	19 20 18.0	JUL 23		JUL 24	
MIR E(P)	07 49 09.7	JUL 22		SBA EP	10 59 09.0	MIR E	02 36 57.9
BYR IP	07 49 13.5	SBA EP	19 20 49.0	JUL 23		JUL 24	
SPA IP	07 49 29.0	JUL 22		SPA EP	14 37 14.0	SBA EP	04 24 21.0
JUL 22		SBA EP	20 10 08.0	I	38 43.5	JUL 24	
H-08 51 30.7		JUL 22		JUL 23		SPA EP	04 29 11.0
4.1N 125.7E		SBA EP	20 23 01.0	SBA EP	14 48 25.0	BYR EP	04 29 44.0
h ABOUT 237KM		JUL 22		JUL 23		JUL 24	
WIL E(P)	09 01 30.0	SBA EP	21 23 01.0	SPA IP	14 59 35.5	MIR EP	04 45 03.5
MIR EP	09 02 43.0	JUL 22		JUL 23		SPA EP	04 47 39.0
MAW IP	09 03 34.6	SPA IP	22 02 19.0	SPA IP	15 14 04.0	JUL 24	
SBA EP	09 03 42.0	BYR IP	22 02 34.0	JUL 23		SPA EP	06 07 46.5
SPA IP	09 04 24.5	JUL 22		SPA IP	15 36 04.5	JUL 24	
BYR EP	09 04 44.0	SBA EP	22 08 13.0	JUL 23		H-06 50 52.8	
JUL 22		JUL 23		SBA EP	16 08 33.0	46.9N 153.9E	
SBA EP	09 48 05.0	SPA IP	00 37 49.5	JUL 23		h ABOUT 033KM	
JUL 22		BYR IP	00 38 04.5	SPA EP	16 15 49.0	WIL EP'	07 09 37.0
SBA EP	10 08 49.0	JUL 23		JUL 23		MIR EP'	07 09 44.4
JUL 22		H-19 08 06.6		SPA EP	16 15 49.0	E(S)	19 17.3
SBA EP	10 08 49.0	59.9N 149.2W		JUL 23		SBA EP'	07 09 51.0
JUL 22		h ABOUT 055KM		JUL 23		BYR EP'	07 10 01.0
SBA EP	10 08 49.0					E	21 41.0

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
JUL 24 H-07 35 48.4 56.3N 157.8W h ABOUT 024KM		JUL 24 H-10 54 52.5 13.1N 145.0E h ABOUT 043KM		JUL 24 H-16 34 29.2 47.2N 153.9E h ABOUT 033KM		SPA IP'	22 14 37.5
SPA IP' 07 55 24.5 I 55 41.0		MIR E 11 07 39.3		SPA EP' 16 53 47.0		JUL 24 HLL IP	22 53 28.0
JUL 24 H-08 12 40.0 47.2N 153.8E h ABOUT 033KM		JUL 24 SBA EP 11 05 14.0		JUL 24 HLL IP 16 43 54.0		I 53 47.0	
WIL EP' 08 31 22.0		JUL 24 SPA EP 11 08 06.0		JUL 24 HLL IP 16 46 17.0		JUL 24 SPA IP	22 59 09.0
MIR EP' 08 31 31.3		JUL 24 H-12 35 59.5 46.9N 154.0E h ABOUT 033KM		JUL 24 SBA EP 16 48 23.0		JUL 25 SPA EP	00 08 23.0
BYR EP' 08 31 48.0 E 35 21.0 E 43 00.0		SPA EP' 12 55 17.0		JUL 24 H-17 02 49.2 47.1N 153.6E h ABOUT 033KM		JUL 25 H-02 24 38.9 01.85 141.0E h ABOUT 048KM	
SPA EP 08 31 48.0 I 35 02.5		JUL 24 HLL IP 12 47 50.0		JUL 24 WIL EP' 17 21 32.0 EPP 22 47.0		MIR EP	02 36 03.5
MAW EP' 08 31 51.5 E 34 17.5		JUL 24 H-13 25 18.3 47.0N 153.7E h ABOUT 033KM		MIR EP' 17 21 40.3 ES 31 17.3		SPA EP	02 37 22.0
JUL 24 SBA EP 08 22 45.0		SPA EP' 13 44 26.0		SPA EP' 17 21 54.0		I 37 26.0	
JUL 24 HLL IP 08 24 27.0 IS 34 10.0		BYR EP' 13 44 31.0 E 48 04.0		BYR EP' 17 21 54.0 E 33 55.0		SBA EP	02 36 30.0
MIR EIP 08 26 14.9		JUL 24 HLL IP 13 37 06.0 IS 46 50.0		MAW IP' 17 22 02.1 ES 25 29.5		BYR IP	02 37 35.0
JUL 24 MIR EP' 08 33 14.0 E 41 07.3 E 45 11.3		JUL 24 H-13 47 48.6 06.6S 154.8E h ABOUT 062KM		JUL 24 HLL IP 17 14 37.0		JUL 25 SPA EP	03 43 14.0
JUL 24 SBA EP 08 57 08.0		WIL EP 13 58 36.0 ES 14 07 25.0		JUL 24 SBA EP 17 20 08.0		JUL 25 SPA EP	03 59 31.0
JUL 24 SBA EP 09 03 15.0		MIR EIP 13 59 12.8 ES 14 08 35.3		MAW IP 17 45 48.1		JUL 25 H-12 20 22.2 19.9S 176.2W h ABOUT 205KM	
JUL 24 H-09 17 00.5 46.8N 154.1E h ABOUT 033KM		BYR IP 14 00 07.5 ES 10 25.0		JUL 24 MAW IP 17 55 38.3		SBA IP	12 30 00.5
SPA EP' 09 36 14.0		SPA IP 14 00 10.0 E 10 29.0		JUL 24 MAW IP 18 01 50.4		BYR IP	12 30 42.0
JUL 24 MIR E(P) 09 38 40.2 E 38 47.8		MAW IP 14 00 17.2 ES 10 37.5		JUL 24 MIR EP 18 29 50.8		SPA IP	12 31 14.5
JUL 24 H-10 02 16.4 46.8N 153.8E h ABOUT 033KM		JUL 24 SBA EP 13 58 24.0		JUL 24 H-18 50 04.1 47.0N 153.8E h ABOUT 033KM		I 32 13.5	
SPA EP' 10 21 29.0		JUL 24 HLL EP' 14 06 45.0		SPA EP' 19 09 16.0		MIR EP	12 31 26.4
JUL 24 SPA EP 10 26 35.5		JUL 24 HLL IP 14 37 49.0		JUL 24 MIR EP 20 32 44.0		MAW IP	12 32 23.7
JUL 24 SBA EP 10 36 03.0		JUL 24 SBA EP 15 20 09.0		SPA EP 20 36 50.0		I 33 26.0	
		JUL 24 SPA EP 16 09 45.0		SBA EP 20 37 44.0		JUL 25 HLL E	12 39 43.0
				JUL 24 SBA EP 21 09 44.0		JUL 25 SBA EP	13 04 36.0
				JUL 24 H-21 54 54.0 57.7N 152.2W h ABOUT 010KM		JUL 25 SPA EP	16 50 28.0
						JUL 25 SBA EP	17 57 08.0
						JUL 25 H-18 18 08.9 17.1S 172.9W h ABOUT 033KM	

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
BYR IP	18 28 59.0	MAW IP	23 00 11.5	JUL 26		SPA IP'	00 35 38.0
SPA IP	18 29 33.5	JUL 26		BYR EP	13 49 12.0	JUL 27	
JUL 25		SBA EP	00 42 51.0	JUL 26		H-00 40 26.2	
H-19 31 07.0		JUL 26		H-13 55 37.4		17.0S 172.7W	
27.9S 070.9W		SBA EP	06 23 36.0	02.6N 078.5W		h ABOUT 033KM	
h ABOUT 026KM		JUL 26		h ABOUT 038KM		BYR E	00 51 19.0
BYR IP	19 40 45.0	JUL 26		BYR IP	14 08 09.0	SPA IP	00 51 53.0
EPP	40 52.0	H-06 28 32.7		JUL 26		JUL 27	
IS	48 35.0	23.4S 180.0E		H-14 21 12.3		MAW EP	01 05 37.5
SPA IP	19 41 28.0	h ABOUT 555KM		27.9S 071.6W		JUL 27	
I	43 26.0	SBA IP	06 37 13.0	h ABOUT 033KM		H-02 27 59.7	
E(S)	50 00.0	I	38 06.0	SPA EP	14 31 33.0	16.4S 173.8W	
SBA IP	19 42 14.4	BYR IP	06 38 00.5	JUL 26		h ABOUT 033KM	
E(S)	51 21.0	SPA IP	06 38 30.0	MCQ IP	16 28 37.0	SPA EP	02 39 30.0
HLL I	19 42 21.0	MAW IP	06 39 35.8	SPA IP	16 32 01.0	JUL 27	
MAW IP	19 43 09.5	JUL 26		JUL 26		SBA EP	02 28 56.0
ES	53 00.0	SBA EP	08 36 24.0	SBA EP	18 09 18.0	JUL 27	
MIR EP	19 43 41.2	BYR EP	08 38 24.0	JUL 26		SBA EP	02 38 56.0
EPP	46 56.6	SPA EP	08 38 38.0	H-18 34 34.6		JUL 27	
ES	54 04.8	MAW IP	08 40 32.9	46.8N 153.8E		MAW EP	03 03 22.0
WIL EP	19 43 46.0	JUL 26		h ABOUT 033KM		SPA EP	03 03 24.0
EPP	44 56.0	MIR E	08 44 25.0	SPA EP'	18 53 50.0	JUL 27	
JUL 25		JUL 26		JUL 26		H-04 03 33.2	
HLL IP	19 49 49.0	H-10 13 07.7		SBA EP	19 15 08.0	1.7S 077.9W	
JUL 25		05.0S 142.1E		JUL 26		h ABOUT 164KM	
HLL E	20 01 11.0	h ABOUT 017KM		SPA IP	19 38 05.5	BYR IP	04 15 30.0
JUL 25		SPA EP	10 25 42.0	JUL 26		SPA IP	04 16 07.5
BYR E	20 10 33.0	JUL 26		SPA IP	19 40 41.0	JUL 27	
JUL 25		SBA EP	11 26 55.0	JUL 26		SBA E	04 28 07.0
SPA I	20 14 41.0	JUL 26		H-19 43 40.9		JUL 27	
JUL 25		H-11 44 45.0		2.5N 078.4W		BYR EP	05 28 24.0
SPA EP	21 00 56.0	52.3N 176.2W		h ABOUT 107KM		JUL 27	
JUL 25		h ABOUT 100KM		SPA EP	19 56 43.0	MAW EP	05 37 16.0
H-21 29 33.2		SPA IP'	12 04 01.5	JUL 26		JUL 27	
2.9N 128.2E		I	07 31.0	H-20 24 13.9		SPA EP	05 45 57.0
h ABOUT 022KM		MAW EP'	12 04 19.0	04.1N 126.4E		JUL 27	
WIL EP	21 40 44.0	JUL 26		h ABOUT 033KM		SPA EP	05 45 57.0
SBA EP	21 41 59.0	SBA EP	12 06 56.0	SBA EP	20 36 47.0	JUL 27	
MAW IP	21 42 00.5	JUL 26		SPA IP	20 37 30.5	MAW IP	08 29 45.2
ES	52 14.5	SBA EP	12 06 56.0	JUL 26		JUL 27	
SPA IP	21 42 46.0	JUL 26		MAW EP	20 36 26.0	SPA IP	10 03 38.5
BYR IP	21 43 04.0	SPA EP	12 59 59.0	JUL 26		JUL 27	
JUL 25		JUL 26		MAW EP	20 36 26.0	SPA EP	10 09 29.0
HLL EP	21 48 08.0	H-13 02 49.9		JUL 26		JUL 27	
JUL 25		3.6S 153.5E		SBA EP	20 46 49.0	SPA EP	10 59 15.0
HLL EP	21 48 08.0	h ABOUT 239KM		JUL 26		JUL 27	
JUL 25		SPA IP	13 15 06.5	SPA IP	21 26 33.5	SPA EP	10 59 15.0
H-22 47 42.7		JUL 26		JUL 27		JUL 27	
9.7S 159.8E		SBA EP	13 37 37.0	H-00 15 44.7		H-11 01 12.5	
h ABOUT 021KM		JUL 26		61.5N 163.9E		01.9N 126.3E	
BYR IP	22 59 46.0	SPA IP	13 44 56.5	h ABOUT 008KM		h ABOUT 067KM	
SPA IP	22 59 53.5	JUL 26		BYR IP'	00 35 29.0	SBA E(P)	11 13 17.0
		MAW EP'	00 35 30.0	MAW EP'	00 35 30.0	JUL 27	
						MAW EP	11 07 08.0

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h m s		h m s		h m s		h m s	
HLL I	11 09 44.0	JUL 28		JUL 28		JUL 28	
I	12 32.0	SPA IP	00 18 52.5	SBA EP	09 16 48.0	HLL IP	18 59 47.0
JUL 27		JUL 28		JUL 28		JUL 28	
SBA EP	12 08 33.0	MAW EP	01 05 37.5	SPA EP	10 23 58.0	SPA IP	19 17 15.5
JUL 27		JUL 28		JUL 28		JUL 28	
SBA EP	12 24 36.0	SBA EP	01 43 34.3	H-10 46 00.6		MCQ IP	19 45 17.0
JUL 27		JUL 28		16.0S 172.9W		JUL 28	
MAW EP	12 30 08.5	SPA EP	02 02 00.0	h ABOUT 033KM		MCQ IP	21 02 51.0
JUL 27		JUL 28		BYR EP	10 56 58.0	SPA IP	21 09 49.5
MAW EP	12 55 16.5	MCQ IP	02 04 11.0	SPA IP	10 57 35.0	JUL 28	
JUL 27		IS	04 27.0	MAW EP	10 58 46.0	BYR EP	21 10 15.0
SBA EP	15 16 29.0	JUL 28		JUL 28		JUL 28	
E(S)	17 25.0	BYR EP	04 02 13.0	MAW EP	11 07 08.0	H-21 38 43.5	
JUL 27		JUL 28		JUL 28		14.3N 096.2E	
SBA EP	15 29 22.0	H-04 40 59.1		H-12 22 43.0		h ABOUT 033KM	
JUL 27		7.6N 082.3W		51.3S 139.3E		MIR EP	21 50 51.4
MIR E	15 46 09.0	h ABOUT 026KM		h ABOUT 034KM		WIL EP	21 50 56.0
JUL 27		MAW EP'	04 59 35.0	SPA IP	12 30 06.5	MAW IP	21 51 17.3
SPA EP	17 45 17.0	JUL 28		I	30 11.5	JUL 28	
BYR EP	17 45 22.0	MAW EP	05 37 16.0	MAW EP	12 30 08.5	HLL IP	21 50 27.0
JUL 27		JUL 28		BYR IP	12 30 31.0	IS	22 00 03.0
MAW IP'	18 47 29.8	MAW EP	06 11 57.0	E	32 27.0	JUL 28	
ES	49 01.0	JUL 28		JUL 28		SPA EP	22 08 30.0
JUL 27		H-06 19 29.8		SBA EP	12 24 50.0	JUL 28	
SBA EP	18 55 55.0	45.4N 151.3E		JUL 28		SBA IP	22 27 37.6
JUL 27		h ABOUT 033KM		MAW EP	12 55 16.5	JUL 28	
SBA EP	19 13 33.0	SPA EP'	06 38 51.0	JUL 28		WIL EP	22 37 46.0
JUL 27		JUL 28		SBA EP	13 52 55.0	JUL 28	
SBA E(P)	19 21 30.0	MAW IP	06 23 04.9	JUL 28		H-22 46 34.0	
JUL 27		JUL 28		SBA EP	14 33 43.0	14.1N 096.1E	
H-21 00 43.5		SPA EP	06 44 24.0	JUL 28		h ABOUT 014KM	
20.1S 175.7W		JUL 28		SBA EP	15 34 56.0	MIR E(P)	22 58 46.1
h ABOUT 163KM		H-06 45 46.0		JUL 28		MAW IP	22 59 10.2
SPA IP	21 11 39.5	7.6S 127.3E		H-18 40 04.3		JUL 28	
JUL 27		h ABOUT 257KM		51.2S 139.0E		HLL IP	22 58 19.0
MAW IP	21 51 17.3	SPA IP	06 57 41.5	h ABOUT 033KM		IPP	58 25.0
JUL 27		JUL 28		MCQ EP	18 43 04.0	JUL 29	
WIL IP	22 54 20.0	H-08 00 00.3		E(S)	45 53.0	MCQ IP	00 42 55.0
JUL 27		18.9S 169.4E		WIL IP	18 44 44.5	JUL 29	
MAW IP	22 59 10.2	h ABOUT 237KM		ES	48 35.0	MCQ IP	01 15 05.0
JUL 27		BYR IP	08 10 36.0	MIR IP	18 45 48.5	JUL 29	
SPA IP	23 19 56.0	SPA IP	08 10 54.0	SBA IP	18 45 59.8	MIR IP	01 25 20.7
JUL 27		JUL 28		E(S)	50 51.0	JUL 29	
H-23 00 36.3		H-08 17 31.5		SPA IP	18 47 27.5	HLL EP'	01 45 25.0
46.8N 153.8E		21.5S 067.9W		E(S)	55 45.0	JUL 29	
h ABOUT 033KM		h ABOUT 164KM		E	19 02 28.0	SPA IP	02 16 54.5
JUL 27		SPA IP	08 28 18.0	MAW IP	18 47 29.8	BYR IP	02 17 08.0
SBA EP	23 34 30.0	MAW IP	08 29 45.2	E	49 01.0	JUL 29	
JUL 28		JUL 28		E(S)	53 36.0	JUL 29	
MCQ EP	00 02 07.0	SBA EP	08 45 23.0	BYR IP	18 47 53.5	MIR E(P)	02 44 36.2
IS	02 22.0			EPP	49 58.0		

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h m s		h m s		h m s		h m s	
JUL 29		JUL 30		SBA EP	13 24 12.0	SPA EP'	04 24 12.0
H-04 38 59.2		H-01 22 10.1		MIR EP	13 24 16.3	MAW EP'	04 24 12.0
4.0S 128.9E		17.7S 178.2W		BYR IP	13 25 14.0	JUL 31	
h ABOUT 159KM		h ABOUT 643KM		SPA IP	13 25 17.0	SBA EP	04 07 20.0
MAW EP	04 50 35.0	SPA IP	01 32 34.0	I	25 36.0	JUL 31	
BYR IP	04 51 40.0	JUL 30		MAW IP	13 25 22.2	HLL IP	04 17 02.0
JUL 29		SPA EP	01 39 25.0	JUL 30		1pP	17 42.0
SBA EP	05 05 32.0	JUL 30		SPA IP	14 28 31.0	MAW EP	04 20 12.0
JUL 29		SPA IP	03 24 09.5	MAW EP	14 30 04.0	JUL 31	
BYR E	05 38 40.0	MAW EP	03 28 14.5	JUL 30		H-05 52 18.8	
JUL 29		JUL 30		SPA EP	15 31 52.0	6.1S 149.4E	
MAW EP	06 11 57.0	SPA EP	03 51 04.0	JUL 30		h ABOUT 063KM	
JUL 29		JUL 30		JUL 30		WIL EP	06 02 58.0
MAW IP	06 23 04.9	H-05 16 03.3		H-18 15 20.1		ES	11 41.0
JUL 29		11.1N 086.2W		01.4S 149.2E		MIR IP	06 03 34.2
SPA EP	07 42 45.0	h ABOUT 042KM		h ABOUT 090KM		EPCP	03 40.8
JUL 29		BYR IP	05 29 11.5	MAW EP	18 27 55.5	EPS	09 48.8
SBA EP	10 26 40.0	MAW EP'	05 34 50.0	BYR IP	18 28 06.0	SBA IP	06 03 40.4
JUL 29		JUL 30		JUL 30		IS	13 06.0
SPA EP	10 40 33.0	MAW EP	05 28 17.0	MIR E	18 26 39.6	MAW IP	06 04 38.7
JUL 29		JUL 30		JUL 30		IS	14 53.0
H-13 38 52.3		SBA EP	05 36 43.0	SPA IP	19 13 03.5	SPA IP	06 04 42.0
14.3N 096.1E		JUL 30		MAW EP	19 37 47.5	BYR IP	06 04 45.0
h ABOUT 033KM		SPA EP	05 45 32.0	JUL 30		JUL 31	
MAW EP	13 51 25.5	JUL 30		MAW EP	19 50 07.5	HLL E	06 13 14.0
JUL 29		MIR E(P)	07 32 15.4	JUL 30		JUL 31	
BYR IP	14 32 02.5	JUL 30		SBA EP	22 22 20.0	H-06 26 36.7	
JUL 29		H-07 41 25.0		JUL 30		25.7S 179.6W	
SPA EP	14 34 38.0	35.9N 139.6E		H-22 52 19.4		h ABOUT 429KM	
JUL 29		h ABOUT 101KM		14.3N 096.2E		MAW IP	06 37 40.3
SPA IP	18 07 06.0	SBA EP'	08 00 09.0	h ABOUT 033KM		JUL 31	
JUL 29		JUL 30		MAW E	23 04 53.5	MAW IP	07 04 38.7
SBA EP	18 40 09.0	H-08 41 54.1		JUL 31		IS	14 53.0
JUL 29		55.5S 147.3E		SBA EP	00 12 03.0	JUL 31	
SPA EP	18 55 56.0	h ABOUT 033KM		BYR EP	01 47 38.0	MIR E	07 48 11.8
JUL 29		WIL EP	08 46 31.0	JUL 31		E(S)	55 35.8
SPA EP	20 00 00.0	SBA E(P)	08 47 09.0	WIL E(P)	02 16 15.0	JUL 31	
JUL 29		MIR E(P)	08 47 44.2	JUL 31		H-09 25 51.6	
SBA EP	20 42 24.0	SPA EP	08 48 41.0	SPA IP	02 26 01.0	59.7N 145.0W	
JUL 29		MAW EP	08 49 16.5	BYR EP	03 52 52.0	h ABOUT 033KM	
SBA EP	23 31 14.0	JUL 30		JUL 31		SPA EP'	09 45 36.0
JUL 29		WIL E(P)	09 11 30.0	SPA IP	02 26 01.0	JUL 31	
SBA EP	23 36 09.0	JUL 30		BYR EP	03 52 52.0	SBA EP	10 27 25.0
JUL 29		SBA EP	09 25 07.0	JUL 31		JUL 31	
SBA EP	23 50 49.0	JUL 30		H-04 05 06.2		MAW EP	11 39 49.0
JUL 30		MCQ IP	12 19 57.0	44.6N 151.6E		JUL 31	
SBA EP	00 45 41.0	JUL 30		h ABOUT 053KM		SPA IP	13 29 30.0
E	49 05.0	JUL 30		MIR EP'	04 23 52.4	MAW IP	13 30 29.2
JUL 30		H-13 12 54.3		BYR IP'	04 24 04.0		
WIL E(P)	01 12 30.0	06.0S 154.4E					
		h ABOUT 079KM					

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h m s		h m s		h m s		h m s	
JUL 31 H-14 51 22.0 2.4N 128.2E h ABOUT 023KM		AUG 01 SBA EP	07 21 06.0	MIR E(P) ES	21 42 40.6 49 27.5	AUG 2 H-03 04 16.9 56.1N 156.1W h ABOUT 033KM	
SBA EP	15 03 45.0	AUG 01 MAW IP	08 24 18.1	SPA I(P)	21 44 35.0	SPA IP'	03 23 51.0
MAW IP	15 03 45.8	AUG 01 SBA EP	08 29 41.0	SBA E(P) E	21 45 03.0 46 18.0	I	33 00.0
JUL 31 SBA EP	15 42 05.0	AUG 1 H-09 52 51.3 5.5S 131.4E h ABOUT 033KM		BYR EP	21 45 37.0	MIR EP'	03 23 55.8
JUL 31 AIA EP	16 50 14.0	SPA IP	10 05 22.5	AUG 01 SPA IP	21 52 51.5	AUG 02 MIR E(P)	04 12 31.0
SBA EP	16 50 26.0	BYR IP	10 05 39.5	AUG 1 H-22 12 04.1 28.1S 070.4W h ABOUT 033KM		MAW IP	04 47 41.0
JUL 31 MAW E	17 16 40.0	AUG 01 SPA EP	10 29 10.0	BYR EP	22 21 40.0	AUG 2 H-07 03 11.4 03.8S 123.2E h ABOUT 037KM	
JUL 31 HLL I	19 05 04.0	AUG 01 SPA IP	10 32 32.5	SPA IP	22 22 25.0	SBA EP	07 15 04.0
JUL 31 H-20 43 19.2 47.8N 147.4E h ABOUT 378KM		AUG 01 SPA IP	11 55 21.0	MAW EP	22 24 05.0	SPA IP	07 15 50.0
MAW EP'	21 01 46.5	AUG 1 H-13 54 54.8 27.7S 070.9W h ABOUT 118KM		AUG 01 SPA EP	22 21 45.0	BYR IP	07 16 13.0
JUL 31 HLL I	23 52 55.0	BYR IP	14 04 22.5	AUG 01 AIA EP	22 44 57.0	AUG 2 H-08 10 38.7 .1N 123.9E h ABOUT 110KM	
AUG 01 WIL E(P)	00 05 55.0	SPA IP	14 05 07.0	AUG 2 H-00 15 34.5 52.9N 162.3E h ABOUT 033KM		MAW IP	08 22 33.3
MAW IP	00 05 55.1	I	05 16.0	SPA IP'	00 34 57.5	SPA IP	08 23 27.0
SPA EP	00 06 01.0	I	05 25.5	AUG 02 MAW IP	00 15 48.4	BYR IP	08 23 48.5
AUG 01 SPA IP	00 07 47.0	SBA EP	14 05 52.0	SPA IP	00 16 32.0	AUG 2 H-08 36 16.9 56.2N 149.9W h ABOUT 031KM	
AUG 01 SPA EP	00 11 42.0	MAW IP	14 06 47.8	AUG 02 SBA EP	00 50 43.0	SPA IP'	08 55 53.0
AUG 1 H-02 27 13.6 20.0S 179.8E h ABOUT 553KM		MIR E(P)	14 07 19.6	AUG 02 MCQ IP	01 13 16.0	I	56 11.0
SPA IP	02 37 31.5	AUG 01 SPA EP	14 34 14.0	AUG 02 MAW IP	01 54 08.4	MIR EP'	08 56 01.3
AUG 01 SPA EP	03 06 26.0	AUG 01 AIA EP	15 33 19.0	AUG 2 H-02 20 19.2 55.9S 027.7W h ABOUT 086KM		AUG 02 SPA IP	11 31 17.5
AUG 01 SPA IP	03 34 20.5	E	36 22.0	AUG 2 H-02 20 19.2 55.9S 027.7W h ABOUT 086KM		AUG 2 H-13 57 45.0 27.5S 070.3W h ABOUT 061KM	
AUG 01 MAW EP	04 39 49.0	AUG 01 SBA EP	16 56 32.0	AIA EP	02 24 47.0	SPA IP	14 08 02.5
AUG 01 SPA EP	04 49 42.0	AUG 1 H-18 11 51.9 32.7S 071.5W h ABOUT 070KM		SPA IP	02 26 58.5	MAW EP	14 09 43.5
AUG 01 SPA EP	05 05 16.0	BYR I(P)	18 20 58.0	BYR IP	02 27 11.0	AUG 2 H-15 33 31.1 56.5N 149.5W h ABOUT 033KM	
AUG 01 SBA EP	05 55 38.0	SPA IP	18 21 37.0	IS	33 07.0	SPA IP'	15 53 05.1
AUG 01 SBA EP	07 02 29.0	MAW IP	18 23 24.8	MAW IP	02 27 50.0	AUG 02 MAW EP	17 46 12.0
		AUG 01 SPA IP	19 11 50.0	I'P	29 50.6	AUG 02 MCQ IP	19 34 29.0
		AUG 1 H-21 33 27.7 19.9S 066.4E h ABOUT 033KM		SBA EP	02 28 38.0		
		MAW EP	21 42 03.0	AUG 02 HLL I	02 24 19.0		
				AUG 02 MAW EP	02 33 26.0		

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
AUG 02 SBA EP	20 02 43.0	AUG 03 SBA EP	05 13 44.0	AUG 03 SPA IP	15 42 15.0	AUG 04 SBA EP	13 58 28.0
AUG 02 MAW EP	20 53 36.0	AUG 03 SPA EP	06 09 11.0	AUG 03 MCQ IP	15 51 20.0	BYR IP	14 00 23.0
SPA EP	20 53 57.5	AUG 03 SBA EP	06 53 07.0	AUG 03 SPA IP	16 47 52.0	AUG 4 H-17 24 29.2 46.5N 151.1E h ABOUT 101KM	
BYR IP	20 54 06.5	AUG 03 SPA EP	07 23 55.0	AUG 03 SPA IP	16 52 03.5	SBA IP'	17 43 18.0
AUG 02 MAW IP	21 21 26.0	I	25 03.0	AUG 3 H-16 56 18.2 56.7N 152.4W h ABOUT 020KM		BYR EP'	17 43 25.0
AUG 02 MAW IP	21 32 26.0	AUG 03 SBA EP	07 37 07.0	SPA EP'	17 15 56.0	I	46 59.5
AUG 2 H-21 39 54.3 49.9N 156.8E h ABOUT 058KM		AUG 3 H-07 44 44.3 22.6N 121.3E h ABOUT 033KM		AUG 3 H-17 08 11.2 08.3S 118.7E h ABOUT 033KM		AIA EP'	17 44 16.0
SPA EP'	21 59 04.0	WIL EP	07 57 37.0	MAW EP	17 19 19.4	AUG 04 HLL IP	17 36 09.0
AUG 02 SBA EP	21 48 57.0	MIR E	07 57 47.4	SBA EP	17 19 45.0	IS	46 01.0
SPA IP	21 50 41.0	MAW EP	07 58 25.5	SPA IP	17 20 27.0	AUG 04 MAW IP	17 46 38.5
AUG 02 WIL E(P)	21 53 09.0	AUG 03 HLL IP	07 57 13.0	BYR IP	17 20 55.0	AUG 04 MAW I(P)	17 46 48.5
AUG 02 SBA EP	22 22 34.0	AUG 03 SPA EP	08 02 54.0	AUG 03 MAW EP	17 46 12.0	AUG 04 BYR IP	19 47 27.5
AUG 03 MIR E	01 32 55.4	SBA EP	08 03 07.0	AUG 03 SPA EP	18 27 05.0	AUG 04 AIA EP	20 27 58.0
SPA IP'	01 37 37.5	AUG 03 SPA IP	08 13 10.5	AUG 3 H-18 54 54.9 53.8N 132.1W h ABOUT 033KM		I	29 04.0
I	38 16.0	BYR IP	08 13 24.5	SPA EP'	19 14 25.0	AUG 04 SBA EP	20 59 29.0
BYR IP	01 37 56.0	IS	19 24.0	AUG 03 SPA EP	20 00 37.0	AUG 5 H-01 47 39.1 17.8S 176.4W h ABOUT 016KM	
AUG 3 H-01 48 23.3 19.8N 070.7W h ABOUT 007KM		AUG 03 SBA EP	10 56 22.0	AUG 03 WIL E(P)	21 07 34.0	BYR EP	01 58 34.0
SPA EP'	02 07 32.0	AUG 03 SPA EP	11 57 38.0	AUG 04 HLL E	01 07 05.0	AUG 05 HLL IP	04 11 53.0
AUG 03 HLL IP	01 59 40.0	AUG 3 H-13 11 46.9 28.1S 069.5W h ABOUT 071KM		AUG 04 MCQ IP	02 07 30.0	AUG 05 HLL IP	04 37 07.0
I>P	02 00 09.0	SPA IP	13 22 02.5	AUG 4 H-03 36 42.0 2.5S 139.8E h ABOUT 033KM		I>P	37 47.0
ES	08 52.0	AUG 03 WIL E(P)	13 23 14.0	BYR IP	03 49 37.0	AUG 5 H-06 47 27.7 44.4S 072.4W h ABOUT 033KM	
AUG 3 H-02 32 14.6 60.0N 148.0W h ABOUT 018KM		AUG 03 SPA EP	13 28 06.0	AUG 04 BYR IP	09 56 24.0	BYR IP	06 54 56.5
SPA IP'	02 52 05.0	AUG 03 SPA EP	13 51 47.0	AUG 04 MCQ IP	11 28 15.0	MAW IP	06 57 55.5
I	52 11.0	AUG 03 SPA EP	14 25 44.0	AUG 04 BYR EP	12 51 47.0	AUG 05 BYR EP	10 09 27.0
AUG 03 AIA EP	02 33 31.0	AUG 03 SPA EP	14 26 08.0	AUG 05 HLL I	10 42 49.0	AUG 05 HLL I	10 42 49.0
I	34 02.0	AUG 03 MCQ IP	14 49 58.0	AUG 5 H-11 01 16.5 39.0S 074.5W h ABOUT 026KM		MAW EP	11 12 21.0
AUG 03 SBA EP	03 45 46.0	AUG 03 MIR E	15 38 12.8				

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
AUG 5		MAW IP	22 34 04.0	AUG 06		AUG 07	
H-11 06 02.6		IS	43 01.0	SPA EP	17 28 19.0	AIA EP	14 40 54.0
32.1S 179.8E						E	44 23.0
h ABOUT 235KM		WIL IP	22 34 40.0	AUG 06		AUG 07	
SBA IP	11 14 08.7	ES	44 10.0	SBA EP	18 09 06.0	WIL E(P)	15 59 29.0
WIL IP	11 14 56.0	MCQ EP	22 34 47.0	AUG 06		AUG 07	
ES	22 03.0	AUG 05		SPA IP'	18 24 24.5	SPA EP	16 03 13.0
BYR IP	11 15 02.0	HLL IP'	22 42 00.0	AUG 06		AUG 07	
EPP	16 03.0	AUG 05		SPA IP	18 56 05.5	BYR IP	17 13 06.0
IPCS	19 38.0	SPA E	23 02 09.0	AUG 06		AUG 07	
MIR IP	11 15 44.7	AUG 6		AIA EP	19 38 06.0	BYR EP	18 44 07.0
EPP	16 57.7	H-02 33 39.5		AUG 07		AUG 07	
IS	23 35.2	31.5N 129.9E		SBA EP	01 07 50.0	SPA EP	19 56 55.0
MAW IP	11 16 50.0	h ABOUT 197KM		SPA EP	01 08 33.0	AUG 07	
IS	25 40.0	SPA EP'	02 52 07.0	AUG 07		BYR IP	23 53 43.0
AIA EIP	11 16 56.5	AUG 06		SBA EP	01 41 50.0	AUG 08	
E	25 55.0	HLL I	02 45 35.0	E	43 29.0	SPA IP	01 26 01.0
AUG 05		AUG 06		AUG 7		BYR IP	01 26 15.5
HLL EP'	11 25 32.0	SPA IP	02 59 33.5	H-02 15 03.9		AUG 08	
IPP	26 10.0	AUG 06		20.2S 174.6W		SPA IP	05 48 14.0
ESKKS	36 14.0	SPA IP	05 32 29.5	h ABOUT 029KM		AUG 08	
AUG 05		AUG 6		BYR IP	02 25 39.0	AUG 08	
MIR E	11 29 51.1	H-07 12 01.1		SPA IP	02 26 14.0	SPA IP	06 22 36.0
EsP	30 11.3	9.1S 120.8E		AUG 07		AUG 08	
AUG 05		h ABOUT 058KM		SPA EP	02 45 15.0	SBA EP	09 07 25.0
SPA IP	17 03 28.0	MAW IP	07 23 07.5	AUG 07		E	09 57.0
MAW IP	17 04 45.0	SBA EP	07 23 25.0	SPA EP	05 07 50.0	AUG 08	
AUG 05		SPA IP	07 24 11.0	BYR IP	05 32 32.0	SBA EP	09 32 12.0
SPA EP	17 11 10.0	AUG 06		AUG 7		AUG 8	
AUG 05		SPA EP	10 00 37.0	H-05 37 25.1		H-09 48 35.6	
MAW IP	17 34 04.0	AUG 6		56.8N 152.3W		56.7N 152.4W	
IS	43 01.0	H-13 11 31.1		h ABOUT 033KM		h ABOUT 033KM	
AUG 05		60.4N 145.8W		SPA IP'	05 57 01.0	SPA EP'	10 08 11.0
SBA EP	18 34 38.0	h ABOUT 033KM		AUG 7		AUG 08	
AUG 05		SPA EP'	13 31 16.0	H-07 08 06.6		SPA IP	11 10 30.5
MIR E	20 07 55.4	AUG 6		54.4N 164.4W		BYR IP	11 11 40.0
AUG 05		H-13 41 36.5		h ABOUT 033KM		AUG 08	
BYR EP	20 10 24.0	4.2S 140.5E		SPA EP'	07 27 43.0	SBA EP	11 55 33.0
SPA EP	20 11 44.0	h ABOUT 050KM		AUG 07		AUG 8	
H-22 23 13.0		SPA IP	13 54 11.5	BYR IP	07 24 37.0	H-14 50 32.2	
AUG 5		AUG 06		AUG 7		42.1N 083.7E	
41.1S 074.9W		SBA EP	14 53 11.0	H-08 08 49.9		h ABOUT 033KM	
h ABOUT 033KM		AUG 06		27.8S 066.4W		SPA EP'	15 09 43.0
AIA EIP	22 28 34.0	SPA EP	16 25 07.0	h ABOUT 162KM		AUG 8	
E	32 58.0	AUG 6		SPA EP	08 18 58.0	H-14 59 41.2	
BYR IP	22 31 04.0	H-17 03 28.9		AUG 07		31.7N 140.2E	
EPP	32 39.0	22.5S 179.5W		BYR IP	11 57 10.0	h ABOUT 110KM	
ES	37 29.0	h ABOUT 504KM		AUG 07		BYR EP'	15 18 25.0
SPA IP	22 31 57.5	SBA IP	17 12 20.2	SBA EP	13 04 28.0	E	28 18.0
I	34 01.0	SPA IP	17 13 35.5	AUG 07		SPA IP'	15 18 31.5
I	39 20.5	I	15 30.5	BYR EP	13 54 21.0	AUG 08	
SBA IP	22 32 48.1					SPA IP	15 28 23.0

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
AUG 08 BYR EP	15 43 22.0	AUG 9 H-05 30 46.9 10.3S 161.3E h ABOUT 085KM		AUG 9 H-20 06 36.9 00.3S 125.1E h ABOUT 059KM		AUG 10 SBA EP	07 36 29.0
AUG 08 SPA EP	16 14 47.0	SPA IP	05 42 46.5	MAW EP	20 18 38.0	AUG 10 SPA EP	07 41 07.0
AUG 08 SBA EP	16 21 06.0	AUG 09 SPA IP	05 54 35.0	SBA EP	20 18 46.0	AUG 10 SBA EP	07 46 33.0
AUG 08 SPA IP	17 17 22.5	SBA EP	05 56 29.0	SPA IP I	20 19 30.5 19 53.5	AUG 10 SBA EP	09 17 14.0
AUG 08 WIL EP	18 26 18.0	AUG 9 H-06 31 29.3 17.1S 173.1W h ABOUT 033KM		BYR EP	20 19 50.0	AUG 10 SBA EP	10 03 36.0
AUG 8 H-18 42 58.5 20.9S 176.7W h ABOUT 354KM		BYR IP	06 42 20.0	AUG 09 SPA EP	20 29 59.0	AUG 10 SPA IP	10 28 54.0
SPA IP	18 53 30.0	SPA IP	06 42 56.0	AUG 09 SPA EP	21 43 09.0	AUG 10 SPA IP	13 53 33.0
AUG 08 SPA IP	19 19 23.0	AUG 9 H-07 56 26.2 45.1S 079.2W h ABOUT 033KM		AUG 09 MIR E(P)	22 17 43.0	AUG 10 H-14 44 40.1 14.1S 166.7E h ABOUT 044KM	
AUG 8 H-20 59 43.6 17.5S 175.0W h ABOUT 193KM		BYR IP	08 03 40.5	MIR IP I I	00 42 09.2 42 15.7 43 29.7	SPA IP	14 56 24.0
BYR EP	21 10 18.0	SPA IP	08 04 41.0	AUG 10 H-01 10 12.4 19.1N 067.3W h ABOUT 033KM		AUG 10 H-16 58 44.0 09.2N 062.0W h ABOUT 051KM	
SPA EP	21 10 52.0	AUG 09 SPA IP I	10 03 46.0 04 51.0	BYR EP	01 24 06.0	BYR IP	17 11 55.0
AUG 09 SPA EP	01 39 29.0	BYR EP	10 04 01.0	SPA E(P)	01 24 47.0	SPA EP	17 12 21.0
AUG 9 H-01 48 12.8 17.8S 178.6W h ABOUT 537KM		AUG 09 SPA EP	10 58 01.0	AUG 10 MIR EP	01 32 41.8	AUG 10 H-17 52 02.5 45.1N 149.9E h ABOUT 040KM	
BYR EP	01 58 16.0	BYR EP	10 58 16.0	AUG 10 SPA EP	01 39 58.0	SPA EP'	18 11 11.0
SPA IP	01 58 45.0	AUG 9 H-11 33 25.5 60.7N 145.4W h ABOUT 033KM		AUG 10 H-03 54 26.1 6.4S 154.2E h ABOUT 166KM		BYR EP'	18 11 15.0
AUG 09 SPA IP	02 08 15.5	SPA IP'	11 53 11.0	BYR IP	04 06 34.0	AUG 10 SPA IP	19 11 23.0
AUG 9 H-03 12 57.3 6.2S 147.9E h ABOUT 054KM		AUG 09 BYR EP	13 09 28.0	SPA IP	04 06 37.5	AUG 10 H-20 16 55.8 44.6N 148.8E h ABOUT 033KM	
SPA IP	03 25 22.5	AUG 09 SPA IP	13 20 54.5	AUG 10 MAW EP	04 58 13.0	SPA EP'	20 36 19.0
BYR EP	03 25 25.0	BYR IP	13 21 08.5	AUG 10 SPA EP	07 13 47.0	AUG 10 SBA EP	20 35 03.0
AUG 09 AIA EP E E	03 47 05.0 48 00.0 50 39.0	AUG 09 SBA EP	15 24 32.0	BYR EP	07 14 17.0	AUG 10 H-21 05 37.9 32.8S 072.0W h ABOUT 033KM	
AUG 9 H-05 20 32.7 53.4N 153.4E h ABOUT 511KM		AUG 09 SBA EP	15 47 03.0	AUG 10 H-07 34 49.9 16.7S 070.8W h ABOUT 092KM		SPA IP	21 15 27.0
BYR EP'	05 38 59.0	AUG 09 SPA EP	17 54 33.0	BYR IP I	07 45 34.5 45 59.5	AUG 10 BYR IP E	21 37 25.5 44 12.0
SPA IP' I	05 39 05.0 41 59.5	AUG 09 MAW EP	18 28 08.5	SPA IP I I	07 46 14.5 46 39.5 46 51.0	AUG 10 H-21 40 10.4 06.2S 154.5E h ABOUT 105KM	
				MAW IP	07 47 39.1		

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SBA EP	21 51 24.0	AUG 11 SPA EP	15 14 39.0	AUG 12 SPA EP'	16 12 02.0	AUG 13 H-10 38 05.0	
MIR IP	21 51 32.1	AUG 11 SBA EP	19 30 50.0	I	12 38.5	34.2N 025.7E	
SPA IP	21 52 29.5	AUG 11 WIL EP	19 51 58.0	MAW IP	16 12 14.3	h ABOUT 033KM	
I	52 44.0	AUG 11 SPA EP	20 33 30.0	AUG 12 SPA EP	18 32 32.0	SPA IP'	10 57 03.5
AUG 11 H-01 55 25.0		AUG 11 SBA EP	21 19 04.0	AUG 12 H-19 26 26.1		AUG 13 H-10 48 34.5	
5.8S 154.1E		AUG 11 SPA EP	21 54 12.0	31.0N 049.8E		19.3S 177.6W	
h ABOUT 425KM		AUG 11 SPA IP	22 22 51.0	h ABOUT 033KM		h ABOUT 551KM	
BYR IP	02 07 08.5	AUG 11 SPA IP	23 00 01.0	SPA IP'	19 45 15.5	SPA IP	10 58 57.0
SPA IP	02 07 12.0	AUG 12 MCQ IP	00 22 53.0	BYR EP'	19 45 34.0	AUG 13 HLL EP	13 04 58.0
AUG 11 H-05 49 58.7		ES	22 59.0	AUG 13 H-00 31 14.1		I P P	05 06.0
18.0S 176.9W		AUG 12 MCQ IP	00 23 16.0	05.4S 154.3E		AUG 13 H-16 32 17.3	
h ABOUT 329KM		ES	23 21.0	h ABOUT 383KM		05.9S 081.1W	
BYR IP	06 00 18.0	AUG 12 SPA IP	00 34 36.5	h ABOUT 033KM		h ABOUT 033KM	
SPA IP	06 00 49.5	AUG 12 SBA EP	04 49 00.0	MCQ IP	00 39 26.0	SPA IP	16 44 46.5
AUG 11 SBA EP	06 31 36.0	AUG 12 SPA IP	04 54 01.0	WIL EP	00 41 33.0	AUG 13 SBA EP	17 48 01.0
AUG 11 MAW IP	06 52 42.8	AUG 12 BYR IP	04 54 13.5	SBA IP	00 42 03.4	AUG 13 H-18 26 30.7	
AUG 11 SPA EP	07 43 02.0	AUG 12 BYR EP'	07 10 48.0	ES	51 01.0	10.5S 013.3W	
AUG 11 H-07 44 07.0		I	14 13.0	BYR IP	00 43 03.0	h ABOUT 033KM	
53.8N 163.3E		SPA IP'	07 10 50.0	E	44 26.0	MAW EP	18 38 11.0
h ABOUT 040KM		I	14 17.5	IS	52 48.0	SPA EP	18 38 36.0
SPA EP'	08 03 32.0	AUG 12 MAW EP	07 14 05.0	SPA IP	00 43 06.0	BYR IP	18 38 51.0
AUG 11 BYR EP	09 30 25.0	AUG 12 SPA IP	07 22 40.0	I P P	46 21.5	AUG 13 SBA EP	18 45 33.0
SPA EP	09 31 55.0	AUG 12 SBA EP	07 57 51.0	IS	52 55.0	AUG 13 SBA EP	20 24 58.0
AUG 11 H-12 32 00.2		AUG 12 SPA EP	09 17 44.0	MAW IP	00 43 10.5	AUG 13 SPA IP	21 04 28.5
14.7S 167.8E		AUG 12 SPA EP	11 15 37.0	IS	52 57.0	BYR EP	21 04 42.0
h ABOUT 140KM		AUG 13 H-06 51 49.9		SPA IP	00 43 26.0	AUG 13 MAW EP	22 35 49.0
BYR EP	12 43 12.0	48.9N 153.7E		BYR IP	00 43 03.0	AUG 14 SBA EP	02 11 27.0
SPA IP	12 43 31.5	h ABOUT 127KM		IS	44 26.0	AUG 14 MAW EP	02 28 31.0
AUG 11 SBA EP	13 00 08.0	BYR EP'	07 10 48.0	MAW IP	00 43 10.5	AUG 14 SPA EP	04 59 37.0
AUG 11 SBA EP	14 11 16.0	I	14 13.0	IS	52 57.0	AUG 14 MCQ EP	05 26 43.0
AUG 11 H-14 12 35.9		SPA IP'	07 10 50.0	SPA IP	00 43 06.0	AUG 14 SPA IP	06 24 52.0
3.0N 084.3W		I	14 17.5	I P P	46 21.5	AUG 14 H-07 08 55.9	
h ABOUT 033KM		AUG 12 MAW EP	07 14 05.0	IS	52 55.0	9.8S 123.8E	
SPA IP	14 25 45.5	AUG 12 SPA IP	07 22 40.0	MAW IP	00 43 10.5	h ABOUT 033KM	
AUG 11 SPA IP	14 31 22.0	AUG 12 SBA EP	07 57 51.0	IS	52 57.0	MAW IP	07 20 06.4
AUG 11 SPA IP	15 12 05.0	AUG 13 H-08 38 11.4		SPA IP	00 43 06.0		
		59.7N 145.3W		I P P	46 21.5		
		h ABOUT 033KM		IS	52 55.0		

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SPA IP	07 21 05.0	AUG 15		SPA IP	00 53 18.0	AUG 16	
BYR IP	07 21 29.0	H-03 34 50.8		AUG 16		WIL EP	17 32 39.0
AUG 14		05.5S 104.1E		BYR EP	01 04 28.0	AUG 16	
SPA EP	07 11 10.0	h ABOUT 033KM		SPA IP	01 04 31.0	H-19 40 53.9	
AUG 14		MAW EP	03 45 50.0	AUG 16		15.0S 175.8W	
SPA IP	08 05 02.0	SBA EP	03 46 55.0	H-02 57 05.6		h ABOUT 332KM	
BYR IP	08 05 14.5	SPA IP	03 47 22.5	61.6N 150.2W		SBA EP	19 50 52.0
AUG 14		BYR IP	03 47 58.0	h ABOUT 063KM		BYR IP	19 51 30.0
SPA EP	09 36 12.0	AUG 15		SPA IP'	03 16 53.0	SPA IP	19 52 01.5
AUG 14		SPA IP	04 03 40.0	AUG 16		MAW IP	19 53 04.9
SPA IP	09 59 50.5	AUG 15		SBA EP	03 27 03.0	AUG 16	
AUG 14		H-04 10 09.3		AUG 16		H-21 28 49.1	
SPA IP	16 15 51.5	04.1S 104.7E		SBA EP	04 11 40.0	39.7N 052.6E	
AUG 14		h ABOUT 017KM		AUG 16		h ABOUT 033KM	
AIA EP	16 44 54.0	MAW EP	04 21 21.0	SBA EP	08 18 15.0	SPA IP'	21 47 54.5
I	45 21.5	SPA EP	04 22 48.0	AUG 16		AUG 17	
SPA IP	16 45 53.5	BYR EP	04 23 22.0	AIA EP	08 27 38.0	H-00 17 40.9	
I	46 00.5	E	27 30.0	AUG 16		35.0N 026.0E	
I	46 41.0	AUG 15		MCO IP	08 41 14.0	h ABOUT 018KM	
MAW IP	16 45 59.8	SPA IP	04 27 20.0	ES	41 19.0	SPA EP'	00 36 41.0
BYR IP	16 46 30.0	I	28 08.5	AUG 16		AUG 17	
SBA EP	16 47 37.0	AUG 15		SBA EP	09 20 06.0	MIR E	00 22 05.6
AUG 14		SPA EP	09 31 49.0	AUG 16		HLL EP'	00 22 11.0
H-19 25 38.2		AUG 15		MIR E	10 21 36.0	EP'	22 50.0
.4N 079.9W		WIL EP	10 43 20.0	AUG 16		I	25 52.0
h ABOUT 102KM		E	43 35.0	H-11 08 00.2		AUG 17	
SPA EP	19 38 30.0	AUG 15		5.9S 151.4E		SPA IP	00 47 57.5
AUG 14		SPA IP	11 32 04.5	h ABOUT 054KM		AUG 17	
SPA IP	21 21 46.0	BYR EP	11 32 19.0	SPA IP	11 20 27.0	MIR E	00 58 17.7
AUG 14		AUG 15		BYR EP	11 20 27.0	AUG 17	
H-21 27 41.6		SBA EP	16 14 19.0	AUG 16		SBA EP	01 38 33.0
7.4N 036.8W		AUG 15		H-11 40 46.5		SPA IP	01 40 47.0
h ABOUT 033KM		SBA EP	19 42 14.0	40.3N 142.2E		AUG 17	
SPA E(P)	21 41 21.0	AUG 15		h ABOUT 074KM		WIL E(P)	03 56 30.0
AUG 14		SPA IP	19 46 10.5	SPA IP'	11 59 48.0	AUG 17	
H-21 48 31.2		AUG 15		AUG 16		MIR EP	04 55 58.6
18.8S 168.2E		SPA EP	20 35 36.0	SBA EP	12 11 04.0	AUG 17	
h ABOUT 026KM		AUG 15		AUG 16		MIR E	06 26 25.7
SBA EP	21 58 31.0	SPA EP	21 40 06.0	H-12 38 20.6		AUG 17	
SPA IP	21 59 49.0	AUG 15		62.1N 147.3W		MIR E	07 04 23.0
MAW EP	22 00 31.0	SBA EP	22 04 24.0	h ABOUT 056KM		AUG 17	
AUG 14		AUG 15		SPA IP'	12 57 57.0	MIR EP	08 05 37.9
MAW EP	23 04 55.5	WIL EP	23 06 23.0	AUG 16		ES	15 21.9
SPA EP	23 05 46.0	AUG 16		SBA EP	13 58 17.0	AUG 17	
AUG 14		H-00 42 13.4		AUG 16		H-09 07 03.8	
SPA IP	23 13 46.0	19.8S 169.5E		SBA EP	15 35 18.0	52.0N 030.0W	
AUG 15		h ABOUT 102KM		AUG 16		h ABOUT 042KM	
SPA IP	03 13 33.0	SBA E(P)	00 52 09.0	SPA IP	15 58 19.0	SPA EP'	09 26 16.0
		BYR IP	00 52 59.0	BYR IP	15 58 45.0	AUG 17	
						HLL IP	09 12 34.0

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h m s		h m s		h m s		h m s	
AUG 17		AUG 17		AUG 18		AUG 19	
MIR E	09 21 26.0	SPA IP	17 44 16.0	WIL E(P)	04 24 22.0	SPA EP	03 05 05.0
ES	28 06.0	E	48 16.0				
AUG 17		AUG 17		AUG 18		AUG 19	
H-11	45 01.2	SPA IP	18 01 42.0	H-04	44 58.0	WIL E(P)	07 51 35.0
18.0S	178.3W			26.4S	071.5W		
h ABOUT	648KM	AUG 17		h ABOUT	008KM	AUG 19	
SBA EP	11 54 13.0	SPA EP	18 13 10.0	AIA EIP	04 52 28.0	SPA IP	08 04 13.5
WIL EP	11 54 48.0	AUG 17		BYR IP	04 54 47.0	AUG 19	
BYR IP	11 54 54.0	SBA EP	18 34 27.0	ES	05 02 44.0	H-08	22 17.8
SPA IP	11 55 23.5	AUG 17		EPP	23 48.0	31.3S	068.5W
I	57 38.0	MIR EP	18 52 33.3	SBA IP	04 56 15.6	h ABOUT	128KM
MIR EP	11 55 28.1	AUG 17		MAW IP	04 57 11.5	SPA IP	08 32 05.0
MAW IP	11 56 25.6	H-20	17 26.6	ES	05 07 15.0	AUG 19	
AUG 17		27.8S	070.5W	MIR EP	04 57 42.7	H-09	33 10.0
SPA EP	12 10 15.0	h ABOUT	033KM	ESKS	05 08 01.2	28.2N	052.6E
I	10 38.5	BYR EP	20 27 04.0	WIL IP	04 57 48.5	h ABOUT	050KM
E	12 55.0	SPA IP	20 27 49.0	EPP	05 01 15.0	SPA IP'	09 51 51.0
AUG 17		AUG 17		ES	08 29.0	BYR EP'	09 52 13.0
SBA EP	13 09 30.0	H-22	02 35.1	AUG 18		AUG 19	
AUG 17		24.5S	176.8W	H-11	09 43.4	HLL IP	09 40 28.0
H-14	42 56.6	h ABOUT	033KM	00.5N	067.2E	I p P	41 48.0
24.2N	094.0E	BYR IP	22 12 43.0	h ABOUT	033KM	AUG 19	
h ABOUT	184KM	SPA IP	22 13 17.0	MAW IP	11 20 41.0	SPA IP	11 03 13.0
SPA IP'	15 01 17.0	AUG 17		WIL EP	11 21 14.0	AUG 19	
AUG 17		H-22	33 58.4	AUG 18		SPA IP	13 01 47.5
H-14	54 01.4	33.3N	114.8W	SBA EP	14 52 41.0	AUG 19	
42.6N	142.8E	h ABOUT	014KM	MAW IP	14 53 17.2	H-14	00 37.8
h ABOUT	033KM	HLL IP'	22 53 02.0	AUG 18		06.9S	075.5W
SPA IP'	15 13 13.0	AUG 17		H-15	26 11.4	h ABOUT	014KM
BYR EP'	15 13 13.0	H-22	47 32.4	05.7N	058.0E	SPA IP	14 13 04.5
AUG 17		52.1N	030.1W	h ABOUT	033KM	AUG 19	
H-15	15 18.9	h ABOUT	036KM	MAW EP	15 37 40.5	SBA EP	14 31 17.0
72.2N	001.7E	SPA EP'	23 06 57.0	MIR EP	15 37 58.4	AUG 19	
h ABOUT	033KM	AUG 17		AUG 18		H-15	20 13.9
MAW IP'	15 34 55.7	SPA EP	22 49 06.0	BYR IP	17 49 18.0	28.2N	052.7E
AUG 17		AUG 17		AUG 18		h ABOUT	052KM
SPA IP	15 16 25.0	SBA EP	23 45 50.0	AIA EP	21 07 26.5	SPA IP'	15 38 55.0
HLL IP	15 20 07.0	AUG 18		E	08 17.0	BYR EP'	15 39 15.0
I	24 04.0	H-00	26 51.8	AUG 19		AUG 19	
AUG 17		07.2S	074.4W	H-01	30 57.4	SPA IP	15 25 01.5
SPA EP	15 27 46.0	h ABOUT	156KM	61.2S	027.8W	HLL IP	15 27 32.0
AUG 17		BYR IP	00 38 22.0	h ABOUT	033KM	ES	34 00.0
SPA IP	15 36 05.5	I	39 01.0	AIA EP	01 34 52.0	AUG 19	
AUG 17		AUG 18		BYR EP	01 37 12.0	MIR E	16 00 25.2
H-16	38 44.4	HLL IP	00 37 28.0	MAW IP	01 37 59.2	AUG 19	
51.5N	177.8E	I	37 41.0	SBA EP	01 38 41.0	AIA EP	17 30 27.0
h ABOUT	042KM	I	38 04.0	MIR EP	01 39 13.3	AUG 19	
SPA IP'	16 58 05.5	AUG 18		WIL EP	01 39 44.0	BYR IP	18 26 46.5
MAW EP'	16 58 17.0	WIL EP	01 39 22.0	AUG 19		MIR E	20 16 49.6
		AUG 18		AUG 19		WIL EP	21 38 12.0
		SBA EP	02 25 25.0				

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h m s		h m s		h m s		h m s	
AUG 19 MIR I	21 53 24.3	BYR EP	12 59 07.0	AUG 21 SPA IP	03 21 50.0	AUG 21 H-23 49 13.6 18.7S 169.1E h ABOUT 081KM	
AUG 20 SBA P	01 31 10.0	AUG 20 SPA EP	12 52 53.0	AUG 21 SPA EP	03 36 43.0	BYR IP	24 00 09.0
AUG 20 SBA EP	03 31 42.0	AUG 20 AIA EP	13 12 16.0	AUG 21 SBA EP	05 26 45.0	SPA IP	24 00 27.0
AUG 20 SBA EP	03 43 43.0	AUG 20 SPA IP	15 09 48.0	AUG 21 SBA EP	06 40 07.0	AUG 21 SPA IP	23 55 55.5
AUG 20 H-03 56 29.2 63.9N 020.5W h ABOUT 033KM		AUG 20 H-15 11 52.9 00.8S 132.6E h ABOUT 033KM		SPA IP	06 40 48.0 E 43 36.0	AUG 21 H-23 58 56.6 12.2S 110.5E h ABOUT 035KM	
BYR EP'	04 16 25.0	MAW EP	15 24 10.5	AUG 21 SPA IP	08 16 12.5 E 17 56.0	WIL E(P)	24 08 09.0
AUG 20 H-04 18 01.3 4.1N 095.4E h ABOUT 093KM		AUG 20 SPA IP	15 38 19.5	AUG 21 SPA EP	08 46 37.0	SBA EP	24 10 17.0
WIL EP	04 29 15.0	AUG 20 H-16 17 48.2 60.3S 027.1W h ABOUT 033KM		AUG 21 WIL EP	09 01 56.0	AUG 22 SPA EP	02 16 11.0
AUG 20 H-05 08 50.3 28.1N 052.6E h ABOUT 047KM		AIA EP	16 21 52.0	AUG 21 WIL EP	09 32 25.0	AUG 22 BYR EP	02 17 48.0
SPA IP'	05 27 32.0	SPA IP	16 23 54.5 I 24 12.0	AUG 21 H-10 13 33.4 19.6S 066.1W h ABOUT 199KM		SPA IP	02 18 37.0
AUG 20 H-05 39 47.7 28.2N 052.6E h ABOUT 052KM		BYR IP	16 24 10.0	BYR IP	10 23 52.5	AUG 22 H-05 42 38.7 34.9S 015.1W h ABOUT 033KM	
MAW EP	05 53 10.5	MAW IP	16 24 54.5	AUG 21 SPA IP	10 19 35.5	SPA IP	05 52 11.0
SPA IP'	05 58 28.5	SBA EP	16 25 38.0	AUG 21 SPA IP	10 19 35.5	BYR E(P)	05 52 28.0
BYR EP'	05 58 48.0	AUG 20 H-16 29 58.5 72.3N 001.7E h ABOUT 033KM		AUG 21 SPA IP	11 18 11.0	MIR E(P)	05 53 18.9 E 53 32.2 E 06 05 59.4
AUG 20 SBA EP	08 07 30.0	MAW EP'	16 49 34.5	AUG 21 MAW EP	13 59 03.0	AUG 22 AIA EP	08 11 25.0
AUG 20 AIA EP	08 28 05.0	AUG 20 MCQ IP	17 09 09.0 IS 09 19.0	AUG 21 SPA IP	16 30 15.0	AUG 22 AIA EP	09 47 59.0
AUG 20 H-08 32 43.1 29.7S 177.9W h ABOUT 080KM		AUG 20 H-17 30 42.3 03.0N 128.3E h ABOUT 178KM		BYR IP	16 31 03.0	AUG 22 SPA IP	11 39 39.0
SPA IP	08 42 46.5	MAW IP	17 42 54.4	AUG 21 SPA EP	17 11 33.0	BYR IP	11 39 53.0
AUG 20 SBA EP	08 51 28.0	SPA IP	17 43 38.0	AUG 21 SBA P	17 19 44.0	AUG 22 H-12 41 22.1 10.5S 161.6E h ABOUT 050KM	
AUG 20 SBA EP	10 07 37.0	AUG 20 WIL EP	18 16 56.0	SPA IP	17 22 03.0	SPA IP	12 53 25.0
AUG 20 H-12 48 47.7 37.4S 078.3E h ABOUT 033KM		AUG 20 SPA IP	21 51 57.0	AUG 21 AIA EP	19 37 02.0 E 39 24.0	AUG 22 H-17 04 31.2 51.9N 030.0W h ABOUT 033KM	
MAW EP	12 55 09.5	AUG 21 H-02 09 41.5 23.0S 069.0W h ABOUT 112KM		AUG 21 WIL EP	20 18 06.0	SPA EP'	17 23 55.0
ES	13 02 53.0	SPA IP	02 20 25.5	AUG 21 SPA IP	20 37 46.0	AUG 22 BYR EP	17 39 24.0 I 44 08.0
SPA IP	12 58 03.5	AUG 21 SPA IP	03 11 25.0	AUG 21 SPA IP	23 36 26.0	AUG 22 SPA IP	17 44 01.5
SBA EP	12 58 05.0	BYR IP	03 11 36.5				

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h m s		h m s		h m s		h m s	
AUG 22 SPA EP	18 16 23.0	AUG 23 H-13 26 25.4 21.6S 069.6W h ABOUT 071KM		AUG 24 H-21 56 54.2 58.4N 150.3W h ABOUT 022KM		AUG 25 SBA EP	19 14 48.0
AUG 22 SPA EP	18 50 13.0	BYR IP	13 36 42.5	BYR EP' E	22 16 15.0 19 10.0	AUG 25 SBA EP	23 13 01.0
AUG 22 BYR IP	19 32 01.0	SPA IP	13 37 23.0	WIL EP'	22 16 24.0	AUG 26 MIR E(P)	02 48 17.1
SPA EP	19 32 05.0	AUG 23 H-15 24 05.3 06.1S 149.4E h ABOUT 063KM		MIR IP'	22 16 43.6	AUG 26 H-03 18 44.1 52.1N 030.1W h ABOUT 033KM	
MIR E	19 34 42.0	WIL EP	15 34 44.0	AUG 25 WIL EP	00 40 50.0	BYR EP'	03 38 04.0
AUG 22 SPA IP	20 06 54.5	ES	43 26.0	AUG 25 H-02 56 17.0 07.0S 129.4E h ABOUT 143KM		MIR EP'	03 38 28.3
AUG 22 H-20 07 51.7 10.1S 161.7E h ABOUT 071KM		MIR IP	15 35 20.0	BYR IP	03 08 47.0	AUG 26 H-05 40 27.1 47.2N 148.4E h ABOUT 308KM	
SPA IP	20 19 53.0	SBA EP	15 35 26.0	AUG 25 H-05 46 12.1 05.4S 147.1E h ABOUT 203KM		SBA IP'	05 58 47.1
AUG 22 SPA EP	21 37 14.0	MAW IP	15 36 25.2	BYR IP	05 58 27.0	BYR EP'	05 59 02.0
AUG 22 SPA IP	21 45 07.0	ES	46 39.5	AUG 25 WIL EP	06 11 18.0	I	06 02 16.0
AUG 23 H-02 56 13.3 59.4N 030.3W h ABOUT 033KM		BYR IP	15 36 31.0	BYR IP	05 58 27.0	AUG 26 MCQ IP	06 06 56.0
BYR IP'	03 15 54.5	ES	46 52.0	AUG 25 WIL EP	06 11 18.0	AUG 26 MIR EIP	09 40 43.6
SPA IP'	03 15 57.5	AUG 23 SPA IP	15 31 29.0	AUG 25 H-07 45 47.1 37.6S 073.7W h ABOUT 024KM		AUG 26 H-12 59 31.1 .2N 126.6E h ABOUT 033KM	
AUG 23 H-04 47 46.4 59.4N 030.2W h ABOUT 033KM		I	31 42.0	BYR EP	07 54 09.0	MAW EP	13 11 41.0
BYR IP'	05 07 27.5	AUG 23 SPA EP	22 25 47.0	MAW IP	07 56 58.9	AUG 26 BYR EP	13 02 47.0
SPA IP'	05 07 32.0	AUG 24 H-10 37 23.4 1.5S 078.1W h ABOUT 173KM		WIL EP	07 57 36.0	AUG 26 SBA EP	15 03 13.0
AUG 23 AIA EP	04 53 25.0	BYR IP	10 49 20.0	AUG 25 BYR IP	10 14 10.5	AUG 26 H-20 47 53.3 28.8S 069.3W h ABOUT 102KM	
AUG 23 H-09 35 25.0 4.5S 138.4E h ABOUT 163KM		AUG 24 BYR EP	12 07 06.0	MAW E(P)	10 14 11.5	BYR EP	20 57 18.0
SPA IP	09 47 45.0	AUG 24 SBA EP	13 06 29.0	AUG 25 H-11 11 53.6 36.1N 028.7E h ABOUT 050KM		AUG 26 WIL E(P)	21 27 35.0
BYR IP	09 47 56.0	AUG 24 H-17 26 15.1 00.2N 123.8E h ABOUT 127KM		BYR EP'	11 31 02.1	AUG 26 WIL E(P)	22 33 32.0
AUG 23 H-10 30 28.0 30.8S 071.9W h ABOUT 076KM		WIL IP	17 36 55.0	AUG 25 BYR IP	13 01 33.0	AUG 27 SPA EP	01 22 36.0
SPA IP	10 40 24.5	MIR IP	17 37 14.1	AUG 25 H-13 47 20.6 78.2N 126.6E h ABOUT 050KM		AUG 27 SPA EP	02 53 00.0
AUG 23 MIR E	11 17 50.0	MAW IP	17 38 08.6	WIL EP'	14 06 49.0	AUG 27 H-04 45 02.6 05.6S 133.9E h ABOUT 009KM	
SPA EP	11 19 03.0	SBA IP	17 38 18.6	EPP	10 16.0		
AUG 23 SPA EP	11 51 57.0	BYR IP	17 39 23.5	MAW EP'	14 07 02.0		
		AUG 24 H-21 24 48.0 86.9N 052.0E h ABOUT 011KM		SBA EP'	14 07 10.0		
		MAW EP'	21 44 47.0	BYR IP'	14 07 16.0		
				I	08 30.5		

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	h m s		h m s		h m s		h m s
SBA IP	04 56 42.0	SPA EP	15 49 44.0	SPA IP	04 45 46.0	AUG 29	
SPA IP	04 57 37.0	AUG 27		I	47 03.0	H-05 20 19.8	
I	58 03.0	SPA IP	17 49 44.0	I	54 14.0	71.6N 003.7W	
BYR IP	04 57 52.0	AUG 27		MIR E	04 45 52.7	h ABOUT 033KM	
AUG 27		H-19 31 56.9		MAW EP	04 46 51.0	MAW IP'	05 40 03.9
SPA EP	05 40 48.0	35.5N 028.7E		AUG 28		AUG 29	
AUG 27		h ABOUT 033KM		SPA EP	05 13 30.0	SPA EP	05 41 04.0
SPA IP	06 22 58.5	SPA IP'	19 50 59.0	AUG 28		AUG 29	
AUG 27		AUG 27		MAW IP	05 40 03.9	MIR E(P)	05 55 46.8
MAW EP	06 25 18.0	SPA EP	19 36 33.0	AUG 28		AUG 29	
SPA IP	06 25 39.0	AUG 27		SPA EP	08 09 04.0	H-06 05 24.2	
I	25 54.0	WIL E(P)	21 02 31.0	AUG 28		19.35 066.3W	
BYR IP	06 25 56.5	AUG 27		H-08 25 08.9		h ABOUT 232KM	
SBA IP	06 26 41.0	SPA EP	21 18 33.0	18.2S 174.6W		BYR IP	06 15 41.0
AUG 27		AUG 27		h ABOUT 070KM		SPA IP	06 16 18.0
SPA EP	06 53 06.0	H-21 23 38.9		SPA IP	08 36 26.0	AUG 29	
AUG 27		22.7S 172.0E		AUG 28		MIR E(P)	08 53 35.6
MCO IP	07 49 25.0	h ABOUT 033KM		AIA EP	10 57 55.0	SPA EP	08 53 53.0
ES	49 28.0	SPA IP	21 34 33.0	AUG 28		AUG 29	
AUG 27		AUG 27		H-12 06 18.3		MIR E(P)	12 28 22.8
H-07 53 54.8		SBA EP	21 34 44.0	37.9N 019.8E		AUG 29	
17.5S 173.0W		AUG 27		h ABOUT 061KM		H-12 49 58.3	
h ABOUT 033KM		H-22 41 53.0		SPA EP'	12 25 19.0	13.3S 172.4E	
SBA EP	08 04 08.0	60.9N 152.8W		AUG 28		h ABOUT 033KM	
BYR IP	08 04 43.0	h ABOUT 033KM		H-13 21 13.5		BYR EP	13 01 24.0
SPA IP	08 05 20.5	SPA EP'	23 01 43.0	07.1N 095.1E		MIR E	13 01 25.6
AUG 27		AUG 27		h ABOUT 033KM		SPA E(P)	13 02 45.0
AIA EP	09 18 36.0	H-23 48 26.3		MIR EP	13 32 42.9	AUG 29	
I	19 00.0	21.6S 175.3W		WIL EP	13 32 47.0	H-13 25 25.9	
SPA IP	09 19 43.5	h ABOUT 060KM		MAW EP	13 33 09.5	13.7S 172.6E	
I	19 56.0	SPA E(P)	23 59 18.0	SPA EP	13 34 44.0	h ABOUT 033KM	
BYR IP	09 20 17.5	AUG 28		AUG 28		SBA EP	13 36 00.0
AUG 27		SPA EP	01 12 12.0	H-14 42 18.5		BYR EP	13 36 51.0
MAW EP	09 26 20.0	I	12 20.0	24.4S 179.8E		SPA IP	13 37 13.5
AUG 27		AUG 28		h ABOUT 549KM		AUG 29	
H-11 58 41.3		MAW IP	01 49 42.5	BYR IP	14 51 41.0	SPA EP	14 24 10.0
28.2N 055.7E		AUG 28		SPA IP	14 52 11.0	AUG 29	
h ABOUT 069KM		SPA EP	03 23 14.0	MAW IP	14 53 17.2	SPA EP	15 05 12.0
SPA IP'	12 17 21.0	AUG 28		AUG 28		AUG 29	
AUG 27		AIA EP	03 31 17.0	SPA IP	16 41 52.5	H-17 26 55.5	
SPA EP	12 53 58.0	AUG 28		AUG 28		20.7S 174.1W	
AUG 27		MAW EP	04 28 33.5	MAW EP	19 09 45.0	h ABOUT 033KM	
H-12 56 46.1		SPA IP	04 32 34.5	BYR IP	14 51 41.0	BYR EP	17 37 25.0
27.5N 055.9E		AUG 28		SPA IP	14 52 11.0	SPA IP	17 38 02.0
h ABOUT 033KM		H-04 35 29.3		MAW IP	14 53 17.2	AUG 29	
SPA IP'	13 15 34.0	19.8S 178.2W		AUG 28		SPA EP	17 31 36.0
AUG 27		h ABOUT 580KM		SPA IP	21 45 03.0	AUG 29	
H-15 37 52.0		SBA IP	04 44 33.0	AUG 29		SPA EP	17 31 36.0
3.0S 103.1E		BYR IP	04 45 15.5	SPA EP	04 26 13.0	AUG 29	
h ABOUT 506KM				I	27 38.0	H-19 37 56.0	
				MAW EP	04 28 33.5	35.2N 028.6E	
						h ABOUT 063KM	

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h m s		h m s		h m s		h m s	
SPA EP'	19 56 55.0	AUG 30		SPA IP	22 42 12.5	AUG 31	
AUG 29		SPA IP	11 25 42.5	AUG 31		H-19 36 37.6	
SPA IP	20 06 42.5	AUG 30		SPA IP	01 34 35.0	59.5N 145.9W	
AUG 29		MAW IP	11 41 49.7	AUG 31		h ABOUT 033KM	
SPA IP	21 25 36.0	SPA IP	11 43 17.5	H-02 14 20.3		SPA IP'	19 56 22.5
BYR IP	21 26 26.5	BYR IP	11 43 52.0	35.2S 106.0W		I	56 28.0
AUG 29		AUG 30		h ABOUT 033KM		AUG 31	
H-21 36 50.8		SPA EP	11 57 22.0	BYR E(IP)	02 22 28.0	SPA EP	20 38 13.0
14.9S 172.8W		AUG 30		SPA IP	02 23 49.0	AUG 31	
h ABOUT 033KM		SPA IP	12 54 17.5	I	24 53.0	H-23 20 19.4	
SPA IP	21 48 33.0	AUG 30		SBA EP	02 23 53.0	52.4N 170.7W	
MAW IP	21 49 42.5	MAW EP	14 55 16.5	MAW IP	02 26 10.4	h ABOUT 033KM	
AUG 30		AUG 30		AUG 31		MAW IP'	23 40 07.1
SPA IP	01 06 25.5	SBA EP	16 46 44.0	H-02 42 09.7		SEP 01	
BYR IP	01 07 16.0	AUG 30		55.2N 162.0E		SPA EP	00 15 06.0
SBA EP	01 08 05.0	SPA EP	17 22 32.0	h ABOUT 033KM		SEP 01	
AUG 30		AUG 30		SPA IP'	03 01 39.0	SPA EP	00 22 21.0
H-02 35 08.1		H-17 55 17.0		AUG 31		SEP 01	
27.6N 088.3E		09.8S 159.1E		SPA EP	02 53 55.0	SBA EP	06 07 38.0
h ABOUT 021KM		h ABOUT 035KM		AUG 31		SEP 01	
SPA IP'	02 53 50.5	SPA IP	18 07 26.0	H-04 22 08.6		SBA EP	09 36 00.0
AUG 30		AUG 30		1.4N 066.0E		SEP 01	
SPA IP	04 54 50.5	SPA EP	18 16 35.0	h ABOUT 029KM		SBA EP	10 17 36.0
E	58 07.0	AUG 30		MAW IP	04 33 12.3	SEP 1	
AUG 30		SPA EP	19 43 26.0	SPA EP	04 35 13.0	H-12 45 23.8	
SPA EP	05 14 04.0	AUG 30		AUG 31		76.1N 120.8E	
AUG 30		H-20 37 09.2		SPA IP	04 45 35.5	h ABOUT 033KM	
SPA IP	05 22 25.5	13.6S 172.4E		AUG 31		MAW IP'	13 05 25.0
BYR IP	05 22 38.5	h ABOUT 033KM		SPA IP	05 23 19.0	SEP 01	
MAW IP	05 23 17.0	SBA EP	20 47 44.0	AUG 31		SPA IP	13 17 25.0
AUG 30		BYR EP	20 48 35.0	MAW EP	08 26 33.5	SEP 1	
H-08 11 42.5		SPA IP	20 48 58.0	AUG 31		H-13 22 36.6	
15.8S 174.9W		MAW EP	20 49 41.5	SPA IP	09 40 38.5	27.2N 092.3E	
h ABOUT 286KM		AUG 30		AUG 31		h ABOUT 033KM	
SPA IP	08 22 50.0	SPA IP	21 07 59.0	AIA EP	12 03 08.0	SPA IP'	13 41 18.0
MAW IP	08 23 56.4	AUG 30		AUG 31		I	51 48.5
AUG 30		H-21 44 56.9		SPA EP	12 19 12.0	E	55 28.0
H-08 47 34.7		19.9S 176.0W		AUG 31		BYR EP'	13 41 35.0
5.0S 144.5E		h ABOUT 253KM		MAW IP	13 18 13.8	SEP 01	
h ABOUT 093KM		SBA IP	21 54 30.1	SPA IP	13 18 18.5	SPA IP	14 26 28.0
MAW EP	08 59 46.7	BYR IP	21 55 10.0	I	18 32.0	SEP 01	
SPA IP	09 00 00.5	SPA IP	21 55 44.0	BYR IP	13 18 20.5	SPA IP	15 58 32.5
I	00 18.5	I	56 41.0	AUG 31		SEP 01	
BYR EP	09 00 04.0	MAW IP	21 56 53.5	SPA IP	14 25 15.0	SBA EP	17 09 26.0
AUG 30		AUG 30		AUG 31		SEP 1	
SPA IP	10 42 38.5	H-22 30 24.8		SPA IP	16 17 02.5	H-17 16 40.4	
BYR IP	10 42 51.5	13.7S 172.5E		AUG 31		51.2N 170.6W	
MAW IP	10 43 30.7	h ABOUT 033KM		MAW EP	18 04 34.0	h ABOUT 025KM	
		SBA EP	22 40 59.0			BYR EP'	17 35 43.0
						MIR EP'	17 35 54.6

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SPA IP'	17 36 00.5	SEP 03		SEP 3		SEP 3	
I	36 09.5	SPA EP	01 30 45.0	H-12 57 22.3		H-22 19 23.1	
MAW IP'	17 36 27.3	SEP 3		17.9S 178.0W		06.4S 128.5E	
I	36 32.1	H-02 45 07.2		h ABOUT 567KM		h ABOUT 218KM	
SEP 01		59.5N 144.8W		SPA IP	13 07 51.0	SPA IP	22 31 28.5
SBA EP	17 25 47.0	h ABOUT 019KM		SEP 03		SEP 04	
SEP 01		SPA IP'	03 04 55.0	MCQ IP	14 33 34.0	AIA EP	00 02 31.0
SBA EP	17 33 36.0	SEP 03		IS	33 38.0	E	03 17.0
WIL EP	17 36 51.0	SPA IP	03 44 49.5	SEP 03		SEP 4	
SEP 1		SEP 03		SPA IP	15 41 06.5	H-00 08 51.0	
H-20 48 38.8		SPA EP	06 04 48.0	SEP 03		5.5S 130.4E	
57.2S 147.1E		SBA EP	06 07 38.0	SPA EP'	15 46 26.0	h ABOUT 099KM	
h ABOUT 033KM		SEP 03		I	46 59.0	SPA EP	00 21 14.0
WIL EP	20 53 05.0	SBA EP	09 36 00.0	I	47 09.0	SEP 4	
ES	56 47.0	SEP 03		SEP 03		H-01 25 43.9	
SBA E(P)	20 53 37.0	SEP 3		SPA IP	15 53 20.5	04.5S 153.5E	
MIR EP	20 54 10.3	H-10 06 55.9		SEP 03		h ABOUT 167KM	
SPA IP	20 55 13.0	30.9S 068.4W		SPA IP	16 03 30.0	MAW IP	01 38 06.5
SEP 02		h ABOUT 113KM		SEP 03		SEP 4	
MIR E	03 08 33.4	BYR EP	10 16 03.5	MAW IP	16 08 20.2	H-03 28 33.1	
E	15 27.5	SPA IP	10 16 46.5	SEP 03		7.6N 036.9W	
SEP 02		I	17 31.0	SPA IP	16 07 29.5	h ABOUT 022KM	
WIL EP	07 02 18.0	SBA EP	10 17 36.0	BYR IP	16 07 44.0	BYR EP	03 42 00.0
SEP 02		MAW IP	10 18 27.9	SEP 03		E(S)	52 24.0
SPA EP	08 39 38.0	WIL IP	10 19 11.0	MAW EP	16 25 27.0	SPA IP	03 42 07.5
SEP 02		SEP 03		SEP 3		SEP 4	
SPA IP	10 24 56.0	MIR EP	10 12 29.2	H-16 58 55.4		H-03 39 36.7	
SEP 02		I	12 44.5	15.2S 173.5W		39.8N 040.3E	
SPA EP	16 04 54.0	SEP 3		h ABOUT 033KM		h ABOUT 033KM	
SEP 02		H-10 23 47.8		SBA EP	17 09 26.0	SPA IP'	03 58 42.5
SPA IP	16 26 45.5	10.4S 160.5E		BYR IP	17 10 01.0	SEP 04	
SEP 02		h ABOUT 057KM		SPA IP	17 10 35.0	SPA IP	04 08 35.0
SPA EP	17 30 43.0	SPA EP	10 35 50.0	I	10 48.0	SEP 4	
SEP 2		MAW EP	10 36 10.5	MIR E(P)	17 11 02.2	H-04 10 55.9	
H-18 12 22.9		SEP 03		MAW IP	17 11 43.0	59.2N 138.1W	
7.8N 073.3W		WIL EP	10 56 28.0	SEP 03		h ABOUT 033KM	
h ABOUT 112KM		SEP 03		MAW IP	17 07 32.0	SPA EP'	04 30 40.0
BYR IP	18 25 15.0	WIL EP	10 56 38.0	SEP 03		SEP 04	
SEP 02		SEP 3		SBA EP	17 33 36.0	SPA IP	04 52 13.5
SPA IP	18 45 27.5	H-11 23 02.8		SEP 03		SEP 04	
SEP 2		28.4S 177.1W		SPA IP	18 12 46.5	SBA EP	06 40 40.0
H-21 32 39.6		h ABOUT 312KM		MAW EP	19 14 17.0	SEP 04	
18.6S 169.4E		SPA IP	11 32 50.0	SEP 03		SPA IP	07 45 27.0
h ABOUT 218KM		SEP 3		MAW EP	19 46 36.0	SEP 4	
BYR IP	21 43 18.5	H-12 32 00.6		SEP 03		H-09 03 00.6	
SPA IP	21 43 37.0	59.4N 145.2W		SPA EP	19 46 36.0	28.5S 070.3W	
MAW IP	21 44 20.5	h ABOUT 035KM		SEP 3		h ABOUT 044KM	
SEP 02		SPA IP'	12 51 36.0	H-21 04 13.3		BYR EP	09 12 31.0
WIL EP	21 55 49.0	SEP 03		59.7N 144.0W		SPA EP	09 13 18.0
SEP 02		SPA EP	12 46 13.0	h ABOUT 033KM		SEP 04	
WIL EP	21 55 49.0	I	46 25.5	SPA EP'	21 23 56.0	SPA IP	09 33 12.0

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h m s		h m s		h m s		h m s	
SEP 4		SBA IP	17 22 11.5	SEP 5		SEP 5	
H-09 36 58.7		MAW IP	17 22 27.0	H-04 09 51.6		H-12 27 22.2	
18.3S 069.0W		SPA IP	17 23 08.0	06.0S 153.8E		00.6N 025.9W	
h ABOUT 101KM		I	23 15.5	h ABOUT 081KM		h ABOUT 033KM	
BYR IP	09 47 33.0	BYR IP	17 23 24.0	MIR EP	04 21 14.9	SPA IP	12 40 22.0
MAW IP	09 49 35.8	SEP 04		BYR IP	04 22 11.0	I	40 39.5
SEP 04		MIR E(P)	22 34 51.0	SPA IP	04 22 14.5	I	40 52.0
MIR E	09 58 24.0	SEP 04		MAW IP	04 22 18.7	BYR EP	12 40 25.0
SEP 4		SPA EP	22 53 00.0	SEP 05		MAW I(P)	12 40 27.0
H-10 34 13.1		SEP 5		SPA IP	05 13 50.5	SEP 5	
4.0S 131.4E		H-02 09 21.4		SEP 05		H-15 05 10.9	
h ABOUT 033KM		24.4S 068.2W		SPA EP	05 23 15.0	19.2S 069.3W	
WIL EP	10 44 44.0	h ABOUT 064KM		SEP 05		h ABOUT 103KM	
ES	53 19.0	MAW IP	02 21 32.6	MIR E	06 28 49.0	BYR IP	15 15 40.0
MIR EP	10 45 09.8	SEP 5		SEP 5		SPA IP	15 16 20.0
EPCP	45 36.0	H-02 17 14.4		H-07 20 45.1		SEP 05	
ES	54 09.0	32.2S 179.5E		33.6S 077.6E		SPA IP	17 01 39.5
SBA IP	10 46 00.9	h ABOUT 397KM		h ABOUT 033KM		SEP 05	
MAW IP	10 46 11.1	SPA IP	02 26 28.5	MIR EP	07 27 29.3	SBA EP	17 23 26.0
EPP	49 05.9	I	27 58.5	ES	32 59.8	SEP 5	
ES	56 04.0	MAW IP	02 27 43.1	SPA IP	07 30 27.0	H-18 46 18.8	
SPA IP	10 46 52.0	SEP 05		BYR EP	07 31 32.0	53.9S 140.4E	
IPP	50 11.5	BYR IP	02 18 16.0	SEP 5		h ABOUT 033KM	
BYR IP	10 47 08.0	I	19 19.5	H-07 27 21.0		WIL EP	18 50 39.0
ES	57 59.0	SPA IP	02 18 51.5	05.9S 153.7E		SBA EP	18 51 49.0
E	11 04 39.0	I	20 00.5	h ABOUT 106KM		MIR EP	18 51 51.3
SEP 04		I	20 30.5	BYR IP	07 39 39.0	SPA IP	18 53 20.0
SPA IP	10 44 05.0	MAW IP	02 20 05.6	SPA EP	07 39 41.5	MAW EP	18 53 32.5
SEP 4		I(P)	22 01.5	I	39 55.5	E	53 40.5
H-11 39 24.0		SEP 5		SEP 05		SEP 05	
17.6S 168.6E		H-02 53 50.6		SPA IP	08 08 03.5	SPA EP	19 14 06.0
h ABOUT 033KM		05.8S 154.0E		SEP 05		SEP 05	
SPA IP	11 50 51.0	h ABOUT 069KM		BYR IP	08 25 58.0	MAW EP	19 43 46.0
SEP 4		MCQ EP	03 02 31.0	SEP 05		SEP 05	
H-14 50 33.5		WIL IP	03 04 40.5	MAW EP	10 45 21.5	MAW EP	21 15 27.0
24.3S 179.1E		E	04 58.0	SEP 05		SEP 06	
h ABOUT 548KM		ES	13 32.0	SPA EP	10 52 22.0	SPA IP	02 08 47.0
SPA IP	15 00 26.5	SBA IP	03 05 12.1	SEP 5		BYR IP	02 09 02.0
MAW IP	15 01 31.2	IS	14 37.0	H-11 55 36.7		MAW EP	02 09 35.5
SEP 4		MIR IP	03 05 17.8	54.0S 141.1E		SEP 06	
H-16 10 53.0		EPCP	05 38.8	h ABOUT 033KM		BYR EP	02 40 35.0
4.0S 131.5E		IS	14 44.8	WIL EP	12 00 01.0	SPA IP	02 41 11.0
h ABOUT 037KM		BYR IP	03 06 13.5	SBA EP	12 01 08.0	SEP 6	
MAW EP	16 22 50.5	IS	16 37.0	MIR EP	12 01 13.8	H-03 27 47.9	
SPA IP	16 23 31.0	SPA IP	03 06 16.5	E(S)	05 58.8	17.8S 168.2E	
BYR IP	16 23 47.0	IPP	09 30.5	SEP 06		h ABOUT 033KM	
SEP 04		IS	16 32.5	BYR EP	02 40 35.0	MIR IP	03 38 47.2
WIL EP	16 32 32.0	MAW IP	03 06 20.7	SEP 6		BYR EP	03 38 56.0
SEP 4		ES	16 40.0	H-03 27 47.9		I	47 19.5
H-17 10 28.4		SEP 05		17.8S 168.2E			
3.9S 131.5E		SPA IP	04 08 00.0	h ABOUT 033KM			
h ABOUT 033KM				MIR IP	03 38 47.2		
				BYR EP	03 38 56.0		
				I	47 19.5		

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SPA IP	03 39 09.5	SEP 06		SEP 06		SEP 07	
MAW IP	03 39 51.2	MAW IP	11 26 18.2	MIR EP	18 53 45.2	SPA EP	06 38 21.0
SEP 06		SEP 06		ES	19 03 47.5	SEP 7	
SPA EP	03 29 38.0	MAW IP	11 37 53.2	SEP 06		H-07 07 55.4	
SEP 06		SEP 06		H-18 57 20.4		57.7N 151.5W	
WIL EP	03 38 22.0	SPA IP	13 43 13.0	07.1N 93.7E		h ABOUT 033KM	
E	38 50.0	SEP 06		h ABOUT 033KM		SPA IP'	07 27 29.0
SEP 6		SPA IP	15 50 18.5	MAW IP	19 09 14.9	SEP 7	
H-03 38 48.8		SEP 6		E	09 28.5	H-07 42 02.3	
46.7S 013.5W		H-15 51 23.5		SPA EP	19 11 01.0	58.3N 152.0W	
h ABOUT 033KM		10.6S 107.5W		E	14 56.0	h ABOUT 033KM	
MAW IP	03 46 44.7	h ABOUT 033KM		E	21 25.0	SPA IP'	08 01 41.5
SPA IP	03 46 51.0	SPA IP	16 03 28.0	SEP 06		SEP 07	
MIR EP	03 48 10.0	SEP 06		SPA IP	19 41 27.5	SBA EP	09 00 42.0
SBA EP	03 48 25.0	SPA IP	15 57 56.0	SEP 06		SEP 7	
SEP 06		SEP 6		SPA IP	19 55 24.5	H-11 27 14.7	
MAW IP	03 56 44.7	H-15 58 15.4		SEP 6		15.7N 053.3E	
SEP 06		58.7N 151.4W		H-20 34 22.2		h ABOUT 033KM	
SPA EP	04 12 18.0	h ABOUT 033KM		04.7S 144.8E		MAW IP	11 39 38.5
SEP 06		SPA IP'	16 17 57.5	h ABOUT 076KM		SPA I(P)	11 41 30.5
WIL E(P)	05 11 50.0	SEP 06		WIL E(P)	20 45 02.0	SEP 7	
SEP 06		MIR E	16 11 39.2	MAW IP	20 46 38.0	H-11 29 17.6	
WIL EP	06 54 28.0	SEP 6		SPA IP	20 46 52.0	04.1S 151.7E	
SEP 6		H-16 13 23.2		BYR EP	20 46 58.0	h ABOUT 246KM	
H-07 50 12.6		21.5S 066.8W		SEP 6		BYR EP	11 41 29.0
48.1S 104.1E		h ABOUT 233KM		H-21 05 47.8		MAW IP	11 41 29.4
h ABOUT 033KM		BYR IP	16 23 26.0	06.0S 107.1W		I	41 36.0
MIR EP	07 54 37.4	SPA IP	16 24 03.5	h ABOUT 033KM		SEP 07	
MAW EP	07 56 06.0	MAW IP	16 25 27.7	SPA IP	21 18 16.0	MIR E	11 50 29.4
SBA EP	07 57 27.0	SEP 6		SEP 6		E	51 07.4
SPA IP	07 58 03.0	H-17 16 54.6		H-21 18 02.1		E	54 14.4
BYR EP	07 59 03.0	59.1N 147.4W		h ABOUT 033KM		SEP 07	
SEP 6		h ABOUT 033KM		SPA IP	21 30 30.0	MIR E	14 13 36.2
H-09 21 22.4		SPA IP'	17 36 36.0	SEP 06		SEP 7	
20.3S 178.9W		SEP 6		MIR E	21 39 50.9	H-15 13 14.1	
h ABOUT 621KM		H-17 36 44.3		SEP 07		10.1S 161.1E	
BYR EP	09 31 03.5	63.1N 147.7W		MIR E	02 30 48.1	h ABOUT 038KM	
SPA IP	09 31 33.0	h ABOUT 033KM		SEP 07		BYR IP	15 25 10.5
MAW EP	09 32 36.5	SPA IP'	17 56 33.0	SPA EP	03 11 04.0	SPA IP	15 25 19.5
SEP 6		SEP 06		SEP 7		SEP 07	
H-11 15 27.9		SPA IP	18 16 02.0	H-03 38 50.4		MAW EP	15 39 47.0
6.0S 153.7E		SEP 6		19.9N 122.2E		SEP 07	
h ABOUT 090KM		H-18 41 01.8		h ABOUT 028KM		SPA EP	19 21 28.0
MIR E	11 26 50.6	10.0N 140.2E		WIL E(P)	03 51 31.0	SEP 08	
BYR IP	11 27 46.0	h ABOUT 033KM		SEP 7		MIR E	00 42 25.4
SPA IP	11 27 49.0	WIL EP	18 53 04.0	H-03 54 05.1		SEP 08	
MAW IP	11 27 53.2	SBA EP	18 53 56.0	48.6N 153.9E		AIA EP	00 56 17.0
		MAW IP	18 54 19.4	h ABOUT 100KM		SEP 08	
		E	58 01.0	BYR EP'	04 13 05.0	MAW IP	01 35 56.2
		SPA EP	18 54 45.0	SPA EP'	04 13 08.0	SEP 08	
				I	16 42.0	SBA E(P)	01 50 25.0

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SEP 08 SPA IP	03 35 21.0	SEP 08 WIL EP E	13 34 10.0 34 24.0	MAW IP	15 41 23.8	SEP 09 AIA EP	04 18 42.0
SEP 08 AIA EP	05 20 10.0	SEP 8 H-13 40 03.5 29.6N 142.0E h ABOUT 077KM		SEP 8 H-16 52 33.2 29.1N 142.3E h ABOUT 033KM		SEP 9 H-04 52 45.4 05.6S 130.9E h ABOUT 093KM	
SEP 8 H-05 55 18.7 20.5S 176.2W h ABOUT 033KM		SPA IP'	13 58 41.0	SPA EP'	17 11 17.0	SPA IP	05 05 08.5
SPA IP	06 06 26.0	BYR EP'	13 58 43.0	SEP 8 H-17 05 23.4 20.4S 178.3W h ABOUT 539KM		BYR EP	05 05 26.0
MAW IP	06 07 36.2	SEP 8 H-13 41 44.1 24.1S 177.6W h ABOUT 165KM		SBA EP	17 14 27.0	SEP 9 H-05 30 44.7 24.1S 177.1W h ABOUT 033KM	
SEP 08 SPA EP	06 20 11.0	SBA EP	13 50 56.0	SPA IP	17 15 39.5	SPA EP	05 41 30.0
SEP 8 H-07 54 57.9 5.8N 126.1E h ABOUT 177KM		MIR E E	13 52 31.3 14 19 55.2	SEP 08 MAW IP	17 18 48.5	MAW EP	05 42 44.0
WIL EP	08 06 09.0	MAW IP	13 53 26.4	SEP 08 SPA EP	19 41 32.0	SEP 09 MIR E	06 27 49.0
MIR EP	08 06 25.6	SEP 08 MAW IP	13 47 27.5	SEP 8 H-20 22 54.2 06.9N 126.4E h ABOUT 033KM		SEP 9 H-06 35 14.9 06.9S 129.4E h ABOUT 122KM	
MAW IP ES	08 07 17.4 17 37.0	SEP 08 MAW IP	13 51 47.2	MAW EP	20 35 32.5	SPA EP	06 47 28.0
SBA EP	08 07 24.0	SEP 8 H-14 09 19.2 23.8S 177.5W h ABOUT 213KM		SPA EP	20 36 24.0	SEP 09 SPA IP	08 36 35.0
SPA IP E	08 08 06.5 18 31.0	SBA EP	14 18 27.0	SEP 08 SPA EP	20 42 49.0	SEP 09 WIL EP	09 09 46.0
SEP 08 SPA IP	09 01 22.0	BYR E(P)	14 19 09.0	MAW IP	20 43 42.5	SEP 09 SPA IP	12 25 05.5
SEP 08 SPA EP	09 44 28.0	SPA IP E	14 19 46.5 23 09.5	SEP 08 WIL E(P)	23 14 05.0	SEP 09 SBA EP	12 40 05.0
SEP 8 H-10 26 24.6 2.7S 127.7E h ABOUT 033KM		MAW IP	14 20 58.6	SEP 08 BYR IP E	23 25 02.0 35 23.0	SEP 09 AIA EP	13 05 23.0
MAW EP	10 38 22.0	SEP 8 H-14 12 39.8 23.9S 177.2W h ABOUT 175KM		SEP 09 AIA EP	02 15 06.0	SEP 09 MAW IP	21 57 03.8
SPA EP	10 39 10.0	MIR EP	14 23 20.4	SEP 09 MAW IP	02 23 44.8	SEP 09 MAW IP E	23 11 50.9 13 15.0
BYR IP	10 39 28.0	MAW IP	14 24 23.0	SPA IP	02 24 29.0	SEP 10 AIA EP	00 24 01.0
SEP 8 H-11 15 35.1 17.4S 173.5W h ABOUT 033KM		SEP 08 MAW IP	14 16 27.2	SEP 09 MAW IP	02 34 48.0	SEP 10 SBA EP	02 20 21.0
MAW IP	11 28 11.3	SEP 08 MAW IP	14 23 14.9	SEP 9 H-02 41 46.1 58.9N 154.5W h ABOUT 033KM		SEP 10 WIL E(P)	03 52 06.0
SEP 08 SPA IP	11 28 58.5	SEP 08 MAW IP	14 33 14.9	SPA EP'	03 01 33.0	SEP 10 WIL EP	07 06 03.0
SEP 08 SPA IP	12 32 40.0	SEP 08 SPA IP	14 40 52.0	SEP 9 H-03 36 43.4 58.9N 152.8W h ABOUT 033KM		SEP 10 SPA IP	07 15 05.5
SEP 08 SPA IP	12 44 26.0	MAW IP	14 43 08.4	SPA IP'	03 56 23.5	SEP 10 AIA EP	08 28 29.0
BYR. IP E E	12 44 42.0 13 02 11.0 06 42.0	SEP 08 SPA IP	14 52 14.5	SEP 09 MAW IP	03 57 22.1	SEP 10 SBA P	11 28 38.0
WIL EP	12 46 17.0	SEP 08 SPA EP	15 40 10.0				

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SEP 10 SBA EP	13 16 13.0	MAW IP E IS	04 35 52.6 36 44.5 45 46.5	SEP 11 MAW EP	23 07 07.5	SEP 12 WIL EP	13 18 18.0
SEP 10 MAW IP	13 20 59.6	SEP 11 SPA EP	05 02 47.0	SEP 11 SPA IP	23 07 10.0	SEP 12 SBA E(P)	14 57 30.0
SEP 10 SPA IP	13 20 08.5	SEP 11 SPA IP	05 15 01.0	SEP 12 WIL EP	23 08 31.5	SEP 12 H-15 19 22.3 17.4S 179.9W h ABOUT 561KM	
BYR IP E	13 20 22.0 26 19.0	SEP 11 SPA IP	06 20 16.5	SEP 12 MAW IP	06 07 50.0	SBA IP	15 28 41.9
SEP 10 SPA IP	13 22 33.0	BYR IP	06 20 31.5	SEP 12 H-06 29 59.6 01.7N 127.8E h ABOUT 172KM	06 25 08.8	WIL IP E(S)	15 29 13.0 37 11.0
SEP 10 WIL EP	17 09 09.0	MAW IP I	06 21 04.6 23 09.5	MAW IP	06 42 02.7	MAW EP I ES	15 30 51.7 33 04.0 40 19.0
SEP 10 H-17 37 08.7 33.0S 069.4W h ABOUT 080KM		SEP 11 BYR IP	06 43 08.0	SEP 12 SPA IP	06 42 49.0	SEP 12 HLL I	15 37 56.0
BYR IP	17 46 04.0	SEP 11 SPA IP	08 15 34.0	SEP 12 SPA IP	06 55 19.5	SEP 12 SPA IP	16 10 42.0
MAW IP E I	17 48 34.8 49 04.0 49 18.0	SEP 11 BYR IP	10 58 36.0	SEP 12 MAW IP	07 12 14.8	SEP 12 H-17 08 38.1 18.5S 067.0W h ABOUT 237KM	
SEP 10 MAW EP E	17 39 03.0 40 23.5	SEP 11 H-11 04 39.0 26.4S 177.8W h ABOUT 217KM		SEP 12 MAW IP	08 46 58.7	SPA IP	17 19 35.0
SEP 10 WIL EP	17 49 47.0	BYR I(P)	11 14 25.5	SEP 12 SBA EP	09 39 52.0	SEP 12 SPA EP	18 12 22.0
SEP 10 SPA IP	18 16 45.5	SEP 11 SPA IP	11 14 48.0	SEP 12 SPA IP	09 58 56.0	SEP 12 H-20 25 53.5 45.4N 149.7E h ABOUT 053KM	
SEP 10 H-21 36 32.3 4.8S 081.3W h ABOUT 045KM		MIR EP	11 14 59.9	SEP 12 H-10 48 19.2 24.7S 170.5E h ABOUT 033KM		SPA IP	20 44 56.0
SPA IP	21 49 06.0	MAW IP	11 16 02.7	MAW E(P)	10 59 58.0	SEP 12 SPA IP	21 20 07.0
SEP 10 SPA IP	23 16 21.0	SEP 11 BYR IP IPP IS	12 55 52.0 56 18.0 13 06 24.0	SEP 12 HLL IP	11 56 43.0	SEP 12 H-22 07 03.2 49.1S 164.2E h ABOUT 033KM	
SEP 10 SBA EP	23 31 48.0	SEP 11 SPA IP	15 18 56.5	SEP 12 WIL EP	12 18 57.0	MCQ I(P)	22 08 34.0
SEP 11 H-00 26 29.9 60.3N 146.6W h ABOUT 038KM		SEP 11 BYR IP	15 29 25.0	SEP 12 H-12 43 19.0 04.4S 144.0E h ABOUT 120KM		SBA IP	22 13 03.4
SPA EP	00 46 16.0	SEP 11 MAW IP	18 09 33.6	MCQ IP	12 52 14.0	WIL IP ES	22 13 29.0 18 44.0
SEP 11 WIL EP	04 06 35.0	SEP 11 MIR IP	22 14 29.6	WIL IP ES	12 53 53.5 13 02 34.0	SPA IP IPP IS	22 14 45.5 16 32.5 21 13.0
SEP 11 H-04 23 56.0 23.9S 066.6W h ABOUT 195KM		BYR IP IS	22 14 35.0 30 58.0	SBA IP ES	12 54 46.8 13 04 18.0	MAW IP I E	22 15 54.0 18 01.0 23 04.0
BYR IP E	04 33 47.0 34 37.0	SEP 11 SPA IP I	22 24 05.0 24 46.0	MAW IP IS	12 55 30.2 13 05 36.0	AIA EIP	22 17 06.5
SPA EP I I	04 34 24.5 35 17.0 42 58.0	MAW EP	22 24 44.0	SEP 11 SPA IP I IS	12 55 45.0 59 05.0 13 06 00.0	SEP 12 MAW E(P) E	22 25 32.2 26 38.0
		SEP 11 SPA IP I	22 36 39.5 39 51.0	SEP 12 HLL I	13 02 22.0	HLL IP I	22 26 59.0 27 50.0
		MAW EP	22 39 49.0				

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SEP 13 MCQ IP	00 19 49.0	SEP 13 H-11 03 50.0 19.8S 177.7W h ABOUT 357KM		SEP 13 H-23 01 05.7 58.5N 030.8W h ABOUT 033KM		SEP 14 H-12 56 32.2 09.5S 111.8E h ABOUT 127KM	
BYR EP E	00 25 53.0 28 22.0	SBA EP	11 13 14.0	BYR IP'	23 20 48.0	MIR E	13 06 20.2
SPA IP I I	00 26 04.0 28 12.5 28 49.5	BYR IP	11 13 57.0	SPA IP'	23 20 51.5	MAW EP	13 07 09.5
SEP 13 H-00 21 06.7 49.3S 163.7E h ABOUT 033KM		SPA IP	11 14 27.0	SEP 13 H-23 23 34.6 58.3N 032.4W h ABOUT 025KM		SBA E(P)	13 08 03.0
MCQ I(P)	00 22 32.0	MIR E(P)	11 14 34.3	BYR EP'	23 43 09.0	SEP 14 AIA EIP I	13 06 15.0 06 41.0
SBA EP	00 27 05.0	MAW EP	11 15 33.0	SEP 14 AIA EP	01 35 04.0	SPA IP	13 07 44.0
MIR IP	00 28 29.5	SEP 13 SBA EP	11 28 14.0	SEP 14 SBA EP	02 53 43.0	SBA EP	13 08 30.0
MAW EP I ES	00 29 55.0 31 18.0 37 07.0	SEP 13 WIL EP	14 01 18.0	SEP 14 SBA EP	02 53 43.0	SEP 14 BYR EP E	13 56 47.0 57 49.0
SEP 13 MAW EP I ES	00 39 55.0 31 18.0 37 07.0	SEP 13 SPA IP	14 50 23.5	SEP 14 SPA IP	04 14 11.5	SEP 14 HLL I	14 26 43.0
SEP 13 SPA EP	02 29 09.0	BYR IP PP	14 50 37.0 15 15 00.5	SEP 14 H-06 19 50.9 59.3N 032.1W h ABOUT 033KM		SEP 14 BYR EP I	14 40 51.0 42 22.5
SEP 13 MAW EP	02 45 23.0	MAW IP	14 51 14.7	BYR IP' E	06 39 26.5 54 19.0	SPA IP	14 40 56.5
SEP 13 H-02 50 18.2 49.4S 162.9E h ABOUT 033KM		SEP 13 MAW IP	14 56 55.4	SEP 14 H-06 34 41.7 59.4N 031.2W h ABOUT 033KM		SEP 14 H-15 21 09.0 28.0N 055.8E h ABOUT 033KM	
MIR E	02 57 37.3	SEP 13 MCQ IP	15 08 56.0	SPA IP'	06 54 14.0	SPA EP'	15 39 54.0
BYR EP	02 57 47.0	SBA EP	15 13 26.0	SEP 14 SBA EP	08 25 12.0	HLL I	15 28 52.0
SPA IP	02 57 58.5	MIR EP	15 14 54.3	SEP 14 SBA EP	09 40 57.0	SEP 14 SBA EP	17 42 10.0
SEP 13 SPA EP	03 17 32.0	SPA IP I	15 15 11.0 17 10.0	SEP 14 SBA EP	09 50 26.5	SEP 14 SPA EP	18 19 32.0
SEP 13 H-04 47 45.4 6.3S 127.8E h ABOUT 373KM		MAW EP	15 16 18.0	SEP 14 SPA IP	09 50 26.5	SEP 14 SPA EP I	19 01 12.0 02 03.5
SPA IP	04 59 34.5	SEP 13 SPA IP	15 23 38.0	SEP 14 H-10 17 46.6 56.7N 157.4W h ABOUT 061KM		SEP 14 WIL IP	19 38 56.0
SEP 13 SPA IP	06 35 56.0	MAW EP	15 24 27.0	MIR EP'	10 37 20.2	SEP 14 H-20 40 26.5 45.2N 150.3E h ABOUT 033KM	
MAW IP	06 36 47.7	SEP 13 H-15 52 23.8 15.8S 172.9W h ABOUT 033KM		SEP 14 AIA EP	10 25 06.0	SPA EP' I	20 59 31.0 59 44.5
SEP 13 SPA IP	07 50 57.5	SPA IP	16 03 57.0	SEP 14 MAW P	10 38 13.2	SEP 14 SBA EP	22 30 37.0
SEP 13 SPA EP	08 23 21.0	SEP 13 MIR E	19 21 05.5	SEP 14 SPA IP I I	10 47 20.5 47 39.0 48 01.0	SEP 15 AIA EP	00 31 54.0
SEP 13 AIA EP	09 17 21.0	SEP 13 H-19 40 44.4 58.8N 154.9W h ABOUT 083KM		SEP 14 H-11 58 31.3 41.9S 089.5W h ABOUT 033KM		SEP 15 H-01 00 08.0 15.6S 175.9W h ABOUT 009KM	
SEP 13 WIL E(P)	10 13 07.0	SPA IP'	20 00 22.5	SPA EP	12 07 11.0	SBA EP	01 10 37.0
		SEP 13 MIR E	20 43 40.7				
		SPA EP	20 44 32.0				

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
BYR IP	01 11 16.5	SEP 15 HLL I	10 32 44.0	SEP 15 H-16 13 33.1 41.6S 073.6W h ABOUT 082KM		SEP 16 MAW EP	01 20 33.5
SPA IP	01 11 48.5	SEP 15 H-11 44 13.7 22.2S 175.2W h ABOUT 033KM		BYR I	16 21 18.0	SEP 16 H-01 26 26.9 10.9N 093.1E h ABOUT 047KM	
SEP 15 AIA EP	01 01 22.0	SPA IP	11 55 07.5	MAW IP	16 24 14.0	WIL EP	01 38 22.0
SEP 15 BYR EP	01 41 34.0	MAW IP	11 56 23.6	SEP 15 SPA IP	16 22 49.5	E	38 33.0
SPA EP	01 42 09.0	SEP 15 H-12 44 12.2 16.0S 172.9W h ABOUT 033KM		SEP 15 SPA EP	17 58 17.0	ES	48 04.0
SEP 15 SBA EP	04 01 42.0	SBA IP	12 54 36.5	SEP 15 SPA IP	18 17 10.0	MAW IP	01 38 37.4
SEP 15 MIR E	04 55 03.6	BYR EP	12 55 11.0	SEP 15 H-18 37 10.1 6.6S 146.8E h ABOUT 059KM		I	38 53.9
SEP 15 H-05 37 45.4 .1S 124.6E h ABOUT 033KM		WIL E(P)	12 55 11.0	SEP 15 SPA IP	18 49 32.0	IS	48 44.5
WIL E(P)	05 48 43.0	SPA IP	12 55 46.0	MIR IP	12 56 03.4	SBA EP	01 39 56.0
ES	57 22.0	MIR IP	12 56 03.4	MAW IP	12 56 57.2	SPA E(P)	01 40 17.0
MIR IP	05 48 54.8	ES	13 07 37.0	ES	13 07 37.0	E	44 22.0
ES	58 01.2	SEP 15 H-13 12 53.5 15.8S 173.1W h ABOUT 033KM		BYR IP	20 30 06.0	BYR EP'	01 45 04.0
MAW IP	05 49 49.5	SPA IP	13 24 28.0	SBA IP	20 31 57.0	SEP 16 HLL IP	01 38 11.0
ES	59 46.0	MAW EP	13 25 39.0	MAW IP	20 32 23.8	I	38 27.0
SBA IP	05 49 58.0	SEP 15 H-15 29 32.2 08.9N 093.1E h ABOUT 037KM		MIR IP	20 33 16.2	MIR EP	01 38 42.6
SPA I(P)	05 50 52.0	MIR IP	15 41 12.9	IS	42 19.6	ES	48 01.4
I	51 07.5	I	41 33.1	E	57 13.7	SEP 16 H-01 50 33.9 60.0N 147.1W h ABOUT 029KM	
ES	06 01 10.0	IS	50 42.8	WIL EP	20 33 33.0	BYR EP'	02 09 55.0
BYR IP	05 51 03.0	WIL EP	15 41 18.0	SEP 15 H-21 00 31.7 58.7S 066.5W h ABOUT 033KM		SBA EP'	02 09 58.0
SEP 15 SPA EP	06 08 06.0	I	41 37.0	AIA EP	21 02 08.0	WIL EP'	02 10 12.0
SEP 15 WIL EP	06 20 50.0	ES	49 54.0	BYR IP	21 06 08.5	SPA IP'	02 10 13.0
SEP 15 SPA EP	06 27 04.0	MAW IP	15 41 35.9	SEP 15 SPA I(P)	21 06 42.0	I	00 26.5
SEP 15 SBA EP	06 31 57.0	I	41 56.0	I	06 59.0	MAW EP'	02 10 33.5
SEP 15 H-08 57 56.5 56.4S 027.2W h ABOUT 033KM		IS	51 31.0	I	07 11.5	MIR EP'	02 10 33.5
SPA I(P)	09 04 34.0	MCQ EP	15 42 01.0	MAW IP	21 09 13.9	SEP 16 HLL IP	02 01 29.0
I	05 02.0	SBA IP	15 42 55.0	I	09 24.5	I	01 35.0
I	07 15.5	ES	53 23.0	MIR EP	21 09 54.8	SEP 16 H-03 32 33.8 51.6N 173.8W h ABOUT 045KM	
BYR IP	09 04 53.0	SPA IP	15 43 10.0	WIL EP	21 10 05.0	SPA EP'	03 51 57.0
E	11 00.0	IPP	46 23.5	SEP 15 SBA E(P)	21 06 48.0	MAW IP'	03 52 16.4
MAW EP	09 05 28.5	IS	53 41.0	SEP 15 SPA IP	21 37 16.0	SEP 16 MIR E	03 53 02.6
SBA EP	09 06 19.0	BYR EP'	15 43 50.0	SEP 15 MIR E	23 35 13.6	SEP 16 SPA IP	04 52 29.0
SEP 15 MAW IP	09 50 05.5	I	54 23.0	SEP 15 HLL IP	15 41 26.0	SEP 16 H-05 20 46.1 05.9S 152.0E h ABOUT 029KM	
		E	58 41.0	I	41 47.0	WIL EP	05 31 36.0
		IS	51 07.0	IS	51 07.0		

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SBA EP	05 32 09.0	SEP 16		SEP 17		BYR EP'	00 28 02.0
BYR EP	05 33 13.0	H-22 23 36.3		SPA IP	08 28 55.0	SEP 18	
SPA IP	05 33 15.5	22.9N 045.1W		BYR IP	08 29 41.5	HLL EP	00 13 14.0
I	33 34.0	h ABOUT 033KM		SEP 17		SEP 18	
MAW IP	05 33 16.1	WIL EP'	22 42 36.0	SPA IP	09 51 43.0	MAW IP	00 55 44.8
SEP 16		MIR EP'	22 42 39.4	SEP 17		SPA IP	00 56 03.0
SPA EP	07 21 31.0	E	51 51.1	MIR E	12 06 41.6	SEP 18	
SEP 16		SEP 16		SEP 17		SBA EP	01 34 18.0
SPA EP	09 47 37.0	HLL IP	22 32 44.0	SPA IP	12 10 21.0	SEP 18	
SEP 16		SEP 16		SEP 17		SPA IP	03 20 06.0
SPA EP	09 47 37.0	H-22 37 26.5		SPA IP	13 02 33.0	I	20 33.5
SEP 16		56.3N 162.8E		SEP 17		BYR EP	03 20 19.0
WIL EP	12 17 25.0	h ABOUT 029KM		SBA EP	13 31 17.0	E(S)	26 15.0
SEP 16		BYR EP'	22 56 52.0	SEP 17		SEP 18	
WIL E(P)	13 50 55.0	SPA IP'	22 57 03.5	H-15 02 00.9		MAW IP	03 26 34.5
BYR IP	13 52 16.0	SEP 16		44.5N 031.3W		SEP 18	
I	53 22.5	MAW IP	23 00 37.7	h ABOUT 024KM		H-07 20 34.2	
SPA IP	13 52 31.5	SEP 17		SPA EP'	15 21 03.0	54.2N 164.0W	
SEP 16		SPA IP	00 20 20.5	MAW IP'	15 21 12.3	h ABOUT 033KM	
SPA IP	13 53 55.5	SEP 17		E	23 32.0	SPA IP'	07 40 02.0
MAW IP	13 55 05.1	H-02 06 26.8		ES	24 38.5	MAW EP'	07 40 28.4
SEP 16		59.1N 148.3W		SBA IP'	15 21 39.5	SEP 18	
H-17 23 16.1		h ABOUT 033KM		WIL EP'	15 21 44.0	MAW EP	07 21 34.0
10.3S 161.3E		SEP 17		MIR IP'	15 21 52.0	SEP 18	
h ABOUT 046KM		H-06 59 37.8		SEP 17		SBA EP	08 10 09.0
SPA IP	17 35 20.0	26.5S 176.4W		H-15 06 13.8		SEP 18	
MAW IP	17 35 40.4	h ABOUT 033KM		12.8S 168.9E		SPA IP	10 59 08.0
SEP 16		SBA EP	07 08 47.0	h ABOUT 622KM		BYR EP	10 59 21.0
HLL I	17 33 02.0	BYR EP	07 09 30.0	BYR EP	15 16 47.0	MIR E	11 00 01.2
SEP 16		WIL EP	07 09 36.0	E	21 14.0	SEP 18	
WIL E(P)	18 42 36.0	SPA IP	07 10 06.5	SPA IP	15 17 05.5	WIL EP	11 29 24.0
SEP 16		MIR EP	07 10 22.8	MAW IP	15 17 41.7	SEP 18	
H-20 32 11.2		MAW IP	07 11 25.0	SEP 17		SPA EP	12 30 24.0
29.7S 069.7W		E	13 36.0	HLL I	15 08 04.0	SEP 18	
h ABOUT 076KM		SEP 17		I	08 11.0	MIR E	13 02 10.6
BYR IP	20 41 32.0	WIL EP	07 36 05.0	SEP 17		SEP 18	
SPA IP	20 42 15.0	E	36 19.0	MAW EP	15 15 56.0	H-13 06 00.2	
SEP 16		SEP 17		SEP 17		05.9S 103.4E	
MAW EP	20 44 23.5	H-07 41 13.9		SPA IP	15 57 08.5	h ABOUT 086KM	
SEP 16		15.6S 072.9W		SEP 17		MAW EP	13 16 47.5
H-20 47 16.0		h ABOUT 118KM		MAW IP	17 04 35.0	BYR EP	13 18 58.0
16.1S 176.5W		BYR IP	07 52 01.0	SEP 17		SEP 18	
h ABOUT 352KM		E	52 26.0	MAW EP	17 40 29.0	H-13 12 42.3	
BYR IP	20 57 43.0	SPA IP	07 52 42.0	SEP 17		39.8N 029.7W	
SPA IP	20 58 14.5	I	53 08.5	MAW EP	19 57 19.5	h ABOUT 020KM	
MAW EP	20 59 18.5	MAW IP	07 54 06.6	SEP 18		SPA EP'	13 31 39.0
SEP 16		SEP 17		H-00 08 42.6		I	31 52.0
MIR EP	22 05 02.8	SBA EP	07 52 55.0	35.4N 028.8E		MIR EP'	13 32 08.7
				h ABOUT 018KM		WIL EP'	13 32 22.0
				SPA EP'	00 27 43.0		

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SEP 18 HLL IP I	13 19 00.0 19 11.0	SEP 19 MAW EP	08 20 00.5	SEP 20 H-04 20 17.6 49.5S 116.2W h ABOUT 033KM		SEP 20 WIL EP	15 30 00.0
MAW E(P)	13 25 06.0	SEP 19 WIL EP	09 08 47.0	SPA IP	04 27 57.0	SEP 20 SPA IP	22 24 18.0
SEP 18 SPA IP	13 57 56.5	SEP 19 SPA EP	11 27 11.0	MAW EP	04 30 44.5	SEP 21 H-00 10 36.8 5.0N 076.0W h ABOUT 116KM	
SEP 18 MIR E	14 06 29.4	SBA EP	11 29 48.0	SEP 20 H-04 33 29.4 49.6S 116.2W h ABOUT 033KM		BYR IP	00 23 11.5
SEP 18 SPA EP	14 56 41.0	SEP 19 SPA IP	15 32 16.5	BYR EP	04 39 44.0	SPA IP	00 23 46.0
SEP 18 WIL EP	15 07 20.0	SEP 19 MAW EP	16 53 05.0	SBA EP	04 41 03.0	SEP 21 WIL E(P)	01 03 36.0
SEP 18 MAW EP	17 55 48.5	SEP 19 SPA EP	17 24 59.0	SPA EP	04 41 06.0	SEP 21 MIR E	01 57 35.5
SEP 18 MAW IP	18 06 36.0	SEP 19 H-17 26 13.0 05.6S 081.0W h ABOUT 033KM		WIL E(P)	04 43 40.0	SEP 21 WIL EP	02 01 10.0
SEP 18 MAW EP	18 19 30.0	BYR IP	17 38 01.0	MAW EP	04 43 55.5	SEP 21 MIR E	03 07 58.8
SEP 18 SPA EP	18 55 50.0	SPA IP	17 38 43.0	SEP 20 SPA IP	05 26 24.0	SEP 21 H-04 23 19.7 21.8S 179.6W h ABOUT 609KM	
SEP 18 H-19 09 03.9 58.3N 151.8W h ABOUT 053KM		SEP 19 SPA EP	19 26 25.0	SEP 20 SPA EP	05 59 34.5	SBA IP	04 32 06.6
SPA IP'	19 28 50.5	SEP 19 SPA EP	20 42 48.0	SEP 20 SBA EP	06 21 57.0	WIL IP	04 32 42.5
SEP 18 MAW EP	21 02 48.1	SEP 19 WIL EP	20 55 33.0	SEP 20 MAW EP	06 42 54.0	BYR IP E	04 32 52.0 05 01 18.0
SEP 18 MAW EP	22 04 51.5	SEP 19 H-21 34 10.2 22.1S 177.6W h ABOUT 251KM		SEP 20 SPA EP	06 43 56.0	SPA IP I I	04 33 21.5 35 24.0 41 35.0
SEP 18 MCQ IP IS	23 40 20.0 40 23.0	SPA EP	21 44 44.0	SEP 20 WIL EP	07 07 07.0 08 31 40.0	MIR IP ES	04 33 26.6 41 44.2
SEP 19 MCQ IP	00 08 13.0	SEP 19 MAW EP	23 34 23.0	SEP 20 SPA IP	10 12 51.0	MAW IP ES	04 34 26.1 43 39.0
SEP 19 MCQ IP IS	00 14 30.0 14 36.0	SEP 20 MCQ EP ES	02 40 42.0 41 32.0	SEP 20 SPA EP	11 43 14.0	SEP 21 HLL IP	04 41 55.0
SEP 19 MAW EP	01 18 33.5	SBA EP	02 43 53.0	SEP 20 WIL EP	13 31 32.0	SEP 21 SPA EP I I	05 00 19.0 01 22.0 01 32.0
SEP 19 MAW IP	05 08 27.5	SPA EP	02 45 49.0	SEP 20 H-14 36 05.3 30.0N 138.1E h ABOUT 454KM		SEP 21 SPA IP	05 27 17.5
SEP 19 HLL I	05 21 03.0	MAW IP	02 47 03.5	SBA EP'	14 53 43.0	SEP 21 H-05 37 48.9 07.0S 129.4E h ABOUT 123KM	
SEP 19 WIL E(P)	05 59 34.0	SEP 20 SPA IP	02 48 42.5	MAW IP'	14 53 48.0	WIL EP	05 47 49.0
SEP 19 SPA EP	06 25 45.0	SEP 20 H-03 25 36.0 06.8S 108.9E h ABOUT 240KM		SPA IP' I	14 54 02.5 55 34.5	SBA EP	05 49 11.0
AIA EP	06 27 54.0	MAW IP	03 36 11.5	BYR IP'	14 54 06.0	MAW IP	05 49 13.3
SEP 19 SBA EP	07 01 34.0	SEP 20 SPA IP	03 37 35.5	SEP 20 HLL E	14 49 39.0	SPA IP	05 50 03.0
		BYR IP	03 38 08.5	SEP 20 MAW IP	14 54 40.0	BYR EP	05 50 22.0
		SEP 20 SPA EP	03 35 58.0				

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SEP 21 MAW IP	05 45 18.3	SEP 21 H-14 17 54.4 36.2S 100.2W h ABOUT 033KM		SEP 22 MIR E(P)	04 45 46.8	SEP 22 H-20 39 07.0 2.8S 141.0E h ABOUT 084KM	
SEP 21 WIL EP	06 19 15.0	BYR EP	14 26 03.0	SEP 22 WIL EP	05 01 28.0	MAW IP	20 51 24.7
SEP 21 SPA EP	07 14 22.0	SPA EP	14 27 17.0	SEP 22 MAW EP	05 19 43.5	SPA IP	20 51 45.0
SEP 21 H-08 30 54.4 2.1S 128.3E h ABOUT 036KM		SBA EP	14 27 29.0	SEP 22 MAW IP	06 38 56.0	BYR IP	20 51 53.5
MIR EP	08 41 56.6	MAW EP	14 29 38.0	SEP 22 SPA EP	06 50 17.0	SEP 22 SPA IP	21 21 00.5
SBA EP	08 42 53.0	SEP 21 SPA IP	15 19 14.5	SEP 22 MCQ IP	07 12 25.0	SEP 23 SPA EP	00 23 50.5
MAW EP	08 42 55.7	SEP 21 SPA EP	16 11 03.0	IS	12 29.0	SEP 23 WIL EP	02 48 48.0
SPA IP	08 43 42.0	SEP 21 H-18 10 51.6 30.1S 179.5W h ABOUT 319KM		SEP 22 MIR E	07 40 57.8	SEP 23 BYR IP	03 32 51.0
I	43 57.0	BYR EP	18 19 56.0	SEP 22 MAW IP	08 04 08.2	SEP 23 WIL EP	04 42 09.0
BYR EP	08 43 59.0	SPA IP	18 20 28.0	SEP 22 H-09 05 06.4 23.9S 070.7W h ABOUT 033KM		I	42 21.5
SEP 21 WIL E(P)	09 24 52.0	I	21 09.0	BYR IP	09 15 10.0	SEP 23 H-04 59 47.4 53.6N 163.9W h ABOUT 029KM	
SEP 21 BYR EP	11 58 10.0	I	21 43.0	SPA IP	09 15 52.0	BYR EP'	05 19 01.0
E	59 39.0	MIR EP	18 20 37.1	I	16 03.5	E	22 33.0
SPA IP	11 58 26.5	MAW IP	18 21 42.0	I	16 16.5	MIR EP'	05 19 10.6
I	59 56.5	SEP 21 SPA EP	18 49 40.0	SBA IP	09 16 36.0	E	22 52.7
SEP 21 H-12 01 46.6 17.8S 167.3E h ABOUT 033KM		SEP 21 MAW EP	19 59 18.5	MAW IP	09 17 26.7	E	29 47.3
SBA EP	12 11 53.0	SEP 21 WIL EP	20 07 15.0	WIL IP	09 18 05.0	SBA IP'	05 19 14.0
MIR EP	12 12 41.9	SEP 21 WIL E(P)	20 38 35.0	SEP 22 SPA IP	09 16 46.0	E	22 23.0
BYR IP	12 12 54.5	SEP 21 SPA EP	20 57 41.0	SEP 22 SPA IP	11 55 55.0	MAW EP'	05 19 43.5
SPA IP	12 13 11.0	I	59 47.0	SEP 22 MIR E(P)	13 03 24.5	SEP 23 WIL E(P)	05 01 28.0
MAW IP	12 13 49.7	E	21 01 36.0	SEP 22 MCQ EP	13 37 48.0	SEP 23 H-06 18 57.4 53.7N 163.6W h ABOUT 013KM	
SEP 21 SBA EP	13 00 48.0	SEP 21 H-21 23 43.4 15.2S 175.2W h ABOUT 126KM		SEP 22 SPA EP	14 11 44.0	MAW IP'	06 38 56.0
SEP 21 BYR IP	13 14 13.0	SPA I(P)	21 35 25.0	SEP 22 SPA IP	16 04 34.5	SEP 23 SPA IP	06 24 26.5
E	19 17.0	MAW I(P)	21 36 25.3	SEP 22 SPA EP	16 45 56.0	SEP 23 H-07 52 38.5 13.1S 014.8W h ABOUT 033KM	
SPA EP	13 14 29.0	SEP 21 MIR E	21 42 53.2	SEP 22 WIL EP	17 59 28.0	MAW IP	08 04 08.2
SEP 21 SPA EP	13 19 34.0	E	56 19.3	SEP 22 SPA EP	18 49 46.0	SPA IP	08 04 30.5
SEP 21 H-13 27 32.9 7.2S 074.3W h ABOUT 150KM		SEP 21 H-23 16 35.8 20.2S 177.8W h ABOUT 511KM		SEP 22 WIL EP	19 20 16.0	BYR EP	08 04 44.0
BYR IP	13 39 05.0	MAW IP	23 28 01.4	SEP 22 SPA EP	19 25 33.0	SEP 23 SBA EP	09 21 03.0
E	40 44.0	SEP 21 SBA E(P)	23 16 46.0			SEP 23 SPA EP	10 02 29.0
SPA IP	13 39 43.0						
I	40 22.0						

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SEP 23 BYR IP	14 46 47.0	SEP 24 H-09 34 26.5 60.9N 143.7W h ABOUT 007KM		SEP 25 H-04 55 21.6 57.5N 144.5W h ABOUT 033KM		SEP 25 H-16 32 22.7 56.7N 152.8W h ABOUT 033KM	
SPA EP	14 47 03.0	SPA IP'	09 54 17.0	SPA IP'	05 14 56.0	SPA IP'	16 52 06.0
SEP 23 AIA EP	15 05 32.0	SEP 24 BYR EP	10 14 14.0	SEP 25 H-05 21 33.0 52.1N 174.7W h ABOUT 033KM		SEP 25 SPA EP	17 01 20.0
I	05 45.0	SEP 24 SBA EP	10 43 01.0	MAW IP'	05 41 13.5	SEP 25 SPA EP	17 42 16.0
E	07 32.0	SEP 24 WIL EP	13 59 29.0	SEP 25 SPA EP	05 26 01.0	I	44 12.0
SEP 23 MCQ IP	15 53 49.5	SEP 24 H-13 59 36.8 43.5N 127.5W h ABOUT 014KM		MAW EP	05 28 13.0	I	48 04.0
IS	54 03.0	SPA EP'	14 18 51.0	SEP 25 SPA IP	06 07 47.5	SEP 25 WIL E(P)	19 48 53.0
SEP 23 H-16 37 19.1 61.6N 150.0W h ABOUT 033KM		SEP 24 SPA IP	15 38 06.0	BYR EP	06 07 59.0	SEP 25 H-20 28 33.5 03.85 139.0E h ABOUT 171KM	
SPA IP'	16 57 06.5	SEP 24 WIL EP	15 51 17.0	SEP 25 H-06 33 35.1 08.95 108.4W h ABOUT 033KM		SPA IP	20 40 55.5
SEP 23 H-17 18 12.1 5.8N 126.4E h ABOUT 132KM		SEP 24 AIA EP	16 41 17.0	BYR EP	06 44 52.0	I	41 23.5
MAW IP	17 30 36.8	I	41 48.0	SPA IP	06 45 48.5	BYR EP	20 41 06.0
I	32 56.0	SEP 24 SPA EP	16 44 52.0	SEP 25 WIL IP	10 08 49.0	E	59 10.0
SBA EP	17 30 43.0	SEP 24 SPA EP	18 22 27.0	I	09 03.0	SEP 25 SPA IP	21 00 40.0
SPA EP	17 31 26.0	SEP 24 SPA EP	18 31 15.0	SEP 25 WIL EP	13 36 37.0	SEP 25 SPA IP	22 20 58.0
SEP 23 MCQ EP	17 37 08.0	SEP 24 SBA EP	18 35 46.0	E	36 52.0	SEP 25 WIL EP	23 26 44.0
SEP 23 WIL EP	17 59 28.0	SEP 24 SPA EP	18 54 02.0	SEP 25 SPA EP	14 30 58.0	SEP 25 H-23 27 49.7 30.75 179.9W h ABOUT 424KM	
SEP 23 SPA EP	18 43 12.0	I	55 04.0	SEP 25 H-14 33 51.4 08.95 108.3W h ABOUT 033KM		SBA EP	23 35 49.0
SEP 23 WIL E(P)	19 25 33.0	SEP 24 SPA IP	20 30 15.5	SPA EP	14 46 05.0	WIL IP	23 36 33.5
SEP 23 SPA IP	20 44 54.5	MAW IP	20 31 23.2	SEP 25 AIA IP	15 03 37.0	BYR IP	23 36 42.0
SEP 23 AIA E	23 12 55.0	SEP 24 BYR EP	22 13 40.0	I	04 34.0	I	37 38.0
SEP 24 MAW EP	01 36 04.9	SEP 24 H-23 37 23.5 51.5N 177.1W h ABOUT 049KM		I	06 59.0	E	40 54.0
SEP 24 AIA IP	06 47 22.0	MAW IP'	23 57 02.6	SEP 25 H-15 42 17.9 50.3N 176.6E h ABOUT 030KM		SPA I(P)	23 37 07.5
SEP 24 H-09 14 38.6 5.65 151.8E h ABOUT 035KM		SEP 25 SPA IP	02 44 08.5	SEP 25 AIA IP	15 03 37.0	I	37 55.0
SBA EP	09 26 05.0	SEP 25 SBA EP	02 55 01.0	I	06 59.0	MAW EP	23 38 26.0
MAW EP	09 27 09.0	SEP 25 SPA EP	03 31 25.0	SEP 26 SPA IP	00 06 24.0	SEP 26 H-00 46 02.8 30.1N 080.7E h ABOUT 050KM	
SEP 24 SPA IP	09 26 36.5	SEP 25 MIR E(P)	16 01 12.6	SEP 26 H-00 46 02.8 30.1N 080.7E h ABOUT 050KM		MAW EP	00 59 35.5
I	27 09.5	SEP 25 SBA EP'	16 01 21.0	MAW EP	00 59 35.5	SBA EP'	01 04 46.0
BYR IP	09 26 50.0	SEP 25 BYR EP'	16 01 32.0	SBA EP'	01 04 46.0	SPA IP'	01 04 47.0
SEP 25 SBA EP	03 39 13.0	SEP 25 SPA EP'	16 01 35.0	SPA IP'	01 04 47.0	I	14 59.5
SEP 25 MIR E(P)	16 01 12.6	MAW IP'	16 01 45.5	I	18 43.0	E	18 43.0
SEP 25 SBA EP	03 39 13.0	SEP 25 MIR E(P)	16 01 12.6	BYR EP'	01 04 51.0	BYR EP'	01 04 51.0
		E	08 23.0	E	08 23.0	E	08 23.0

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
SEP 26 MIR E	01 03 33.6	SEP 26 SPA IP	17 37 38.0	SBA EP	10 05 53.0	BYR IP	23 08 42.0
SEP 26 WIL E(P)	01 18 57.0	SEP 26 AIA EP	19 06 55.0	SPA IP	10 06 37.5	SPA IP	23 09 20.5
SEP 26 SBA EP	02 48 45.0	SEP 26 SBA EP	19 48 23.0	BYR EP E	10 06 57.0 10 48.0	SEP 27 SPA IP	23 17 03.5
SEP 26 MAW EP	03 17 29.5	SEP 26 H-22 55 14.8 4.9S 153.5E h ABOUT 034KM		SEP 27 SPA IP	11 03 57.5	SEP 28 MIR E	00 43 09.0
SEP 26 H-03 38 32.7 17.7S 173.3W h ABOUT 033KM		SBA IP	23 06 45.0	SEP 27 SPA IP	11 44 10.0	SEP 28 H-05 04 55.5 01.2S 024.1W h ABOUT 037KM	
SBA EP	03 48 45.0	MIR IP	23 06 48.6	SEP 27 SPA EP	11 53 10.0	MAW EP	05 17 42.5
BYR EP	03 49 22.0	BYR IP	23 07 46.0	SEP 27 H-13 24 23.9 28.3S 178.3W h ABOUT 220KM		BYR IP	05 17 52.0
WIL EP	03 49 33.0	SPA IP I	23 07 48.5 08 00.0	SBA EP	13 32 59.0	SEP 28 MIR EP	05 07 31.4
SPA IP	03 49 56.5	MAW IP IS	23 07 51.9 17 44.5	SPA IP E	13 34 20.5 35 13.0	SBA EP	05 07 46.0
MIR E	03 50 14.7	SEP 26 MAW EP	23 38 26.0	SEP 27 SPA IP	13 48 27.5	SPA IP I I	05 07 46.5 18 04.0 18 23.0
MAW IP	03 51 09.0	SEP 27 MIR E	00 54 41.4 01 16 59.6 E 17 02.0	SEP 27 SPA IP	13 48 27.5	SEP 28 H-05 39 34.8 40.0S 074.1W h ABOUT 033KM	
SEP 26 MIR E	05 17 00.5	SEP 27 SPA IP	03 53 35.0	SEP 27 H-15 24 17.2 11.3S 116.6E h ABOUT 033KM		BYR IP	05 47 36.5
SEP 26 MAW EP	05 28 13.0	SEP 27 WIL EP	04 36 49.0	SBA E(P)	15 35 40.0	SPA IP	05 48 29.0
SEP 26 MAW IP	05 41 13.5	SEP 27 MIR E	04 42 34.1	SPA EP	15 36 18.0	SBA EP	05 49 18.0
SEP 26 MIR E E	07 29 37.5 57 52.3	SEP 27 H-06 36 25.3 16.1S 176.0W h ABOUT 332KM		BYR EP	15 36 51.0	MAW IP	05 50 33.0
SEP 26 H-07 50 18.9 49.0S 164.5E h ABOUT 033KM		SEP 27 SPA IP	06 47 26.0	SEP 27 SPA EP	15 43 56.0	SEP 28 MIR E	05 48 03.2
SBA EP	07 56 22.0	SEP 27 SPA IP	07 15 21.0	SEP 27 H-15 50 54.7 56.6N 152.0W h ABOUT 027KM		SEP 28 MIR E	06 19 47.5
SPA EP	07 58 02.0	SEP 27 SPA EP	07 44 40.0	SPA IP'	16 10 32.0	SEP 28 H-06 51 05.3 36.3N 071.6E h ABOUT 118KM	
SEP 26 AIA EP	10 01 08.0	SEP 27 SBA EP	08 06 12.0	MIR EP'	16 10 39.4	SPA IP'	07 09 53.0
SEP 26 SBA EP	14 18 48.0	SEP 27 H-07 53 53.4 02.2N 126.5E h ABOUT 070KM		SEP 27 BYR EP	19 55 45.0	SEP 28 SPA EP E	07 29 36.0 35 32.0
SEP 26 SBA EP	15 19 41.0	SEP 27 SBA EP	08 06 12.0	SPA IP	19 56 03.5	SEP 28 SPA EP	09 55 31.0
SEP 26 MAW IP	16 01 45.4	SEP 27 SPA IP	08 06 57.0	SEP 27 H-22 01 40.2 5.5S 151.6E h ABOUT 050KM		SEP 28 H-12 53 55.1 22.0S 179.4W h ABOUT 548KM	
SEP 26 SPA EP	16 37 30.0	SEP 27 H-09 53 36.6 02.3N 126.7E h ABOUT 100KM		BYR IP	22 14 09.5	BYR IP	13 03 32.5
SEP 26 SPA IP	16 59 50.5	WIL EP	10 04 35.0	SPA EP	22 14 09.5	SPA IP	13 04 02.0
SEP 26 MIR E	17 32 09.1	MIR E	10 04 53.6	SEP 27 H-22 58 29.3 21.4S 068.7W h ABOUT 132KM		MAW IP	13 05 07.2
SEP 26 SBA EP	17 34 04.0						

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SEP 28		SEP 29		SPA IP	18 58 14.5	SEP 30	
H-16 25 54.6		H-05 30 59.5		SEP 29		WIL EP	17 45 27.0
34.0N 141.2E		18.1S 175.4W		AIA EP	21 26 04.0	I	45 41.0
h ABOUT 071KM		h ABOUT 197KM		SEP 29		SEP 30	
SPA IP'	16 44 45.0	SPA EP	05 42 03.0	BYR IP	22 51 12.0	SBA EP	18 55 31.0
SEP 28		SEP 29		SEP 30		SEP 30	
H-18 30 20.2		SPA EP	07 14 06.0	SPA IP	00 48 51.0	H-20 27 24.1	
61.0N 147.4W		SEP 29		H-03 47 00.3		58.4N 151.3W	
h ABOUT 089KM		SPA IP	07 20 03.0	22.9S 179.1W		h ABOUT 017KM	
SEP 28		SEP 29		h ABOUT 368KM		SPA IP'	20 47 07.5
SPA IP'	18 50 09.0	WIL E(P)	08 30 37.0	BYR IP	03 56 47.0	SEP 30	
I	50 12.5	SEP 29		SPA IP	03 57 17.0	WIL EP	21 18 43.0
SEP 28		MIR E	08 50 01.6	SEP 30		SEP 30	
SPA IP	19 22 17.5	SEP 29		H-04 39 44.0		WIL EP	21 58 19.0
SEP 28		MIR E	10 49 58.2	34.5N 023.4E		SEP 30	
SPA EP	19 30 20.0	SEP 29		h ABOUT 043KM		SPA IP	22 59 03.0
SEP 28		MIR E	13 09 17.5	SPA IP'	04 58 38.5	BYR EP	22 59 04.0
H-20 06 46.0		SEP 29		BYR EP'	04 58 54.0		
5.2S 150.5E		H-13 47 24.3		SEP 30			
h ABOUT 224KM		33.3N 141.9E		H-06 25 54.2			
SPA EP	20 18 57.0	h ABOUT 041KM		.5N 126.6E			
SEP 28		SPA IP'	14 06 17.0	h ABOUT 077KM			
SPA EP	21 26 20.0	SEP 29		SPA IP	06 38 48.5		
SEP 28		H-14 00 14.9		BYR IP	06 39 08.0		
H-22 39 45.6		20.4S 174.4W		SEP 30			
2.5S 138.7E		h ABOUT 029KM		H-08 23 12.2			
h ABOUT 082KM		SBA IP	14 10 10.8	32.5S 071.6W			
SEP 28		BYR IP	14 10 48.5	h ABOUT 033KM			
MIR E	23 58 07.7	IS	19 28.0	BYR IP	08 32 15.0		
SEP 28		WIL E(P)	14 10 58.0	I	32 31.5		
H-23 59 30.5		ES	19 40.0	SEP 30			
7.5S 146.7E		SPA I(P)	14 11 34.0	SPA IP	08 33 01.5		
h ABOUT 152KM		I _P	11 55.0	I	33 12.5		
SEP 28		IS	20 35.0	I	33 17.5		
SPA IP	24 11 37.5	MIR IP	14 11 41.1	SEP 30			
SEP 29		MAW EP	14 12 38.5	SPA EP	10 33 13.0		
SPA EP	01 01 16.0	SEP 29		SEP 30			
SEP 29		SPA IP	14 39 22.0	SPA EP	10 52 38.0		
H-02 00 01.7		SEP 29		SEP 30			
57.8N 149.5W		AIA EP	15 08 24.0	SPA IP	12 22 23.8		
h ABOUT 044KM		SEP 29		SEP 30			
SPA EP'	02 19 36.0	SPA IP	15 10 20.0	SPA IP	12 51 45.5		
SEP 29		I	10 36.5	SEP 30			
MCQ IP	02 34 29.0	BYR IP	15 10 38.5	H-14 46 28.9			
SEP 29		SBA EP	15 12 04.0	11.6S 166.5E			
SBA EP	03 20 52.0	MIR E(P)	15 12 44.4	h ABOUT 118KM			
SEP 29		E	14 11.0	SPA IP	14 58 17.5		
SPA IP	04 17 44.0	SEP 29		SEP 30			
BYR EP	04 18 45.0	H-18 46 15.3		SPA IP	15 12 18.0		
MIR E	04 19 31.6	08.6S 074.5W		SEP 30			
SEP 29		h ABOUT 170KM		SPA IP	16 50 01.0		
MIR IP	04 37 42.9						

*Geophysics Div.
Wellington*



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U.S. DEPARTMENT OF COMMERCE

John T. Connor, Secretary

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H. Arnold Karo, Director

FOR OFFICIAL DISTRIBUTION

U. S. COAST AND GEODETIC SURVEY
ANTARCTIC SEISMOLOGICAL BULLETIN

The Scientific Committee on Antarctic Research of the International Council of Scientific Unions recommended that a bulletin of phase readings be issued from seismological stations in the Antarctic.

The United States Coast and Geodetic Survey has undertaken the publication of the Antarctic Seismological Bulletin to be issued quarterly, based on the readings received by radio from the Antarctic stations. The phase designation shown in this bulletin is the identification given by the station operator.

The epicenters shown in this Bulletin are computed by the United States Coast and Geodetic Survey using the phase readings from many stations in addition to the Antarctic readings shown.

STATION AND INSTRUMENTAL CONSTANTS

Country, Station and Station Abbreviation	Position		Foundation and Elevation (In Meters)	Instruments and Components	T ₀ Seconds	T _g Seconds
	Latitude	Longitude				
ARGENTINA Deception (DEC)	62°59' S	60°43' W	Rock 7 m	Mainka N Mainka E	5.0 5.0	
AUSTRALIA Macquarie (MCQ)	54°29'55" S	158°57'22" E	Weathered Basaltic Lava 14 m	Benioff Z Benioff N Benioff E	1.0 1.0 1.0	0.2 0.2 0.2
Mawson (MAW)	67°36'21" S	62°52'48" E	Pre-Cambrian granite 9 m	Benioff Z Benioff N Benioff E	1.0 1.0 1.0	0.2 14.0 14.0
Wilkes (WIL)	66°15.5' S	110°31.2'	Rock 9m	Grenet Z Lehner-Griffith Z Lehner-Griffith N Lehner-Griffith E	1.4 16.4	1.0 60.0 92.0 85.0
NEW ZEALAND Scott Base (SBA)	77°51' S	166°45' E	Rock 15m	Benioff Z Benioff N Benioff E Sprengnether Z Sprengnether N Sprengnether E	1.0 1.0 1.0 30.0 30.0 30.0	0.2-25 0.2-25 0.2-25 100.0 100.0 100.0
USSR Mirny (MIR)	66°33' S	93°00' E	Rock 30 m	SVKM Z SVK Z SGK N SGK E	2.5 12.5 12.5 12.5	1.0 1.1 1.1 1.1
UNITED KINGDOM Argentine Islands (AIA)	65°15' S	64°16' W	Rock 11 m	Willmore Z Willmore N Willmore E	1.0 1.0 1.0	0.25 0.25 0.25
UNITED STATES Byrd (BYR)	60°01' S	119°31' W	Ice 1515 m	Benioff Z Wilson-Lamison N Wilson-Lamison E Sprengnether Z Sprengnether N Sprengnether E	1.0 6.3 5.8 30.0 30.0 30.0	0.5 3.6 Geotech Helicorder 90.0 90.0 90.0
South Pole (SPA)	90° S	0	Ice 2800 M	Benioff Z Benioff N Benioff E Sprengnether Z Sprengnether N Sprengnether E	1.0 1.0 1.0 30.0 30.0 30.0	0.2-25 0.2-25 0.2-25 100.0 100.0 100.0

HALLETT Discontinued Oct 1964

ANTARCTIC SEISMOGRAM DEPOSITORIES

ARGENTINA: Servicio Meteorologico Nacional
Paseo Colon 317, 2° Piso
Buenos Aires, Argentina

USSR: Research Institute of Earth Physics
Academy of Sciences of the USSR
Moscow, USSR

AUSTRALIA: Chief Geophysicist
Bureau of Mineral
Geology and Geophysics
203 Collins Street
Melbourne, Australia

UNITED KINGDOM: Falkland Island Dependency Survey
4 Milbank
London, SW1
England

NEW ZEALAND: Superintendent
Seismological Observatory
DSIR, P.O. Box 8005
Wellington, New Zealand

UNITED STATES: U. S. Coast and Geodetic Survey
Seismology Division
Washington Science Center
Rockville, Maryland 20852
U. S. A.

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
OCT 01 WIL E(P)	00 22 22.0	OCT 2 H-04 31 21.0 23.6S 179.6W h ABOUT 503KM		OCT 2 H-16 52 06.4 21.7S 067.7W h ABOUT 049KM		OCT 03 MAW EP	06 49 59.5
OCT 1 H-02 33 02.8 10.5S 013.3W h ABOUT 033KM		BYR IP	04 40 52.0	BYR IP	17 02 26.5	OCT 03 MAW IP	07 43 52.2
SPA IP I	02 45 09.0 47 54.0	SPA IP I	04 41 22.0 43 17.0	SPA IP	17 03 06.0	OCT 03 MAW EP	10 00 03.0
BYR EP E	02 45 23.0 47 48.0	MAW IP	04 42 27.9	MAW IP	17 04 33.6	OCT 03 MAW EP	10 57 50.5
OCT 01 SBA EP	06 04 57.0	OCT 02 MAW IP	05 03 46.1	OCT 02 SPA IP'	20 22 06.0	OCT 3 H-12 49 31.5 10.7S 075.3W h ABOUT 154KM	
OCT 01 WIL IP	07 01 17.5	OCT 02 MAW EP	06 49 59.5	MAW EP'	20 22 50.5	SPA EP	13 01 23.0
OCT 1 H-08 58 25.7 55.9S 026.8W h ABOUT 033KM		OCT 02 MAW IP	07 43 52.2	OCT 2 H-20 41 47.7 08.9S 079.7W h ABOUT 055KM		OCT 03 MAW IP	13 13 05.0
AIA IP E	09 03 03.0 05 46.0	OCT 02 SPA IP	07 56 26.0	SPA I(P) I	20 54 58.0 55 15.0	OCT 3 H-13 39 39.9 61.4N 147.1W h ABOUT 048KM	
SPA IP	09 05 10.0	OCT 02 SPA IP	08 25 54.0	OCT 02 WIL EP	22 13 12.0	SBA EP'	13 59 08.0
BYR IP ES	09 05 23.0 11 22.0	OCT 2 H-09 47 27.2 10.4S 162.4E h ABOUT 058KM		OCT 2 H-22 23 32.4 59.7N 144.5W h ABOUT 022KM		WIL EP'	13 59 17.0
MAW IP	09 06 01.6	SBA EP	09 58 18.0	SPA IP'	22 43 18.5	SPA IP'	13 59 27.0
WIL EP	09 07 28.0	BYR I(P)	09 59 06.0	OCT 3 H-01 55 00.2 21.0S 178.5W h ABOUT 547KM		OCT 3 H-15 05 19.5 59.1N 153.2W h ABOUT 060KM	
OCT 01 MCQ IP ES	10 45 45.0 45 51.0	SPA IP	09 59 28.5	BYR EP	02 04 42.0	SPA IP'	15 25 16.0
OCT 01 MAW EP	15 34 38.0	MAW E(P)	10 00 03.0	SPA IP	02 05 13.5	OCT 03 SBA EP	15 59 08.0
OCT 01 MAW IP	16 03 07.0	OCT 02 SPA EP	12 07 00.0	OCT 03 MAW EP	02 32 27.5	OCT 3 H-16 52 20.7 26.7S 177.7W h ABOUT 134KM	
OCT 01 SBA EP	20 21 05.0	OCT 2 H-13 00 39.7 10.5S 162.4E h ABOUT 068KM		SPA EP	02 35 03.0	SBA IP	17 01 17.0
OCT 01 SPA EP	20 48 48.0	WIL EP ES	13 11 19.0 20 04.0	OCT 03 SBA EP	02 57 55.0	SPA IP	17 02 36.5
OCT 01 WIL E(P)	22 18 32.0	SBA IP ES	13 11 30.7 20 32.0	OCT 03 AIA EP	03 35 53.0	MAW IP	17 03 51.6
OCT 01 SBA EP	23 56 35.0	BYR IP IS	13 12 30.0 22 36.0	SPA EP	03 39 03.0	OCT 03 WIL EP	16 59 55.0
OCT 2 H-00 58 39.2 51.9N 142.9E h ABOUT 033KM		SPA IP ES E	13 12 40.5 22 45.0 30 25.0	OCT 03 SPA EP	04 16 15.0	OCT 3 H-17 02 48.0 18.1S 178.8W h ABOUT 673KM	
BYR IP'	01 18 01.0	MAW IP E E	13 13 05.0 13 16.0 23 28.0	OCT 03 MAW IP	04 42 27.9	SBA EP	17 11 56.0
SPA IP'	01 18 01.5	OCT 02 SPA IP	13 07 06.5	OCT 03 AIA EP	05 22 20.0	BYR IP	17 12 38.0
OCT 02 SBA EP	02 55 51.0	OCT 02 MAW IP	14 38 16.4	OCT 03 SPA EP	06 16 13.0	SPA IP	17 13 07.5
		OCT 02 WIL I(P)	16 03 06.5	OCT 03 WIL EP	06 41 11.0	MAW EP IS	17 14 08.5 23 33.5
						OCT 03 WIL EP	19 05 21.0

ANTARCTIC SEISMOLOGICAL BULLETIN

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
OCT 03 SPA IP	19 55 19.0	OCT 04 MAW IP	17 04 33.6	SPA IP I	12 35 31.0 36 02.5	OCT 06 MIR E	04 37 12.2
OCT 3 H-22 00 53.8 10.3S 164.5E h ABOUT 066KM		OCT 04 MAW EP	20 25 50.5	MAW IP	12 36 40.0	OCT 06 WIL EP	05 17 18.0
SBA EP	22 11 47.0	OCT 04 BYR EP	21 38 44.0	OCT 5 H-13 12 15.5 22.3S 171.6E h ABOUT 145KM		OCT 6 H-06 11 32.6 18.6N 119.6E h ABOUT 033KM	
BYR EP	22 12 44.0	OCT 05 MIR IP	01 08 56.0	SBA EP	13 21 38.0	WIL EP	06 24 05.0
SPA IP	22 12 57.0	OCT 5 H-03 35 08.4 42.6N 142.6E h ABOUT 038KM		BYR IP	13 22 36.0	MAW I(P)	06 25 05.3
OCT 3 H-22 41 09.0 20.2S 176.3W h ABOUT 219KM		MAW EP'	03 54 05.0	SPA IP I	13 22 58.5 22 44.0	SPA EP'	06 30 04.0
BYR IP	22 51 25.0	BYR EP'	03 54 19.0	MAW EP	13 23 50.0	OCT 06 SPA EP	06 41 09.0
SPA IP	22 51 58.0	SPA IP'	03 54 19.0	OCT 5 H-13 58 56.9 22.2S 175.8W h ABOUT 033KM		OCT 06 SPA EP	06 52 17.0
MAW IP	22 53 07.3	OCT 05 MIR E	03 39 30.5	SBA EP	14 08 38.0	OCT 6 H-07 17 57.1 36.2S 100.9W h ABOUT 033KM	
OCT 03 WIL EP	22 51 47.0	OCT 05 MIR E	05 20 22.3	BYR IP I+P	14 09 20.0 09 33.0	BYR EP E	07 26 05.0 36 00.0
OCT 04 WIL E(P)	00 08 48.0	OCT 05 MAW EP	06 32 44.5	SPA IP I	14 09 54.0 10 08.5	SPA IP E(S) E	07 27 20.5 34 04.0 39 53.0
OCT 04 MAW P	00 38 16.4	OCT 05 MIR E E	07 35 46.7 37 34.2	MAW IP	14 11 07.8	SBA EP	07 27 29.0
OCT 04 BYR EP	00 45 15.0	OCT 5 H-08 30 15.7 16.7S 173.7W h ABOUT 033KM		OCT 05 SPA EP	14 38 10.0	WIL EP ES	07 29 38.0 39 18.0
SBA E(P)	00 46 26.0	SBA EP	08 40 35.2	OCT 05 MAW EP	18 30 34.0	MAW EP ES	07 29 42.0 39 33.0
MAW EP	00 49 56.0	BYR IP	08 41 11.0	WIL EP E	18 31 20.0 31 43.0	MIR EP ES	07 29 46.6 39 36.0
OCT 04 WIL EP	01 46 35.0	SPA IP I	08 41 45.5 42 01.0	OCT 05 WIL EP	19 06 18.0	OCT 06 MIR E	08 34 05.3
OCT 04 WIL EP	02 25 10.0	MIR E	08 42 01.5	OCT 05 MAW EP	20 09 32.0	OCT 6 H-10 06 17.9 2.6N 095.3W h ABOUT 033KM	
OCT 04 SBA EP	05 00 02.0	MAW IP	08 42 56.8	OCT 05 SPA IP	21 04 41.0	SPA IP	10 19 25.5
OCT 04 SPA IP	07 04 19.0	OCT 05 WIL IP	08 51 20.5	OCT 05 MAW IP	23 29 49.9	OCT 06 SPA EP	10 51 07.0
OCT 04 MCQ IP	09 20 54.5	OCT 05 SPA IP	09 38 19.0	OCT 6 H-01 37 20.5 56.5N 152.7W h ABOUT 033KM		OCT 06 SPA EP	14 28 33.0
SPA IP	09 27 22.5	MAW IP	09 39 16.1	SPA IP'	01 56 55.0	OCT 6 H-14 29 55.6 40.2N 028.1E h ABOUT 010KM	
OCT 04 SBA EP	09 26 38.0	OCT 05 SPA EP	12 19 17.0	OCT 06 MIR E	02 48 50.2	SPA IP' E(S)	14 49 03.5 52 44.0
OCT 04 MAW IP	09 39 17.9	OCT 5 H-12 24 06.4 16.6S 174.2W h ABOUT 084KM		OCT 06 MAW IP	04 04 03.6	BYR EP' E EPP	14 49 13.0 50 39.0 53 37.0
OCT 04 BYR IP	09 59 54.5	SBA IP	12 34 21.1	SPA IP	04 04 14.5		
OCT 04 MAW IP	12 19 37.7	BYR IP E	12 34 57.0 35 28.0				
OCT 04 SPA EP	15 47 43.0						

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SBA EP'	14 49 25.0	OCT 7		OCT 07		BYR EP	14 48 14.0
E	50 44.0	H-01 24 45.2		AIA EP	18 10 25.0	SPA IP	14 48 56.0
		20.7S 177.8W		I	11 02.0		
OCT 6		h ABOUT 328KM		OCT 07		MAW EP	14 50 27.0
H-14 31 19.2		SPA IP	01 35 20.0	MIR E	18 44 21.3	E	50 43.5
40.3N 028.2E		MAW IP	01 36 26.0	OCT 07		OCT 8	
h ABOUT 010KM		I	37 43.7	SPA EP	19 47 45.0	H-16 53 23.0	
MAW EP'	14 49 51.0	OCT 07		OCT 7		52.8N 168.0W	
I	49 59.5	SPA EP	03 24 19.0	H-20 05 36.7		h ABOUT 033KM	
E	50 38.0	OCT 07		59.0N 148.8W		SPA EP'	17 12 46.0
WIL EP'	14 50 16.0	MIR E	03 39 57.2	h ABOUT 033KM		MAW EP'	17 13 10.5
EPP	52 00.0	OCT 7		SPA IP'	20 25 23.5	OCT 8	
OCT 06		H-03 52 11.3		OCT 07		H-17 07 15.4	
SPA EP	14 48 13.0	06.8S 155.2E		MIR E	20 50 14.8	32.1S 070.9W	
MIR EP'	14 49 40.9	h ABOUT 070KM		OCT 07		h ABOUT 146KM	
OCT 06		SBA EP	04 03 26.0	WIL E(P)	21 25 48.0	SPA IP	17 16 56.5
MIR E	15 34 37.6	BYR IP	04 04 28.0	OCT 07		MAW IP	17 18 39.7
OCT 6		SPA IP	04 04 32.0	SPA EP	21 31 56.0	OCT 08	
H-18 19 07.5		MAW IP	04 04 39.0	MAW EP	22 02 47.0	SPA IP	18 48 30.0
13.4S 075.8W		I	04 48.6	OCT 08		SPA IP	18 51 31.5
h ABOUT 117KM		OCT 07		SPA EP	01 06 29.0	OCT 08	
SPA EP	18 30 47.0	MIR E	04 25 33.0	OCT 08		MAW EP	19 02 28.0
MIR E(P)	18 31 41.5	OCT 07		SPA IP	01 40 56.0	OCT 08	
OCT 6		SPA EP	05 10 53.0	OCT 08		SPA EP	20 06 06.0
H-18 24 57.0		OCT 07		AIA EP	01 59 16.0	OCT 08	
70.9N 005.7W		MIR E(P)	07 13 33.5	OCT 08		SPA IP	21 03 45.0
h ABOUT 033KM		OCT 07		SBA EP	03 13 41.0	OCT 08	
SPA IP'	18 44 30.0	MIR E(P)	09 39 04.1	OCT 08		MIR E	22 09 49.3
MAW EP'	18 44 32.5	OCT 7		MAW IP	04 16 22.0	OCT 9	
OCT 6		H-11 03 55.0		OCT 08		H-00 14 22.3	
H-19 12 12.0		51.9N 173.3W		MIR EP	04 58 17.9	35.0S 115.0W	
16.1S 168.6E		h ABOUT 033KM		OCT 08		h ABOUT 033KM	
h ABOUT 021KM		MAW IP'	11 23 36.5	MAW EP	06 02 44.0	SPA EP	00 23 54.0
SBA EP	19 22 33.0	OCT 07		OCT 08		MAW EP	00 26 16.0
WIL EP	19 22 37.0	WIL EP	12 05 10.0	SPA IP	07 19 59.0	OCT 9	
BYR EP	19 23 30.0	I	05 24.5	OCT 08		H-04 27 42.3	
SPA IP	19 23 47.5	OCT 07		MCQ EP	09 13 04.0	05.6S 129.0E	
I	23 53.5	WIL EP	12 13 50.0	OCT 8		h ABOUT 079KM	
MAW IP	19 24 27.5	OCT 07		H-10 39 13.0		MAW IP	04 39 24.9
OCT 06		SBA EP	16 52 05.0	06.5S 154.4E		OCT 09	
SPA IP	20 12 18.0	OCT 07		h ABOUT 074KM		MAW IP	08 55 17.3
OCT 6		MIR EP	17 02 23.2	BYR EP	10 51 31.0	OCT 09	
H-20 19 34.1		OCT 7		SPA IP	10 51 34.5	WIL EP	09 48 23.0
29.3N 080.9E		H-17 02 34.4		MAW IP	10 51 40.4	OCT 9	
h ABOUT 027KM		6.3S 078.6W		OCT 08		H-11 27 57.0	
SPA IP'	20 38 21.0	h ABOUT 023KM		MIR E	10 49 49.9	18.4N 068.9W	
OCT 06		SPA EP	17 15 03.0	OCT 8		h ABOUT 178KM	
MAW IP	23 34 18.1	OCT 07		H-14 38 01.8		MAW IP'	11 46 31.6
OCT 07		SPA EP'	17 09 12.0	22.6S 069.4W		OCT 09	
SPA IP	00 28 29.0			h ABOUT 033KM		SBA EP	12 24 21.0

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
OCT 09 MAW IP	13 02 44.7	SBA E(P)	02 39 41.0	OCT 10 WIL EP	15 24 50.0	OCT 10 H-23 57 13.7 52.7N 171.5W h ABOUT 033KM	
OCT 09 WIL EP	13 29 31.0	OCT 10 SPA EP	02 57 14.0	OCT 10 H-16 00 59.2 05.9S 130.1E h ABOUT 100KM		SPA EP'	24 16 52.0
OCT 09 MIR E	14 03 25.6	OCT 10 AIA EP	03 30 01.0	SPA EP	16 13 20.0	MAW IP'	24 17 17.6
OCT 09 SBA EP	14 16 52.0	OCT 10 H-04 47 45.7 32.0N 087.3E h ABOUT 020KM		BYR EP	16 13 38.0	OCT 11 H-00 13 13.4 16.2S 168.2E h ABOUT 017KM	
MAW IP	14 18 55.7	SPA EP'	05 06 39.0	OCT 10 WIL EP	17 03 27.0	WIL E(P)	00 23 37.0
OCT 09 MAW IP'	14 19 50.7	OCT 10 WIL E(P)	04 49 19.0	OCT 10 H-17 13 29.8 30.2S 179.3W h ABOUT 294KM		SPA IP	00 24 49.0
OCT 09 MAW IP	14 30 27.0	OCT 10 SPA EP	05 58 34.0	SPA IP	17 23 08.5	MAW IP	00 25 28.4
OCT 09 AIA EP	15 12 00.0	OCT 10 MAW EP	06 11 50.0	MAW EP	17 24 22.0	OCT 11 WIL E(P)	00 42 36.0
OCT 09 AIA EP	15 36 49.0	OCT 10 H-07 56 40.5 25.2S 180.0E h ABOUT 432KM		I	24 39.0	OCT 11 WIL EP	02 35 31.0
OCT 09 MAW IP	16 26 01.2	SPA IP	08 06 36.0	OCT 10 WIL EP	17 31 30.0	E	35 46.0
OCT 9 H-19 26 39.7 6.8N 073.0W h ABOUT 157KM		MAW IP	08 07 43.7	OCT 10 WIL EP	17 58 25.0	OCT 11 SPA EP	03 43 47.0
BYR IP	19 39 20.5	OCT 10 H-08 31 07.7 23.8S 179.7W h ABOUT 441KM		OCT 10 SPA EP	18 57 41.0	OCT 11 SPA IP	04 48 23.5
OCT 9 H-19 55 34.7 57.0N 151.9W h ABOUT 017KM		BYR IP	08 40 42.0	OCT 10 WIL EP	19 10 21.0	OCT 11 MAW IP	05 45 10.0
MIR EP'	20 15 28.2	SPA IP	08 41 12.5	I	18 35.0	SPA IP	05 46 16.5
OCT 9 H-21 34 09.2 16.2S 171.9W h ABOUT 033KM		MAW EP	08 42 18.7	OCT 10 WIL I(P)	19 19 42.0	BYR IP	05 46 45.0
SBA IP	21 44 32.7	OCT 10 MAW EP	09 27 53.0	OCT 10 H-19 38 47.7 60.4N 146.1W h ABOUT 044KM		OCT 11 MIR E	06 27 31.7
BYR IP	21 45 04.5	OCT 10 MAW EP	09 31 07.5	BYR EP'	19 58 08.0	OCT 11 SPA IP	08 04 32.8
MIR EP	21 46 01.3	OCT 10 MAW IP	10 56 17.3	SPA EP'	19 58 26.0	OCT 11 MIR E	09 43 44.0
E	47 15.5	OCT 10 WIL IP	11 21 03.0	OCT 10 H-20 06 39.8 60.5N 145.4W h ABOUT 031KM		OCT 11 H-10 06 44.9 19.1N 156.6W h ABOUT 033KM	
ES	56 08.1	SPA IP	11 23 30.0	BYR EP'	20 26 00.0	SPA EP'	10 25 12.0
MAW IP	21 46 54.4	BYR IP	11 23 44.5	SBA EP'	20 26 05.0	OCT 11 H-10 21 01.1 06.3S 145.7E h ABOUT 138KM	
I	46 57.2	MAW IP	11 24 21.6	WIL EP'	20 26 19.0	MIR E	10 31 57.6
OCT 09 MAW E(P)	21 52 51.0	OCT 10 MAW IP	11 30 07.7	OCT 10 WIL EP	21 25 47.0	SBA EP	10 32 16.0
OCT 09 MAW E(P)	23 51 12.0	OCT 10 WIL EP	12 31 05.0	ES	34 36.0	MAW EP	10 33 04.0
OCT 10 WIL E(P)	00 23 37.0	OCT 10 MIR EP	12 34 00.2	OCT 10 MAW EP	21 35 11.0	SPA IP	10 33 15.5
OCT 10 WIL E(P)	00 43 36.0	OCT 10 MAW EP	14 12 42.5	OCT 10 H-22 50 19.4 31.4S 070.7W h ABOUT 075KM		I	33 48.0
OCT 10 WIL EP	02 35 31.0			SPA IP	23 00 11.5	BYR EP	10 33 20.0
E	35 46.0					OCT 11 MIR EP	10 32 30.5

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
OCT 11		SBA IP	21 27 18.0	OCT 12		MIR EP	15 54 21.7
MIR E(P)	10 35 15.3	ES	37 31.0	SPA EP	08 09 18.0	EPCP	54 40.7
						EPP	55 08.7
OCT 11		SPA IP	21 27 58.5	OCT 12		MAW IP	15 55 16.8
H-11 10 33.6		IPP	31 28.0	MIR EP	08 35 56.9	I	55 20.0
13.6S 166.6E		IS	38 24.0	SPA IP	08 36 08.5	ES	16 05 35.0
h ABOUT 068KM				BYR IP	08 37 18.0		
SBA EP	11 21 03.0	BYR IP	21 28 22.0	E	43 43.0	SBA EP	15 55 21.0
		ES	39 00.0			SPA IP	15 56 04.0
WIL IP	11 21 03.0	OCT 11		SBA EP	08 37 35.0	I	16 07 58.5
MIR IP	11 21 45.6	MIR EP	21 54 16.6			I	13 13.5
ES	31 20.2			OCT 12		BYR IP	15 56 23.5
BYR IP	11 22 01.5	OCT 11		SPA IP	08 42 37.0	E	16 13 02.0
		H-22 01 46.2		SBA EP	08 44 03.0		
SPA IP	11 22 16.0	57.4N 150.2W		MAW IP	08 46 48.2	OCT 12	
I	22 31.0	h ABOUT 033KM				SPA IP	19 17 54.5
MAW EP	11 22 51.0	SPA IP'	22 21 23.5	OCT 12			
				SPA EP	09 02 00.0	OCT 12	
OCT 11		OCT 11				SPA IP	20 23 08.5
MIR E	13 12 30.0	SPA I	22 14 29.0	OCT 12			
				H-09 14 52.2		OCT 12	
OCT 11		OCT 11		55.9S 144.1W		H-21 55 33.2	
H-14 19 11.5		SPA IP	22 20 42.5	h ABOUT 033KM		31.3S 110.8W	
17.9S 071.5W						h ABOUT 025KM	
h ABOUT 035KM		OCT 11		BYR IP	09 20 17.5	BYR EP	22 04 17.0
BYR IP	14 29 51.0	MIR E(P)	23 26 13.6	SBA P	09 20 42.0	SBA EP	22 05 26.0
						ES	13 36.0
SPA IP	14 30 36.0	OCT 11		SPA IP	09 21 37.0	SPA IP	22 05 31.0
I	30 46.0	H-23 33 23.9		MAW EP	09 24 24.5	I	07 14.0
SBA EP	14 31 16.0	6.0N 126.7E				IS	13 44.0
		h ABOUT 121KM		OCT 12		MIR EP	22 07 44.0
MAW IP	14 32 03.4	MCQ EP	23 43 58.0	MIR E(P)	09 40 45.0	MAW EP	22 07 48.5
				E	44 33.4	E	08 51.0
OCT 11		OCT 12				ES	17 24.5
WIL EP	17 03 27.0	H-01 02 02.5		OCT 12			
		12.3S 166.7E		SPA IP	09 46 44.5	OCT 12	
OCT 11		h ABOUT 035KM				MIR EP	22 11 05.7
MAW IP	17 54 44.6	SPA IP	01 13 57.0	OCT 12		OCT 12	
				H-11 43 35.3		WIL ES	22 17 25.0
OCT 11		OCT 12		04.5S 144.5E			
WIL EP	19 10 21.0	H-01 48 30.8		h ABOUT 077KM		OCT 13	
E	10 35.0	21.6S 177.1W		SPA IP	11 56 05.5	MAW EP	00 18 55.5
		h ABOUT 188KM		BYR IP	11 56 12.0		
OCT 11		SPA IP	01 59 14.5			OCT 13	
SPA EP	20 06 31.0	I	59 24.5	OCT 12		H-00 49 43.2	
				SPA IP	12 39 24.0	08.2N 122.4E	
OCT 11		OCT 12				h ABOUT 064KM	
H-20 52 14.0		MIR EP	03 33 04.5	OCT 12		SPA IP	01 03 15.5
15.1S 167.6E				H-13 55 21.5			
h ABOUT 241KM		OCT 12		14.8S 167.4E		OCT 13	
SPA IP	21 03 29.0	SPA IP	05 52 29.0	h ABOUT 131KM		MAW EP	01 53 07.5
OCT 11		OCT 12		SPA IP	14 06 51.5	OCT 13	
H-21 15 03.9		BYR EP	05 56 49.0			H-02 20 49.3	
.6S 121.7E		SBA EP	05 57 06.0	OCT 12		44.4N 151.6E	
h ABOUT 033KM				SBA EP	15 02 19.0	h ABOUT 033KM	
WIL EP	21 25 47.0	OCT 12				BYR EP'	02 39 52.9
ES	34 36.0	SPA IP	06 45 26.5	OCT 12		MAW EP'	02 39 58.5
				H-15 42 54.7		I	40 13.0
MIR IP	21 26 06.6	OCT 12		03.0N 126.7E		SPA IP'	02 40 05.0
EPCP	26 23.0	SPA IP	07 24 06.0	h ABOUT 059KM			
EPP	28 51.0						
MAW IP	21 27 01.6	OCT 12		WIL EP	15 54 02.0		
I	27 23.5	SPA IP	07 59 23.5	ES	16 03 09.0		
ES	36 55.5						

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
OCT 13 MIR EP	02 32 56.8	OCT 13 H-14 00 12.3 58.5N 151.4W h ABOUT 033KM		OCT 14 MCQ IP ES	02 26 23.0 26 29.0	OCT 14 H-11 50 28.7 05.0N 075.9W h ABOUT 063KM	
OCT 13 H-03 13 41.5 16.3S 174.2W h ABOUT 167KM		SPA EP'	14 19 51.0	OCT 14 SPA EP	02 36 06.0	SPA EP	12 03 43.0
BYR P	03 24 25.0	OCT 13 MAW IP	14 04 07.0	BYR IP	02 36 17.5	OCT 14 H-12 06 38.1 05.7S 150.5E h ABOUT 089KM	
SPA IP	03 24 58.5	OCT 13 SPA EP	15 19 51.0	OCT 14 H-03 04 59.6 33.4N 141.8E h ABOUT 033KM		MAW IP	12 18 58.8
MAW IP	03 26 08.0	OCT 13 MAW IP	15 52 24.2	SPA EP'	03 23 50.0	SPA IP	12 19 02.0
OCT 13 H-05 31 42.6 1.9N 126.5E h ABOUT 016KM		OCT 13 SBA EP	16 24 51.0	OCT 14 SBA EP	03 26 41.0	OCT 14 MAW EP	12 12 18.0
MIR E	05 43 07.8	OCT 13 SPA IP	16 53 10.5	OCT 14 H-03 45 58.0 21.4S 178.5W h ABOUT 481KM		SPA IP	12 13 16.0
MAW IP	05 44 03.2	OCT 13 H-17 20 14.9 32.6S 179.8W h ABOUT 118KM		SPA IP	03 56 13.5	OCT 14 SBA EP	13 05 32.0
SPA IP	05 44 51.0	SPA IP	17 29 54.5	OCT 14 MIR EP	04 51 17.9	OCT 14 SPA EP	13 38 33.0
OCT 13 MIR E	06 37 55.3	OCT 13 H-18 12 14.5 22.1S 170.5E h ABOUT 041KM		OCT 14 SPA EP	05 40 29.0	OCT 14 SBA EP	14 27 09.0
OCT 13 H-06 57 48.7 34.0N 045.1E h ABOUT 096KM		SPA IP	18 23 09.5	OCT 14 SPA EP	05 57 16.0	OCT 14 MIR EP' E	17 00 39.4 00 44.7
SPA EP'	07 16 45.0	MAW EP	18 23 59.0	OCT 14 SPA EP	06 06 35.0	OCT 14 MAW IP E	17 37 57.6 38 19.0
OCT 13 MIR E	07 44 09.7	OCT 13 MAW IP	19 20 14.0	OCT 14 SBA EP	06 11 04.0	OCT 14 H-18 04 41.3 34.8N 138.9E h ABOUT 176KM	
OCT 13 SBA EP	08 46 08.0	OCT 13 MAW E(P)	19 21 48.5	SPA EP	06 12 30.0	SPA IP'	18 23 29.0
OCT 13 MAW EP	08 58 16.0	OCT 13 SPA EP	19 27 38.0	OCT 14 SBA EP	09 34 45.0	OCT 14 MAW EP	19 34 11.0
OCT 13 H-10 38 59.3 3.3S 149.9E h ABOUT 059KM		OCT 13 MAW IP	19 56 55.1	SPA IP I	09 35 48.0 36 47.0	OCT 14 SPA EP	19 51 57.0
MIR IP	10 50 35.0	OCT 13 MAW IP	20 34 51.4	I	46 54.0	OCT 14 MAW EP	21 32 30.0
SBA EP	10 50 37.0	OCT 13 H-23 02 26.2 35.8N 071.1E h ABOUT 120KM		MAW IP	09 36 42.6	SPA EP	21 34 27.0
MAW EP I	10 51 33.0 51 38.0	SPA EP'	23 21 18.0	OCT 14 MAW EP I	09 44 02.0 44 06.5	OCT 14 SPA EP	22 48 45.0
SPA IP	10 51 37.0	OCT 13 MAW IP	23 56 02.7	MIR EP	09 45 06.7	OCT 14 SPA EP	21 21 03.5 23 33.5
BYR IP	10 51 38.0	OCT 14 MAW EP I	00 04 46.0 04 50.5	BYR IP	09 48 05.5	MAW IP	01 24 46.1
OCT 13 SPA EP	13 23 38.0	OCT 14 SPA IP	01 43 40.5	OCT 14 MAW IP	09 44 54.6	OCT 15 SPA IP I	01 21 03.5 23 33.5
OCT 13 SPA EP	13 32 38.0	OCT 14 AIA EP E	02 23 51.0 25 56.0	OCT 14 SBA EP	11 10 59.0	MAW IP	01 34 15.1
OCT 13 MAW IP	13 53 23.1			SPA EP	11 13 03.0	OCT 15 MAW IP	01 34 15.1
SPA IP	13 54 07.0			OCT 14 MIR EP	11 36 13.0	OCT 15 SPA EP	01 47 50.0
				OCT 14 SPA IP	11 45 48.0	MAW IP	01 49 05.4

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
OCT 15		SBA EP'	20 45 45.0	BYR EP'	07 18 50.0	MAW EP'	09 37 21.5
H-02 07 06.4		MAW EP'	20 45 56.5	AIA EP'	07 19 37.0	BYR EP'	09 37 29.0
6.6S 154.8E		BYR EP'	20 46 04.0			E	49 10.0
h ABOUT 062KM				OCT 16			
BYR IP	02 19 25.5	OCT 15		H-07 00 14.4		OCT 16	
SPA IP	02 19 28.5	SBA P	22 14 42.0	56.1S 027.7W		H-09 54 30.9	
MAW IP	02 19 34.9			h ABOUT 033KM		44.1N 149.3E	
OCT 15				SPA IP	07 06 58.0	h ABOUT 033KM	
SPA EP	02 31 21.0	OCT 15		BYR IP	07 07 11.5	SPA EP'	10 13 47.0
OCT 15		SPA EP'	22 54 37.0	MAW IP	07 07 49.7		
SPA IP	02 47 15.0					OCT 16	
OCT 15		OCT 15		OCT 16		H-10 50 59.1	
MAW IP	03 35 41.5	SPA IP	22 50 47.0	SPA EP'	07 18 28.0	44.4N 149.5E	
				I	18 53.0	h ABOUT 035KM	
OCT 15						SPA EP'	11 10 10.0
MAW IP	03 49 43.5	OCT 15		OCT 16			
		H-22 59 43.6		H-07 21 42.7		OCT 16	
OCT 15		56.8N 151.9W		44.2N 149.4E		H-10 58 30.6	
MAW IP	03 49 43.5	h ABOUT 033KM		h ABOUT 033KM		44.1N 149.5E	
		BYR EP'	23 19 02.0	MAW EP'	07 40 50.5	h ABOUT 025KM	
OCT 15		SPA IP'	23 19 19.0	BYR EP'	07 40 54.0	SPA EP'	11 17 48.0
H-05 56 31.1		I	19 25.0				
33.0S 070.4W				OCT 16		OCT 16	
h ABOUT 118KM		OCT 15		H-07 37 19.6		H-12 04 05.3	
BYR IP	06 05 24.5	H-23 09 25.1		44.5N 149.6E		44.6N 149.5E	
SPA IP	06 06 09.0	56.9N 151.7W		h ABOUT 033KM		h ABOUT 033KM	
MAW EP	06 07 52.5	h ABOUT 033KM		MAW EP'	07 56 25.5	SPA IP'	12 23 20.5
E	08 21.5	SPA IP'	23 29 00.0	SPA EP'	07 56 32.0		
OCT 15		I	29 06.0			OCT 16	
BYR IP	06 15 24.5			OCT 16		H-12 18 54.4	
MAW IP	06 17 31.9	OCT 15		SPA IP	07 41 59.0	44.6N 149.5E	
		SPA IP	23 17 52.0	I	43 35.5	h ABOUT 033KM	
OCT 15				MAW IP	07 42 54.9	SPA EP'	12 38 09.0
SPA EP	06 36 03.0	OCT 16					
		SPA EP	04 11 03.0	OCT 16		OCT 16	
OCT 15				H-07 51 36.7		H-12 37 26.8	
MCQ IP	06 48 30.0	OCT 16		44.5N 149.6E		44.3N 149.4E	
		H-06 15 31.5		h ABOUT 033KM		h ABOUT 033KM	
OCT 15		23.6S 177.6W		SPA EP'	08 10 53.0	MAW EP'	12 56 32.5
SPA IP	07 56 19.0	h ABOUT 178KM				SPA EP'	12 56 41.0
		MCQ EP	06 22 13.0	OCT 16			
OCT 15		SBA IP	06 24 47.0	H-08 18 28.3		OCT 16	
H-11 05 14.0		BYR IP	06 25 31.0	44.6N 149.4E		H-13 29 30.6	
33.1S 179.6E		E	54 26.0	h ABOUT 033KM		44.4N 149.5E	
h ABOUT 480KM		SPA IP	06 26 03.5	SPA EP'	08 37 20.0	h ABOUT 033KM	
SPA IP	11 14 14.0	I	26 11.5	I	08 37 33.0	SPA EP'	13 48 47.0
OCT 15		I	26 30.0	I	40 21.0	OCT 16	
MAW IP	12 13 05.5	MAW IP	06 27 15.3	I	41 13.5	SPA IP	14 34 11.0
		I	27 21.0	MAW EP'	08 37 35.0		
OCT 15		IS	36 53.0	I	37 52.2	OCT 16	
H-17 45 07.5				E	42 23.0	SPA IP	17 25 46.5
54.9N 161.1E		OCT 16		BYR EP'	08 37 40.0	E	33 12.0
h ABOUT 033KM		SPA EP	06 52 30.0	E	49 14.0	MAW EP	17 29 08.0
SPA IP'	18 04 41.0						
I	04 54.0	OCT 16		OCT 16		OCT 16	
OCT 15		H-06 59 38.6		H-09 18 16.6		MAW IP	17 49 09.0
SPA IP	17 56 08.0	44.3N 149.5E		44.5N 149.1E			
		h ABOUT 033KM		h ABOUT 033KM		OCT 16	
OCT 15		SBA EP'	07 18 32.0	SPA EP'	09 37 09.0	BYR EP'	19 37 29.0
H-20 26 53.5		MAW IP'	07 18 44.7			E	49 10.0
44.7N 149.8E							
h ABOUT 049KM						OCT 16	
						MAW IP	19 55 07.6

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
OCT 16 SPA EP	20 58 17.0	AIA EP'	03 36 16.0	OCT 17 H-15 01 14.0 07.1S 129.4E h ABOUT 117KM		OCT 18 AIA EP	11 18 41.0
OCT 16 AIA EP	22 12 18.0	OCT 17 H-05 55 54.4 22.3S 171.5E h ABOUT 116KM		WIL EP	15 11 14.0	OCT 18 H-12 32 24.1 07.0S 124.0E h ABOUT 574KM	
OCT 16 MCQ IP ES	22 12 44.0 12 52.0	SBA IP	06 05 20.5	SBA EP	15 12 36.0	MCQ IP	12 41 06.0
OCT 17 OCT 17 SPA I	01 06 09.5	BYR I(P)	06 06 14.5	MAW IP	15 12 42.3	ES	42 56.0
H-01 07 49.8 29.6S 068.4W h ABOUT 096KM		MAW IP	06 07 31.8	OCT 17 SPA IP	15 13 27.0	ES	48 49.0
BYR IP	01 17 10.5	SPA IP	06 06 40.5	WIL EP	15 49 06.0	WIL EP	12 41 34.0
SPA IP	01 17 52.0	IS	17 10.0	OCT 17 SPA IP	16 12 37.5	EP	42 15.0
MAW IP	01 19 30.9	OCT 17 SPA EP	06 34 37.0	OCT 17 SPA IP	17 39 32.0	SBA IP	12 43 04.5
OCT 17 H-01 38 36.0 7.0S 155.8E h ABOUT 058KM		OCT 17 SPA IP	06 55 33.5	IS	39 40.0	IS	51 56.0
MCQ EP	01 47 06.0	OCT 17 SPA EP	07 25 04.0	OCT 17 H-18 25 46.8 00.6S 122.2E h ABOUT 152KM		SPA I(P)	12 43 38.5
SBA IP	01 49 50.0	OCT 17 MAW EP	08 12 33.0	MAW EP	18 37 30.0	I	50 42.5
BYR IP	01 50 52.5	SPA IP	08 15 31.0	SPA IP	18 38 28.5	IS	53 08.5
SPA IP	01 50 55.5	SBA EP	08 16 14.0	OCT 17 WIL E(P)	21 07 33.0	BYR IP	12 44 12.0
MAW IP	01 51 04.3	BYR EP	08 16 42.0	OCT 17 MCQ IP	21 58 22.0	I	46 17.0
I	51 16.3	OCT 17 SPA EP	08 13 46.0	SBA EP	22 01 54.0	IS	53 46.0
E	02 01 31.0	OCT 17 SPA EP	08 13 46.0	BYR IP	22 03 47.5	AIA EP'	12 49 46.0
OCT 17 H-02 00 03.3 59.5N 145.5W h ABOUT 033KM		OCT 17 H-09 50 29.5 35.0N 025.4E h ABOUT 033KM		SPA EP	22 03 48.0	OCT 18 H-13 20 20.3 29.7N 050.8E h ABOUT 033KM	
BYR EP'	02 19 16.0	SPA EP'	10 09 25.0	OCT 17 WIL E(P)	23 04 48.0	SPA IP'	13 39 06.5
SPA IP'	02 19 47.0	I	13 37.0	OCT 18 H-06 16 35.2 44.4N 149.7E h ABOUT 033KM		OCT 18 SPA IP	14 53 39.5
I	20 09.5	OCT 17 SPA EP	10 01 08.0	MAW EP'	06 35 42.5	OCT 18 WIL EP	20 08 24.0
OCT 17 SPA EP	02 09 08.0	OCT 17 H-10 02 37.3 21.8S 170.2E h ABOUT 033KM		SPA IP'	06 35 50.5	I	08 39.5
OCT 17 MAW IP	02 20 58.9	SBA EP	10 12 16.0	OCT 18 WIL E(P)	23 04 48.0	OCT 18 H-21 25 29.9 28.0N 054.7E h ABOUT 061KM	
OCT 17 H-03 17 28.1 .7N 119.3E h ABOUT 062KM		BYR E(P)	10 13 09.0	OCT 18 H-06 16 35.2 44.4N 149.7E h ABOUT 033KM		SPA EP'	21 44 09.0
MCQ EP	03 27 57.0	MAW EP	10 14 24.0	MAW EP'	09 17 39.5	OCT 18 H-21 45 10.4 60.3N 152.3W h ABOUT 096KM	
MAW IP	03 29 23.3	OCT 17 H-12 07 30.6 35.8N 141.3E h ABOUT 045KM		E	27 34.0	SPA IP'	22 04 49.0
I	29 29.0	SPA EP'	12 26 28.0	WIL EP	09 18 13.0	OCT 18 H-21 56 01.0 07.1N 144.4E h ABOUT 033KM	
SBA IP	03 29 45.0	OCT 17 MAW EP	10 14 24.0	SBA E(P)	09 19 53.0	SPA EP	22 09 30.0
SPA IP	03 30 25.0	OCT 17 H-10 45 15.5 12.2N 089.3W h ABOUT 033KM		OCT 18 H-09 06 26.0 2.9N 065.7E h ABOUT 033KM		OCT 18 H-22 31 37.7 19.4S 179.1W h ABOUT 666KM	
BYR EP	03 30 50.0	MAW IP	13 22 07.7	MAW EP	09 17 39.5	BYR IP	22 41 22.0
E	47 38.0	E	22 20.0	E	27 34.0	SPA IP	22 41 50.5
				MAW EP'	11 04 05.5		

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
OCT 18 SPA IP I	22 51 48.0 54 31.5	OCT 19 SPA EP	18 20 32.0	OCT 20 SPA EP	14 10 45.0	OCT 21 H-14 32 57.6 58.5N 151.9W h ABOUT 033KM	
OCT 18 H-23 52 34.3 5.9S 105.0E h ABOUT 079KM		OCT 19 SPA EP	18 48 17.0	OCT 20 SPA EP	15 18 43.0	SPA EP'	14 52 40.0
WIL EP	24 02 37.0	OCT 19 H-21 14 52.2 15.7S 177.8W h ABOUT 398KM		OCT 20 SPA IP	17 23 24.5	OCT 21 SPA IP	14 46 01.5
MAW IP	24 03 24.1	SPA IP	21 25 49.0	OCT 20 SPA EP	19 21 06.0	OCT 21 SPA EP I	15 26 30.0 27 40.5
SBA EP	24 04 28.0	OCT 19 H-21 17 59.8 36.1S 073.5W h ABOUT 033KM		OCT 20 H-20 04 01.6 23.9S 179.0W h ABOUT 165KM		OCT 21 SPA IP	15 59 58.5
OCT 19 BYR IP	01 36 54.5	BYR I(P)	21 26 27.0	SPA IP	20 14 33.5	OCT 21 SPA EP	17 10 53.0
OCT 19 SPA EP	04 45 56.0	SPA I(P)	21 27 17.0 I 27 22.5 I 27 38.0	OCT 20 SPA IP	23 11 17.0	OCT 21 SPA IP	18 34 45.0
OCT 19 H-08 50 30.4 24.7S 179.6W h ABOUT 475KM		WIL EP	21 29 56.0	OCT 20 H-23 13 00.4 03.0S 128.6E h ABOUT 033KM		OCT 21 H-20 56 58.7 15.1S 173.0W h ABOUT 033KM	
SPA IP	09 00 27.0	OCT 19 MCQ IP IS	21 47 59.5 48 12.0	SPA IP	23 25 43.0	SPA IP	21 08 37.5
OCT 19 AIA EP	09 30 45.0	OCT 20 H-00 49 05.7 19.6S 174.8W h ABOUT 029KM		BYR IP	23 26 02.0	OCT 21 SBA EP	22 37 28.0
OCT 19 WIL EP	10 43 49.0	BYR EP	00 59 45.0	OCT 21 SPA IP	00 31 21.0	OCT 21 H-23 09 18.8 28.1N 093.8E h ABOUT 037KM	
AIA EP	10 49 02.0	SPA IP I	01 00 19.5 00 45.0	OCT 21 SPA EP	02 15 21.0	WIL E(P) E(S)	23 22 46.0 33 13.0
OCT 19 H-13 29 29.4 4.6S 152.9E h ABOUT 070KM		MAW EP	01 01 31.0	OCT 21 H-07 38 31.0 44.8N 111.6W h ABOUT 033KM		SPA EP' E	23 27 58.0 38 20.0
BYR EP	13 41 55.0	OCT 20 SPA EP	02 07 49.0	SPA EP'	07 57 48.0	BYR EP'	23 28 10.0
SPA IP I	13 42 00.5 42 31.0	OCT 20 SPA EP	02 22 31.0	OCT 21 H-10 08 46.7 14.1S 166.7E h ABOUT 045KM		OCT 21 SBA EP	23 13 10.0
OCT 19 H-13 54 29.1 14.4S 166.4E h ABOUT 009KM		OCT 20 SBA EP	05 53 49.0	BYR E(P)	10 20 11.0	OCT 22 SPA IP	00 15 23.5
BYR EP	14 06 00.0	OCT 20 H-06 24 11.9 56.9N 152.6W h ABOUT 048KM		OCT 21 H-11 48 30.9 02.7S 138.9E h ABOUT 099KM		OCT 22 SPA IP	03 07 30.0
SPA IP	14 06 16.5	SPA EP'	06 43 53.0	SPA IP	12 01 08.5	OCT 22 SPA EP	05 16 29.0
OCT 19 H-15 33 34.9 45.1N 150.9E h ABOUT 033KM		OCT 20 SBA EP	07 41 44.0	BYR EP	12 01 18.0	OCT 22 SBA EP	06 06 12.0
SPA EP'	15 52 53.0	SPA IP	07 43 42.0	OCT 21 SPA EP	13 13 22.0	OCT 22 SPA IP	06 15 47.0
OCT 19 H-16 29 49.1 59.7N 148.7W h ABOUT 053KM		OCT 20 SPA EP	08 15 53.0	OCT 21 SPA IP	14 02 03.0	OCT 22 BYR IP	06 53 04.0
SPA IP' I	16 49 31.5 49 36.5	OCT 20 BYR EP	13 20 07.0	BYR EP	14 02 24.0	SPA IP I	06 53 20.0 58 11.0
		SPA EP	13 20 23.0				

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
OCT 22		OCT 23		OCT 24		MAW IP	22 17 33.5
H-09 54 36.9		H-06 53 25.1		SBA EP	01 14 27.0	OCT 24	
36.7N 141.1E		02.7S 142.1E		OCT 24		SPA IP	22 15 25.5
h ABOUT 040KM		h ABOUT 033KM		SBA EP	02 03 11.0	I	17 33.5
SPA IP'	10 13 35.0	SPA IP	07 06 07.0	OCT 24		OCT 24	
OCT 22		BYR EP	07 06 16.0	SBA EP	03 18 47.0	SPA EP	22 31 11.0
SPA IP	12 06 51.0	OCT 23		OCT 24		OCT 25	
E	12 36.0	H-09 39 06.2		SPA IP	05 44 55.5	SPA EP	00 18 54.0
BYR EP	12 07 13.0	28.2S 177.3W		OCT 24		OCT 25	
OCT 22		h ABOUT 068KM		H-06 51 01.9		SPA IP	00 51 32.0
SPA EP	15 09 05.0	SPA IP	09 49 21.0	38.8N 071.0E		OCT 25	
OCT 22		I	52 14.0	h ABOUT 057KM		SPA EP	02 04 25.0
SPA EP	18 31 35.0	OCT 23		SPA IP'	07 10 03.5	OCT 25	
OCT 22		SPA EP	09 58 57.0	OCT 24		H-03 43 20.0	
BYR IP	19 54 00.0	OCT 23		H-07 51 30.7		05.0N 082.5W	
SPA IP	19 54 42.0	H-11 08 03.1		60.9N 146.7W		h ABOUT 033KM	
OCT 22		45.2N 152.0E		h ABOUT 033KM		SPA EP	03 56 40.0
AIA EP	21 52 56.0	h ABOUT 033KM		SPA EP'	08 11 12.0	OCT 25	
I	55 25.0	SPA EP'	11 27 21.0	OCT 24		H-06 25 48.6	
OCT 22		OCT 23		H-08 46 25.0		02.0S 077.2W	
SPA IP	22 15 35.5	SPA EP	14 34 54.0	24.8N 122.1E		h ABOUT 160KM	
OCT 22		OCT 23		h ABOUT 063KM		BYR IP	06 37 45.0
MCQ EP	22 30 14.0	SPA EP	16 17 40.0	SPA EP'	09 04 57.0	SPA IP	06 38 22.5
OCT 23		OCT 23		OCT 24		OCT 25	
SPA IP	00 33 17.5	SPA EP	17 34 12.0	H-09 51 27.3		SPA IP	07 02 17.0
OCT 23		OCT 23		19.1S 169.7E		OCT 25	
SPA EP	01 04 06.0	SBA EP	18 18 04.0	h ABOUT 033KM		H-07 59 58.8	
OCT 23		OCT 23		SPA IP	10 02 42.5	73.5N 053.7E	
MCQ IP	01 54 08.0	SPA IP	19 41 34.0	OCT 24		h ABOUT 000KM	
IS	54 29.0	OCT 23		SBA EP	11 31 20.0	SPA EP'	08 20 01.0
OCT 23		SPA IP	20 28 35.5	OCT 24		OCT 25	
H-01 56 03.2		OCT 23		SPA IP	13 41 48.0	H-10 01 48.0	
19.8N 056.0W		H-21 06 24.2		OCT 24		15.3S 173.3W	
h ABOUT 031KM		44.0N 147.5E		H-13 46 19.1		h ABOUT 033KM	
BYR EP	02 10 11.0	h ABOUT 045KM		55.8N 160.4E		BYR IP	10 12 54.0
E	25 45.0	BYR EP'	21 25 23.0	h ABOUT 033KM		OCT 25	
SPA EP	02 10 33.0	I	29 04.0	SPA IP'	14 05 52.5	H-12 08 46.9	
IPP	15 02.5	SPA EP'	21 25 25.0	OCT 24		21.7S 179.2W	
E(S)	22 54.0	I	15 38.0	SPA IP	15 22 16.0	h ABOUT 534KM	
SBA EP'	02 14 49.0	I	29 05.0	OCT 24		BYR IP	12 18 27.0
WIL EP'	02 15 26.0	OCT 23		SPA EP	18 26 02.0	E	22 00.0
EPP	17 44.0	H-22 22 06.9		OCT 24		E	46 33.0
OCT 23		61.8N 161.6W		H-18 38 25.7		SPA IP	12 18 56.0
SPA EP	02 47 55.0	h ABOUT 029KM		66.0N 145.5E		I	19 15.0
OCT 23		SPA IP'	22 42 00.0	h ABOUT 033KM		I	21 02.0
H-05 06 43.9		OCT 23		SPA EP'	18 58 17.0	MAW IP	12 20 00.8
23.6S 180.0W		SBA IP	23 16 27.7	I	54 40.0	EPP	22 13.5
h ABOUT 548KM		OCT 24		OCT 24		ES	29 14.5
SPA IP	05 16 41.0	H-00 40 09.4		SPA IP	21 35 48.0	OCT 25	
MAW IP	05 17 47.1	44.2N 149.3E		OCT 24		SPA IP'	12 46 13.0
		h ABOUT 033KM		H-22 04 57.5		I	46 54.5
		SPA EP'	00 59 26.0	04.5S 152.9E		OCT 25	
				h ABOUT 049KM		MAW IP	16 00 37.8

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
h m s		h m s		h m s		h m s	
OCT 25 SPA IP	20 23 27.5	OCT 26 SPA EP	12 36 27.0	SPA IP	20 10 42.5	OCT 28	
OCT 25 MAW EP	22 44 37.5	OCT 26 SPA IP	13 10 27.0	MAW IP	20 12 02.1	H-01 34 54.5	
OCT 25 SPA EP	22 45 50.0	OCT 26 H-14 22 57.8		OCT 27		17.7N 094.2W	
OCT 25 H-22 56 32.8		OCT 26 02.2N 126.8E		H-21 24 31.2		h ABOUT 159KM	
2.0S 079.0W		h ABOUT 048KM		45.6S 096.1E		MAW IP'	01 53 41.1
h ABOUT 057KM		MAW IP	14 35 16.4	h ABOUT 033KM		OCT 28	
BYR IP	23 08 40.0	SBA IP	14 35 19.9	WIL IP	21 29 23.0	MAW IP	02 20 47.7
OCT 26 MAW IP	00 06 18.7	SPA IP	14 36 04.0	ES	33 31.0	SPA EP	02 21 36.0
OCT 26 H-00 55 22.3		I	36 16.0	MAW IP	21 30 19.9	OCT 28	
8.9N 083.9W		E	46 30.0	E	30 37.0	H-03 07 07.3	
h ABOUT 033KM		OCT 26 SPA EP	16 15 46.0	E	31 05.0	13.4S 072.6W	
RYR EP	01 08 23.5	OCT 26 SPA EP	19 18 11.0	SBA IP	21 32 20.0	h ABOUT 053KM	
OCT 26 MAW IP	01 26 29.9	OCT 27 SPA IP	00 49 48.5	SPA IP	21 32 41.0	SPA EP	03 18 54.0
SPA EP	01 27 17.0	I	50 33.0	IPP	34 24.0	OCT 28	
OCT 26 H-01 29 21.1		OCT 27		IS	39 30.0	WIL IP	03 55 04.0
32.9N 049.2E		H-01 52 21.7		BYR IP	21 33 47.0	OCT 28	
h ABOUT 033KM		28.4N 128.8E		IPP	35 44.0	MAW EP	04 59 32.0
SPA EP'	01 48 11.0	h ABOUT 033KM		ES	41 23.0	SPA EP	05 01 44.0
OCT 26 SBA EP	01 41 53.0	SBA EP'	02 10 36.0	OCT 27 SPA IP	22 33 30.5	OCT 28	
OCT 26 SPA EP	02 09 29.0	OCT 27 SBA EP	02 53 10.0	OCT 27		H-05 48 45.4	
OCT 26 MAW IP	03 27 24.3	OCT 27 WIL EP	03 55 04.0	H-22 36 17.9		16.6S 177.2W	
OCT 26 SBA EP	03 43 52.0	OCT 27 BYR EP	04 36 13.0	58.5S 066.2W		h ABOUT 033KM	
OCT 26 H-04 05 37.0		OCT 27 SPA IP	04 51 29.5	h ABOUT 033KM		BYR IP	05 59 46.0
49.1S 163.7E		OCT 27		BYR IP	22 41 56.0	SPA E(P)	06 00 05.0
h ABOUT 033KM		H-06 12 48.8		I	42 59.0	OCT 28	
MCQ EP	04 07 09.0	20.8S 071.4W		E	46 40.0	SPA EP	07 44 04.0
BYR IP	04 13 08.0	h ABOUT 008KM		E	47 43.0	OCT 28	
SPA IP	04 13 19.0	BYR EP	06 23 18.0	SPA IP	22 42 38.5	H-08 17 20.5	
OCT 26 SPA EP	06 35 31.0	SPA IP	06 23 58.5	IPP	43 05.5	60.8N 146.9W	
OCT 26 SPA IP	07 16 32.0	OCT 27 MCQ IP	12 37 23.5	ES	49 33.0	h ABOUT 033KM	
I	16 56.0	ES	37 34.0	MAW IP	22 44 58.5	SPA IP'	08 37 06.0
OCT 26 SPA EP	09 52 33.0	OCT 27		E	46 57.0	OCT 28	
OCT 26 SPA EP	11 49 35.0	H-19 46 12.0		WIL EP	22 45 52.0	MAW IP	08 45 50.9
		47.8N 016.1E		OCT 28		OCT 28	
		h ABOUT 039KM		SPA IP	00 18 30.0	H-09 26 02.0	
		SPA EP'	20 05 37.0	I	18 45.5	06.1S 149.3E	
		OCT 27		I	18 51.5	h ABOUT 060KM	
		H-20 00 34.9		MAW IP	00 20 58.7	MAW I(P)	09 38 22.2
		27.6S 176.8W		OCT 28		E	38 34.5
		h ABOUT 168KM		MAW IP	00 22 24.4	BYR EP	09 38 29.0
		BYR EP	20 10 08.0	OCT 28		OCT 28	
				H-00 22 07.3		SBA EP	10 42 29.0
				29.6S 070.7W		OCT 28	
				h ABOUT 045KM		H-13 10 49.5	
				BYR IP	00 31 31.0	06.4S 154.7E	
				MAW IP	00 33 58.3	h ABOUT 090KM	
				OCT 28		BYR IP	13 23 06.0
				MAW E(P)	00 36 57.0	SPA IP	13 23 09.0
				OCT 28		MAW IP	13 23 14.6
				SPA EP'	00 57 14.0		

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
OCT 28 SPA IP	14 24 13.5	OCT 29 SBA EP	13 37 28.0	MAW EP	03 03 14.5	OCT 31 SPA IP	04 26 53.0
OCT 28 MAW IP	15 53 21.8	OCT 29 H-13 40 36.3 41.3N 029.5W h ABOUT 033KM		BYR EP	03 06 29.0	OCT 31 SPA EP	06 37 39.0
OCT 28 SPA EP	18 13 56.0	SPA EP'	13 59 46.0	OCT 30 SPA IP	03 35 08.0	OCT 31 SPA IP	08 55 55.5
OCT 28 H-18 24 56.6 6.8S 155.1E h ABOUT 085KM		OCT 29 MAW IP	15 01 20.5	OCT 30 SPA EP	03 51 05.0	OCT 31 MAW IP	09 02 26.4
BYR IP	18 37 12.0	OCT 29 H-19 05 42.9 22.8S 065.6W h ABOUT 127KM		BYR EP	03 51 20.0	OCT 31 SPA IP	09 27 02.0
SPA IP	18 37 16.0	SPA IP	19 16 26.0	OCT 30 MAW EP	06 21 59.5	OCT 31 SPA EP	11 40 03.0
MAW IP	18 37 22.0	OCT 29 H-19 09 59.2 17.8S 168.1E h ABOUT 033KM		SPA IP	06 24 24.0	OCT 31 H-12 13 27.5 38.2S 074.1W h ABOUT 039KM	
OCT 28 SPA EP	19 32 12.0	SPA IP (P) I	19 21 33.0 21 40.0	OCT 30 SPA EP	13 00 07.0	SPA EP	12 22 35.0
OCT 28 WIL IP ES	21 29 23.0 33 31.0	MAW EP	19 22 02.7	OCT 30 SBA EP	13 28 32.0 13 28 33.0	OCT 31 BYR EP	12 55 58.0
OCT 28 BYR IP	21 46 21.0	OCT 29 H-23 07 41.0 06.9S 143.6E h ABOUT 033KM		OCT 30 SPA IP	14 03 51.0 06 35.5	SPA IP	12 56 05.0
SPA IP	21 46 54.5	SPA IP	23 20 06.0	I	06 35.5	OCT 31 H-13 36 44.0 55.4N 160.4E h ABOUT 033KM	
MAW IP	21 48 02.8	BYR IP	23 20 13.0	BYR IP	14 04 06.0	SPA IP'	13 56 19.0
OCT 28 WIL EP	22 41 52.0	OCT 30 H-00 22 48.8 38.9S 074.1W h ABOUT 033KM		OCT 30 SPA IP	16 44 50.0	OCT 31 SPA IP	14 05 52.5
OCT 29 H-01 14 51.0 52.7N 168.7W h ABOUT 033KM		BYR EP	00 30 59.0	MAW IP	16 45 59.5	OCT 31 SPA EP	15 16 38.0
MAW EP'	01 34 39.5	SPA IP	00 31 51.5	OCT 30 H-16 47 52.7 06.8N 073.0W h ABOUT 146KM		OCT 31 MAW IP'	17 24 49.5
I	34 48.8	MAW IP	00 33 53.5	SPA EP	17 01 07.0	OCT 31 SPA EP	18 42 00.0
OCT 29 MAW IP	03 00 42.8	OCT 30 H-02 10 37.6 35.0S 107.3W h ABOUT 033KM		OCT 30 H-17 13 13.8 56.6N 152.2W h ABOUT 033KM		OCT 31 H-18 54 28.6 8.8N 126.6E h ABOUT 069KM	
OCT 29 MAW IP	05 01 01.6	BYR EP	02 18 56.0	SPA IP'	17 32 50.5	MAW EP	19 07 16.5
OCT 29 H-06 51 46.0 13.4S 166.6E h ABOUT 043KM		SPA EP	02 20 07.0	OCT 30 SBA EP	17 18 40.0	SPA IP	19 08 02.0
SBA EP	07 02 20.0	E	28 04.0	OCT 30 H-19 01 45.7 37.8N 118.2W h ABOUT 020KM		OCT 31 BYR EP	20 27 33.0
BYR EP	07 03 19.0	MAW EP	02 22 32.0	SPA EP'	19 21 20.0	OCT 31 SPA EP	21 27 22.0
SPA IP	07 03 33.5	OCT 30 H-02 22 50.0 32.6S 069.9W h ABOUT 092KM		OCT 30 H-20 04 41.1 59.2N 152.6W h ABOUT 033KM		OCT 31 SPA IP	22 40 55.0
MAW IP	07 04 06.5	SPA EP	02 32 32.0	SPA EP'	20 24 28.0	OCT 31 MAW EP	22 50 10.5
OCT 29 MCQ EP ES	08 00 59.0 01 13.0	OCT 30 H-02 53 40.8 12.1S 065.7E h ABOUT 028KM		OCT 31 SPA IP	00 34 28.5	NOV 01 SPA EP	00 30 24.0
OCT 29 SPA EP	08 35 18.0						
OCT 29 SBA EP	12 44 31.0						

COAST AND GEODETIC SURVEY

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
NOV 1 H-02 56 41.4 25.1S 179.7W h ABOUT 459KM		NOV 01 MAW EP	12 56 50.5	NOV 2 H-07 07 57.8 11.8N 086.9W h ABOUT 117KM		NOV 03 SPA EP I	04 19 39.0 20 38.5
SBA IP	03 05 19.2	NOV 01 SPA EP	13 03 42.0	SPA EP	07 21 35.2	NOV 03 SPA EP	08 31 31.0
SPA IP	03 06 37.0	MAW EP	13 04 55.0	NOV 2 H-08 10 05.5 16.9S 169.7E h ABOUT 255KM		NOV 03 SPA EP	08 37 28.0
MAW IP	03 07 45.6	NOV 1 H-15 58 15.1 3.1N 128.3E h ABOUT 107KM		BYR IP	08 20 51.0	NOV 03 SPA EP	09 17 21.0
NOV 01 SPA IP	04 01 37.0	MAW IP	16 10 33.4	MAW I(P)	08 21 58.7	NOV 03 SPA IP	09 27 04.5
MAW IP	04 02 28.4	SPA IP	16 11 18.5	NOV 2 H-09 18 01.6 05.8S 105.4E h ABOUT 039KM		NOV 03 AIA P	09 32 17.0
NOV 1 H-04 55 47.4 51.8N 130.8W h ABOUT 033KM		NOV 1 H-16 43 40.6 27.3S 178.5W h ABOUT 366KM		MAW EP	09 28 59.0	NOV 03 AIA EP	09 42 18.0
SPA EP'	05 15 12.0	SPA IP	16 53 30.5	SPA EP	09 30 30.0	NOV 03 SPA EP	09 59 41.0
NOV 1 H-05 15 48.4 13.7N 120.6E h ABOUT 094KM		MAW IP	16 54 44.0	NOV 02 SPA IP	10 52 16.5	NOV 3 H-11 09 37.0 34.6N 138.6E h ABOUT 033KM	
MAW EP	05 28 43.5	NOV 01 MCQ IP	17 02 52.0	NOV 02 SPA EP	11 14 39.0	SPA IP'	11 28 36.5
NOV 1 H-06 46 54.1 51.7N 175.4W h ABOUT 020KM		IS	03 08.0	NOV 02 MAW EP	13 48 50.0	NOV 03 AIA EP	12 39 30.0
SPA EP'	07 06 17.0	NOV 01 SPA IP	17 54 55.5	NOV 02 SPA EP	14 26 18.0	NOV 3 H-12 43 04.7 00.1N 123.7E h ABOUT 149KM	
MAW IP'	07 06 38.2	NOV 01 SBA EP	19 36 37.0	NOV 02 MCQ IP	16 04 03.0	MCQ EP	12 53 09.0
NOV 01 AIA E	07 22 09.0	MAW IP	19 40 47.1	NOV 02 SPA EP	18 16 33.0	WIL IP	12 53 43.0
NOV 1 H-10 03 28.6 34.7S 108.5W h ABOUT 033KM		NOV 01 SPA EP	22 17 40.0	NOV 02 AIA EIP	19 01 09.0	MAW IP	12 54 55.6
SPA EP	10 13 02.0	NOV 01 SPA IP	22 57 16.5	NOV 02 BYR EP	23 38 42.0	E	55 23.5
MAW EP	10 15 23.5	NOV 2 H-05 03 52.3 07.5S 128.7E h ABOUT 048KM		NOV 03 MCQ IP	00 20 48.0	E	55 29.5
I	15 31.5	SBA EP	05 15 19.0	NOV 03 MCQ IP	00 42 23.0	SBA IP	12 55 06.7
NOV 01 SPA IP	11 20 14.5	MAW IP	05 15 23.7	NOV 03 MAW EP	00 50 53.5	BYR IP	12 56 11.0
NOV 1 H-12 26 06.2 3.1N 128.1E h ABOUT 065KM		SPA IP	05 16 10.5	NOV 3 H-02 05 40.4 34.5N 140.3E h ABOUT 086KM		EPP	59 48.0
MCQ EP	12 36 27.0	I	16 15.0	SPA IP'	02 24 31.5	NOV 3 H-14 55 40.1 44.6N 149.0E h ABOUT 020KM	
MAW IP	12 38 29.0	I	16 25.5	NOV 3 H-02 25 50.7 29.7N 051.0E h ABOUT 035KM		BYR EP'	15 14 55.0
IS	48 43.0	BYR EP	05 16 29.0	SPA IP'	02 44 37.5	SPA IP'	15 14 58.0
SBA IP	12 38 29.1	NOV 2 H-06 50 58.2 4.1S 076.9W h ABOUT 091KM		NOV 3 H-02 25 50.7 29.7N 051.0E h ABOUT 035KM		NOV 03 SBA EP	17 09 19.0
SPA IP	12 39 14.0	BYR IP	07 02 52.0	NOV 3 H-02 25 50.7 29.7N 051.0E h ABOUT 035KM		NOV 03 SPA IP	17 18 34.0
I	49 37.5	ES	12 45.0	SPA IP'	02 44 37.5	NOV 03 SBA EP	17 44 59.0
IS	49 38.5	SBA IP	07 03 56.8			NOV 03 SPA IP	17 54 04.0
BYR EP	12 39 32.0	MAW EP	07 04 48.5				
ES	51 01.0	E	05 18.0				

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Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
NOV 03 SPA IP	18 13 07.5	NOV 4 H-06 27 53.8 16.3S 172.9W h ABOUT 033KM		NOV 05 SPA EP	10 07 45.0	SPA EP'	12 38 26.0
NOV 03 AIA EP	18 21 08.0	SPA EP	06 39 25.0	NOV 05 AIA EP	10 50 21.0	NOV 06 SPA EP	13 55 51.0
NOV 3 H-18 28 58.6 1.7S 149.8E h ABOUT 035KM		NOV 4 H-06 40 51.0 55.0N 162.3E h ABOUT 033KM		NOV 05 SPA IP	10 51 28.0	NOV 6 H-13 55 53.7 31.7S 057.4E h ABOUT 033KM	
MAW IP	18 41 42.3	SPA IP'	07 00 22.5	NOV 05 SBA IP	11 40 30.8	WIL EP	14 04 21.0
SPA IP	18 41 47.5	NOV 04 SBA EP	07 05 38.0	NOV 05 SBA EP	12 06 52.0	ES	11 08.0
BYR EP	18 41 48.0	NOV 04 SBA EP	09 34 09.0	NOV 05 SPA IP	13 20 02.0	SPA IP	14 05 46.0
NOV 03 SBA EP	18 53 57.0	NOV 04 SPA EP	20 32 25.0	NOV 05 BYR EP	13 21 13.0	SBA P	14 06 20.0
NOV 03 SPA IP	19 21 22.5	NOV 04 SPA EP	21 16 18.0	NOV 05 SBA EP	15 21 55.0	BYR EP	14 06 54.0
WIL EP	19 26 32.0	NOV 04 BYR EP	21 19 17.0	NOV 05 SPA IP	16 05 56.5	NOV 6 H-16 31 11.9 21.0S 067.2W h ABOUT 179KM	
NOV 03 MCQ IP	19 42 53.0	NOV 04 SPA IP	21 27 38.5	NOV 05 BYR IP	16 06 11.0	BYR I	16 41 23.0
IS	42 57.0	NOV 04 BYR EP	21 19 17.0	NOV 05 SPA IP	16 05 56.5	SPA IP	16 42 00.0
NOV 03 BYR EP	21 10 39.0	NOV 04 SPA IP	21 27 38.5	NOV 05 BYR IP	16 06 11.0	NOV 06 AIA IP C	18 25 59.0
NOV 04 SPA IP	00 29 06.5	NOV 04 I	27 43.5	NOV 05 AIA EP	17 05 30.0	NOV 06 SPA EP	21 25 02.0
NOV 04 SPA EP	01 14 10.0	NOV 04 I	27 53.5	NOV 05 I	07 32.5	NOV 06 SBA EP	22 55 35.0
NOV 04 SBA EP	02 08 14.0	NOV 04 AIA EP	22 52 00.0	NOV 05 SBA IP	17 10 38.5	NOV 06 SBA EP	23 22 36.0
NOV 4 H-02 11 24.9 19.7S 069.2W h ABOUT 102KM		NOV 4 E	54 12.0	NOV 05 AIA EP	21 44 09.0	NOV 06 SBA EP	23 22 36.0
BYR IP	02 21 53.0	NOV 5 H-00 45 30.9 7.0S 129.4E h ABOUT 095KM		NOV 05 SBA EP	00 55 33.0	NOV 07 SPA IP	00 15 01.5
I _p P	22 18.0	SPA IP	00 57 46.5	NOV 06 SBA EP	00 55 44.0	NOV 7 H-07 44 05.7 06.5S 148.2E h ABOUT 048KM	
IPC _P	22 24.0	NOV 5 H-01 47 42.1 05.1S 146.1E h ABOUT 137KM		NOV 06 SPA EP	05 23 02.0	SPA IP	07 56 30.0
SPA IP	02 22 32.0	NOV 5 H-04 19 39.5 05.5S 147.2E h ABOUT 197KM		NOV 6 H-09 22 01.1 57.0N 161.6E h ABOUT 033KM		NOV 7 H-07 59 56.7 06.8S 148.4E h ABOUT 044KM	
I	22 57.5	SPA IP	02 00 02.0	SPA EP'	09 41 34.0	SPA I(P)	08 12 08.5
NOV 04 SPA IP	03 19 23.5	NOV 5 H-04 19 39.5 05.5S 147.2E h ABOUT 197KM		NOV 6 H-09 53 22.4 44.4N 149.0E h ABOUT 060KM		NOV 07 AIA EP	08 01 17.0
BYR EP	03 19 56.0	SPA IP	04 31 51.0	NOV 6 H-09 53 22.4 44.4N 149.0E h ABOUT 060KM		NOV 7 H-08 47 59.3 06.7S 148.2E h ABOUT 069KM	
NOV 4 H-03 37 35.9 54.9N 162.6E h ABOUT 049KM		BYR EP	04 31 55.0	SPA EP'	10 12 20.0	NOV 7 H-08 47 59.3 06.7S 148.2E h ABOUT 069KM	
SPA IP'	03 57 03.5	NOV 05 SBA IP	07 38 39.3	NOV 06 SPA IP	10 15 24.0	SPA IP	09 00 20.0
NOV 04 AIA EP	04 45 37.0	NOV 5 H-09 07 32.0 20.3S 174.0W h ABOUT 015KM		I	16 02.0	NOV 07 AIA EIP	11 27 22.0
NOV 04 MAW EP	05 13 52.0	BYR EP	09 18 06.0	E	24 05.0	SBA EP	11 29 30.0
		SPA IP	09 18 42.5	NOV 06 SBA EP	10 45 29.0	NOV 07 AIA EP	12 33 07.0
				NOV 6 H-12 18 42.1 59.7N 148.9W h ABOUT 033KM			

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
NOV 07 SPA EP	13 51 07.0	BYR E(P) I ES	02 51 22.0 55 17.5 57 36.5	NOV 09 WIL EP	08 34 34.0	NOV 10 H-06 07 49.6 59.8N 144.3W h ABOUT 042KM	
NOV 7 H-14 49 13.4 45.5N 150.3E h ABOUT 033KM		SPA E(P) ISKS	02 51 31.0 57 46.0	NOV 09 SPA EP I	10 01 19.0 14 52.0	SPA EP'	06 27 28.0
SPA EP' I	15 08 22.0 11 55.5	NOV 08 SPA I	04 13 30.5	NOV 09 AIA EP	10 12 54.0	NOV 10 MAW EP	10 26 52.5
NOV 07 AIA EP	15 50 25.0	NOV 08 AIA EP	05 40 39.0	NOV 09 AIA IP	15 20 08.5	NOV 10 H-10 35 34.5 6.1S 147.2E h ABOUT 080KM	
NOV 7 H-18 37 43.7 .4N 100.1E h ABOUT 107KM		NOV 08 WIL IP E	05 50 27.0 55 31.0	NOV 9 H-16 01 03.1 56.8N 161.5E h ABOUT 033KM		SPA IP I I	10 47 56.0 48 08.5 48 20.0
WIL IP ES	18 48 26.5 57 20.0	NOV 08 SPA IP	06 06 58.5	SPA IP'	16 20 38.5	NOV 10 SPA IP	11 43 30.0
SBA IP	18 50 12.7	NOV 08 SPA IP	10 52 13.0	NOV 9 H-16 12 50.6 29.5N 086.0E h ABOUT 033KM		NOV 10 SPA IP	14 04 14.5
SPA IP I	18 50 35.0 19 01 04.0	NOV 08 SPA EP	14 40 01.0	SPA EP'	16 31 27.0	NOV 10 SPA IP	14 41 34.5
NOV 07 BYR IP	18 55 11.0	NOV 8 H-16 36 52.8 05.5S 147.0E h ABOUT 170KM		NOV 09 AIA EP	16 46 03.0	NOV 10 MAW IP	15 15 10.1
NOV 07 SPA EP	20 44 58.0	SPA IP	16 49 07.5	NOV 9 H-17 53 02.5 07.1S 129.1E h ABOUT 164KM		NOV 10 SPA IP	15 44 05.0
NOV 07 SPA IP	21 22 49.5	NOV 8 H-17 56 31.1 34.8N 133.0E h ABOUT 042KM		SPA IP	18 05 10.0	NOV 10 H-15 47 49.3 32.6N 049.1E h ABOUT 028KM	
NOV 07 SPA IP	21 40 37.0	SPA IP'	18 15 21.0	NOV 09 SPA EP I	19 01 19.0 14 52.0	SPA IP'	16 06 43.5
NOV 7 H-23 41 55.1 19.9S 177.4W h ABOUT 281KM		NOV 08 SPA IP	18 52 17.0	NOV 09 SPA IP	19 35 43.5	NOV 10 BYR EP	15 55 32.0
BYR IP	23 52 07.0	NOV 08 SPA EP	20 41 26.0	NOV 09 SPA IP	20 20 50.0	NOV 10 H-16 34 15.5 03.7S 136.5E h ABOUT 014KM	
NOV 07 SBA IP E	23 44 01.1 51 24.7	NOV 09 AIA EP	00 26 37.0	NOV 10 SPA IP	00 18 07.5	SPA EP	16 47 00.0
NOV 8 H-00 06 54.3 48.8S 111.2W h ABOUT 033KM		NOV 9 H-04 44 19.9 07.2S 128.2E h ABOUT 129KM		NOV 10 SPA IP	01 11 50.5	NOV 10 SPA EP	19 12 10.0
SPA EP	00 14 39.0	MAW IP	04 55 42.6	NOV 10 AIA EP	03 12 18.0	NOV 10 SPA EP	19 39 47.0
NOV 08 SPA IP I	00 48 22.0 48 30.5	SPA IP I I	04 56 29.5 56 45.0 57 29.0	NOV 10 SPA IP I	04 26 34.5 27 29.0	NOV 10 MAW IP	21 48 38.4
NOV 08 SPA EP' I	01 35 08.0 35 25.5	NOV 09 BYR IP E	05 41 52.0 47 05.0	NOV 10 SPA IP	05 28 25.0	NOV 10 SPA EP	22 48 09.0
NOV 8 H-02 43 57.2 49.0S 163.7E h ABOUT 033KM		NOV 9 H-08 05 48.8 39.8N 048.4E h ABOUT 065KM		NOV 10 MAW EP	05 41 48.5	NOV 11 SPA IP	03 21 24.5
SBA EP	02 49 57.0	SPA IP' I I	08 24 50.0 25 04.5 25 19.5	NOV 10 MCQ EP	05 55 46.0	NOV 11 SPA IP I	03 40 56.5 41 38.5

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
BYR EP	03 41 20.0	NOV 11		NOV 11		NOV 11	
		AIA EP	14 19 38.0	H-17 26 24.5		SPA IP	19 09 41.5
NOV 11				56.8N 161.8E			
SPA EP	09 09 19.0	NOV 11		h ABOUT 033KM		NOV 11	
		H-14 37 22.6				H-19 13 39.3	
NOV 11		56.8N 161.1E		SPA IP'	17 45 59.5	56.6N 161.3E	
H-09 18 33.9		h ABOUT 033KM				h ABOUT 033KM	
56.7N 161.4E				NOV 11			
h ABOUT 033KM		SPA IP'	14 56 59.0	SPA IP	17 29 22.5	SPA IP'	19 33 16.0
SPA IP'	09 38 09.5	NOV 11		NOV 11		NOV 11	
		SPA IP	14 54 50.5	SPA IP	17 38 27.0	SPA IP	19 14 57.5
NOV 11							
SPA EP	09 35 56.0	NOV 11		NOV 11		NOV 11	
		H-14 59 36.0		H-17 53 19.3		SPA IP	19 21 01.5
NOV 11		56.9N 161.7E		56.5N 161.3E		I	21 57.5
H-10 16 17.5		h ABOUT 033KM		h ABOUT 033KM			
56.8N 161.2E						NOV 11	
h ABOUT 033KM		SPA IP'	15 19 09.5	SPA IP'	18 12 55.5	MCQ EP	20 02 52.0
						ES	03 01.0
SPA IP'	10 35 53.5	NOV 11		NOV 11			
		SPA IP	15 24 59.0	SPA EP	17 54 07.0	NOV 11	
NOV 11		I	25 40.5			AIA EP	22 13 55.0
SPA IP	10 32 05.0			NOV 11			
		NOV 11		SPA IP	18 08 26.0	NOV 12	
NOV 11		H-15 40 18.0				SPA IP	00 20 38.0
H-11 19 38.6		56.6N 161.4E		NOV 11			
23.7S 178.0W		h ABOUT 033KM		H-18 18 52.7		NOV 12	
h ABOUT 332KM				56.5N 161.3E		SPA IP	00 24 13.0
		SPA IP'	15 59 53.5	h ABOUT 033KM			
SPA E(P)	11 29 49.0	NOV 11				NOV 12	
		SPA EP	15 57 46.0	SPA IP'	18 38 29.0	H-00 55 25.6	
NOV 11		I	58 39.5			33.2S 179.9W	
SPA EP	11 24 13.0			NOV 11		h ABOUT 074KM	
		NOV 11		SPA IP	18 22 11.0		
NOV 11		SPA EP	16 24 41.3			SPA IP	01 05 05.5
SPA EP	11 41 39.0			NOV 11			
		NOV 11		SPA IP	18 28 19.0	NOV 12	
NOV 11		SPA IP	16 30 40.0			H-01 12 07.7	
SPA EP	11 55 00.0			NOV 11		33.0S 179.7E	
		NOV 11		SPA EP	18 32 14.0	h ABOUT 008KM	
NOV 11		NOV 11					
SPA EP	12 11 23.0	H-16 32 24.5		NOV 11		BYR EP	01 21 24.0
		56.5N 161.2E		SPA IP	18 34 45.0		
NOV 11		h ABOUT 033KM		I	35 37.0	SPA I(P)	01 21 53.5
SPA EP	12 13 21.0					I	22 02.0
		SPA IP'	16 52 01.5	NOV 11			
NOV 11				SPA IP	18 46 14.5	NOV 12	
SPA EP	12 18 57.0	NOV 11				SPA IP	01 17 58.5
		SPA EP	16 36 03.0	NOV 11			
NOV 11				H-18 48 56.6		NOV 12	
H-13 11 23.3		NOV 11		13.4S 075.0W		SPA IP	01 40 10.0
56.5N 161.5E		H-16 57 24.4		h ABOUT 099KM			
h ABOUT 033KM		56.6N 161.4E		BYR EP	18 59 59.5	NOV 12	
		h ABOUT 033KM				SPA EP	02 59 38.0
SPA IP'	13 31 00.5			SPA IP	19 00 25.5		
		SPA IP'	17 16 59.0	I	00 40.0	NOV 12	
NOV 11						SPA IP	04 31 57.0
H-13 17 37.5		NOV 11		MAW IP	19 02 04.2		
56.6N 161.4E		SPA EP	16 58 17.0			NOV 12	
h ABOUT 033KM				NOV 11		AIA EP	04 37 50.0
		NOV 11		SPA IP	18 59 32.0		
SPA IP'	13 37 14.5	H-17 18 43.2				SPA EP	04 39 31.0
		19.8N 108.9W		NOV 11			
NOV 11		h ABOUT 033KM		H-19 06 57.1		NOV 12	
SPA IP	14 02 33.5			56.5N 161.3E		H-05 33 28.7	
		SPA I(P)	17 33 18.5	h ABOUT 033KM		18.2S 176.4W	
NOV 11						h ABOUT 107KM	
H-14 11 05.0		NOV 11		BYR EP'	19 26 24.0		
29.4S 178.2W		H-17 23 18.0				SBA EP	05 43 31.0
h ABOUT 089KM		55.8N 161.0E		SPA IP'	19 26 33.5		
		h ABOUT 033KM				BYR EP	05 44 10.0
SPA IP	14 21 09.0					E+P	44 27.0
		SPA EP'	17 42 56.0				

ANTARCTIC SEISMOLOGICAL BULLETIN

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
RYR IP	16 53 14.0	NOV 16		NOV 16		NOV 17	
SPA EP	16 53 22.0	SPA EP	08 34 17.0	H-21 37 31.0		H-08 08 56.7	
		NOV 16		30.9S 066.8W		23.5S 175.7W	
NOV 15		SPA EP	08 51 08.0	h ABOUT 033KM		h ABOUT 320KM	
SPA IP	17 50 55.0			SPA IP	21 47 30.0	BYR IP	08 18 41.0
NOV 15		NOV 16				I P	28 08.0
SPA IP	18 15 17.5	H-08 54 08.9		NOV 16			
		56.1S 027.5W		H-22 40 44.0		NOV 17	
NOV 15		h ABOUT 163KM		01.0N 118.8E		H-08 15 39.3	
H-20 03 49.6				h ABOUT 033KM		05.7S 150.7E	
34.9N 005.2W		SPA IP	09 00 39.5			h ABOUT 045KM	
h ABOUT 003KM		I	03 12.4	MIR IP	22 51 53.4		
SPA IP'	20 22 51.5	E	06 43.0	ES	23 01 02.6	MCQ EP	08 24 25.0
NOV 15		BYR EP	09 00 53.0	MAW IP	22 52 43.1	WIL IP	08 26 27.0
SPA EP	22 01 07.0	MAW IP	09 01 30.2	SBA EP	22 53 07.0	ES	35 09.0
NOV 15		MIR E(P)	09 02 44.7	SPA IP	22 53 45.5	MIR IP	08 27 02.1
SPA IP	22 22 42.5	NOV 16				SBA IP	08 27 04.6
NOV 15		AIA EP	09 15 37.0	NOV 16		I	27 15.5
MAW EP	23 45 34.0	NOV 16		H-23 05 29.2		IS	36 32.3
NOV 16		H-09 34 42.3		15.8S 173.0W		MAW IP	08 28 05.2
MAW IP	00 18 48.0	22.8S 171.6E		h ABOUT 012KM		IS	38 22.5
		h ABOUT 025KM		SPA EP	23 17 10.0	SPA IP	08 28 07.0
NOV 16		SPA EP	09 45 36.0			IS	38 25.0
H-02 46 43.4		NOV 16		NOV 17			
36.9N 121.8W		NOV 16		H-00 01 17.1		NOV 17	
h ABOUT 033KM		SPA IP	10 47 27.5	16.3S 173.7W		SPA E	09 14 43.0
SPA EP'	03 05 46.0			h ABOUT 033KM			
MAW EP'	03 06 35.0	NOV 16		SBA EP	00 11 38.0	NOV 17	
		H-12 38 29.7		BYR EP	00 12 12.0	MIR IS	10 42 52.8
NOV 16		47.4N 154.2E		SPA IP	00 12 47.5		
H-04 47 27.5		h ABOUT 033KM		I	13 02.5	NOV 17	
36.3N 070.4E		SPA EP'	12 57 46.0	MIR E(P)	00 13 11.3	H-11 03 06.8	
h ABOUT 225KM		NOV 16				23.4S 179.9W	
SPA IP'	05 06 04.0	BYR I	13 43 40.0			h ABOUT 549KM	
I	07 01.0	SPA IP	13 44 09.5	NOV 17			
NOV 16				SPA IP	01 18 43.5	SBA IP	11 11 48.4
SPA IP	04 53 54.5	NOV 16		NOV 17		BYR IP	11 12 36.0
NOV 16		H-13 50 58.5		MIR E	00 11 34.9	I	13 10.5
SPA IP	05 24 39.5	48.3N 154.6E		NOV 17		SPA IP	11 13 05.0
		h ABOUT 033KM		MIR E	02 17 39.9	I	14 57.0
NOV 16		SPA EP'	14 10 09.0			MAW IP	11 14 09.3
H-05 27 33.8		NOV 16		NOV 17		E	16 11.0
39.8N 039.9E		MIR E(P)	14 54 32.9	H-02 46 35.2		AIA EP	11 14 14.0
h ABOUT 039KM		NOV 16		55.5S 027.9W		NOV 17	
SPA EP'	05 46 39.0	SPA EP	17 14 11.0	h ABOUT 115KM		MIR EP	11 12 37.1
NOV 16		NOV 16		SPA IP	02 53 15.5	NOV 17	
SPA EP	05 42 22.0	SPA IP	17 47 24.5	BYR IP	02 53 28.5	BYR IP	11 14 29.5
NOV 16		NOV 16		NOV 17		MIR EP	11 15 02.7
H-05 59 57.4		SBA EP	20 11 48.0	MIR EP'	02 52 13.6	NOV 17	
49.7N 078.0E		NOV 16		E	55 28.5	SPA EP	11 40 40.0
h ABOUT 000KM		NOV 16				NOV 17	
SPA EP'	06 19 17.0	H-20 35 06.0		NOV 17		MIR EP	12 06 25.5
BYR IP'	06 19 49.0	51.6N 178.5E		SPA EP	03 04 52.0	NOV 17	
I	19 54.0	h ABOUT 033KM		NOV 17		H-14 37 52.6	
NOV 16		SPA EP'	20 54 58.0	AIA EP	07 42 14.0	03.5S 150.1E	
MIR E	08 10 45.2			NOV 17		h ABOUT 033KM	
				MIR E(P)	08 04 58.8		
						MIR EP	14 49 30.8

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SPA EP	14 50 36.0	SPA IP	05 11 41.5	BYR EP	23 45 37.0	NOV 19	
BYR EP	14 50 38.0	I	12 32.0	SPA IP	23 46 12.5	SPA IP	21 21 50.0
NOV 17		I	41 25.0	NOV 19		NOV 19	
MIR IP	14 46 10.2	MAW EP	05 13 23.0	MAW IP	01 21 55.5	SPA EP	22 01 45.0
IS	55 23.0	NOV 18		NOV 19		NOV 19	
NOV 17		AIA EP	08 41 30.0	H-03 30 25.9		SPA EP	22 17 51.0
SPA EP	15 39 05.0	NOV 18		19.2S 169.3E		NOV 19	
NOV 17		SPA IP	10 09 22.0	h ABOUT 147KM		H-23 35 06.0	
MAW EP	16 24 57.0	NOV 18		SPA IP	03 41 26.5	6.0S 150.8E	
NOV 17		SPA IP	11 34 41.9	NOV 19		h ABOUT 003KM	
H-17 40 57.4		NOV 18		SBA EP	03 54 47.0	MCQ EP	23 43 55.0
.1S 122.9E		SPA EP	13 46 11.0	NOV 19		WIL IP	23 45 57.0
h ABOUT 160KM		NOV 18		SPA EP	06 31 41.0	ES	54 45.0
MAW EP	17 52 43.5	H-14 34 54.5		NOV 19		MIR IP	23 46 33.6
SPA IP	17 53 39.5	6.0S 148.2E		SPA IP	08 07 45.0	IS	55 53.0
NOV 17		h ABOUT 049KM		NOV 19		SBA IP	23 46 35.2
SPA IP	18 39 00.5	WIL EP	14 45 34.0	NOV 19		ES	56 02.4
NOV 17		E	45 48.0	AIA EP	09 13 20.0	MAW IP	23 47 38.7
SPA IP	18 39 00.5	ES	54 14.0	NOV 19		IS	57 57.0
NOV 17		SBA IP	14 46 18.0	SPA IP	10 43 39.5	BYR IP	23 47 40.5
H-19 00 10.4		MAW IP	14 47 14.4	BYR IP	10 43 55.0	IPP	47 58.5
12.7N 144.9E		SPA IP	14 47 20.5	NOV 19		ISKS	58 10.5
h ABOUT 043KM		I	47 34.5	SBA EP	13 50 37.0	NOV 20	
MIR E(P)	19 13 01.4	I	49 31.5	NOV 19		SBA EP'	00 14 25.0
NOV 17		BYR IP	14 47 24.0	H-14 07 21.5		NOV 20	
SBA EP	19 46 22.0	IPP	47 39.0	56.0N 161.3E		H-01 23 40.6	
NOV 17		IS	47 52.5	h ABOUT 033KM		06.2S 150.4E	
MAW EP	20 38 10.5	NOV 18		SPA IP'	14 26 55.5	h ABOUT 061KM	
NOV 18		SPA EP	17 16 08.0	NOV 19		SPA IP	01 36 05.5
H-00 11 55.8		NOV 18		AIA EP	14 56 18.0	BYR IP	01 36 07.0
10.3S 075.9W		MAW EP	21 04 59.5	NOV 19		NOV 20	
h ABOUT 024KM		NOV 18		H-15 45 31.2		SPA IP	01 34 19.0
SPA IP	00 24 04.0	H-22 21 01.9		03.4S 150.1E		I	50 27.5
NOV 18		20.2S 174.1W		h ABOUT 038KM		NOV 20	
H-03 24 53.9		h ABOUT 033KM		SBA EP	15 57 11.0	H-01 35 38.4	
9.6S 116.8E		SBA IP	22 30 56.0	SPA IP	15 58 10.5	05.5S 150.1E	
h ABOUT 082KM		BYR IP	22 31 34.0	BYR EP	15 58 13.0	h ABOUT 091KM	
SPA IP	03 36 57.0	ES	40 10.0	NOV 19		SPA EP	01 48 02.0
NOV 18		WIL EP	22 31 45.0	H-16 15 26.2		NOV 20	
H-04 03 58.0		ES	40 31.0	10.8S 166.3E		SPA IP	02 42 13.0
13.1S 075.0W		SPA IP	22 32 09.5	h ABOUT 166KM		I	42 24.0
h ABOUT 080KM		I	32 24.5	SPA IP	16 27 12.5	BYR EP	02 42 16.0
BYR IP	04 15 03.5	I	33 14.0	NOV 19		IPP	44 22.5
SPA IP	04 15 43.5	MIR EP	22 32 30.2	NOV 19		NOV 20	
I	16 05.0	ES	41 55.4	SPA IP	17 33 44.0	SPA IP	02 44 20.5
NOV 18		MAW EP	22 33 27.0	NOV 19		I	44 30.5
BYR EP	04 15 38.0	NOV 18		SPA IP	17 41 03.0	I	51 04.5
NOV 18		SPA I	23 00 15.5	NOV 19		NOV 20	
H-05 01 41.4		NOV 18		SPA EP	18 27 38.0	BYR IP	02 58 38.0
31.2S 067.6W		H-23 35 03.9		NOV 19		NOV 20	
h ABOUT 008KM		20.1S 174.3W		AIA EP	21 07 43.0	SPA IP	03 01 28.5
BYR IP	05 11 00.5	h ABOUT 033KM					
I	12 08.5						

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
NOV 20		NOV 20		BYR IP	02 29 44.0	NOV 21	
H-03 01 52.3		H-09 50 13.5		IP	30 44.0	SBA EP	15 50 46.0
6.2S 150.5E		00.2S 018.2W				SPA IP	15 52 06.0
h ABOUT 044KM		h ABOUT 033KM		NOV 21		I	55 54.0
SPA IP	03 14 19.0	SPA IP	10 03 11.0	SPA EP	02 46 45.0	MIR EP	15 52 30.7
I	14 26.0	I	03 26.5	NOV 21		NOV 21	
I	14 32.5	NOV 20		H-04 01 02.0		SPA EP	16 08 36.0
BYR EP	03 14 20.0	SPA EP	12 19 28.0	01.9N 096.8E		NOV 21	
NOV 20		NOV 20		h ABOUT 033KM		NOV 21	
MCQ EP	03 32 09.0	SPA IP	16 48 57.0	MAW I(P)	04 12 44.0	H-17 24 24.1	
ES	32 13.0	NOV 20		SBA E(P)	04 13 57.0	04.8S 076.6W	
NOV 20		SPA IP	17 32 17.5	SPA EP	04 14 13.0	h ABOUT 107KM	
SPA IP	03 33 13.5	NOV 20		NOV 21		SPA IP	17 36 49.5
NOV 20		SPA E	17 48 27.0	SBA EP	04 49 03.0	NOV 21	
MAW IP	04 04 04.5	NOV 20		NOV 21		SPA IP	19 05 23.0
NOV 20		SPA IP	18 19 50.5	H-06 19 16.0		I	06 55.5
H-04 50 55.3		NOV 20		14.9S 167.2E		NOV 21	
59.6N 148.2W		AIA EP	18 42 37.0	h ABOUT 097KM		MCQ EP	19 19 00.0
h ABOUT 033KM		NOV 20		SBA IP	06 29 35.0	NOV 21	
SPA IP'	05 10 29.5	H-19 05 09.7		BYR IP	06 30 34.0	SBA EP	21 51 47.0
NOV 20		06.9S 129.7E		SPA IP	06 30 49.0	NOV 21	
SPA IP	04 56 29.5	h ABOUT 126KM		NOV 21		H-22 40 11.6	
NOV 20		SPA IP	19 17 22.5	SPA EP	08 30 13.0	4.9S 103.6E	
SPA IP	05 04 06.0	NOV 20		NOV 21		h ABOUT 033KM	
NOV 20		SPA IP	19 42 46.5	SPA EP	09 03 57.0	SPA IP	22 52 44.0
SPA IP	05 23 56.0	BYR EP	19 43 36.0	NOV 21		NOV 21	
NOV 20		I	44 18.0	SPA EP	09 33 04.0	WIL E(P)	23 44 15.0
SPA IP	06 34 53.5	NOV 20		S	34 47.0	MIR IP	23 45 11.2
I	35 02.5	SPA IP	19 48 29.5	NOV 21		NOV 22	
NOV 20		NOV 20		H-11 57 00.3		SPA IP	00 22 33.5
SPA IP	06 53 39.0	SPA EP	20 14 41.0	19.9S 070.4W		NOV 22	
NOV 20		NOV 20		h ABOUT 118KM		AIA EP	00 26 10.0
SPA EP	06 57 16.0	H-21 27 39.5		SPA EP	12 08 02.0	NOV 22	
NOV 20		63.7N 146.5W		NOV 21		SBA EP	01 12 24.0
SPA IP	07 11 45.5	h ABOUT 080KM		SBA ES	12 13 02.8	NOV 22	
I	11 56.0	SPA EP'	21 47 23.0	NOV 21		H-02 28 17.4	
NOV 20		NOV 21		H-12 41 47.8		33.9N 024.9E	
SPA IP	07 16 50.0	SPA IP	00 10 19.5	06.2S 150.5E		h ABOUT 033KM	
NOV 20		NOV 21		h ABOUT 043KM		SPA EP'	02 47 12.0
SPA EP	07 38 06.0	SPA IP	00 44 17.5	SBA IP	12 53 11.0	NOV 22	
NOV 20		NOV 21		MAW EP	12 54 13.0	H-02 38 29.0	
SPA IP	07 57 39.5	SPA EP	00 47 55.0	SPA IP	12 54 14.5	17.9S 178.5W	
NOV 20		NOV 21		I	50 25.5	h ABOUT 563KM	
WIL E(P)	08 23 46.0	H-02 16 44.5		BYR IP	12 54 16.5	BYR EP	02 48 30.0
SPA EP	08 24 50.0	01.0N 124.0E		NOV 21		SPA IP	02 48 58.5
NOV 20		h ABOUT 248KM		NOV 21		MIR EP	02 49 02.9
SPA EP	09 04 37.0	MCQ E(P)	02 26 34.0	SPA EP	13 06 00.0	MAW IP	02 50 00.2
NOV 20		MAW IP	02 28 29.8	NOV 21		NOV 22	
SPA EP	09 22 20.0	IS	38 14.5	SPA EP	15 10 25.0	H-02 40 55.9	
NOV 20		SBA IP	02 28 39.2	NOV 21		22.1S 171.1E	
SPA EP	09 24 42.0			SPA IP	15 48 31.0	h ABOUT 106KM	

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	h m s		h m s		h m s		h m s
SBA IP	02 50 24.1	NOV 22		MAW IP	10 58 56.6	MIR EP	01 50 10.8
BYR I(P)	02 51 40.5	H-09 25 15.8		NOV 23		E	53 03.2
IP	52 03.0	03.4S 130.7E		MCQ EP	12 24 34.0	SBA IP	01 50 13.2
SPA IP	02 51 44.0	h ABOUT 033KM		ES	24 53.0	MAW IP	01 51 14.6
I	52 08.0	SPA IP	09 37 58.0	NOV 23		BYR EP	01 51 17.0
MAW IP	02 52 34.5	BYR EP	09 38 15.0	SBA EP	15 06 55.0	NOV 24	
NOV 22		I	38 37.0	NOV 23		MIR E	03 07 17.4
MIR EP	02 51 52.1	NOV 22		MIR E	18 16 28.1	NOV 24	
NOV 22		SPA EP	11 19 08.0	NOV 23		H-05 48 32.8	
SPA EP	03 26 30.0	I	20 07.0	MIR E	19 05 27.1	8.2S 122.6E	
NOV 22		NOV 22		NOV 23		h ABOUT 033KM	
SPA EP	04 44 40.0	SPA IP	14 33 34.0	H-19 45 09.0		MAW IP	05 59 50.0
NOV 22		I	34 27.5	56.0S 027.6W		SBA EP	06 00 04.0
SPA EP	05 04 44.0	NOV 22		h ABOUT 033KM		NOV 24	
SBA ES	05 06 07.6	SPA EP	14 44 00.0	BYR EP	19 52 06.0	H-06 35 14.5	
NOV 22		I	44 08.0	IS	58 05.0	20.2S 179.2W	
H-05 10 41.2		NOV 22		MAW IP	19 52 44.5	h ABOUT 660KM	
6.2S 150.4E		MCQ IP	17 13 11.0	I	54 46.0	BYR EP	06 44 54.0
h ABOUT 039KM		NOV 22		I	58 22.0	MIR E	06 45 26.6
SPA IP	05 23 07.0	H-17 52 23.0		SBA EP	19 53 33.0	MAW IP	06 46 25.2
BYR EP	05 23 08.0	6.4S 150.6E		MIR EP	19 54 02.6	NOV 24	
I	34 06.5	h ABOUT 048KM		WIL EP	19 54 31.0	MAW IP	08 16 19.3
NOV 22		SPA IP	18 04 48.0	NOV 23		AIA EP	08 16 52.0
H-05 24 01.6		NOV 22		WIL EP	19 54 17.0	NOV 24	
22.9S 065.7W		H-18 40 41.8		NOV 23		H-10 41 33.5	
h ABOUT 135KM		04.9S 151.9E		H-22 15 47.0		06.8S 107.4E	
SPA IP	05 34 43.5	h ABOUT 086KM		00.1S 124.5E		h ABOUT 125KM	
NOV 22		SBA EP	18 52 06.0	h ABOUT 066KM		WIL IP	10 51 20.5
SPA EP	05 45 02.0	BYR EP	18 53 06.0	WIL EP	22 26 33.0	E	51 38.0
NOV 22		SPA IP	18 53 09.0	ES	35 17.0	E(S)	59 27.0
H-05 46 33.3		MAW IP	18 53 09.4	MAW IP	22 27 47.3	MAW IP	10 52 17.1
6.2S 150.4E		NOV 22		SBA IP	22 27 55.9	E	52 39.0
h ABOUT 047KM		MAW IP	22 06 49.4	BYR IP	22 29 01.5	ES	11 01 03.0
MIR EP	05 57 51.2	NOV 23		NOV 23		BYR IP	10 54 22.0
SBA IP	05 57 55.6	MAW IP	02 17 22.7	MAW IP	22 27 15.5	E	57 53.0
MAW IP	05 58 56.4	NOV 23		NOV 23		NOV 24	
SPA IP	05 58 58.5	H-04 17 13.1		BYR IP	23 34 41.0	MAW EP	11 20 36.0
I	59 07.5	8.1S 108.4E		MAW IP	23 35 22.3	NOV 24	
RYR IP	05 59 01.0	h ABOUT 033KM		NOV 23		MAW IP	11 24 05.2
NOV 22		MAW IP	04 28 02.9	MAW IP	23 55 27.7	NOV 24	
SBA EP	08 25 44.0	SBA IP	04 28 57.4	NOV 24		H-12 40 51.4	
NOV 22		NOV 23		NOV 24		13.1N 124.7E	
SPA IP	08 37 48.5	WIL E(P)	08 39 29.0	MAW EP	00 08 22.0	h ABOUT 005KM	
NOV 22		NOV 23		NOV 24		WIL EP	12 53 03.0
H-09 00 57.0		MCQ EP	09 18 20.0	MIR E	01 36 51.8	I	53 17.0
6.1S 150.4E		NOV 23		NOV 24		ES	13 03 00.0
h ABOUT 050KM		H-10 47 16.6		H-01 38 49.6		MIR EP'	12 53 15.8
SPA IP	09 13 23.0	31.5S 072.0W		06.3S 150.7E		E	56 29.8
BYR IP	10 56 24.0	h ABOUT 068KM		h ABOUT 033KM		E	13 03 04.8
WIL IP	01 49 34.5	MAW EP	12 54 00.0	MAW EP	12 54 00.0	ESKS	13 04 48.0

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
SBA EP	12 54 15.0	MAW IP	08 43 43.0	NOV 26		NOV 27	
EPP	54 58.2			SPA EP	02 43 51.0	MAW EP	14 16 42.0
BYR E(P)	12 55 20.0	NOV 25		NOV 26		NOV 27	
EPP	59 38.0	H-09 24 08.9		SBA EP	06 44 33.0	SPA IP	14 53 46.5
ESKS	13 05 56.0	04.3S 122.2E		NOV 26		NOV 27	
NOV 24		h ABOUT 610KM		H-06 55 25.1		MAW EP	14 59 02.5
H-12 50 40.2		WIL IP	09 33 33.5	28.0S 177.0W		NOV 27	
13.2N 124.9E		ES	41 12.0	h ABOUT 033KM		SPA IP	16 52 51.0
h ABOUT 097KM		MIR EP	09 33 53.3	MAW IP	07 07 03.6	I	53 16.5
MAW EP	13 03 38.5	ES	41 47.0	NOV 26		I	55 04.5
NOV 24		MAW IP	09 34 47.7	SPA IP	08 18 16.0	NOV 27	
AIA EP	13 00 03.0	ES	43 34.0	NOV 26		SPA IP	17 00 46.5
NOV 24		SBA IP	09 35 01.8	H-10 21 07.2		I	01 11.5
MCQ IP	14 23 14.0	SPA IP	09 35 45.5	24.9N 122.0E		I	01 35.0
NOV 24		I	35 54.5	h ABOUT 033KM		NOV 27	
H-14 48 47.0		I	36 07.0	WIL EP	10 34 13.0	SPA IP	21 23 39.0
24.6S 179.5W		BYR IPCP	09 36 09.0	MIR E	10 38 11.8	NOV 27	
h ABOUT 406KM		NOV 25		E	42 14.7	AIA EP	23 50 53.0
MAW IP	14 59 58.3	SPA I	11 06 05.5	BYR EP'	10 39 54.0	I	52 20.0
NOV 24		NOV 25		NOV 26		NOV 28	
MAW EP	16 28 13.5	H-12 45 20.0		WIL EP	14 22 16.0	SBA IP	00 38 42.1
NOV 24		55.1N 162.6E		I	22 30.0	NOV 28	
SBA EP	17 46 34.0	h ABOUT 079KM		NOV 26		MIR E	00 44 09.1
NOV 24		SPA IP'	13 04 46.5	MAW IP	17 21 14.0	NOV 28	
H-23 51 20.2		NOV 25		NOV 26		AIA EP	01 18 35.0
23.2S 176.0W		H-13 02 41.7		MAW IP	18 42 44.3	NOV 28	
h ABOUT 033KM		09.5S 158.8E		NOV 27		SBA EP	09 39 08.0
MAW IP	24 03 23.2	h ABOUT 038KM		SPA EP	05 08 19.0	NOV 28	
NOV 25		BYR EP	13 14 45.0	NOV 27		H-16 49 30.3	
MAW IP	00 25 58.5	SPA EP	13 14 52.0	H-07 47 07.6		8.0S 071.4W	
NOV 25		NOV 25		62.6N 151.5W		h ABOUT 655KM	
H-04 35 56.7		SPA IP	16 56 28.0	h ABOUT 113KM		SBA EP	17 01 19.0
20.6S 069.6W		NOV 25		BYR EP'	08 06 25.0	MAW IP	17 02 00.0
h ABOUT 078KM		H-19 35 16.4		NOV 27		E	04 19.0
SPA IP	04 46 59.0	05.2S 125.2E		SPA I	08 56 07.5	NOV 28	
NOV 25		h ABOUT 430KM		NOV 27		MIR E(P)	16 53 03.9
SPA EP	06 05 12.0	SPA I(P)	19 46 59.6	AIA EP	09 01 13.0	ES	17 04 13.1
NOV 25		NOV 25		E	05 04.0	NOV 28	
SPA IP	07 42 04.0	MCQ EP	19 51 55.0	NOV 27		MAW IP	17 11 44.6
BYR IP	07 42 18.0	ES	52 57.0	MAW IP	09 57 18.7	NOV 28	
NOV 25		WIL EP	19 55 35.0	NOV 27		MAW IP	17 46 08.3
MCQ EP	08 04 27.0	ES	59 46.0	MAW IP	11 11 01.6	NOV 28	
ES	04 33.0	SPA EP	19 56 36.0	NOV 27		MAW IP	18 57 23.9
NOV 25		BYR EP	19 56 45.0	SPA EP	13 10 00.0	NOV 28	
MAW IP	08 10 34.8	E	57 39.0	NOV 27		MAW IP	21 07 01.6
NOV 25		MAW EP	19 58 03.0	H-13 47 42.7		NOV 28	
H-08 31 32.9		NOV 25		37.9N 138.3E		MIR E	22 37 42.2
16.1S 175.1W		SPA EP	20 42 06.0	h ABOUT 036KM		NOV 29	
h ABOUT 302KM		NOV 25		MAW IP'	14 06 28.5	SPA IP	00 00 52.0
BYR IP	08 42 05.0	SPA EP	20 56 48.0	BYR IP'	14 06 44.0	NOV 29	
SPA IP	08 42 36.5	NOV 25		I	07 44.5	SPA EP	02 48 26.0

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	h m s		h m s		h m s		h m s
NOV 29 H-03 05 03.0 23.7S 179.9E h ABOUT 600KM		NOV 29 H-17 08 25.7 04.8S 079.3W h ABOUT 081KM		NOV 30 MCQ IP 15 20 07.0 IS 20 10.0		DEC 01 MAW E 06 31 13.5	
SPA IP 03 14 55.5		SPA IP 17 20 54.0		NOV 30 H-16 07 30.1 23.8S 179.3E h ABOUT 481KM		DEC 01 MAW I 06 53 15.0	
NOV 29 SPA EP 04 46 57.0		NOV 29 SPA EP 18 27 10.0		SPA IP 16 17 31.0		DEC 1 H-07 39 50.2 79.5N 003.9E h ABOUT 033KM	
NOV 29 WIL IP 05 16 12.5		NOV 29 MAW EP 19 42 36.5		MAW EP 16 18 35.6		MAW IP' 07 59 39.4 E 08 06 21.5	
NOV 29 MCQ IP 06 01 55.0		NOV 29 MAW EP 19 46 36.5		NOV 30 SPA IP 16 21 15.0		SPA EP' 07 59 49.0	
NOV 29 H-06 20 10.0 19.4S 169.2E h ABOUT 324KM		NOV 29 MAW EP 20 24 43.5		NOV 30 H-17 59 07.7 06.4S 150.9E h ABOUT 037KM		DEC 01 SPA IP 08 19 24.5	
SPA IP 06 30 52.5 I 31 13.0 I 31 48.5		NOV 29 MAW EP 20 51 12.0		SPA IP 18 11 34.0		DEC 01 AIA EP 09 32 27.0	
NOV 29 MAW EP 08 10 05.0		NOV 29 SPA IP 22 19 25.0		NOV 30 H-18 53 11.4 24.0S 179.9E h ABOUT 550KM		DEC 01 SPA IP 10 22 07.0	
NOV 29 WIL E(P) 08 16 05.0		NOV 29 SBA EP 23 02 58.0		SPA IP 19 03 06.0 I 04 58.0		DEC 01 AIA EP 10 36 42.0 I 37 12.0 I 39 38.0	
NOV 29 SPA IP 09 14 18.0		NOV 30 H-00 15 56.6 38.9S 072.4W h ABOUT 087KM		MAW IP 19 04 12.5		DEC 1 H-11 47 02.4 30.9S 177.9W h ABOUT 033KM	
NOV 29 SPA EP 11 15 18.0		SPA IP 00 24 54.0		NOV 30 H-22 40 46.0 53.7N 167.7W h ABOUT 069KM		SPA IP 11 57 03.5	
NOV 29 H-12 26 29.6 4.6N 077.6W h ABOUT 044KM		NOV 30 AIA EP 06 49 04.0		SPA IP' 23 00 09.0 I 00 34.0 I 03 42.0		MAW E 11 57 33.5	
SPA IP 12 39 47.0		NOV 30 SPA IP 07 53 18.5		MAW IP' 23 00 34.5 I 00 45.3		DEC 01 AIA EP 13 04 06.0	
NOV 29 WIL IP 13 12 30.5		MAW IP 07 54 22.4		NOV 30 AIA EP 23 43 13.0		DEC 01 MAW E(P) 14 23 24.5	
NOV 29 SPA EP 13 56 16.0		NOV 30 SPA IP 08 15 18.0		DEC 01 AIA EP 04 10 33.0		DEC 01 SPA IP 16 20 22.0	
NOV 29 H-15 52 18.4 5.5S 146.2E h ABOUT 048KM		NOV 30 SPA EP 10 53 29.0		SPA IP 04 13 22.5 I 13 40.0		DEC 01 SPA EP 21 46 44.0	
SPA IP 16 04 46.5		NOV 30 H-12 27 38.6 6.8N 094.8E h ABOUT 033KM		DEC 01 SPA I 04 18 15.0		DEC 02 BYR IP 01 14 10.5	
NOV 29 SPA IP 16 20 53.0		WIL IP 12 39 14.5 ES 48 41.0		DEC 1 H-04 53 23.9 18.9S 175.8W h ABOUT 232KM		DEC 02 MAW E(P) 01 24 04.5	
NOV 29 H-16 54 25.8 55.5S 026.0W h ABOUT 033KM		MAW IP 12 39 34.8 ES 49 30.5 ES 49 43.5		SBA IP 05 03 07.0		DEC 02 BYR EP 01 42 59.0	
AIA EP 16 59 07.0		MCQ EP 12 39 56.0		SPA IP 05 04 18.5		DEC 02 MAW EP 01 55 15.7	
SPA IP 17 01 13.5 I 01 27.0		SBA E(P) 12 40 55.0		MIR EP 05 04 31.3		DEC 02 SBA EP 03 26 58.0	
MAW EP 17 01 59.0		SPA EP 12 41 08.0 ES 52 14.0		MAW EP 05 05 31.0		DEC 2 H-08 20 45.6 30.6N 042.0W h ABOUT 033KM	
SBA EP 17 02 56.0		NOV 30 MAW IP 14 39 07.4		DEC 01 SPA IP 05 35 48.5			

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	h m s		h m s		h m s		h m s
SPA IP'	08 39 34.0	DEC 02 SPA EP	20 05 51.0	DEC 03 SPA IP	16 58 15.5	DEC 4 H-15 48 43.4 6.4S 150.7E h ABOUT 019KM	
DEC 02 SBA EP	08 28 33.0	DEC 03 SPA IP	00 27 47.0	DEC 03 SPA EP	17 34 52.0	WIL EP	15 59 30.0
MAW IP	08 29 47.9	DEC 03 SPA IP	02 57 32.0	DEC 03 SPA EP	20 32 49.0	ES	16 08 16.0
DEC 2 H-09 34 25.7 60.4N 153.9W h ABOUT 033KM		DEC 03 SPA IP	03 10 00.5	DEC 03 BYR EP	21 24 02.0	MIR EP	16 00 08.0
SPA IP'	09 54 19.5	DEC 3 H-03 50 01.2 15.0S 066.8E h ABOUT 046KM		DEC 4 H-00 38 54.7 15.4S 173.9W h ABOUT 033KM		ES	09 25.0
DEC 2 H-10 08 39.6 9.1S 158.0E h ABOUT 042KM		MAW EP	03 59 13.0	DEC 4 SPA EP	00 50 32.0	DEC 04 AIA EP	16 29 22.0
SPA IP	10 20 51.0	WIL EP	03 59 57.0	DEC 04 SPA EP	01 27 58.0	DEC 04 SPA IP	18 26 44.0
MAW E(P)	10 21 10.5	SPA IP	04 01 40.0	DEC 04 AIA EP	01 35 43.0	I	27 16.0
DEC 02 SPA IP	11 28 19.5	I	04 12.0	DEC 04 SPA IP	02 48 37.0	DEC 04 SPA EP	20 37 19.0
DEC 2 H-11 33 36.6 21.9S 175.2W h ABOUT 033KM		ES	11 24.0	DEC 04 SPA EP	04 02 34.0	DEC 04 SPA EP	22 52 05.0
SPA IP	11 44 34.0	DEC 03 SPA EP	04 42 33.0	DEC 04 BYR EP'	03 35.5	DEC 05 SPA EP	00 15 54.0
DEC 02 SPA IP	12 25 41.0	MAW IP	05 35 35.1	ESS	18 48.0	DEC 05 SPA EP	02 12 49.0
DEC 2 H-13 18 29.0 53.8N 165.4W h ABOUT 035KM		SPA IP	05 37 32.5	DEC 04 WIL E(P)	06 01 21.0	DEC 05 SPA EP	04 54 45.0
SPA IP'	13 37 58.5	E	40 09.0	DEC 04 SPA IP	07 05 38.5	BYR EP	04 55 32.0
I	38 27.5	DEC 03 SPA IP	07 17 20.0	DEC 04 SPA EP	08 01 33.0	I	55 39.5
I	41 35.0	DEC 3 H-08 16 55.4 06.1S 150.6E h ABOUT 035KM		DEC 04 SPA EP	08 04 58.0	DEC 05 SPA EP	05 11 53.0
MAW IP'	13 38 23.5	SPA IP	08 29 23.5	DEC 04 SPA EP	08 10 33.0	DEC 5 H-05 14 39.6 20.9S 178.5W h ABOUT 529KM	
I	38 36.0	DEC 03 SPA IP	09 17 20.0	DEC 04 SPA EP	08 44 45.0	SPA IP	05 24 53.5
DEC 2 H-14 27 15.4 49.1S 121.4E h ABOUT 016KM		DEC 03 SPA IP	09 29 24.5	DEC 04 SPA EP	08 50 28.0	I	29 08.0
MAW EP	14 34 01.0	DEC 03 SPA IP	09 30 57.0	DEC 4 H-09 21 14.2 21.3S 067.4W h ABOUT 060KM		DEC 05 SPA IP	05 27 46.0
SPA IP	14 35 00.0	DEC 03 AIA EP	10 00 53.0	SPA IP	09 32 14.5	I	28 05.0
DEC 2 H-15 20 11.4 19.6S 177.8W h ABOUT 396KM		DEC 03 SPA EP	12 34 52.0	DEC 04 SPA I	14 01 24.5	DEC 05 SPA IP	05 51 37.0
SPA IP	15 30 45.5	DEC 03 WIL EP	13 16 24.0	ES	11 36.0	I	53 38.5
DEC 02 MAW EP	15 51 57.0	DEC 03 SPA EP	13 46 01.0	DEC 4 H-10 32 39.2 17.8S 167.8E h ABOUT 033KM		DEC 05 SPA IP	08 13 22.0
DEC 02 AIA EP	19 00 53.0	DEC 03 SPA EP	15 08 36.0	DEC 04 SPA EP	14 28 07.0	DEC 05 SPA IP	08 23 16.0
DEC 02 SPA IP	19 07 46.0	DEC 03 SPA EP	16 48 08.0	DEC 4 SPA I	14 34 05.5	DEC 5 H-10 32 39.2 17.8S 167.8E h ABOUT 033KM	
		DEC 03 SPA IP	16 48 15.5	I	15 01 24.5	BYR EP	10 43 47.0
				DEC 04 SPA ES	15 11 36.0	SPA IP	10 44 04.5
						I	44 14.0
						DEC 05 SPA EP	15 13 04.0

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h m s		h m s		h m s		h m s	
DEC 05 SPA IP	16 11 28.5	BYR E(P)	04 40 20.0	SPA IP	13 20 36.5	DEC 08 SPA IP	07 59 38.5
DEC 05 SBA EP	17 36 28.0	DEC 06 AIA EP I	04 31 51.0 32 53.0	DEC 07 BYR IP I	13 35 35.0 35 49.0	DEC 08 SPA EP	08 13 10.0
DEC 05 SPA EP	19 13 06.0	DEC 06 SPA IP	04 44 03.0	DEC 07 BYR EP E	15 40 40.0 41 18.0	DEC 08 SPA EP	08 56 55.0
DEC 05 MCQ EP ES	19 26 04.0 26 18.0	DEC 06 AIA EP	05 25 43.0	DEC 7 H-15 43 29.7 05.1S 145.9E h ABOUT 219KM		DEC 8 H-09 14 29.4 21.3S 081.8W h ABOUT 033KM	
DEC 5 H-19 50 01.6 59.4N 144.8W h ABOUT 033KM		SPA IP I	05 27 46.0 28 05.0	SPA IP	15 55 41.0	BYR IP	09 24 41.5
SPA IP' I	20 09 45.0 09 57.5	DEC 6 H-05 41 06.9 18.0S 178.5W h ABOUT 551KM		DEC 7 H-15 55 56.8 06.4S 076.2W h ABOUT 177KM		SPA IP	09 25 32.5
DEC 05 SPA EP	21 34 06.0	SPA IP I	05 51 37.0 53 38.5	SPA IP	16 08 06.0	MAW EP	09 27 14.0
DEC 05 SPA EP	21 27 04.0	DEC 06 MAW EP	08 11 25.5	DEC 07 MIR EP	16 12 19.4	DEC 08 AIA EP	09 48 21.0
DEC 5 H-22 31 44.3 54.0N 161.5E h ABOUT 038KM		BYR IP IS	08 14 29.5 22 42.5	DEC 07 SPA IP	17 13 39.0	DEC 08 SPA EP	09 55 10.0
SPA IP' I	22 51 11.5 51 23.5	DEC 06 SBA EP	09 23 11.0	DEC 07 MIR E	17 52 06.2	DEC 8 H-17 49 46.3 34.7N 139.2E h ABOUT 031KM	
DEC 5 H-23 51 38.8 53.9N 161.5E h ABOUT 038KM		DEC 06 MAW IP	22 47 31.2	DEC 7 H-18 30 16.9 51.7N 158.0E h ABOUT 050KM		SPA EP' I	18 08 42.5 10 28.5
SPA IP' I	24 11 06.0 15 27.0.	DEC 07 AIA EP	00 54 45.0	SPA IP'	18 49 37.0	BYR EP' E(S)	18 08 48.0 10 44.0
DEC 06 SPA EP	00 37 48.0	DEC 07 MIR EP	05 26 08.4	DEC 7 H-18 52 47.6 06.7N 082.2W h ABOUT 030KM		DEC 08 MIR EP	19 18 24.0
DEC 06 BYR EP IPP	02 40 20.0 45 34.0	DEC 07 SPA IP	06 14 39.1	SPA E(P)	19 06 21.0	DEC 08 MAW IP	21 12 34.2
SBA IP	02 41 29.9	DEC 7 H-08 58 43.8 05.4S 151.3E h ABOUT 054KM		DEC 07 SPA IP	20 29 35.0	DEC 08 SPA IP	23 10 04.0
SPA IP I ES	02 42 21.0 43 41.0 48 06.0	MAW IP	09 11 11.2	DEC 7 H-20 41 42.0 18.9S 069.6W h ABOUT 127KM		MIR E(P)	23 14 58.5
DEC 6 H-03 15 37.7 15.4S 070.5W h ABOUT 164KM		SPA IP I ES	09 11 12.0 11 25.0 21 28.0	BYR EP I	20 52 10.0	DEC 09 SPA EP	00 41 33.0
BYR IP	03 26 22.5	DEC 07 AIA EP	10 39 03.0	DEC 7 H-21 03 48.3 02.6N 079.8W h ABOUT 038KM		DEC 09 SPA IP	00 45 54.0
SPA IP	03 27 00.5	DEC 07 AIA EP	10 57 51.0	SPA EP	21 16 57.0	DEC 09 SPA IP	00 49 24.5
DEC 06 SPA IP	04 00 05.5	DEC 07 SPA IP	12 17 03.0	DEC 07 SPA IP	22 16 30.5	DEC 09 SPA EP	01 00 18.0
DEC 6 H-04 27 15.5 2.3S 138.3E h ABOUT 033KM		DEC 07 SPA IP	13 01 54.5	DEC 08 SPA IP	06 39 51.0	DEC 09 MIR E	01 09 00.7
SBA E(P)	04 39 18.0	DEC 7 H-13 08 05.0 05.1S 153.3E h ABOUT 057KM		DEC 08 SPA IP	06 47 00.0	DEC 09 MIR EIP	02 44 22.0
						DEC 09 MAW EP	04 11 01.0

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	h m s		h m s		h m s		h m s
DEC 09 SPA IP	05 02 11.0	DEC 9 H-19 12 21.1 1.1S 077.4W h ABOUT 242KM		DEC 11 H-05 29 14.7 18.7S 178.4W h ABOUT 635KM		SPA IP	02 31 32.0
DEC 09 MIR EP	05 19 03.3	BYR IP	19 24 12.0	SPA IP	05 39 34.0	DEC 12 BYR IP	02 20 55.0
DEC 9 H-06 19 33.3 19.5S 176.9W h ABOUT 290KM		DEC 09 SPA IP	22 25 19.5	DEC 11 SPA EP	06 07 48.0	DEC 12 WIL E(P)	07 19 13.0
SPA IP	06 30 20.0	DEC 10 SPA EP	01 22 34.0	DEC 11 SPA EP	06 58 03.0	DEC 12 WIL EP	07 19 14.0
DEC 9 H-07 21 18.1 60.8N 144.2W h ABOUT 033KM		DEC 10 SPA EP	02 10 19.0	DEC 11 SPA EP	08 44 42.0	DEC 12 H-07 20 00.0 06.9S 150.6E h ABOUT 033KM	
SPA EP'	07 41 06.0	DEC 10 SPA IP	04 20 05.5	DEC 11 H-11 18 23.0 60.1N 146.6W h ABOUT 033KM		WIL IP	07 30 42.0
DEC 09 SPA IP	11 31 33.5	DEC 10 SPA IP	10 47 30.0	SPA IP'	11 38 08.0	ES	39 22.0
DEC 09 AIA EP	12 22 33.0	DEC 10 SPA IP	13 22 45.0	DEC 11 SPA IP	11 21 05.0	SPA IP	07 32 23.5
DEC 9 H-13 35 42.4 27.5S 063.2W h ABOUT 586KM		DEC 10 SPA EP	13 27 13.0	DEC 11 SPA IP	14 28 08.0	I	32 34.0
AIA EP	13 42 11.0	DEC 10 WIL IP	13 47 04.0	DEC 11 SPA EP	16 08 15.0	BYR IP	07 32 25.0
E	47 22.0	ES	55 38.0	DEC 11 SPA IP	16 15 54.0	DEC 12 SPA EP	07 30 20.0
BYR IP	13 44 38.0	DEC 10 H-15 10 25.6 36.5S 110.5W h ABOUT 033KM		DEC 11 SPA EP	16 22 37.0	DEC 12 H-07 57 44.3 07.0S 150.7E h ABOUT 030KM	
I _{PP}	45 24.0	SPA IP	15 19 46.5	I	23 03.0	SPA IP	08 10 09.0
IPP	46 29.5	I	20 35.5	I	25 29.5	DEC 12 H-09 22 16.3 19.0S 169.5E h ABOUT 261KM	
SPA IP	13 45 12.0	ES	27 38.0	BYR EP	16 22 52.0	SPA IP	09 33 06.5
I	46 03.0	MAW EP	15 22 11.0	I	25 40.0	DEC 12 SPA EP	10 09 25.0
IS	52 58.0	DEC 10 H-15 11 05.5 40.4N 138.9E h ABOUT 033KM		DEC 11 SPA IP	19 00 17.0	DEC 12 H-10 10 17.0 52.6N 169.3W h ABOUT 033KM	
MAW IP	13 46 36.9	MAW EP'	15 29 56.5	DEC 11 H-19 03 25.8 15.3S 173.4W h ABOUT 033KM		MAW EP'	10 30 02.0
I	48 42.0	AIA EP'	15 30 57.0	SPA IP	19 15 05.5	DEC 12 SPA EP	10 22 15.0
IS	55 39.0	DEC 10 BYR IP	15 35 15.5	DEC 11 AIA EP	22 42 13.0	DEC 12 SPA IP	10 28 56.5
MIR IP	13 47 16.9	E	38 46.0	DEC 11 H-22 42 59.4 06.3S 131.2E h ABOUT 047KM		I	29 48.0
E	47 40.9	MAW EP	15 39 55.5	MAW IP	22 54 43.0	BYR EP	10 29 08.0
E	49 22.5	DEC 10 H-16 44 02.2 20.4S 068.0W h ABOUT 083KM		SPA IP	22 55 24.0	DEC 12 SPA EP	11 14 48.0
DEC 09 WIL IP	13 44 05.5	SPA IP	20 37 56.0	BYR IP	22 55 43.0	DEC 12 SPA IP	12 23 37.5
E(S)	54 46.0	DEC 10 SPA IP	20 31 15.5	DEC 12 H-02 19 52.2 15.0S 173.8W h ABOUT 033KM		DEC 12 SPA EP	12 38 45.0
DEC 09 SPA IP	15 29 52.5	DEC 11 SPA EP	01 15 53.0	BYR EP	02 30 59.0	DEC 12 SPA EP	12 48 56.0
I	30 07.0					DEC 12 SPA IP	13 03 25.0

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h m s		h m s		h m s		h m s	
DEC 12 H-13 11 50.2 35.3N 023.0E h ABOUT 060KM		DEC 13 H-00 32 09.4 65.2N 164.9W h ABOUT 033KM		DEC 13 H-16 51 39.2 07.9N 137.0E h ABOUT 033KM		DEC 14 SPA EP I I	06 50 29.0 51 26.0 54 31.5
SPA EP' 13 30 46.0		SPA EP' 00 52 01.0 I 53 22.0		MAW EP 17 04 42.0		BYR EP 06 52 12.0 E 07 03 52.0	
DEC 12 H-14 20 35.1 35.4S 071.5W h ABOUT 089KM		DEC 13 H-00 33 24.7 64.9N 165.7W h ABOUT 015KM		DEC 13 H-19 12 57.1 10.7S 165.0E h ABOUT 033KM		DEC 14 SPA IP I I	07 21 29.0 22 58.5 23 54.0
SPA EP 14 29 58.0 I 30 15.0		WIL EP' 00 52 56.0		BYR IP 19 24 48.5		BYR IP 07 22 15.0	
DEC 12 SPA EP 15 44 57.0		BYR IP' 00 53 06.0		SPA IP 19 25 00.5		DEC 14 SPA EP 07 52 25.0	
DEC 12 WIL EP 18 28 20.0 E 28 32.0		DEC 13 WIL EP 02 01 16.0 E 01 27.0		DEC 13 SPA IP 22 06 18.5 I 09 42.0		DEC 14 SPA EP 08 32 10.0	
DEC 12 H-19 44 55.7 26.1S 175.9W h ABOUT 085KM		DEC 13 SPA EP 03 38 29.0		BYR IP 22 07 05.0 E 10 30.0		DEC 14 SPA EP 09 32 43.0	
BYR EP 19 54 49.0		DEC 13 SPA IP 03 54 53.5		DEC 13 SPA IP 23 04 48.5		DEC 14 BYR EP 10 22 56.0	
WIL IP 19 54 55.0		DEC 13 WIL E(P) 05 16 47.0		DEC 14 SPA IP 00 55 16.5		DEC 14 SPA IP 13 28 04.0	
SPA IP 19 55 24.0 I 55 36.0		DEC 13 H-06 37 07.3 15.0S 167.2E h ABOUT 131KM		DEC 14 H-01 59 05.6 54.3S 002.4W h ABOUT 033KM		DEC 14 AIA EP 14 14 40.0	
MAW EP 19 56 42.0		BYR IP 06 48 20.5		AIA EP 02 05 29.0		DEC 14 SPA EP 15 43 09.0	
DEC 12 H-22 15 50.9 20.2S 174.0W h ABOUT 033KM		SPA IP 06 48 35.5		MAW IP 02 05 34.0 E 10 53.0 E 12 32.0		DEC 14 H-15 52 34.2 33.4N 142.0E h ABOUT 033KM	
BYR EP 22 26 24.0		DEC 13 SPA IP 06 54 41.5		SPA IP 02 06 03.5 I 07 20.0 IS 11 49.0		SPA EP' 16 11 26.0	
SPA IP 22 26 58.5		DEC 13 SPA IP 07 38 49.0		SBA IP 02 07 43.1		DEC 14 SPA IP 16 27 12.0	
DEC 12 H-23 07 46.1 5.8S 147.1E h ABOUT 068KM		DEC 13 SPA EP 08 06 39.0		WIL IP 02 07 53.5 ES 15 04.0		MAW EP 16 27 32.5	
WIL EP 23 18 25.0		DEC 13 SPA IP 09 22 21.0		DEC 14 BYR IP 02 32 58.0 I 34 01.0		DEC 14 SPA EP 17 35 51.0	
MAW EP 23 20 01.5		DEC 13 SPA IP 12 30 10.5		DEC 14 SPA IP 03 47 26.5		DEC 14 BYR EP 19 58 40.0 E 20 05 29.0	
SPA IP 23 20 10.5 I 20 26.5		DEC 13 H-13 15 49.8 20.1N 122.0E h ABOUT 033KM		DEC 14 BYR EP 04 17 00.0		SPA IP 20 00 01.5	
BYR IP 23 20 15.0		WIL EP 13 28 31.0		DEC 14 SPA IP 04 22 19.0		DEC 14 AIA EP 20 39 37.0	
DEC 13 H-00 13 39.6 34.0S 179.1W h ABOUT 112KM		DEC 13 SPA EP 13 32 53.0		DEC 14 SPA IP 06 21 42.5		DEC 14 BYR EP 20 51 03.0 E 57 41.0 I 59 20.0	
WIL EP 00 22 35.0 ES 30 00.0		DEC 13 AIA EP 15 03 59.0		DEC 14 H-06 41 23.1 28.2N 140.8E h ABOUT 115KM		SPA IP 20 52 22.5	
BYR EP 00 22 37.0		DEC 13 SPA IP 15 24 07.5		SPA IP' 06 59 56.5 I 07 02 58.5		DEC 15 SPA IP 00 44 03.5	
SPA IP 00 23 11.0 I 23 22.0 I 23 30.0		DEC 13 WIL E(P) 16 32 55.0				DEC 15 SPA IP 00 53 07.5 I 55 40.5	
MAW EP 00 24 28.5							

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
BYR IP	h m s 00 53 21.5	DEC 15 SPA IP	h m s 17 35 51.5	DEC 16 SPA IP	h m s 13 02 59.0	SPA IP	h m s 10 39 45.0
DEC 15 H-01 16 41.7 15.5S 173.3W h ABOUT 014KM		DEC 15 SPA EP	20 09 37.6	DEC 16 SPA IP	13 14 44.5	DEC 17 SPA EP	12 42 47.0
SPA IP	01 28 22.5	DEC 15 SPA IP	22 27 51.0	DEC 16 H-19 20 26.3 21.8S 175.3W h ABOUT 033KM		DEC 17 H-14 33 43.3 24.3S 179.6E h ABOUT 600KM	
DEC 15 SPA IP	01 59 17.5	DEC 15 H-22 34 07.7 51.0N 169.6W h ABOUT 033KM		BYR EP	19 30 49.0	SPA IP	14 43 32.0
DEC 15 SPA IP	02 13 52.5	MAW EP'	22 53 52.5	SPA I(P)	19 31 16.0	DEC 17 H-14 58 26.3 21.5S 066.9W h ABOUT 190KM	
DEC 15 MAW IP	02 23 13.5	DEC 16 MAW IP	00 04 08.5	DEC 16 SBA EP	22 13 06.0	SPA IP	15 09 10.5
DEC 15 SPA IP	04 44 46.5	DEC 16 H-02 21 30.7 03.2S 147.5E h ABOUT 033KM		DEC 16 SPA IP	23 04 37.0	DEC 17 SPA EP	17 20 44.0
DEC 15 H-05 06 22.8 2.3N 126.6E h ABOUT 045KM		SPA EP	02 34 12.0	DEC 17 H-01 08 51.2 7.8S 117.4E h ABOUT 033KM		DEC 17 SPA EP	18 12 31.0
MAW IP	05 18 43.0	BYR EP	02 34 17.0	SPA IP	01 21 10.5	DEC 17 H-18 48 02.4 31.6N 138.0E h ABOUT 376KM	
SBA EP	05 18 45.0	DEC 16 SPA EP	02 22 03.0	BYR IP	01 21 39.5	SPA IP'	19 06 11.0
SPA IP	05 19 31.0	DEC 16 H-03 08 12.1 3.2S 147.3E h ABOUT 033KM		DEC 17 H-04 03 45.7 27.6N 140.0E h ABOUT 468KM		DEC 17 SBA EP	20 33 42.0
BYR IP	05 19 50.0	SPA EP	03 20 56.0	SPA IP'	04 21 35.5	DEC 17 SBA EP	21 40 11.0
DEC 15 SPA EP	05 45 29.0	BYR IP	03 21 00.0	DEC 17 H-04 43 56.8 01.8N 084.6W h ABOUT 033KM		DEC 17 SPA IP	21 54 57.5
DEC 15 H-07 58 49.9 76.2N 009.3E h ABOUT 033KM		DEC 16 H-03 55 17.4 06.0N 125.3E h ABOUT 121KM		SPA IP	04 57 05.5	DEC 17 SBA EP	23 28 12.0
MAW IP'	08 18 30.5	MAW IP	04 07 42.0	DEC 17 BYR EP	04 50 11.0	DEC 17 SBA EP	23 40 01.0
DEC 15 MCQ IP	10 05 40.9	SBA IP	04 07 50.6	DEC 17 H-05 18 34.8 45.4N 150.1E h ABOUT 017KM		DEC 17 H-23 44 46.2 51.4N 177.9W h ABOUT 057KM	
DEC 15 MCQ IP	10 12 25.7	SPA IP	04 08 32.5	SPA EP'	05 37 39.0	BYR EP'	24 04 00.0
DEC 15 H-12 13 25.8 14.7N 091.7W h ABOUT 118KM		I	08 40.5	I	37 55.5	E	07 28.0
BYR EP	12 26 37.0	DEC 16 H-03 57 17.2 21.6S 169.6E h ABOUT 044KM		BYR EP'	05 37 49.0	MAW EP'	24 04 23.0
SPA EP	12 27 22.0	BYR IP	04 07 58.0	AIA EP'	05 38 43.0	DEC 18 H-00 10 59.6 18.8S 168.9E h ABOUT 069KM	
DEC 15 SBA EP	13 29 37.0	EPP	08 53.0	DEC 17 BYR EP	05 41 16.0	SPA IP	00 22 13.0
DEC 15 SPA EP	14 53 15.0	IS	12 56.0	EPP	41 41.0	I	22 33.0
DEC 15 H-15 03 40.2 45.4N 150.9E h ABOUT 033KM		SPA IP	04 08 16.5	DEC 17 SPA EP	08 42 49.0	DEC 18 AIA EP	08 40 12.0
SPA EP'	15 22 51.0	DEC 16 SPA IP	04 25 20.0	DEC 17 BYR EP	09 39 31.0	DEC 18 SPA IP	08 48 35.5
DEC 15 SPA IP	17 11 20.5	DEC 16 H-12 20 44.2 21.7S 169.6E h ABOUT 021KM		I	40 16.0	DEC 18 SPA IP	12 23 13.0
		SPA IP	12 31 45.5	DEC 17 H-10 28 41.7 21.0S 175.0W h ABOUT 033KM			

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
DEC 18 SBA EP	12 44 31.0	DEC 19 H-12 53 27.6 37.8S 072.9W h ABOUT 064KM		DEC 20 H-11 26 32.6 20.1S 177.7W h ABOUT 463KM		MAW EP	07 41 20.5
DEC 18 SPA EP	13 03 46.0	BYR IP	13 01 45.0	SPA IP	11 36 57.5	DEC 21 SPA EP	09 16 34.0
DEC 18 WIL E(P)	15 53 36.0	SPA IP E	13 02 35.5 02 39.0	DEC 20 SPA IP	12 23 41.0	DEC 21 MIR EP	10 22 48.8
DEC 18 SPA EP	16 16 07.0	DEC 19 SPA EP	14 41 07.0	DEC 20 H-13 31 54.7 37.5N 141.6E h ABOUT 040KM		DEC 21 MIR EP	11 02 55.0
I	17 33.0	I	41 18.0	SPA EP'	13 50 50.0	DEC 21 SPA EP	14 16 12.0
DEC 18 SPA IP	17 09 40.5	DEC 19 WIL E(P)	15 53 36.0	DEC 20 SPA IP	13 40 54.0	DEC 21 SPA EP	15 04 13.0
DEC 18 SPA IP	20 43 44.5	DEC 19 H-18 18 31.4 08.9S 112.8E h ABOUT 336KM		DEC 20 SPA IP	13 57 17.5	DEC 21 SPA EP	16 43 08.0
BYR IP	20 43 58.0	SPA EP	18 30 11.0	DEC 20 SPA EP	14 01 24.0	DEC 21 H-17 36 29.0 60.5N 146.8W h ABOUT 043KM	
DEC 18 SBA EP	21 33 05.0	DEC 19 SBA EP	19 59 27.0	DEC 20 SPA EP	14 01 24.0	SPA IP'	17 56 12.0
DEC 18 SBA EP	23 02 17.0	DEC 19 SPA IP	20 14 07.5	DEC 20 SPA EP	14 17 14.0	I	56 51.5
DEC 18 SBA EP	23 08 28.0	BYR EP	20 15 12.0	DEC 20 H-15 45 25.3 22.2S 069.1W h ABOUT 100KM		I	57 57.0
DEC 19 AIA EP	06 10 10.0	DFC 19 SBA EP	22 47 54.0	BYR IP	15 55 35.5	DEC 21 H-18 32 03.0 63.1N 150.3W h ABOUT 111KM	
DEC 19 H-06 41 27.3 32.8S 177.6W h ABOUT 203KM		DEC 19 BYR IP	23 35 03.5	I	56 01.0	SPA IP'	18 51 35.5
SBA E(P)	06 49 43.0	DEC 20 SPA IP	00 30 24.5	SPA IP	15 56 14.5	I	51 45.0
SPA I(P)	06 51 08.5	DEC 20 SPA EP	02 50 22.5	I	56 40.0	I	52 14.5
I	51 39.0	DEC 20 SPA IP	03 02 40.5	DEC 20 SPA IP	17 47 11.0	DEC 21 MIR EP	20 52 56.0
DEC 19 MAW IP	07 03 36.0	DEC 20 SPA IP	04 57 06.0	DEC 21 SPA IP	01 14 58.0	DEC 21 SPA IP	22 23 05.5
DEC 19 H-08 30 22.5 55.9S 028.0W h ABOUT 033KM		E	58 27.0	E	15 21.0	I	29 19.5
SPA IP	08 37 06.5	DEC 20 BYR EP	04 57 06.0	DEC 21 SPA IP	01 43 30.0	DEC 21 SPA IP	22 29 19.5
I	38 14.5	E	58 27.0	DEC 21 SPA EP	01 59 13.0	DEC 21 MIR EP	22 38 23.0
BYR EP	08 37 21.0	SPA IP	04 57 06.5	DEC 21 SPA IP	02 22 38.5	DEC 22 H-00 24 48.7 09.5S 071.3W h ABOUT 614KM	
MAW IP	08 38 00.0	DEC 20 WIL EP	05 22 12.0	DEC 21 SPA IP	02 22 38.5	AIA EIP	00 33 31.0
SBA IP	08 38 45.8	DEC 20 SPA EP	05 44 10.0	DEC 21 MIR EP	02 38 21.3	SPA IP	00 35 58.5
DEC 19 SPA IP	09 12 55.0	DEC 20 SPA EP	05 47 28.0	DEC 21 MIR EP	02 56 37.8	I	36 18.0
DEC 19 SPA IP	10 10 16.0	DEC 20 SPA EP	06 50 28.0	DEC 21 MIR EP	04 59 29.3	I	38 07.0
DEC 19 SPA EP	11 55 48.0	DEC 20 H-08 44 42.5 33.9S 072.0W h ABOUT 028KM		DEC 21 H-07 28 48.1 05.9S 154.3E h ABOUT 040KM		SBA IP	00 36 32.8
DEC 19 WIL E(P)	12 32 26.0	SPA IP	08 54 22.5	SPA IP	07 41 14.5	MAW EP	00 37 14.0
				I	41 29.0	DEC 22 H-00 46 32.9 21.3S 179.3W h ABOUT 663KM	
				I	41 45.0	SPA IP	00 56 35.5

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
DEC 22 MIR EP	01 01 03.0	SPA IP	20 24 48.5	DEC 23 H-11 11 50.9 19.7S 068.5W h ABOUT 163KM		DEC 24 SBA EP	18 52 37.0
SPA EP	01 02 37.0	DEC 22 H-20 54 35.3 31.9N 117.1W h ABOUT 014KM		SPA IP	11 22 50.0	DEC 24 H-19 49 58.5 52.7N 168.8W h ABOUT 035KM	
DEC 22 SPA IP	01 37 30.0	SPA IP'	21 13 30.5	DEC 23 SPA EP	11 54 18.0	SPA EP'	20 09 13.0 I 13 51.5
DEC 22 H-02 30 08.7 20.7S 178.2W h ABOUT 085KM		DEC 22 MIR EP	21 32 37.9	DEC 23 SPA EP	15 06 46.0	DEC 24 SPA IP	22 24 39.5
SPA IP	02 41 06.0	DEC 23 H-02 38 36.7 19.9S 169.7E h ABOUT 129KM		DEC 23 H-16 04 17.8 23.2S 114.0W h ABOUT 033KM		DEC 24 SPA IP	23 00 40.5
DEC 22 H-04 36 34.7 28.2N 057.0E h ABOUT 042KM		SPA IP	02 49 36.5	SPA IP	16 15 09.0	DEC 25 H-01 08 26.8 8.2N 126.0E h ABOUT 062KM	
SPA IP'	04 55 17.5 E 56 32.5	DEC 23 MIR E(P)	05 00 44.0	DEC 23 MCQ IP	17 50 33.4	SPA IP	01 21 59.0
BYR EP'	04 55 38.0	DEC 23 H-05 46 44.8 59.4S 026.9W h ABOUT 033KM		DEC 23 H-19 47 59.3 30.3N 131.1E h ABOUT 033KM		DEC 25 H-03 16 47.1 15.2S 173.2W h ABOUT 011KM	
DEC 22 SPA EP	04 49 14.0	SPA IP	05 52 59.5 I 53 59.5 E 59 39.0	SPA EP'	20 06 42.0	SPA IP	03 28 29.5
DEC 22 SPA EP	07 41 11.0	MIR E(P)	05 55 00.0	DEC 24 SPA IP	03 28 59.5	DEC 25 H-08 02 08.5 09.9S 159.8E h ABOUT 035KM	
DEC 22 H-08 01 12.6 18.4N 068.8W h ABOUT 115KM		DEC 23 H-06 30 37.7 27.4S 063.1W h ABOUT 580KM		DEC 24 MIR ES	05 05 39.2	SPA IP	08 14 17.0
AIA EIP	08 13 29.0	SPA IP	06 40 09.0	DEC 24 MIR EP	05 55 15.1 EPP 58 42.5	DEC 25 H-08 48 37.7 18.8S 069.0W h ABOUT 117KM	
BYR IP	08 14 54.0 I pP 15 50.5 EPP 20 19.0	DEC 23 H-07 36 02.9 07.1S 129.4E h ABOUT 111KM		DEC 24 AIA EP	15 37 47.0 E 45 08.0	AIA EP	08 56 55.0
SPA EP	08 15 23.0 E 18 52.0 I 30 38.0	MAW IP	07 47 33.0	DEC 24 AIA EP	15 51 22.0 E 53 24.0	BYR IP	08 59 08.5 I pP 59 38.5 I sP 59 53.0
WIL EP'	08 20 15.0	SPA IP	07 48 17.0	DEC 24 SPA IP	17 27 03.5	SPA IP	08 59 46.5 I 09 00 17.5
DEC 22 SPA EP	10 04 43.0	BYR IP	07 48 37.0	DEC 24 SPA EP	18 24 11.0	MAW IP	09 01 11.5
DEC 22 SPA IP	10 42 42.5	DEC 23 SPA EP	07 58 14.0	DEC 24 SPA IP	18 39 56.5	DEC 25 MIR E	08 51 49.0
DEC 22 AIA EP	11 50 20.0	DEC 23 H-09 16 52.9 51.1N 175.5W h ABOUT 033KM		DEC 24 H-18 45 45.5 04.4S 153.1E h ABOUT 093KM		DEC 25 H-09 51 02.2 22.5S 067.3W h ABOUT 092KM	
DEC 22 H-11 58 10.1 22.2S 179.7W h ABOUT 600KM		SPA EP'	09 36 18.0	MCQ IP	18 54 33.8	BYR EP	10 01 12.0 IPCP 06 31.0
SPA IP	12 08 11.5 I 10 12.5	DEC 23 H-10 16 21.5 23.6S 179.0W h ABOUT 033KM		SBA IP	18 57 10.2	SPA IP	10 01 52.0 I 02 19.5
DEC 22 MIR EP	17 56 10.9	SPA IP	10 27 10.0	SPA IP	18 58 15.5 I 58 31.0	DEC 25 SPA EP	10 29 24.0 I 29 38.0
DEC 22 MIR EP	19 03 26.1	DEC 23 SPA IP	10 19 30.5	BYR EP	18 58 17.0 ES 19 08 44.0	DEC 25 SPA IP	10 55 34.5
DEC 22 WIL E(P)	20 24 11.0			MAW IP	18 58 17.0		

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
DEC 25 SPA IP	11 17 09.5	SPA IP I	18 43 48.5 44 45.5	MIR EP I pP EPP	16 26 17.5 27 28.0 28 47.0	DEC 30 MIR EPP ES	13 27 00.5 30 52.0
DEC 25 H-13 50 49.6 35.2N 139.1E h ABOUT 104KM		DEC 26 MIR E	19 52 16.5	MAW EP E ES	16 27 15.5 29 28.5 36 29.5	DEC 30 H-15 27 25.8 31.3N 138.8E h ABOUT 261KM	
SPA EP'	14 09 34.0	DEC 26 H-23 50 23.8 59.3N 152.9W h ABOUT 035KM		AIA EIP E	16 27 19.0 29 28.0	BYR IP' I I	15 45 51.5 49 02.0 50 30.5
DEC 25 H-17 01 32.2 34.8N 139.3E h ABOUT 033KM		SPA IP'	24 10 06.0	DEC 28 BYR E(P) E	16 54 16.0 56 38.0	AIA EP'	15 46 19.0
SPA IP'	17 20 23.0	DEC 27 AIA EP	01 25 57.0	DEC 28 H-17 04 57.0 86.7N 068.7E h ABOUT 033KM		DEC 30 H-21 30 58.8 23.3S 179.9W h ABOUT 547KM	
DEC 25 SPA EP E	17 32 07.0 33 24.0	SPA IP E	01 28 01.0 34 12.0	BYR EP' EPP	17 24 54.0 26 32.0	SBA E	21 39 40.8
DEC 25 H-17 56 40.1 25.3S 068.1W h ABOUT 101KM		DEC 27 SPA IP	08 30 43.0	DEC 28 MIR EP ES	17 55 15.0 18 05 57.0	BYR I(P) I	21 40 28.5 42 21.0
SPA IP	18 07 12.0	DEC 27 SBA EP	17 38 25.1	DEC 29 AIA EP	02 45 45.0	MIR EP	21 41 02.1
MAW IP	18 08 45.0	DEC 27 H-17 43 21.4 12.9N 125.4E h ABOUT 033KM		DEC 29 MIR E	10 27 21.5	MAW IP	21 42 03.5
DEC 25 SPA IP	18 35 55.0	SPA E(P)	17 57 23.0	DEC 29 SBA IP	13 37 39.2	DEC 31 SBA EP	02 19 38.0
DEC 25 SBA EP	19 18 51.0	BYR EP' I	18 02 00.0 03 03.5	DEC 29 H-22 59 22.0 17.2S 178.7W h ABOUT 493KM		DEC 31 MIR E	07 56 21.5
DEC 25 SPA IP	21 02 19.5	DEC 27 SBA EP	17 50 14.0	MAW IP	23 11 01.7	DEC 31 MIR E E	08 43 56.5 45 45.0
DEC 26 SPA I	10 21 32.5	DEC 27 SBA EP	19 13 52.0	DEC 30 BYR IP	02 31 24.5	DEC 31 MIR E	09 26 57.3
DEC 26 MIR IP	12 40 58.5	DEC 28 MIR E	03 32 47.0	DEC 30 BYR E(P)	10 09 00.0	DEC 31 H-12 46 22.4 07.4S 156.0E h ABOUT 048KM	
DEC 26 SPA EP E	13 10 06.0 11 07.0	DEC 28 MIR EP	08 35 47.4	DEC 30 MIR E	10 44 48.3 50 01.2	BYR IP	12 58 38.0
DEC 26 MIR E	13 32 13.0	DEC 28 MIR EP	08 37 21.0	DEC 30 MIR E	10 44 48.3 50 01.2	DEC 31 SBA EP	15 46 39.0
DEC 26 H-14 30 29.1 51.8N 156.8E h ABOUT 136KM		DEC 28 SBA EP	09 09 21.0	DEC 30 MIR E(P)	12 52 08.5	DEC 31 H-23 13 30.9 04.6S 153.0E h ABOUT 077KM	
BYR IP' E	14 49 32.0 49 40.0	DEC 28 SBA EP	10 04 11.0	DEC 30 H-13 19 47.4 62.6S 165.8E h ABOUT 033KM		SBA EP	23 25 02.0
SPA IP' I I	14 49 38.0 50 13.5 50 13.5	DEC 28 H-16 16 11.0 22.1S 179.6W h ABOUT 611KM		SBA IP	13 23 21.2	BYR IP I	23 26 00.5 26 15.5
DEC 26 BYR IP ES	14 53 02.0 15 01 41.0	MCQ IP	16 22 23.8	WIL E(P) ES	13 25 03.0 29 13.0		
DEC 26 SBA EP	18 29 45.0	SBA IP	16 24 56.0	BYR IP I pP E	13 25 23.0 25 55.0 36 32.0		
DEC 26 BYR EP I	18 43 39.0 44 45.5	WIL EP ES	16 25 34.3 33 10.0	MAW IP	13 27 11.0		