BAGUIO STATION

QUARTERLY SEISMOLOGICAL BULLETIN

MANILA OBSERVATORY

PHILIPPINES

BAGUIO SEISMIC STATION

Baguio, Philippines

Latitude	16° 24' 39'' N
Longitude	120° 34' 47'' E
Elevation	1507 meters

Instruments: World-wide standardized seismographs (USCGS)

S. P.: Benioffs (designated as N, E, Z)

T_o - 1.0 sec.

T_g - 0.75 sec.

Magnification: usually 25,000

L. P.: Sprengnethers (designated as N', E', Z')

T_o - 15 secs.

T_g - 100 secs.

Magnification: usually 3,000

Date	Phase	Comp.	Time (GCT)			Distance, etc.
01 JUN						
(1)	iP	NEZ	02	00	24.5	
(2)	iP	NEZ	02	37	54.4	
(3)	i(P)	NEZ	04	02	15.5	
(4)	iP	NEZ	04	38	08.7	D $\overset{*}{=}$ 2800 km
	iX	NEZ		38	36.0	20.2 N 94.9 E (CGS)
(5)	eS	N'E'Z'	04	42	38.0	
	LR	N'E'Z'		45	00.0	
(6)	iP	EZ	06	24	18.7	D $\overset{*}{=}$ 150 km
	iS	NEZ		24	35.2	28.5 N 83.2 E (CGS)
(7)	eP	NEZ	07	59	32.0	
(8)	LQ	N'E'	08	11	00.0	D $\overset{*}{=}$ 4100 km
	LR	N'E'Z'		15	46.0	
(9)	iP	E	08	18	49.8	D $\overset{*}{=}$ 160 km
	iS	NEZ		19	08.0	
(10)	eP	NEZ	10	39	15.2	D $\overset{*}{=}$ 45 km
	iS	NEZ		39	22.0	
(11)	iP	NEZ	13	08	17.4	D $\overset{*}{=}$ 200 km
	iS	NEZ		08	49.1	
(12)	iP	Z	13	12	30.1	
	LQ	N'E'		18	24.0	
	LR	N'E'Z'		21	07.0	
(13)	eX	N'E'	18	18	24.0	
(14)	eP	NEZ	19	00	42.5	
(15)	iP	NEZ	21	03	32.2	D $\overset{*}{=}$ 160 km
	iS	NEZ		03	50.0	
(16)	eX	E'	21	11	48.0	
	LR	N'E'Z'		12	40.0	
(17)	iP	NEZ	23	16	37.4	D $\overset{*}{=}$ 480 km
	iS	NEZ		17	27.7	
	eX	N'E'Z'		18	09.0	
02 JUN						
(1)	eP	NEZ	03	11	44.1	D $\overset{*}{=}$ 250 km
	iS	NE		12	11.1	
(2)	eP	NEZ	04	07	53.9	D $\overset{*}{=}$ 320 km

Date	Phase	Comp.	Time (GCT)			Distance, etc.
02 JUN						
(2)	eS	NEZ	04	08	27.7	
(3)	eP	NEZ	04	31	25.0	
	eX	NEZ		31	37.5	
	i(S)	NE		31	44.0	
(4)	(LR)	N'E'Z'	04	38	15.0	
(5)	iP	NEZ	05	23	20.0	
	i(S)	NEZ		23	25.0	
(6)	LR	N'E'Z'	05	31	47.0	
(7)	iP	NEZ	08	22	54.5	
	iX	NE		23	00.0	
	i(S*)	NE		23	05.0	
	e(Sn)	NEZ		23	09.4	
(8)	iP	NEZ	09	29	34.0	
	iX	Z		29	38.0	
	eX	NE		29	38.0	
(9)	iP	Z	14	55	56.0	
	i(S)	EZ		56	05.0	
(10)	eP	NEZ	14	58	32.0	$D \overset{*}{=} 80$ km
	iX	EZ		58	39.0	
	iS	NEZ		58	42.0	
	LR	N'E'Z'		59	13.0	
(11)	eP	NEZ	15	04	15.0	
	eX	NEZ		04	20.0	
	eX	NEZ		04	51.0	
(12)	iP	Z	15	08	33.8	$D \overset{*}{=} 130$ km
	iX	NEZ		08	39.7	
	iS	NEZ		08	49.0	
	LQ	N'E'		09	08.0	
	LR	N'E'Z'		09	51.0	
(13)	iP	NEZ	20	25	58.4	D = 510 km
	iX	NZ		26	15.0	
	iX	EZ		26	35.0	
	iS	NEZ		26	51.0	
	iX	NZ		27	10.2	
	LQ	N'E'		27	12.0	
	LR	N'E'Z'		27	29.0	
03 JUN						
(1)	LQ	N'E'	00	40	40.0	
	LR	N'E'Z'		51	37.0	

Date	Phase	Comp.	Time (GCT)	Distance, e tc.
3 JUN				
(2)	iP	Z	04 53 17.2	
(3)	LR	N'E'Z'	05 03 13.0	
(4)	eP	NEZ	05 53 12.7	
	iS	NEZ	54 11.1	D ≐ 570 km
(5)	iP	Z	7 53 12.1	
(6)	LR	N'E'Z'	8 07 25.0	
(7)	iP	EZ	08 08 14.0	
	iX	NEZ	08 45.0	D ≐ 520 km
	iS	EZ	09 08.	
(8)	eP	NEZ	11 16 38.2	
	eS	NE	17 21.0	D ≐ 410 km
(9)	eX	N'E'Z'	12 16 19.0	
(10)	LR	N'E'Z'	17 01 00.0	
(11)	iP	NZ	21 46 38.0	
	iS	N EZ	46 57.3	D ≐ 170 km
(12)	iP	Z	23 07 17.2	
	iX	EZ	07 27.5	
	iS	N EZ	08 15.0	D ≐ 560 km
4 JUN				
(1)	iP	EZ	03 27 12.2	
	iS	EZ	27 14.3	
(2)	iP	Z	04 54. 24.7	
	iX	NZ	54 33.6	
	iS	NEZ	54 37.3	D ≐ 100 km
	iX	NEZ	54 43.2	
	iX	NEZ	54 45.0	
(3)	eP	NEZ	06 39 52.2	
	iS	NEZ	40 28.5	D ≐ 340 km
(4)	iP	NZ	13 36 35.8	
	iX	NZ	36 45.8	
(5)	LR	N'E'Z'	13 43 00.0	
(6)	LR	N'E'Z'	15 26 38.0	
(7)	iP	Z	15 38 08.0	

Date	Phase	Comp.	Time (GST)	Distance, etc.
4 JUN				
(8)	eP	NEZ	17 54 13.6	
	eS	NEZ	54 27.7	D ≐ 120 km
5 JUN				
(1)	iP	NEZ	01 45 06.1	
(2)	iX	NEZ	03 53 22.0	
(3)	eX	NEZ	03 57 15.5	
(4)	iP	NEZ	7 03 49.3	
	iS	NEZ	04 35.1	D ≐ 440 km
(5)	iP	NEZ	10 49 53.8	
	iS	NEZ	50 14.0	D ≐ 180 km
(6)	e(P)	NEZ	12 58 10.6	
	e(S)	NEZ	59 10.3	
(7)	iP	NEZ	13 39 12.9	
	iS	NEZ	39 30.0	D ≐ 150 km
(8)	e(P)	Z	13 40 15.5	
	LR	N'E'Z'	42 00.0	
(9)	iP	NEZ	13 53 17.1	
	iS	NEZ	53 18.9	
(10)	i(P)	NEZ	13 53 54.0	
(11)	eP	N'E'Z'	14 11 36.0	
	eS	N'E'Z'	15 18.0	D ≐ 2300 km
6 JUN				
(1)	iP	NEZ	04 30 50.1	
	iS	NEZ	31 01.2	D ≐ 90 km
(2)	eP	NEZ	08 54 54.2	
	iS	NEZ	55 49.5	
	LR	N'E'Z'	56 08.0	D ≐ 530 km
(3)	eP	NEZ	11 22 47.3	D ≐ 700 km
	iS	NEZ	24 20.5	22.8 N
	LR	N'E'Z'	24 30.0	121.7 E (CGS)
(4)	LR	N'Z'	14 34 40.0	
(5)	eP	NEZ	15 02 49.2	
	iS	NEZ	03 30.2	D ≐ 390 km
(6)	eX	N'E'Z'	15 51 25.0	

Date	Phase	Comp.	Time (GCT)	Distance, etc.
06 JUN				
(7)	(LR)	N'E'Z'	16 04 26.0	
(8)	eP	NEZ	19 14 05.6	
	i(S)	N	14 40.4	
07 JUN				
(1)	iP	NEZ	1 33 14.4	
	i(S)	NZ	33 15.5	
(2)	iP	NEZ	06 54 01.4	
	iX	NE	54 44.0	
	iS	NE	54 57.5	D $\overset{*}{=}$ 540 km
	LR	N'E'Z'	55 27.0	
(3)	(LR)	N'E'Z'	10 32 25.0	
(4)	e(P)	NEZ	12 26 16.4	
	iX	EZ	27 07.5	
	iS	N EZ	27 12.5	
(5)	eX	N'E'Z'	13 42 40.0	
(6)	i(P)	Z'	15 36 18.1	
	iS	NEZ	36 46.5	
08 JUN				
(1)	iP	NEZ	05 49 28.6	
(2)	iP	NEZ	09 16 20.5	D $\overset{*}{=}$ 210 km
	iS	NE	16 43.9	
(3)	eX	N'E'Z'	09 42 15.0	
(4)	eP	NEZ	12 18 31.0	
(5)	e P	NEZ	12 33 45.1	
(6)	e(P)	NEZ	13 43 53.0	
(7)	LR	N'E'Z'	14 33 19.0	
(8)	iP	NEZ	17 03 26.3	
(9)	e(P)	NEZ	20 04 52.5	
	eS	NEZ	05 34.5	
	(LR)	N'E'Z'	05 46.0	
(10)	iP	NEZ	21 36 12.0	D $\overset{*}{=}$ 100km
	iS	NEZ	36 24.5	

Date	Phase	Comp.	Time (GCT)	Distance, etc.
09 JUN				
(1)	iP	NEZ	12 03 05.5	D≅ 90 km
	iS	N	03 16.6	
(2)	eP	NEZ	13 40 27.1	D≅ 60km
	iS	NEZ	40 35.5	
(3)	eP	NEZ	16 00 43.8	
	e(S)	NEZ	01 03.0	
(4)	i(P)	NEZ	17 09 44.0	
(5)	e P	NEZ	19 10 25.1	D≅ 290 km
	eS	N'E'Z'	15 14.0	8.6 S
				127.3 E (CGS)
(6)	eP	NEZ	20 09 28.5	
(7)	LR	N'E'Z'	20 48 09.0	
10 JUN				
(1)	iP	NEZ	15 20 26.0	D≅1750 km
	eS	N'E'Z'	23 22.5	1.9 N
	LR	N'E'Z'	24 28.0	126.6 E
11 JUN				
(1)	eP	NEZ	00 36 37.4	
(2)	LR	N'E'Z'	00 40 06.0	
(3)	eP	NEZ	02 47 08.5	D≅6200 km
	e.	N'E'Z'	47 08.5	51.8 N
	eS	N'E'Z'	54 46.2	174.1 E (CGS)
	LR	N'E'Z'	3 00 30.0	
(4)	iP	NEZ	3 40 51.8	D*4100 km
	iP	N'E'Z'	40 51.8	44.7 N
	eS	N'E'Z'	46 32.0	148.7 E
	LQ	N'E'	49 28.0	
	LR	N'E'Z'	53 50.0	
(5)	iX	NEZ	04 20 22.0	
(6)	iX	NEZ	04 21 57.1	
(7)	iP	NEZ	04 50 49.0	D≅ 140 km
	iS	NEZ	51 05.2	
(8)	iP	NEZ	07 18 10.0	
(9)	iP	NEZ	08 04 05.0	D = 90 km
	iS	NEZ	04 16.0	

Date	Phase	Comp.	Time (GCT)	Distance, etc.
11 JUN				
(10)	eP	N'E'Z'	08 53 47.0	D ≐ 2700 km
	eS	N'E'Z'	58 05.0	
	LQ	N'E'	09 00 38.4	
	LR	Z'	01 42.8	
(11)	eX	E'	10 29 30.0	
(12)	eX	E'	10 35 14.4	
(13)	iP	NEZ	13 21 47.0	
	iS	NEZ	23 24.5	D ± 970 km
	LR	N'E'Z'	23 42.0	
(14)	iP	NEZ	14 03 49.8	
	iP	N'E'Z'	03 49.8	
	iS	NEZ	04 51.0	D ± 600 km
(15)	LR	N'E'Z'	17 33 22.0	
(16)	iP	NEZ	20 51 26.5	
	LR	N'E'Z'	21 05 00.0	
(17)	iP	NEZ	22 51 09.0	
	iS	NEZ	51 24.0	D ± 130 km
12 JUN				
(1)	e P	NEZ	05 35 44.0	4100 km
	iS	N'E'Z'	41 36.0	44.2 N
	LR	N'E'Z'	47 40.0	149.8 E (CGS)
(2)	eX	N'E'Z'	05 49 18.0	
(3)	iP	NEZ	12 52 33.5	
	iS	NEZ	52 43.5	D ± 80 km
(4)	iP	NEZ	12 58 28.0	
	eS	NEZ	58 52.5	D ± 220 km
(5)	iP	NEZ	15 22 51.0	D ≐ 100 km
	eS	NEZ	23 03.5	
(6)	iP	NEZ	18 00 25.5	D ≐ 2900 km
	eS	N'E'Z'	05 08.0	6.3 S
				105.8 E (CGS)
(7)	iP	NEZ	18 52 49.0	D ≐ 4000 km
	eS	N'E'Z'	58 35.0	44.1 N
	LR	N'E'Z'	19 03 34.0	149.0 E
(8)	eP	NEZ	22 23 52.5	
	eS	N'E'Z'	31 14.5	D ≐ 4000 km
	LQ	N'E'	32 48.0	44.2 N
	LR	N'E'Z'	35 11.0	149.0 E

Date	Phase	Comp.	Time (GCT)	Distance, etc.
13 JUN				
(1)	eP	NEZ	01 52 57.0	
	eS	N'E'Z'	55 11.0	
	LQ	N'E'	55 23.0	D ≐ 1300 km
	LR	N'E'Z'	56 00.0	
(2)	eP	NEZ	02 27 57.5	
	eS	N'E'Z'	36 30.0	
	LR	N'E'Z'	41 18.0	D ≐ 7100 km
(3)	eP	NE	07 12 38.0	
	iP	Z	12 38.0	41.9 N
	iP	N'E'Z'	12 38.0	143.4 E (CGS)
	eS	NEZ	17 44.0	D ≐ 3550 km
	eS	N'E'Z'	17 44.0	
	LQ	N'E'	19 56 0	
	LR	N'E'Z'	22 03.0	
(4)	eP	NEZ	16 34 37.0	
(5)	iP	NEZ	17 29 53.5	D ≐ 450 km
	iS	NEZ	30 34.0	21.0 N, 120.5 E (CGS)
(6)	eP	NEZ	20 14 05.0	
	eP	N'E'Z'	14 05.0	
	e(S S)	NEZ	29 02.0	
	(LQ)	N'E'	44 03.0	
	(LR)	Z'	50 25.0	
(7)	iP	NEZ	23 32 54.5	
	iS	NEZ	32 59.0	D ≐ 20 km
14 JUN				
(1)	eP	NEZ	01 23 05.0	
	eS	N'E'Z'	28 35.0	6.0 S
	LQ	N'E'	29 15.0	151.6 E (CGS)
	LR	N'E'Z'	31 54.0	D ≐ 4200 km
(2)	eP	NEZ	04 29 05.5	
	eS	NEZ	29 25.0	D ≐ 170 km
(3)	eP	NEZ	04 46 25.5	
	iS	NEZ	47 13.0	D ≐ 450 km
(4)	eX	NEZ	06 16 14.0	
(5)	iP	NEZ	06 18 07.0	
	iS	NEZ	18 24.0	D ≐ 150 km
(6)	eP	N'E'Z'	07 51 48.0	
	e(PP)	N'E'Z'	54 13	
	eS	N'E'Z'	08 00 19.0	D ≐ 8450 km
	LQ	N'E'	07 12.0	

Date	Phase	Comp.	Time (GCT)	Distance, etc.
14 JUN				
(6)	LR	N'E'Z'	08 20 33.0	
(7)	eP	N'E'Z'	09 55 37.0	
	eS	N'E'Z'	10 04 14.0	
	LQ	N'E'	18 09.0	D ≐ 7200 km
	LR	N'E'Z'	22 42.0	
15 JUN				
(1)	eX	N'E'Z'	05 03 50.0	
	LR	Z'	09 56.0	
(2)	eP	N'E'Z'	08 08 35.0	
	LQ	N'E'	11 44.0	
(3)	eP	NEZ	09 32 06.5	
(4)	e(P)	N'E'Z'	09 51 29.0	
	e(S)	N'E'Z'	54 04.0	
	LR	N'E'Z'	57 13.0	
(5)	eP	NEZ	10 10 55.0	
(6)	eX	N'E'Z'	14 34 17.0	
	eS	N'E'Z'	36 06.0	
	LR	N'E'Z'	39 38.0	
(7)	eP	N'E'Z'	17 00 48.0	
	e(S)	N'	08 42.0	
	LR	Z'	13 38.0	
(8)	eP	NEZ	19 39 15.5	
	eS	NEZ	39 40.0	D ≐ 230 km
(9)	eP	NEZ	20 05 03.0	
	eS	NEZ	05 46.5	D ≐ 420 km
(10)	eP	N'E'Z'	20 19 46.0	
	eS	E'	20 47.0	D ≐ 590 km
(11)	eP	NE	21 20 26.0	
	eS	NE'	20 38.0	D ≐ 100 km
(12)	eP	Z'	23 21 04.0	
	eS	N'E'	29 35.0	20.9 S
	LQ	N'E'	36 56.0	173.7 E (CGS)
	LR	E'Z'	39 42.2	D ≐ 7200 km
16 JUN				
(1)	LR	Z'	01 44 30.0	
(2)	LR	Z'	02 43 02.0	

Date	Phase	Comp.	Time (GCT)	Distance, etc.
16 JUN				
(3)	PP	N'E'	04 26 17.0	D ≐ 11000 km
	eS	N'E'	34 22.5	
	LQ	N'E'	50 12.0	
	LR	N'E'Z'	55 15.0	
(4)	iP	NEZ	05 02 36.2	
	iP	N'	02 36.2	29.5 N
	eS	N'E'Z'	07 08.0	141.9 E
	LQ	N'E'	07 44.0	D ≐ 2650 km
	LR	N'E'Z'	08 49.0	
17 JUN				
(1)	iP	NEZ	01 38 46.7	
	iS	NEZ	39 19.8	D ≐ 310 km
(2)	iP	NEZ	03 08 58.5	
	iS	NEZ	09 58.5	D ≐ 570 km
	LQ	N'E'	10 12.0	
(3)	iP	NEZ	10 45 28.3	
	iS	NEZ	46 59.4	23.9 N
	iS	N'E'Z'	46 59.4	123.3 E (CGS)
	LQ	N'E'	47 08.0	D ≐ 850 km
	LR	N'E'Z'	47 46.0	
(4)	eP	NEZ	20 04 06.2	
(5)	eP	Z'	20 21 36.4	
	eS	N'E'Z'	27 06.0	32.0 N
	LQ	N'E'	30 44.2	87.8 E
	LR	N'E'Z'	32 26.0	D ≐ 3800 km
18 JUN				
(1)	eP	N'	01 31 23.0	
	eS	N'	36 04.0	
	LR	Z'	38 22.0	D ≐ 3100 km
(2)	eX	N'E'	08 29 20.0	
	LR	Z'	29 50.0	
(3)	eX	N'E'	23 30 25.0	
19 JUN				
(1)	eX	E'[illegible]	03 10 11.2	
(2)	eX	Z'	06 53 28.0	
	LR	Z'	07 00 08.0	
(3)	iP	NEZ	15 28 23.5	
	eS	NE	28 31.5	D ≐ 60 km

Date	Phase	Comp.	Time (GCT)	Distance, etc.
19 JUN				
(4)	eP	N'E'	19 56 09.8	
	iS	NE	50 57.8	D ≅ 460 km
(5)	iP	NEZ	23 37 16.5	D ≅ 110 km
	iS	N E	37 23.5	
20 JUN				
(1)	eP	Z	01 29 36.5	
	iS	E	30 06.5	D ≅ 280 km
(2)	iP	Z	02 04 31.5	
	iS	Z'	10 11.0	44.6 N 149.2 E
	LR	Z'	15 20.0	D ≅ 4000 km
(3)	(LQ)	E'	04 09 47.0	
	LR	Z'	11 10.0	
(4)	iP	Z	04 16 41.0	
	i(S)	N'	17 17.0	
(5)	iP	NEZ	05 10 50.0	
	iS	N	11 10.0	D ≅ 180 km
(6)	iP	NEZ	06 07 07.0	
	eS	E	07 22.0	D ≅ 120 km
(7)	eP	E	06 11 12.0	
(8)	iP	E	07 55 38.0	
	eS	E	57 23.0	10.4 N 126.1 E
	LR	Z'	58 54.0	D ≅ 900 km
(9)	eP	E	10 09 15.0	
	iS	NEZ	09 31.0	D ≅ 140 km
(10)	IQ	E'	14 05 23.0	
	LR	Z'	06 04.0	
(11)	eP	NE	20 41 06.0	
	iS	NE	41 33.0	D ≅ 250 km
21 JUN				
(1)	iP	N'	00 39 40.0	
	eS	N'	46 42.0	
	LQ	N'	50 56.0	D ≅ 5500 km
(2)	eP	EZ	03 44 21.0	D ≅ 110 km
	iS	NEZ	44 34.0	
(3)	eP	NEZ	08 18 34.5	
	eS	NEZ	18 43.0	D ≅ 60 km

Date	Phase	Comp.	T ima (GCT)	Distance, etc.
21 JUN				
(4)	eP	N	10 03 07.0	
	eS	NE	03 14.0	D ≐ 45 km
(5)	LR	E'Z'	12 41 33.0	
(6)	LR	Z'	13 22 50.0	
(7)	LR	Z'	20 52 12.0	
22 JUN				
(1)	iP	NEZ	00 58 21.0	
(2)	eP	NZ	04 23 45.0	
	eS	N'Z'	27 08.0	0.6 N, 125.4 E (CGS)
	LQ	N'	29 12.0	D ≐ 1950 km
	LR	N'Z'	29 52.0	
(3)	eP	NEZ	08 44 26.5	
	iS	NE	44 40.0	D ≐ 110 km
(4)	eP	NE	13 30 45.0	
	ePP	N'	32 26.0	
	eS	N'	39 52.0	D ≐ 7800 km
(5)	eP	NEZ	14 36 27.5	
	eS	NE	36 50.0	D ≐ 210 km
(6)	e(P)	NE	21 19 07.5	
	eS	N'	23 48.0	2.3 S, 138.5 E(CGS)
	LR	Z'	26 04.0	D ≐ 3100 km
(7)	iP	NEZ	23 50 26.0	
	iP	N'E'Z'	50 26.0	7.1 N, 123.5 E(CGS)
	iS	N'E'Z'	53 08.0	D ≐ 1100 km
23 JUN				
(1)	eP	E	08 21 03.0	
(2)	eP	E	10 49 03.0	
(3)	iP	Z	11 20 51.0	
	iP	N'E'Z'	20 51.0	56.6 N, 152.9 W(CGS)
	iS	N'E'S'	30 28.0	D ≐ 8300 km
	LQ	N '	40 58.0	
(4)	eP	NEZ	16 14 26.0	
	iS	N'Z'	19 00.0	4.1 S, 135.3 E(CGS)
	LR	Z'	22 02.0	D ≐ 2800 km
(5)	eP	NEZ	16 33 56.0	
	eS	NEZ	34 00.0	

Date	Phase	Comp.	Time (GCT)			Distance (km)
23 JUN						
(6)	eP	NZ	17	01	44.5	130
	eS	Z		02	00.0	
24 JUN						
(1)	iP	NZ	04	53	37.2	2500
	iP	E'		53	37.2	35.5 N
	eX	E'Z'		54	39.0	135.4 E (CGS)
	eX	E'Z'		56	22.0	
	eX	N'		59	14.8	
	LR	Z'	05	03	36.0	
(2)	iP	NEZ	07	47	49.8	1200
	eP	N'E'Z'		47	49.8	7.0 N
	iS	N'E'Z'		50	05.0	126.2 E (CGS)
	LQ	E'		50	34.0	
	LR	Z'		51	35.5	
(3)	iP	NEZ	14	19	52.4	
(4)	LR	Z'	14	43	45.0	
(5)	eP	Z'	14	54	54.0	2210
	eS	Z'		58	25.0	
(6)	iP	NEZ	22	25	51.0	
(7)	iP	NEZ	23	09	34.5	400
	eP	N'E'Z'		09	34.5	20.1 N
	eS	N'E'Z'		10	33.0	120.8 E (CGS)
25 JUN						
(1)	iP	NEZ	12	52	34.6	1000
	eS	E'		54	35.5	9.6 N
	LQ	N'E'		54	57.0	126.3 E (CGS)
	LR	E'Z'		55	29.0	
(2)	iP	NEZ	13	58	25.7	
26 JUN						
(1)	iP	NEZ	04	41	27.4	
(2)	iP	NE	04	42	59.5	
	LR	Z'		43	42.0	
(3)	iP	NEZ	11	49	24.5	190
	iS	N		49	45.2	
(4)	iP	NEZ	16	55	38.0	
	LR	E'Z'		55	48.0	
(5)	eX	N'E'	20	40	10.0	

Date	Phase	Comp.	Time (GCT)	Distance, (Km)
26 JUN				
(6)	iP	NEZ	21 40 02.0	1980
	eS	N	43 16.4	
	LQ	N'	43 24.0	
	LR	E'Z'	43 48.0	
27 JUN				
(1)	eP	NEZ	00 55 05.2	
(2)	eP	Z'	01 10 21.0	
	eS	E'Z'	15 08.5	3150
	LQ	N'	16 17.0	9.2 N
	LR	E'Z'	17 48.0	94.1 E (CGS)
(3)	eX	E'	06 10 47.0	
(4)	eX	N '	09 04 46.0	
(5)	iP	NEZ	10 47 34.0	
	eS	E'	49 12.0	970
(6)	eX	E'	11 31 13.0	
(7)	iP	NEZ	11 37 57.5	
	iP	N'E'Z'	37 57.5	850
	eS	N'E'Z'	39 18.0	23.8 N
	LR	Z'	39 58.2	121.5 E (CGS)
(8)	iP	NZ	17 38 24.2	1500
	eS	N'E'	41 04.2	4.9 N
	LR	Z'	42 04.0	127.5 E (CGS)
(9)	eP	NEZ	22 03 35.7	
	cP	Z'	03 35.7	
28 JUN				
(1)	eP	NEZ	01 27 24.7	
(2)	iP	NEZ	03 40 57.5	
	iP	Z'	40 57.5	4300
	ePP	Z'	42 36.5	5.1 S
	eS	N'E'	47 03.0	153.0 E (CGS)
	LQ	N'E'	49 49.0	
	LR	N'Z'	52 18.0	
(3)	iP	NEZ	04 55 31.0	
	iS	NE	55 48.2	150
(4)	eX	N'	08 53 17.0	
(5)	iP	NEZ	15 46 42.0	800
	eS	N'Z'	47 42.0	23.9 N
	LR	E'Z'	48 51.6	121.6 E (CGS)

Date	Phase	Comp.	Time (GCT)	Distance (km)
28 JUN (6)	iP	EZ	18 07 56.0	
(7)	i(S)	Z	18 15 25.2	
(8)	i(S)	E	18 25 23.0	
(9)	i(S)	NE	18 28 23.2	
(10)	i(S)	NE	18 37 12.7	
(11)	iP	NEZ	19 19 38.8	
	eS	N'E'	19 55.0	140
(12)	iP	Z	19 24 34.5	
(13)	i(S)	Z	19 26 44.7	
(14)	i(S)	EZ	19 30 45.5	
(15)	iP	NEZ	19 54 49.8	
(16)	iP	E	20 23 30.0	
(17)	eP	Z	20 37 44.5	
29 JUN (1)	eX	N'	05 31 23.0	
(2)	iP	Z	06 22 03.5	
	iS	NZ	22 17.5	120
(3)	eX	N'	07 28 20.0	
(4)	eX	N'E'	08 05 05.0	
(5)	eX	N'E'	08 17 44.5	
(6)	eX	N'	08 26 32.0	
(7)	eX	N'	08 45 21.0	
(8)	iP	NEZ	09 42 35.7	
	iS	NEZ	42 52.5	150
(9)	iP	NEZ	15 36 35.4	
	iS	NZ	36 48.0	110
(10)	iP	NEZ	18 17 37.2	130
	iS	N	17 52.0	
30 JUN (1)	iP	NEZ	02 57 33.3	

Date	Phase	Comp.	Time (GCT)	Distance (km)
30 JUN				
	iP	N'E'Z'	02 57 33.3	2100
	eS	E'	03 01 48.0	1.6 S
	LR	Z'	03 04.5	126.7 E (CGS)
(2)	eX	Z'	03 43 08.0	
(3)	eP	N'	04 50 56.8	
	eS	N'	55 13.0	2750
	LR	N'E'Z'	57 11.0	
(4)	eX	N'	15 07 14.0	

Date	Phase	Comp.	Time (GCT)	Distance. (km)
01 JUL				
(1)	iP	NEZ	05 14 46.1	
(2)	iP	NEZ	06 29 25.1	
	iS	NEZ	30 05.4	380
(3)	iP	NEZ	07 05 24.3	
	iS	NEZ	05 50.9	250
	iS	N'E'	05 50.9	
(4)	eX	N'	07 27 17.9	
(5)	eX	N'E'	08 43 13.9	
(6)	iP	NEZ	09 38 55.4	
	iS	NEZ	39 06.3	90
(7)	iP	NEZ	09 45 15.5	
	iS	NEZ	46 06.9	490
(8)	eP	N'Z'	23 30 18.9	
	eX	N'Z'	32 23.0	
	eX	N'	36 59.0	
	eX	N'Z'	40 19.0	
(9)	eP	Z	23 44 24.4	
	LQ	N'E'	46 52.0	
02 JUL				
(1)	LR	Z'	01 38 09.0	
(2)	eP	Z	05 27 23.2	260 k
	iS	NE	27 51.4	
(3)	iP	N	07 11 35.6	
(4)	iP	NEZ	14 22 14.3	
	iS	E	22 17.2	
(5)	iS	N	15 21 45.3	
(6)	iP	NEZ	16 55 17.1	
	iS	NEZ	55 28.7	100
(7)	iP	NEZ	18 08 37.6	
	iS	NEZ	08 56.9	170
	iS	N'	08 56.9	
(8)	iP	NE	19 41 38.7	
(9)	eP	Z	19 48 07.7	

Date	Phase	Comp.	Time (GCT)	Distance (km)
02 JUL				
(10)	e(P)	NZ	20 18 08.4	
(11)	LR	Z'	20 45 58.3	
(12)	iP	NEZ	20 09 22.3	
	iP	Z'	21 09 22.3	7300
	eP	N'E'	21 09 22.3	53.1 N
	iS	NEZ	21 18 05.9	167.7 W (CGS)
	iS	N'E'Z'	18 05.9	
	LQ	N'E'	25 23.9	
03 JUL				
(1)	eX	E'	03 17 23	
(2)	iP	NEZ	09 30 13.6	
	iS	NE	30 34.5	190
(3)	eP	N	11 18 21.7	
(4)	eP	E'	11 22 35.0	
(5)	eP	EZ	11 30 35.8	
	eP	N'E'Z'	30 35.8	2150
	eS	N'E'Z'	34 14.0	22.6 N
	LQ	N'E'	34 40.0	101.4 E (CGS)
	LR	N'E'Z'	35 38.0	
(6)	eP	NEZ	12 27 51.8	
	eP	Z'	27 51.8	2750
	eS	E'	32 10.0	4.7 S
	G	N'Z'	32 35.0	133.8 E (CGS)
(7)	iP	NEZ	13 17 22.2	
	iS	NE	17 24.9	
(8)	eX	E'Z'	14 23 15.0	
(9)	eP	NZ	15 17 14.0	
(10)	iP	NEZ	17 06 29.5	
	iS	NE	06 38.3	70
(11)	eP	NE	19 44 25.5	
(12)	i(P)	NEZ	20 18 52.7	
(13)	eX	N'E'	21 16 38.0	
(14)	iP	NE	22 50 08.7	

Date	Phase	Comp.	Time (GCT)	Distance (km)
04 JUL				
(1)	iP	NE	04 12 53.6	
(2)	iP	NE	04 46 40.5	
(3)	eP	E	06 37 46.8	
(4)	iP	NEZ	08 26 20.7	: 160
	iS	Z'	26 38.7	
	eS	N	26 38.7	
(5)	eX	N'	11 58 29.5	
(6)	eX	N'E'	12 16 10.0	
(7)	eX	N'E'	12 26 04.0	
(8)	eX	N'Z'	12 34 40.0	
(9)	iP	E	12 41 30.3	
(10)	eX	N'E'Z'	12 47 53.2	
(11)	eX	E'	12 54 13.0	
(12)	eX	N'E'Z'	13 30 17.0	
(13)	eX	N'	14 02 10.0	
(14)	LR	N'E'Z'	14 43 36.0	
(15)	eX	E'	15 10 39.5	
(16)	eX	N'E'	16 59 07.0	
(17)	eX	N'E'	17 34 03.8	
(18)	eX	N'E'Z'	22 21 19.5	
05 JUL				
(1)	eX	Z'	01 58 24.7	
(2)	eP	NE	03 00 13.2	
(3)	eX	N'E'	03 00 39.0	
(4)	eX	N'E'Z'	03 10 34.7	
(5)	e(P)	NE	03 10 38.2	
(6)	eP	NEZ	03 31 15.5	250
	iS	NZ	31 42.9	
	eS	E'	31 42.9	

Date	Phase	Comp.	Time (GCT)	Distance (km)
05 JUL				
(7)	eP	E	03 43 30.7	90
	iS	NE	43 41.6	
(8)	iP	NEZ	06 46 33.5	110
	iS	NEZ	46 46.3	
(9)	eP	Z	08 09 38.3	85
	iS	E	09 48.1	
(10)	eX	N'Z'	09 00 13.5	
	(PPS)	N'E'	06 08.5	
	SS	N'	10 15.0	
	SSS	N'	14 09.0	
	eX	E'	16 43.0	
	LQ	E'	18 53.0	
	LR	Z'	24 14.4	
(11)	iP	NEZ	12 49 54.2	
(12)	eP	NEZ	18 07 42.6	180
	iS	NEZ	08 02.7	
(13)	iS	NE	21 24 43.8	
(14)	iP	NE	21 28 29.2	
06 JUL				
(1)	iS	NEZ	01 20 13.9	
(2)	eP	Z	03 14 51.0	
	eP	E'	14 51.0	
	eX	E'	23 29.9	
(3)	iP	NEZ	03 31 22.9	
	iP	N'E'Z'	31 22.9	9550
	PP	E'Z'	35 13.8	38.7 N
	S	Z'	43 31.0	22.6 E (CGS)
	eX	Z'	47 29.0	
	PSPS	N'	51 06.0	
	SSS	N'E'	54 12.0	
	LR	Z'	04 02 16.0	
(4)	iP	NZ	04 11 46.9	
(5)	iP	NEZ	04 16 20.3	
(6)	eP	Z	04 30 37.0	
(7)	iP	NZ	04 37 11.0	1300
	eS	N'	39 41.6	7.4 N
	LQ	E'	40 16.0	127.0 E (CGS)

Date	Phase	Comp.	Time (GCT)	Distance (km)
06 JUL				
(8)	eP	NEZ	04 40 16.0	
(9)	iP	EZ	05 07 47.6	
(10)	iP	NE	07 43 55.7	
(11)	i(P)	NE	10 13 00.0	
(12)	eX	N'E'	13 12 24.0	
(13)	iP	NE	18 12 36.8	
(14)	ePP	NEZ	18 43 38.4	
	ePP	N'E'Z'	43 38.4	
	eS	NEZ	49 06.7	
	eS	N'E'Z'	49 06.7	
	(G)	N'E'	52 10.0	
(15)	iP	NEZ	21 56 21.7	
07 JUL				
(1)	e(P)	NE	03 29 27.0	
(2)	(LR)	E'Z'	07 49 14.0	
(3)	eX	N'E'	09 16 17.0	
(4)	e(S)	N'	12 28 10.0	
	(SS)	E'	35 37.4	
	LR	Z'	39 38.8	
(5)	eX	N'E'	14 48 26.0	
(6)	eX	N'	15 08 28.7	
(7)	eP	Z'	15 48 42.0	7950
	eS	N'E'Z'	58 15.0	15.0 S
	SSS	N'	16 06 18.0	173.0 W
	LR	E'Z'	11 05.0	
(8)	eX	N'	16 36 31.0	
(9)	eX	N'	16 46 29.5	
	eX	N'E'	51 07.0	
(10)	eX	N'	17 20 30.0	
	eX	N'	24 05.0	
	eX	N'	35 24.0	
	eX	N'	38 10.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
07 JUL				
(11)	eX	N'	17 49 24.0	
	eX	N'E'	50 20.0	
(12)	eX	N'	18 00 22.0	
	eX	N'	07 07.0	
(13)	eP	N'	18 25 06.0	
	eX	N'	38 09.5	
	eX	N'	46 44.3	
(14)	iP	NE	19 49 16.8	
(15)	iS	NEZ	21 17 13.4	
(16)	eP	NEZ	21 43 37.6	
	iX	N	44 28.5	
	eX	N'E'Z'	48 44.0	
(17)	iP	Z	23 05 48.0	3100
	eS	N'Z'	10 22.5	6.9 S
	LR	N'Z'	13 50.0	105.6 E (CGS)
(18)	LR	Z'	23 36 17.0	
08 JUL				
(1)	eP	N	03 32 04.0	
	LR	Z'	32 44.0	
(2)	eX	N'E'Z'	05 58 36.0	
(3)	eX	N'	07 36 22.0	
	LR	N'Z'	40 33.0	
(4)	eP	N	08 49 02.5	260
	eS	N	49 30.0	
(5)	eX	E'	09 47 24.0	
(6)	eX	N'	10 23 56.0	
(7)	eX	N'	11 19 08.0	
(8)	eX	N'	11 48 30.0	
	eX	N'	57 30.0	
(9)	eX	N'	16 35 43.0	
(10)	eX	N'	17 16 14.0	
(11)	eP	NE	17 50 05.5	110
	eS	NE	50 18.0	

Date		Phase	Comp.	Time (GCT)	Distance (km)
09 JUL					
	(1)	eP	Z	00 47 39.0	
		eX	Z	47 52.5	
	(2)	e(S)	E'	00 52 18.0	
		LQ	N'	54 18.0	
		LR	Z'	54 48.0	
	(3)	eP	E	07 44 42.5	
		e(S)	E	45 07.0	
	(4)	eX	E	08 21 26.5	
	(5)	eP	EZ	09 19 01.5	300
		iS	N'	19 34.0	
	(6)	eP	N	12 51 08.0	360
		eS	N	51 46.5	
		LR	Z'	52 12.0	
	(7)	eP	E	20 45 18.0	550
		eS	E	46 15.0	
10 JUL					
	(1)	eP	E	02 04 29.0	160
		eS	E	04 47.0	
	(2)	eP	N	04 52 00.0	45
		iS	N	52 07.0	
		(LR)	Z'	52 48.0	
	(3)	eX	N'	05 33 07.0	
	(4)	eX	N'E'	06 23 50.0	
		eX	N'	27 52.0	
	(5)	eX	N'	06 51 22.0	
	(6)	eX	N'	07 39 08	
	(7)	eX	N'	12 40 54.0	
	(8)	eX	N'	12 48 08.0	
	(9)	iP	NEZ	14 36 18.0	
		e(S)	N	36 24.0	
	(10)	eP	N	21 12 45.0	20
		eS	N	12 50.0	
	(11)	eX	Z	21 28 43.0	

Date		Phase	Comp.	Time (GCT)	Distance (km)
11 JUL					
	(1)	eP	NE	08 30 08.0	45
		iS	NE	30 15.5	
	(2)	eX	NE	03 38 02.0	
	(3)	iP	NEZ	04 47 22.0	210
		eS	NE	47 45.0	
	(4)	eP	Z	09 28 49.0	
		eX	E'	30 09.0	
	(5)	eP	NE	11 22 48.5	80
		eS	NE	22 58.5	
12 JUL					
	(1)	eP	NEZ	06 46 41.0	
		e(S)	E	47 29.5	
	(2)	eX	E	08 15 19.0	
	(3)	eP	Z	08 48 18.5	
	(4)	eX	E	09 49 02.0	
	(5)	eX	N	15 38 00.0	
	(6)	eP	N	15 47 10.5	
		eS	N	47 13.0	
	(7)	eX	Z	16 05 58.5	
13 JUL					
	(1)	LR	Z'	14 49 23.0	
14 JUL					
	(1)	eP	NE	05 59 17.0	
	(2)	eP	N	18 17 02.0	
15 JUL					
	(1)	e(P)	NE	07 20 16.5	
		e(S)	NE	20 35.0	
	(2)	eP	NEZ	09 20 18.5	20
		eP	N'E'Z'	20 10.5	
		eS	NEZ	20 15.0	
	(3)	eX	NEZ	13 24 36.0	
	(4)	eP	NEZ	17 55 19.0	
	(5)	eP	NEZ	18 16 06.5	

Date	Phase	Comp.	Time (GCT)	Distance (km)
15 JUL				
(6)	iP	NEZ	18 35 43.0	1050
	iP	N'E'Z'	35 43.0	7.7 N
	iS	N'	37 27.6	123.8 E (CGS)
(7)	iP	Z	18 43 36.0	
(8)	iP	NEZ	22 45 52.0	80
	iS	NEZ	46 01.5	
16 JUL				
(1)	eX	Z	01 39 50.0	
(2)	eX	Z	02 19 42.0	
(3)	eP	NEZ	11 24 00.0	200
	eS	NE	24 22.0	
(4)	eX	Z	11 47 05.0	
(5)	eX	Z	13 26 24.0	
(6)	(PPP)	Z'	13 34 04.0	
	eS	E'	37 29.0	
	(LR)	Z'	44 12.0	
(7)	eP	NEZ	16 40 20.0	
	e(S)	N'E'Z'	44 06.0	
(8)	eP	NEZ	18 00 52.0	100
	iS	NE	01 04.0	
(9)	iP	NEZ	20 24 38.0	
	iP	N'E'Z'	24 38.0	
(10)	iX	NE	20 30 57.0	
(11)	eX	NE	20 35 12.0	
(12)	eP	Z & Z'	22 42 33.5	5900
	eS	Z	49 49.0	11.8S
	eSS	Z	53 40.0	166.1 E (CGS)
	LR	Z'	23 00 12.0	
17 JUL				
(1)	iP	NEZ	01 31 52.0	70
	eS	N'E'Z'	32 01.0	
(2)	iX	NE	03 34 07.0	
(3)	eP	E	03 50 26.5	
	i(S)	E	50 33.5	

Date	Phase	Comp.	Time (GCT)	Distance (km)
17 JUL				
(4)	eP	Z & Z'	07 29 00.0	5260
	e(PP)	Z'	30 41.0	9.7 S
	eS	NE	35 52.0	159.8 E (CGS)
	eSS	N'Z'	39 29.6	
	LR	E'Z'	42 48.0	
(5)	iP	Z & Z'	12 55 26.0	4500
	eP	NE & N'E'	55 26.0	7.2 S
	eS	N'E'	13 01 33.0	153.6 E (CGS)
	LQ	N'	05 28.5	
	LR	Z'	07 08.0	
(6)	e(S)	NEZ	13 10 52.0	
(7)	eP	Z	17 49 31.5	
	i(P)	NE	49 34.5	
(8)	eP	Z	18 13 02.0	
(9)	iX	NE	20 15 40.8	
18 JUL				
(1)	eX	N	04 53 47.8	
(2)	eP	NEZ	05 37 45.0	
	(LR)	Z'	42 12.0	
(3)	eP	NEZ	09 45 31.0	250
	eS	E	45 58.0	
(4)	e(S)	N'Z'	22 32 44.0	
	LR	Z'	36 09.0	
19 JUL				
(1)	eP	Z	01 28 37.7	140
	eS	NE	28 54.0	
(2)	e(P)	Z	02 39 08.0	
	eS	E	39 24.0	
(3)	e(P)	Z	04 27 36.5	
	iS	N	27 51.5	
(4)	e(P)	Z	04 33 14.5	
	LR	Z'	38 02.0	
(5)	e(P)	Z & Z'	05 47 43.0	
	eS	N'E'	54 08.0	
	LR	Z'	06 00 06.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
19 JUL				
(6)	eP	Z	06 51 30.0	
	eX	Z'	53 37.0	
(7)	eX	N	06 54 53.0	
(8)	eX	Z	09 15 14.5	
(9)	LR	Z'	09 21 48.0	
(10)	eX	N	16 09 31.5	
(11)	eP	Z & Z'	16 55 19.5	6000
	eS	N'Z'	17 02 51.0	12.0 S
	LR	Z'	12 46.0	166.0 E (CGS)
20 JUL				
(1)	LR	Z'	01 43 00.0	
(2)	iX	Z	11 27 50.3	
(3)	LR	Z'	11 40 41.0	
(4)	eP	NEZ & E'	13 20 45.5	1200
	iP	N'Z'	20 45.5	7.5 N
	iS	N	23 02.0	124.3 E (CGS)
	LR	Z'	23 46.0	
(5)	eP	NEZ	22 11 14.0	
(6)	eP	NEZ	23 00 43.0	350
	iS	NE	01 10.0	
21 JUL				
(1)	eP	Z'	03 03 05.0	8100
	eS	Z'	12 32.0	20.8 S
	eSS	E'	17 04.0	175.8 E (CGS)
	LQ	N'	22 40.0	
	LR	Z'	27 37.0	
(2)	eX	NE	07 58 31.5	
(3)	eP	NEZ	16 34 31.0	280
	iS	NE	35 01.0	
(4)	eP	N'E'	18 01 50.0	6000
	eX	N	02 13.6	53.3 N
	eS	N'E'	09 22.0	170.4 E (CGS)
	LQ	N'	15 18.0	
(5)	(LR)	Z'	18 29 08.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
21 JUL				
(6)	eX	N	21 15 16.0	
(7)	LR	Z'	21 20 48.0	
22 JUL				
(1)	eX	N'Z'	01 36 20.0	
	eX	N'Z'	41 25.0	
(2)	eP	NEZ	07 59 04.0	230
	iS	NEZ	59 29.0	
(3)	iS	NEZ	11 42 33.5	Start of P uncertain.
(4)	e?	NEZ	15 12 39.0	315
	eS	NEZ	13 12.5	
	eX	N'E'Z'	13 13.0	
(5)	eX	NEZ	16 18 54.0	
(6)	eX	NEZ	17 15 08.5	
(7)	eP	NEZ	23 58 08.5	
	iS	NEZ	58 11.0	
(8)	eX	NE	23 59 13.5	
23 JUL				
(1)	eX	NEZ	02 32 53.0	
(2)	eX	NEZ	04 02 52.0	
(3)	eX	NEZ	15 46 20.0	
(4)	eX	NEZ	17 15 51.0	
(5)	e(P)	NEZ	19 25 57.5	
24 JUL				
(1)	eX	NEZ	05 20 08.5	Start of P uncertain.
	e(S)	E	22 12.0	
(2)	eX	E'	05 24 12.0	
	eX	E'	28 52.0	
(3)	eX	NEZ	07 17 18.0	Start of P uncertain.
	e(S)	NE	17 40.0	
(4)	e(P)	NEZ	21 11 25.5	
	e(S)	E	12 05.0	
(5)	eX	NE	21 46 56.0	

Date		Phase	Comp.	Time (GCT)			Distance (km)
25 JUL							
	(1)	eP	EZ	09	45	19.0	2850
		eX	E		46	12.5	2.0 N
		eS	N'E'		50	21.0	99.3 E (CGS)
		LR	Z'		53	04.0	
	(2)	eX	NE	05	38	08.0	
	(3)	eX	E	07	55	56.5	
	(4)	eX	NE	09	27	40.0	
		(LR)	Z'		28	32.0	
	(5)	e(P)	Z'	13	45	11.0	
		eX	N'E'		47	19.0	
		(LR)	E'Z'		53	55.0	
	(6)	eX	NE	17	53	01.5	
	(7)	iP	NEZ	20	08	22.0	
		eX	N'E'Z'		08	27.0	
	(8)	eX	NEZ	21	56	21.0	
	(9)	eP	E'Z'	22	04	14.0	
		LR	Z'		10	29.0	
26 JUL							
	(1)	eX	Z	02	18	50.5	
	(2)	eP	NEZ	06	25	31.0	
		iS	NE		25	35.5	
	(3)	iP	NEZ	06	44	59.0	
		iS	NZ		45	02.5	
	(4)	eX	NEZ	07	03	25.5	
	(5)	LR	Z'	07	07	16.0	
	(6)	eX	Z	10	53	13.0	
	(7)	eP	Z'	13	35	19.0	8450
		eS	N'E'		45	08.0	
		eSS	E'		49	31.0	
		eSSS	E'		52	54.0	
		LR	Z'		57	54.0	
	(8)	e(P)	Z'	16	15	54.5	
		eX	NEZ		22	09.0	
		eX	E		23	49.0	
		eX	Z'		24	00.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
26 JUL				
(9)	eX	NE	16 35 42.5	
(10)	eX	NE	16 53 06.0	
27 JUL				
(1)	eX	E	00 33 52.0	
(2)	iS	NEZ	00 50 43.5	Start of P undertain.
(3)	iP	EZ	04 22 20.0	
(4)	eP	NZ	06 44 52.0	280
	iS	E	45 22.0	
	LR	E'Z'	45 45.0	
(5)	eP	NEZ	07 57 21.5	1330
	iP	Z'	57 21.5	6.0 N
	i(S)	E'Z'	08 01 42.0	126.0 E (CGS)
	LR	Z'	03 48.0	
(6)	eP	EZ	08 17 25.0	
	LR	Z'	19 26.0	
(7)	eX	N'	10 42 10.0	
(8)	eX	NEZ	12 21 47.5	
(9)	eX	NEZ	13 55 05.0	
(10)	eP	E	15 14 10.0	180
	iS	NE	14 30.0	
(11)	eX	E	15 55 11.0	
(12)	e(P)	NE	16 01 22.5	
	i(P)	Z	01 22.5	
(13)	iP	Z	16 19 34.5	
	eP	NE	19 34.5	
	LR	N'E'Z'	21 32.0	
(14)	eX	NEZ	18 32 09.0	
(15)	iP	NEZ	23 48 51.5	
	i(S)	N'E'	49 08.0	
28 JUL				
(1)	eX	NE	02 14 41.5	
(2)	eX	E'	04 03 15.0	
	e(S)	Z'	05 38.0	
	LR	Z'	07 24.0	

Date		Phase	Comp.	Time (GCT)			Distance (km)
28 JUL							
	(3)	eX	NE	04	07	07.5	
	(4)	eX	NEZ	04	44	04.0	
	(5)	iP	NEZ	12	27	40.5	
		iX	NEZ		27	46.0	
	(6)	iP	NEZ	22	34	33.0	4000
		eS	E'Z'		40	08.0	
		eX	NZ		41	20.0	
29 JUL							
	(1)	i(S)	NE	05	09	04.0	
	(2)	eX	NEZ	06	01	29.0	
	(3)	eX	Z	07	15	24.5	
	(4)	eiP	N'E'Z'	08	39	50.0	7040
		eS	NEZ		48	22.0	51.2 N
		iS	N'E'		48	22.0	171.3 W (CGS)
		LQ	N'		55	48.0	
		LR	Z'		58	44.0	
	(5)	eP	NEZ	09	40	00.0	
		i(S)	NE		40	35.0	
	(6)	eP	NEZ	09	56	36.0	180
		iS	NE		56	56.0	
	(7)	eP	NEZ	09	59	33.0	180
		iS	NE		59	53.0	
	(8)	iP	NEZ	14	22	44.0	180
		iS	NE		23	04.0	
	(9)	eX	NEZ	15	19	05.0	
	(10)	eX	N'E'Z'	15	48	16.0	
	(11)	e(P)	N'	15	56	20.0	
		e(S)	E'		59	22.0	
		(LR)	Z'	16	01	15.0	
	(12)	eX	NEZ	16	16	25.0	
	(13)	iP	NEZ	17	12	18.0	155
		iS	E		12	35.5	
	(14)	iP	NZ	18	01	32.5	185
		iS	NE		01	52.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
30 JUL				
(1)	eX	E	03 33 04.0	
(2)	eX	Z'	06 10 20.0	
(3)	eX	Z'	07 03 27.0	
(4)	eX	Z	07 39 50.5	
(5)	eX	E' Z'	08 40 02.0	
(6)	iP	Z	08 47 03.5	265
	eP	NE	47 03.5	
	iS	NE	47 32.0	
(7)	eP	NEZ	11 20 42.0	
	i(S)	NE	21 09.0	
(8)	eX	NE	15 04 15.0	
(9)	e(P)	NE	15 17 04.5	
(10)	eX	Z'	19 18 52.0	
	eX	Z'	20 02.0	
(11)	eX	Z'	19 23 02.0	
(12)	eX	E'	19 46 04.0	
(13)	eX	NEZ	20 53 08.0	
	LR	Z'	53 55.0	
31 JUL				
(1)	eP	Z	02 48 15.0	
	i(S)	E	48 38.5	
(2)	eP	NEZ	02 53 44.5	
	eX	N'	53 53.0	
(3)	eP	N'	07 05 09.0	3060
	iX	NEZ	05 09.0	10.1 S
	eS	N'	09 50.0	123.7 E (CGS)
(4)	eP	N' Z'	07 42 13.0	
	eX	Z	42 13.0	
	e(S)	N' E'	49 13.0	
(5)	eX	Z	08 05 14.5	
(6)	iP	Z	11 26 42.0	20
	eP	NE	26 42.0	
	iS	NEZ	26 47.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
31 JUL (7)	eX	Z	14 36 58.0	
(8)	eX	NEZ	15 19 24.3	
(9)	eX	N'	16 49 57.0	
	LR	Z'	52 42.0	
(10)	eX	Z'	17 18 49.0	
	e(S)	N'	22 54.0	
	LR	Z'	24 18.0	
(11)	eX	Z	17 59 37.0	
(12)	LR	Z'	19 17 28.0	
(13)	eX	NEZ	20 01 38.5	
(14)	eX	Z'	20 07 42.0	
(15)	eX	NEZ	20 41 38.0	
(16)	e(P)	N' Z'	21 55 40.0	
	LR	Z'	22 01 14.0	
(17)	eX	NZ	23 05 27.5	

Date	Phase	Comp.	Time (GCT)			Distance (km)
01 AUG						
(1)	eX	NE	01	58	50.0	
(2)	eX	NE	03	23	41.0	
(3)	iP	NZ	09	23	42.0	1870
	eP	N'Z'		23	42.0	0.3 N, 125.8 E
	eS	N'E'		26	48.0	(CGS)
	LR	N'Z'		28	30.0	
(4)	eX	NE	09	27	11.0	
(5)	eX	N'E'Z'	14	31	07.0	
(6)	iP	NEZ	15	09	21.0	3900
	eP	E'Z'		09	21.0	46.9 N, 143.8 E
	eS	N'E'Z'		14	29.0	(CGS)
(7)	LR	Z'	16	09	10.0	
(8)	iX	Z	16	48	44.0	
(9)	eX	NEZ	20	20	28.0	
	LR	Z'		25	05.0	
(10)	iX	Z	20	43	41.0	
	eX	NE		43	41.0	
(11)	eX	Z	23	55	07.0	
02 AUG						
(1)	eP	NE	04	29	08.5	35
	iS	NE		29	15.0	
(2)	eiP	N'Z'	13	31	55.0	8695
	e(PP)	N'Z'		34	46.0	56.2 S, 158.2 E
	e(PPP)	N'		36	48.0	(CGS)
	eS	N'E'Z'		41	49.0	
	eX	E'		46	48.0	
	eSS	Z'		47	50.0	
	LQ	E'		52	14.0	
	LR	Z'		56	20.0	
(3)	eP	NE	14	37	32.0	
(4)	eX	NE	14	54	12.5	
	eX	NE		56	08.5	
(5)	eP	NE	17	03	02.5	
(6)	eX	NE	17	18	15.5	
(7)	eP	NE	17	27	44.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
03 AUG				
(1)	iP	NE	00 22 14.5	305
	iS	NE	32 47.0	
(2)	iP	NEZ	01 31 39.5	120
	iS	NEZ	31 54.0	
(3)	eX	Z	02 22 20.5	
(4)	LR	E'Z'	02 47 08.0	
(5)	eX	E'	03 09 22.0	
	LR	Z'	14 11.0	
(6)	eX	Z'	03 30 23.0	
	LR	Z'	38 16.0	
(7)	eX	N	05 19 28.5	
(8)	eX	N	07 06 45.0	
(9)	eX	NEZ	07 11 01.5	
(10)	eP	NEZ	07 14 17.0	
	e(S)	N	14 44.0	
(11)	eP	NEZ	07 32 48.5	
(12)	iX	NE	07 36 08.5	
(13)	eP	Z'	08 36 07.0	3380
	eS	E'Z'	41 04.0	
	LR	Z'	47 10.0	
(14)	eX	NEZ	14 00 13.0	
(15)	iP	NEZ	16 44 48.0	180
	iS	NEZ	45 08.0	
(16)	eX	Z	18 10 00.0	
(17)	eP	Z'	18 18 40.0	
	eX	Z'	24 58.0	
(18)	eX	Z	19 16 30.5	
04 AUG				
(1)	iP	Z	08 56 17.5	
	eP	NE	56 17.5	
(2)	eP	N'E'Z'	09 03 44.0	
	e(S)	E'Z'	09 13.0	
	LR	Z'	13 21.0	

Date	Phase	Comp.	Time (GCT)			Distance (km)	
04 AUG							
(3)	iP	Z	12	46	58:5		
	eP	NE		46	58.5		
(4)	iP	NEZ	16	46	33:0	80	
	iS	NE		46	43.5		
(5)	iP	NEZ	19	02	07:0	120	
	eS	NE		02	21.5		
(6)	iP	Z	21	48	53:0	80	
	eP	NE		48	53:0		
	iS	NE		49	03.5		
(7)	e(P)	NEZ	23	41	10.0		
05 AUG							
(1)	eX	NEZ	00	23	21.0		
	eX	NEZ		24	03.0		
(2)	eX	NEZ	04	58	39.0		
(3)	LR	N'E'Z'	16	02	36.0		
(4)	e(P)	NEZ	19	59	39.6		
(5)	e(P)	N'E'Z'	20	03	06.0		
	e(PPP)	N'E'Z'		07	32:0		
	LR	Z'		17	14.0		
06 AUG							
(1)	iS	NEZ	02	38	20.0		
(2)	eX	NEZ	02	47	22.0		
(3)	eP	NEZ	03	56	49.0		
(4)	LR	E'Z'	06	23	18.0		
(5)	iP	EZ	14	37	23.0		
(6)	eX	NEZ	16	48	55.0		
(7)	iP	NEZ	18	20	05:5	2940	
	eP	E'Z'		20	05:5	41.4 N, 131.2 E	
	eS	NEZ, N'E'Z'		23	55.0		
	LR	Z'		24	40.0		
(8)	eP	NEZ	19	32	07:0	155	
	iS	NE		32	24.5		
(9)	eP	NEZ	20	43	51.0		

Date	Phase	Comp.	Time (GCT)			Distance (km)
06 AUG						
(10)	e(P)	Z'	20	54	56.0	
	e(S)	E		58	18.0	
	(LR)	Z'	21	02	49.0	
07 AUG						
(1)	eX	NE	01	19	04.0	
(2)	eX	N'Z'	01	26	38.0	
(3)	iX	NEZ	03	45	10.0	
(4)	e(P)	EZ	03	52	39.0	
	iS	NEZ		52	53.0	
(5)	eX	NE	09	02	47.0	
(6)	iP	NEZ	13	00	50.0	160
	iS	NEZ		01	08.0	
(7)	eP	NE, N'Z'	13	29	14.0	
	LQ	N'E'		31	54.0	
	LR	Z'		34	33.0	
(8)	eP	Z	14	09	01.4	
	LQ	N'		11	37.0	
(9)	iP	Z	16	11	14.0	490
	eP	NE		11	14.0	21.0 N, 121.5 E
	iS	NEZ		12	01.5	(CGS)
(10)	eP	NEZ	20	41	45.0	
08 AUG						
(1)	eP	NEZ, N'E'Z'	04	35	28.0	6.8 N, 127.0 E
	iX	N'E'		38	40.0	(CGS)
	LR	N'E'Z'		40	53.0	
(2)	eP	EZ	05	52	44.5	235
	iS	N'E'Z'		53	10.0	
(3)	eP	NEZ	09	50	01.0	1670
	iS	N'E'Z'		52	56.0	4.1 N, 128.6 E
	LR	N'E'Z'		56	31.0	(CGS)
(4)	eP	NEZ	12	44	28.0	
(5)	iP	Z	13	04	15.0	
	eP	NE		04	15.0	
	i(S)	NEZ		04	41.0	
(6)	LR	Z'	13	17	32.0	

Date	Phase	Comp.	Time (CGT)			Distance (km)
08 AUG						
(7)	iP	NEZ	13	32	37.0	90
	eS	NEZ		32	48.0	
(8)	eP	NEZ	15	34	17.0	
(9)	(LR)	N'E'Z'	16	44	50.0	
(10)	eX	NEZ	19	00	42.0	
(11)	eX	NEZ	19	04	36.0	
09 AUG						
(1)	eX	NEZ	01	34	05.0	
(2)	eX	NEZ	02	42	18.0	
(3)	iP	NEZ	05	41	26.0	
	iS	NEZ		41	29.5	
(4)	eX	NE	07	42	15.0	
(5)	iP	NEZ	09	21	08.5	
	eP	N'E'Z'		21	08.5	
	e(S)	N'E'Z'		21	29.0	
(6)	iP	NEZ	09	25	23.5	175
	iS	NEZ		25	43.0	
(7)	eP	NEZ	09	59	28.5	
	eX	N'E'		59	52.0	
(8)	eP	NEZ	10	10	40.0	185
	iS	NEZ		11	00.5	
(9)	eX	NE	10	12	49.0	
(10)	e(P)	Z	10	19	45.5	
	eS	NEZ		20	06.5	
(11)	eX	N'E'	10	27	33.0	
(12)	e(P)	N'E'	13	13	46.0	
(13)	e(P)	NEZ	13	43	14.0	
	iS	NEZ		43	34.0	
(14)	iS	NEZ	16	24	38.0	
(15)	eiP	NEZ	16	43	22.0	1980
	iP	N'Z'		43	22.0	0.6 S, 127.4 E
	eP	E'		43	22.0	(CGS)
	iS	N'E'Z'		46	42.0	

Date	Phase	Comp.	Time (GCT)			Distance (km)
10 AUG						
(1)	e(P)	N'Z'	00	38	08.0	
	e(S)	N'E'Z'		48	21.0	
	(LR)	Z'		55	17.0	
(2)	e(P)	NE	00	41	45.0	
	iS	NEZ		41	59.5	
(3)	eX	NE	07	06	46.0	
(4)	iP	NEZ	08	18	51.0	195
	iS	NE		19	12.5	
(5)	e(P)	N'E'	08	37	31.0	
	e(S)	E'		44	17.0	
	eX	Z'		54	37.0	
	(LR)	Z'		58	25.0	
(6)	iP	Z	11	11	58.0	240
	iS	NE		12	24.0	
(7)	iP	NEZ	15	02	18.8	
(8)	iP	Z	20	04	43.0	
	eP	NE		04	43.0	
	iS	NE		04	47.0	
(9)	eX	E	21	10	44.0	
	(LR)	N'Z'		16	42.0	
(10)	eX	NEZ	22	41	22.5	
11AUG						
(1)	iP	EZ	03	19	41.5	45
	eP	Z'		19	41.5	
	iS	EZ		19	48.5	
(2)	eP	N'Z'	03	27	30.0	
	eX	N'Z'		31	00.0	
	e(S)	N'		33	49.0	
	LR	Z'		36	56.0	
(3)	iP	Z, N'E'Z'	03	50	32.0	6200
	eP	NE		50	32.0	15.4 S, 166.9 E
	iS	NEZ, N'E'Z'		58	21.0	(CGS)
	LQ	N'E'	04	01	51.0	
	LR	E'Z'		04	40.0	
(4)	eP	NZ, Z'	07	28	25.5	
	e(S)	N'E'		36	10.0	
	LQ	N'E'		42	28.0	
	LR	Z'		45	32.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
11 AUG				
(5)	iP	Z	17 36 33.0	160
	eP	NE	36 33.0	
	iS	NEZ	36 51.0	
(6)	eP	NEZ	17 46 47.0	380
	iS	NE	47 27.0	
(7)	eP	Z	18 41 33.0	
	eX	Z'	44 10.0	
(8)	eX	N'E'	18 51 30.0	
(9)	eX	E'	19 18 53.0	
(10)	e(P)	NEZ	19 57 20.0	
	i(S)	Z	57 40.0	
(11)	eiP	Z	20 02 05.0	6200
	iP	N'E'Z'	02 05.0	15.7 S, 167.1 E
	eP	N	02 05.0	(CGS)
	iS	N'E'	09 56.0	
	eS	NEZ	09 56.0	
	LQ	N'	13 34.0	
	LR	Z'	18 48.0	
(12)	iP	NZ	20 23 35.0	230
	iS	Z	24 00.0	
(13)	eP	Z	21 04 49.5	
(14)	iP	Z, N'E'Z'	22 41 26.0	6210
	eP	NE	41 26.0	15.8 S, 167.2 E
	iS	NE	49 19.0	(CGS)
(15)	e(P)	Z	23 08 33.0	
(16)	eX	NZ	23 47 45.0	
12 AUG				
(1)	iP	NEZ	00 49 22.0	
	i(S)	N	50 13.5	
(2)	eX	Z	01 14 42.0	
(3)	eX	Z	01 30 23.0	
(4)	iP	NEZ	02 31 13.0	
(5)	iP	NEZ	02 42 38.0	210
	iS	NEZ	43 01.0	
(6)	iP	Z, N'E'Z'	08 11 24.0	6270

Date	Phase	Comp.	Time (GCT)			Distance (km)
12 AUG						
(6)	eP	NE	12	11	24.0	15.9 S, 167.5 E
	ePP	N'E'		13	38.0	(CGS)
	iS	N'E'		19	13.0	
	eS	N		19	13.0	
	eSS	N'E'		22	51.0	
	LQ	N'		25	12.0	
	LR	Z'		28	28.0	
(7)	iX	N	12	57	23.0	
(8)	eiP	Z, N'E'Z'	13	04	25.5	4220
	eP	NE		04	25.5	5.3 S, 152.2 E
	iS	NEZ		10	18.0	(CGS)
	LQ	N'		13	02.0	
	LR	Z'		14	42.0	
(9)	iP	NEZ	18	14	34.0	6230
	eP	N'E'Z'		14	34.0	16.0 S, 167.4 E
	iS	N'E'		22	24.0	(CGS)
	eSS	N'E'		26	02.0	
	LQ	N'E'		28	32.0	
	LR	Z'		31	55.0	
(10)	eP	Z	18	33	29.0	
(11)	iP	NEZ	19	22	52.0	
	eP	N'E'Z'		22	52.0	
	LR	N'E'Z'		25	14.0	
(12)	eX	NEZ	19	30	11.0	
(13)	e(P)	NEZ	20	25	38.0	
(14)	iX	E	20	26	18.0	
(15)	iX	E	20	27	31.0	
13 AUG						
(1)	iP	NZ	01	06	29.0	
	eP	N'Z'		06	29.0	
	eX	N'Z'		07	21.0	
	(LR)	Z'		08	55.0	
(2)	iP	NZ, N'Z'	02	13	58.0	13.6 N, 120.1 E
	iX	N'Z'		14	52.0	(CGS)
	eX	N'		16	28.0	
	(LR)	Z'		18	00.0	
(3)	e(P)	NE	02	45	11.0	
	i(S)	E		45	37.5	

Date	Phase	Comp.	Time (GCT)			Distance (km)
13 AUG						
(4)	eiP	Z	04	50	35.5	6270
	iP	NE		50	35.5	15.9 S, 167.5 E
	eP	N'E'Z'		50	35.5	(CGS)
	eS	N'E'		58	25.0	
	eSS	N'E'	05	02	10.0	
	LQ	E'		04	25.0	
	LR	Z'		07	52.0	
(5)	eP	NE,NE'Z'	11	34	31.0	6250
	ePP	Z'		36	36.0	16.0 S, 167.0 E
	ePPP	Z'		38	13.0	(CGS)
	iS	N'E'		42	19.0	
	iSS	N'E'		46	16.0	
	LQ	E'		48	32.0	
	LR	Z'		51	15.0	
(6)	iP	NEZ	11	59	51.0	23.8 N, 122.2 E
						(CGS)
(7)	eP	EZ	12	26	18.5	375
	iS	E		26	58.0	
(8)	eiP	Z'	12	49	43.5	6200
	eP	EZ		49	43.5	15.9 S, 166.8 E
	ePP	Z'		52	19.0	(CGS)
	ePPP	Z'		53	11.0	
	iS	N'E'		57	48.0	
	eScS	N'E'		59	31.0	
	eSS	N'	13	01	40.0	
	LQ	E'		03	25.0	
	LR	Z'		06	36.0	
(9)	eX	EZ	13	20	03.0	
(10)	eP	Z	13	23	14.5	
(11)	eX	Z	13	35	26.5	
(12)	eX	Z	13	59	11.0	
(13)	eX	Z	14	12	51.5	
(14)	eP	NEZ, Z'	18	06	08.0	6270
	ePPP	Z'		10	08.0	16.6 S, 167.6 E
	eX	EZ		10	46.5	(CGS)
	eS	E		14	19.0	
	iS	N'E'		14	19.0	
	LQ	N'E'		20	19.0	
	LR	Z'		23	04.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
13 AUG				
(15)	eX	Z	18 33 11.0	
(16)	eX	Z	19 28 11.0	
(17)	eX	Z	20 17 20.0	
(18)	eX	Z	20 20 05.5	
(19)	eX	Z	21 33 48.0	
(20)	eX	Z	21 35 02.0	
(21)	eP	Z, N'E' Z'	22 04 32.0	3920
	iS	N'E'	10 12.0	6.4 S, 148.5 E
	LQ	N'E'	13 12.0	
	LR	Z'	15 18.0	
14 AUG				
(1)	eX	Z	07 45 36.0	
(2)	iP	Z, Z'	11 17 21.0	6170
	eP	NE	17 21.0	15.8 S, 166.8 E
	iS	N'	25 11.5	(CGS)
	eS	NE	25 11.5	
	iSS	N'	28 56.0	
	LQ	N'E'	31 27.0	
	LR	Z'	34 15.0	
(3)	eX	Z	11 45 36.0	
(4)	iP	Z'	13 27 20.0	5960
	eP	NE, N'E' Z'	27 20.0	11.5 S, 166.3 E
	iS	N'E'	34 49.5	(CGS)
	iSS	N'E'	38 38.0	
	LR	Z'	43 30.0	
(5)	iP	NEZ	13 49 14.5	170
	iS	NE	49 33.5	
(6)	e(P)	NEZ	20 04 10.5	
(7)	e(P)	NEZ	21 13 47.0	
15 AUG				
(1)	iP	NEZ	04 45 07.5	14.3 N, 120.1 E
	eP	N'E' Z'	45 07.5	(CGS)
	LR	Z'	47 40.0	
(2)	iP	NEZ	05 30 09.0	
	iX	N	31 39.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
16 AUG				
(10)	iP	Z	16 19 45.0	11.0 N, 121.7 E (CGS)
(11)	LR	Z'	16 22 12.0	
(12)	eP	EZ	16 41 52.0	
(13)	LR	Z'	16 44 19.0	
(14)	eX	Z	16 47 07.0	
(15)	eX	Z	17 13 49.0	
(16)	e(P)	E'	17 23 00:0	
	e(S)	N'E'	29 15:0	
	eX	Z'	35 18.0	
(17)	(LR)	Z'	17 43 30.0	
(18)	eP	Z	17 54 56.0	
(19)	eX	Z	18 01 24.0	
(20)	eP	EZ	18 44 17.0	
(21)	LR	Z'	23 35 32.0	
17 AUG				
(1)	iP	NEZ	05 09 25:5	70
	iS	NEZ	09 35.0	
(2)	iP	NEZ, Z'	07 37 46:5	7100
	iS	N'E'	39 38.0	12.4 N, 125.7 E (CGS)
(3)	iP	NEZ	07 42 15:5	730
	iS	N	43 30.5	
(4)	iP	NE	08 00 46:0	310
	iS	NEZ	01 19.0	
(5)	iP	NEZ, Z'	08 07 34:0	710
	iS	N'E'	09 25.0	12.4 N, 125.7 E (CGS)
(6)	iP	NEZ	08 39 43:5	
	i(S)	NEZ	40 59.5	
(7)	eP	NEZ	10 11 19.0	
	LR	N'E' Z'	13 08.0	
(8)	iP	Z	10 40 43.0	2980

Date	Phase	Comp.	Time (GCT)	Distance (km)
17 AUG				
(8)	eP	NE	10 40 43:0	5.3 N, 96.2 E (CGS)
	iS	N'E'	45 24.0	
	LR	Z'	47 56.0	
(9)	eX	E	10 50 47.5	
(10)	eX	Z	12 58 18.0	
(11)	eX	N'	13 03 39:0	
	eX	Z'	06 42.0	
(12)	iP	NEZ	13 11 14.0	
(13)	e(P)	Z	13 26 25.0	
(14)	iP	NEZ	14 11 57.0	
(15)	eX	NEZ	14 15 27.0	
(16)	eX	Z	14 16 57.0	
(17)	iP	NEZ, Z'	16 27 16:0	6180
	iS	N'E'	35 02.0	15.2 S, 166.6 E
	eSS	N'E'	38 49:0	(CGS)
	LQ	N'E'	41 19:0	
	LR	Z'	43 11.0	
(18)	eP	NEZ	19 12 58.0	
(19)	eX	E	20 39 56.5	
(20)	i(P)	NEZ	21 04 08:0	
	iS	NEZ	04 28.0	
18 AUG				
(1)	iP	NEZ	00 39 54:0	70
	iS	NE	40 03.3	
(2)	eP	NEZ	01 00 20.0	110
	iS	E	00 33.0	
(3)	iS	NE	01 46 04.0	
(4)	eX	Z	03 29 14.0	
(5)	eX	NE	03 56 48.0	
(6)	eX	Z	05 15 07.0	

Date	Phase	Comp.	Time (GCT)			Distance (km)
18 AUG						
(7)	eX	Z	06	06	42.0	
(8)	iS	EZ	06	52	31.5	
(9)	eX	NEZ	06	53	50.5	
(10)	eX	Z'	07	55	42.0	
(11)	eP	Z	09	50	33.0	
	i(S)	N		51	08.5	
	eX	Z'		51	56.0	
(12)	eX	Z	11	18	29.5	
(13)	eX	EZ	12	58	25.0	
(14)	eX	E'	14	26	06.0	
(15)	e(P)	E	14	35	37.0	
	LR	Z'		50	10.0	
(16)	iP	Z	15	01	11.0	6295
	eP	N'Z'		01	11.0	16.0 S, 167.0 E
	ePP	Z'		03	08.0	(CGS)
	ePPP	Z'		05	03.0	
	iS	E'		09	02.0	
	eS	E		09	02.0	
	eScS	N'E'		11	08.0	
	eSS	N'E'		12	22.0	
	LQ	N'		16	05.0	
	LR	Z'		19	41.0	
(17)	eP	Z	16	50	08.0	110
	iS	NEZ		50	21.0	
(18)	iP	NEZ	17	56	12.0	110
	iS	NEZ		56	25.0	
(19)	e(P)	Z	18	15	38.0	
(20)	eX	E	21	15	24.0	
19 AUG						
(1)	eP	NZ,E'	00	54	12.0	
	e(S)	N'		58	16.0	
	LR	Z'	01	00	00.0	
(2)	eP	NZ	01	55	46.0	280
	iS	E		56	16.0	
(3)	iX	NEZ	02	15	52.0	

Date		Phase	Comp.	Time (GCT)			Distance (km)
19 AUG							
	(4)	e X	Z'	02	51	37.0	
	(5)	eX	Z	02	56	51.0	
	(6)	eX	N'E'	02	59	06.0	
		LR	Z'	03	02	16.0	
	(7)	eX	NE	03	25	55.0	
	(8)	iP	NEZ, N'E' Z'	03	28	46.5	
		eX	N'E' Z'		29	08.0	
	(9)	eP	Z	05	00	24.5	460
		iS	NZ		01	13.0	
	(10)	iP	NEZ	07	48	22.5	160
		iS	NEZ		48	41.0	
	(11)	eP	NEZ	11	33	15.5	230
		iS	NEZ		33	41.0	
	(12)	eX	NEZ	14	49	15.0	
	(13)	iP	NEZ	19	51	38.0	2440
		iS	NE		55	11.5	30.3 N, 138.4 E (CGS)
	(14)	eX	Z'	19	53	36.0	
	(15)	eX	E	21	26	47.0	
20 AUG							
	(1)	iP	NEZ, N'E' Z'	05	59	33.5	9470
		ePP	Z'	06	02	48.0	
		ePPP	Z'		04	50.0	
		iS	N		10	00.0	
		ePPS	N'		12	06.0	
		eSS	E'		16	05.0	
		eSSS	E'		18	42.0	
		LQ	E'		23	56.0	
		LR	Z'		26	50.0	
	(2)	iP	Z	06	44	57.5	
	(3)	eP	NZ	08	34	15.0	
		i(S)	E		34	33.0	
	(4)	LR	Z'	08	37	19.0	
	(5)	iP	Z'	10	02	43.0	
		eP	Z		02	43.0	
		(PKP)	Z'		04	17.0	
		eX	E'		18	23.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
20 AUG				
(6)	eP	NEZ, N'E'Z'	15 01 51.5	2370
	eS	Z'	05 42.0	
	(LQ)	N'	07 47.0	
	(LR)	Z'	09 48.0	
(7)	iP	Z, N'E'Z'	21 33 14.0	8160
	eP	NE	33 14.0	22.9 S, 176.3 W
	ePP	N'E'Z'	36 17.0	(CGS)
	ePPP	E'Z'	37 33.0	
	iS	N'E'Z'	42 36.0	
	eScS	N'	43 53.0	
	e(SS)	N'	48 05.0	
	eSSS	N'	50 46.0	
	LQ	N'	53 07.0	
	LR	Z'	57 17.0	
(8)	eX	NEZ	22 01 43.0	
(9)	iP	NEZ	22 11 16.0	23.9 N, 121.9 E (CGS)
(10)	e(P)	Z	22 22 50.5	
21 AUG				
(1)	eX	Z'	01 21 28.0	
(2)	iP	Z	03 28 07.5	
	eP	N	28 07.5	
(3)	eX	NZ	04 54 50.0	
(4)	eX	Z	05 18 39.0	
(5)	iP	Z	06 10 18.0	
	eP	NE	10 18.0	
(6)	e(S)	E, Z'	07 37 17.5	
	(LR)	Z'	40 08.0	
(7)	eX	Z'	07 45 54.0	
(8)	eX	Z'	08 09 31.0	
	eX	Z'	11 15.0	
(9)	e(P)	Z'	08 17 26.0	
	e(S)	Z'	20 45.0	
	(LR)	Z'	23 49.0	
(10)	eX	Z'	09 19 56.0	
(11)	iX	NE	11 41 40.0	
(12)	eX	Z	13 04 08.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
21 AUG				
(13)	eP	NEZ	15 10 03.5	3070
	iS	N'E'	15 19.0	5.9 S, 104.2 E
	LR	Z'	17 50.0	(CGS)
(14)	iP	NEZ	20 28 57.0	
	iX	NEZ	28 59.0	
	iS	NE	29 28.0	
22 AUG				
(1)	(LR)	Z'	02 37 55.0	
(2)	eX	NEZ	02 38 02.0	
(3)	eX	Z'	02 40 09.0	
(4)	eX	Z'	02 40 09.0	
(5)	eX	NEZ	03 54 48.0	
(6)	eX	Z'	03 57 14.3	
(7)	eX	Z	04 00 33.5	
(8)	eX	E,E' Z'	04 06 19.0	
(9)	eX	N'E'Z'	04 24 32.0	
	eX	NEZ	24 50.5	
(10)	eX	N'E'Z'	04 59 20.0	
	eX	N	59 30.0	
(11)	eX	NZ,E'Z'	05 20 53.0	
(12)	eX	NZ	06 53 37.5	
(13)	eX	Z	07 35 05.0	
(14)	eX	NEZ	07 58 03.5	
(15)	eX	E'	09 33 06.0	
(16)	eP	NEZ	10 00 18.0	
(17)	(LR)	E'Z'	10 02 50.5	
(18)	e(P)	NEZ	10 07 43.5	
	eS	NE	07 47.5	
(19)	eX	NEZ	10 26 22.0	
	(LR)	Z'	28 41.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
22 AUG (20)	iP	NEZ	10 51 31.5	
(21)	eX	NEZ	11 42 40.5	
(22)	eX	NEZ	16 26 13.0	
23 AUG (1)	iP	Z	00 06 22.5	
(2)	eX	Z'	03 43 46.0	
	eX	N	43 53.5	
(3)	eX	N'E'Z'	03 46 06.0	
	eX	E	46 13.0	
(4)	eX	NE	04 17 14.0	
	eX	E'Z'	17 22.0	
(5)	e(P)	E	07 40 24.0	
(6)	e(P)	N, Z'	07 56 43.0	
(7)	eX	Z'	08 06 49.0	
(8)	eX	NE	08 28 44.0	
(9)	eX	Z'	08 41 47.0	
(10)	eX	N	10 42 11.5	
(11)	eP	Z	14 21 21.5	
(12)	e(P)	Z'	14 44 24.0	
(13)	e(P)	EZ	17 22 04.0	
	e(S)	Z	22 21.0	
(14)	iP	Z	18 46 58.0	835
	iS	E	48 28.5	23.3 N, 120.7 E (CGS)
(15)	eP	Z'	20 02 09.0	
	ePKP	Z, Z'	05 14.5	16.3 N, 98.5 W (CGS)
	eX	N'	25 00.0	
(16)	eX	N	21 05 06.0	
(17)	i(P)	NZ	22 01 50.5	
	i(S)	N	02 02.5	
24 AUG (1)	eX	Z	00 01 39.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
24 AUG (2)	(LR)	Z'	00 23 34.0	
(3)	eP	NZ	01 03 38.5	80
	iS	NZ	03 48.5	
(4)	iS	N	04 30 28.0	
(5)	iP	NZ, Z'	04 53 19.0	2810
	iS	N'	57 40.0	5.8 S, 132.37 E
	LQ	N'	58 56.0	MO
	LR	Z'	59 00.0	
(6)	eP	NEZ	07 17 42.0	
(7)	eX	N	07 33 40.5	
(8)	eP	Z	09 19 32.5	980
	iS	E'	21 12.0	7.7 N, 118.93 E
	(LR)	Z'	22 08.0	MO
(9)	e(P)	N'E'	13 34 08.0	
(10)	eP	NEZ	14 28 46.0	
(11)	(LR)	Z'	14 30 56.0	
(12)	eP	NZ	15 59 31.0	1630
	eS	NE	16 02 13.0	
	LR	Z'	03 50.5	
(13)	eX	N	19 33 48.6	
25 AUG (1)	eP	Z	00 20 16.0	415
	iS	NE	20 58.5	
(2)	eP	Z	04 03 51.5	
	e(S)	E	04 19.5	
(3)	eP	Z	05 10 24.5	
(4)	i(S)	NEZ	06 17 34.5	
(5)	eX	Z	07 14 39.0	
(6)	i(S)	NEZ	08 43 05.5	
(7)	iP	NEZ	09 52 43.5	130
	iS	E	52 58.5	15.2 N & 120.05 E
				MO

Date	Phase	Comp.	Time (GCT)	Distance (km)
25 AUG				
(8)	iX	N	15 34 18.0	
(9)	e(P)	Z	17 49 54.6	
(10)	eX	N	19 06 07.5	
(11)	eX	N'E'	19 17 13.0	
(12)	eX	E	22 14 17.5	
26 AUG				
(1)	eP	Z	01 01 15.5	
	i(S)	N	01 31.5	
(2)	eX	E	03 12 06.0	
(3)	eX	NE	06 10 49.0	
(4)	LR	E'Z'	06 44 08.0	
(5)	eX	NE	06 56 13.0	
(6)	LR	Z'	07 08 19.0	
(7)	LQ	N'E'	15 08 12.0	
(8)	eP	NEZ	16 49 08.0	
	e(S)	E	49 35.0	
27 AUG				
(1)	i(P)	NEZ	00 01 41.0	
(2)	eX	N'E'	02 53 42.0	
(3)	e(P)	Z	04 34 12.0	
(4)	eX	Z'	07 17 34.0	
	(LR)	Z'	22 27.0	
(5)	eP	NEZ, Z'	18 29 09.5	4030
	eS	N'E'	34 48.0	44.6 N, 148.9 E
	(LR)	Z'	38 19.0	
(6)	eX	NE	19 33 44.0	
(7)	eX	N	21 25 10.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
28 AUG				
(1)	iP	NZ	04 16 49.5	145
	iS	N'	17 06.0	
(2)	eX	E	05 27 19.0	
(3)	eX	Z	10 45 54.0	
(4)	e(P)	E'	10 51 24.0	
(5)	e(P)	NEZ	12 15 22.0	
	e(S)	E	15 40.0	
(6)	eP	Z	12 32 27.0	
	i(S)	E	32 52.5	
(7)	eX	E'	18 24 13.0	
(8)	eX	N'E'	18 33 18.5	
(9)	eX	Z	18 42 26.0	
(10)	eX	Z	19 57 18.0	
(11)	eX	N'E'	20 03 24.5	
(12)	e(P)	Z	20 24 13.6	
	iS	N	24 33.0	
(13)	eX	E'	22 23 24.0	
29 AUG				
(1)	e(P)	Z	02 05 09.5	
	eX	Z	08 38.0	
(2)	eX	Z'	02 46 32.0	
	(LR)	Z'	03 03 32.0	
(3)	eX	E	08 56 41.0	
(4)	iS	NEZ	09 19 05.5	
(5)	eX	E'	09 29 32.0	
	eX	E'	33 55.0	
(6)	eX	E'	09 45 29.0	
(7)	eX	E'	10 11 05.0	
(8)	iP	Z, Z'	12 56 15.5	5850
	ePPP	Z'	13 00 12.0	11.6 N, 175.28 E MO

Date	Phase	Comp.	Time (GCT)	Distance (km)
29 AUG				
(8)	iS	Z, N'E'	13 04 10.0	
	eS	NE	04 10:0	
	eSS	E'	07 41:0	
	LQ	N'E'	10 13:0	
	LR	Z'	13 22.0	
(9)	eX	NEZ	13 43 36.0	
(10)	eP	NEZ	13 57 29.5	
(11)	eX	Z	14 10 08.0	
(12)	eP	NEZ	14 17 44:5	
	i(S)	Z	17 50.0	
(13)	eX	Z	15 28 19.5	
(14)	eX	Z	15 59 31.5	
(15)	eX	Z	16 17 41.0	
(16)	e(P)	NZ	17 27 38:5	
	e(S)	N	27 53.5	
(17)	eP	Z	18 41 11.0	
(18)	eX	EZ	18 48 05.0	
(19)	e(P)	E'	18 53 12:0	
	e(S)	E'	56 22:0	
	(LR)	Z'	58 11.0	
(20)	eX	Z	19 58 53.5	
(21)	eP	NEZ	21 18 51:5	
	i(S)	NEZ	19 02.0	
30 AUG				
(1)	eP	NEZ	01 05 50:5	
	i(S)	Z	06 00.0	
(2)	e(P)	Z	01 35 47.0	
(3)	e(P)	EZ	02 26 23.0	
(4)	eP	Z, Z'	03 41 49:0	6340
	ePPP	Z'	45 39:5	13.3 N, 174.3 E
	iS	N'	49 40:0	(MO)
	eSS	N'E'	53 32:0	
	LQ	E'	55 50:0	
	LR	Z'	59 10.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
30 AUG				
(5)	eX	Z	03 57 52.0	
(6)	iP	NEZ	05 32 07.0	70
	iS	N	32 15.6	
(7)	eP	Z	05 54 34.5	
(8)	eX	Z	06 46 03.5	
(9)	eX	Z	11 58 07.5	
(10)	eX	N'E'	12 00 25.0	
	LR	Z'	02 33.0	
(11)	e P	EZ	14 03 47.5	5.5 N, 126.0E (CGS)
(12)	e(P)	Z'	14 05 41.0	
	LR	Z'	08 57.0	
(13)	i(P)	NEZ	16 47 31.5	
	i(S)	E	47 47.0	
(14)	eX	NEZ	18 12 06.5	
(15)	eP	NZ	18 15 27.0	3100
	iS	NEZ	20 34.0	6.5 S, 104.7 E
	LR	Z'	23 15.0	(GCS)
(16)	e(P)	N	23 06 41.5	
	iS	N	06 52.5	
31 AUG				
(1)	eX	Z	02 46 44.0	
(2)	eX	Z	02 59 17.0	
(3)	iP	Z	03 51 38.5	
	eP	N	51 38.5	
(4)	eX	Z'	07 53 22.0	
	eX	Z, Z'	55 27.0	
	(LQ)	N'	59 57.0	
	LQ	N'	08 03 05.0	
	LR	Z'	18 03.0	
(5)	iP	NEZ	14 22 11.5	260
	iS	N	22 39.5	
(6)	e(P)	NZ	16 46 12.0	
(7)	eX	N	18 38 53.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
31 AUG				
(8)	eP	NEZ	19 47 59.0	2650
	iS	E'	51 47.0	17.0 N, 145.2 E
	LR	N'E'Z'	53 38.0	(CGS)
(9)	eP	NEZ	20 39 40.0	115
	iS	NE	39 53.5	
(10)	iP	NEZ	22 51 10.5	1290
	eS	Z'	53 20.0	7.3 N, 128.03 E
				MQ

Date	Phase	Comp.	Time (GCT)	Distance (km)
01 SEPT				
(1)	iP	Z	04 36 28.4	
	eP	NE	36 28.4	
(2)	eX	Z'	04 40 27.9	
	eX	EZ	42 12.9	
(3)	eX	Z'	05 09 15.9	
(4)	(LR)	Z'	05 24 16.9	
(5)	iP	NEZ	06 47 52.9	
	eP	Z'	47 52.9	
	i(S)	Z'	48 34.9	
(6)	eX	N'E'Z'	06 56 23.9	
	(LR)	Z'	59 38.9	
(7)	eX	N'E'	07 12 07.9	
(8)	iP	NEZ, Z'	08 56 19.9	280
	iS	NEZ	56 49.9	
(9)	iP	EZ	11 13 11.9	
	i(S)	N'E'	15 03.9	
	(LR)	Z'	15 37.9	
(10)	iP	EZ	11 40 43.9	
(11)	eX	Z	13 52 20.9	
(12)	eX	Z	22 38 52.9	
02 SEPT				
(1)	eX	Z	00 02 44.9	
(2)	eX	Z	00 27 37.9	
(3)	eX	EZ	00 58 33.0	
(4)	e(P)	NZ	03 11 29.0	
(5)	eX	NE	03 15 53.5	
(6)	iP	Z	04 36 12.0	Aleutian Islands
	eP	Z'	36 12.0	51.9 N, 175.5 E
	iS	N'E'	44 00.0	(CGS)
	LQ	N'E'	49 38.0	
	LR	Z'	53 31.0	
(7)	iP	Z	10 43 23.0	370

Date	Phase	Comp.	Time (GCT)	Distance (km)
02 SEPT				
(7)	eP	NE	10 43 23.0	
	iS	N	44 02.0	
	(LR)	Z'	44 14.0	
(8)	iP	Z	12 01 53.5	
(9)	eP	NEZ	14 36 46.0	145
	iS	E	37 02.5	
(10)	eX	Z	18 59 19.5	
(11)	e(P)	NZ	19 02 56.5	
	e(S)	N'E'	04 10.0	
(12)	e(P)	Z	19 35 54.0	
(13)	eX	Z'	19 49 22.0	
	eX	E'	51 49.0	
	LR	Z'	52 48.0	
(14)	e(P)	Z	22 18 44.0	
(15)	eX	Z	22 46 35.0	
(16)	eX	Z	23 18 50.5	
(17)	eP	Z	23 48 40.0	70
	iS	NE	48 49.0	
03 SEPT				
(1)	eX	EZ	00 13 17.6	
(2)	e(P)	NZ	01 27 02.0	
(3)	eP	NEZ	01 36 26.0	
(4)	eX	Z	02 00 16.0	
(5)	i(P)	NEZ	09 30 10.5	
(6)	e(P)	Z	11 51 11.5	
	iS	NE	51 19.5	
(7)	eX	NEZ	12 01 50.0	
(8)	eP	NE	15 47 35.0	
(9)	iP	NEZ	16 43 55.0	130
	iS	NEZ	44 10.0	

Date	Phase	Comp.	Time (...)			Distance (km)
03 SEPT						
(10)	iS	NEZ	17	22	00	
(11)	iP	NZ	21	46	18.5	4370
	eP	Z'		46	18.5	17.5 S 142.7 E
	ePP	Z'		47	51.5	(MO)
	eS	N'E'		52	17	
	LQ	N'E'		55	16	
	LR	Z'		57	80	
04 SEPT						
(1)	eP	NEZ	00	58	20	155
	iS	NE		58	37.5	
(2)	iP	NEZ	01	08	00	
	LR	Z'		10	20	
(3)	i(P)	Z	01	28	05.5	
(4)	eP	NEZ	06	27	25	
	i(S)	N		27	58.5	
(5)	iX	Z	07	59	22	
(6)	e(P)	Z'	08	09	17	
	e(S)	N'		16	04	
	LR	Z'		22	17	
(7)	eX	N'E'	08	30	08	
	eX	N		32	46	
(8)	iP	Z'	10	27	28	46.6 N, 153.5 E
	eP	NEZ,N'E'		27	28	(CGS)
	ePP	Z'		29	11	
	iS	N'E'Z'		33	37	
	LQ	NE		36	50	
	LR	Z		39	49	
(9)	iP	NEZ,N'E'Z'	14	44	25.5	58.2 N, 152.6 W
	ePPP	Z'		49	52	(CGS)
	iS	N'E'		53	59	
	eSS	N'E'		59	31	
	e(SSS)	N'	15	03	19	
	LQ	N'		08	13	
	LR	Z'		11	24	
(10)	e(P)	Z	22	45	35.5	

Date	Phase	Comp.	Time (GCT)			Distance (km)
05 SEPT						
(1)	eP	NEZ	09	12	22	230
	eS	N		12	47	
(2)	eX	Z	09	53	13	
(3)	eX	Z	10	39	03.5	
(4)	e(P)	N	10	48	37	
(5)	eX	Z	11	41	24.5	
(6)	e(P)	NE	15	04	11.5	
(7)	eP	NEZ	16	03	41	230
	iS	E		04	06	
	eX	Z'		04	15	
(8)	eX	E	17	39	38.5	
(9)	e(P)	NE	20	03	22	
(10)	e(P)	NE	20	14	30	
(11)	eP	NEZ	20	34	47	235
	iS	N		35	12.5	
(12)	eP	NEZ	22	26	35	230
	iS	NE		27	00.8	
(13)	eP	Z	23	03	07	20.8 N, 121.4 E (CGS)
	e(S)	N'E'		04	27	
	(LR)	Z'		05	30	
(14)	e(P)	NZ	23	28	50	
(15)	e(P)	NEZ	23	37	39	
(16)	e(P)	Z'	23	50	53	
	eX	Z		51	15.5	
	(LR)	Z'		58	53	
06 SEPT						
(1)	iP	NZ	01	56	57	
(2)	iP	NEZ	02	57	27	
	(LR)	Z'	03	00	02	
(3)	iP	NEZ	03	19	49.3	Taiwan Region 21.2 N, 121.4 E (CGS)

Date	Phase	Comp.	Time (GCT)	Distance (km)
06 SEPT				
	eP	Z'	19 49.3	
	iS	E'	20 45	
	iX	E'	21 07	
	eX	N'	22 51	
(4)	e(P)	NZ	05 58 46	
(5)	e(P)	Z	06 29 27.5	
	iS	NE	29 38.5	
(6)	eP	NEZ	11 23 05.5	
(7)	eP	NEZ	12 37 08.3	
(8)	eX	E	15 53 13.8	
(9)	eX	NE	15 59 17	
(10)	e(P)	NEZ	17 42 47	
(11)	eX	E'	19 28 54	
(12)	LR	Z'	19 38 49	
(13)	eX	NE	21 07 18	
(14)	eP	Z Z'	21 33 13	
(15)	eX	Z'	21 56 17	
	(LR)	Z'	22 02 41	
(16)	(LR)	Z'	22 21 18	
(17)	eX	N	23 21 10	
07 SEPT				
(1)	e(P)	NEZ	01 34 22.5	
(2)	eX	N	05 46 30	
(3)	eP	EZ E'Z'	07 02 23.5	2630
	eS	N'	06 33	31.5 N, 140.68 E
	LR	Z'	07 47	(MO)
(4)	eP	EZ	08 38 29	

Date	Phase	Comp.	Time (GCT)			Distance (km)
07 SEPT						
	LR	Z'		55	55	
(5)	e(P)	EZ	08	57	35	
(6)	i(P)	Z	11	24	39	
	eX	Z		27	19.5	
(7)	eP	Z	15	33	09.6	1890
	eS	E'		36	16	
(8)	iP	ZZ'	15	44	40	18.2 N, 144.2 E (CGS)
	eS	E'		48	54	
	LR	Z'		50	26	
(9)	eP	NEZ	17	27	40	
(10)	e(P)	NZ	17	48	43	
(11)	e(P)	NEZ	20	00	41	
(12)	iP	NEZ	20	55	43	45
	iS	NE		55	50	
08 SEPT						
(1)	eX	NE	02	21	37	
(2)	e(P)	NEZ	03	03	27.5	
(3)	eX	NE	03	13	06	
(4)	eP	NZ	03	37	59.5	57.5 N, 152.1 W (CGS)
	eS	N'E'		47	48	
	LR	Z'	04	03	43	
(5)	iS	NEZ	06	26	44	
(6)	eP	NEZ	06	34	04.8	150
	iS	NE			22.5	
(7)	eP	NZ	07	06	38	19.2 N, 145.3 E (CGS)
(8)	eX	N'	07	10	38	
(9)	e(P)	NZ	07	39	50	
(10)	iP	NEZ	10	53	49.5	230
	iS	E		54	14.5	

Date	Phase	Comp.	Time (GCT)			Distance (km)
08 SEPT						
(11)	eP	NEZ	11	26	38.5	
(12)	e(P)	Z'	11	27	41	
	iS	N'		37	33	
	LR	Z'		46	38	
(13)	e(P)	NEZ	11	58	25	
(14)	eX	Z	20	04	26	
09 SEPT						
(1)	iP	NZ	03	03	45.5	310
	iS	E	[illegible]	04	19	14.7 N, 119.8 E (MO)
(2)	eP	Z	04	46	22	5390
	eS	N'		52	48	
	LR	Z'		56	58	
(3)	e(PKP)	Z	10	22	04.5	
	i(SS)	N'		44	28	
	(LQ)	E'	11	03	13	
	(LR)	Z'		10	15	
(4)	eP	Z	13	07	38.8	
(5)	iP	NEZ	18	36	36.7	110
	iS	N		36	50	
(6)	e(P)	Z	22	15	51	
	i(S)	E		16	02	
10 SEPT						
(1)	e(P)	Z	01	56	50.5	
	iS	E		57	01.5	
(2)	iP	NEZ	02	54	07	13.9 N, 120.8 E (CGS)
	eP	Z'		54	07	
	iS	E'		54	36	
(3)	eP	Z Z'	07	29	06	
	eX	N'		40	47	
	LR	Z'		46	37	
(4)	eX	Z'	10	41	22	
(5)	eP	EZ	11	36	51	

Date	Phase	Comp.	Time (GCT)			Distance (km)
10 SEPT						
(6)	eP	NEZ	13	09	30	
	iS)	N		09	49.7	
(7)	eX	Z	15	08	20.5	
(8)	eP	NZ Z'	19	31	33	37.4 N, 141.1 E
	iS	N'E'		36	06.5	(CGS)
	(IR)	Z'		38	13	
(9)	e(P)	Z	19	48	17	
	i(S)	E		48	33.8	
(10)	iP	NEZ	22	38	50.8	
11 SEPT						
(1)	e(P)	Z	05	26	37.5	
	e(S)	N'		30	45	
	LR	Z'		31	42	
(2)	iP	NEZ N'				4300
		E'Z'	07	00	20	3.5 S, 153.7 E
	iS	N N'E'		06	16	(MO)
	LQ	N'		09	16	
	LR	Z'		11	51	
(3)	iP	NZ	11	48	07.5	360
	iS	NE		48	46	
(4)	eX	Z	15	58	03	
(5)	eP	NEZ	17	24	34	
	(LR)	Z'		25	36	
12 SEPT						
(1)	eX	Z	00	03	05	
(2)	e(P)	Z'	03	20	54	
	LR	Z'		23	37	
(3)	e(P)	Z	06	52	40.4	
(4)	iP	N'Z'	08	47	30.5	
	eP	Z		47	30.5	6.3 S, 151.6 E
	ePP	Z'		49	02	(CGS)
	iS	N'E'		53	18	
	LQ	N'		56	14	
	LR	Z'		58	57	

Date	Phase	Comp.	Time (GCT)	Distance (km)
12 SEPT				
(5)	eP	Z	10 43 50.5	240
	iS	NE	44 16.4	
(6)	iP	NEZ	11 47 17	250
	iS	E	47 44.5	
(7)	e(P)	Z	16 59 21	
(8)	eX	Z	17 05 19.5	
	LR	Z'	09 38	
(9)	e(P)	Z	21 45 54	
	iS	NE	45 59	
(10)	e(P)	Z	21 59 10.5	
(11)	iP	Z Z'	22 12 00	6.4 S, 70.8 E
	iS	NE	19 38	(CGS)
	LQ	N'	25 04	
	LR	Z'	28 26	
13 SEPT				
(1)	iX	Z	03 20 10.2	
(2)	iP	E	03 24 11.4	
(3)	iP	Z	03 34 48.0	
(4)	iP	E	05 09 31.2	
	iS	NE	05 09 35.4	
(5)	eX	E'	10 04 31.0	
	LR	Z'	10 05 20.0	
(6)	eP	Z'	13 17 04.0	55.5 N, 165.7 E
	eS	N'	13 24 24.8	(CGS)
	e(SS)	E'	13 28 18.0	
	LQ	N'	13 30 24.0	
	LR	Z'	13 34 37.0	
(7)	eP	Z'	16 50 34.0	9900
	eS	E'	17 01 18.0	
	LQ	N'	17 15 11.0	
	LR	Z'	17 19 09.0	
(8)	iX	E	21 33 31.4	
	iP	E	21 33 43.2	

Date	Phase	Comp.	Time (GCT)	Distance (km)
14 SEPT				
(1)	iP	N	00 02 00.8	1260
	iS	Z'	00 04 07.0	6.5 N, 126.35 E Cotobato (MO)
(2)	iP	NEZ	02 04 48	110
	iS	NE	05 01	
(3)	iP	NEZ	07 39 54.5	340
	iS	E	40 31	
(4)	e(P)	Z	07 44 41	
(5)	iP	N'Z'	08 29 40	8.4 N, 126.8 E (CGS)
	eP	NZ	29 40	
	iS	E'	31 46	
(6)	iP	Z	11 41 31.5	100
	iS	NE	41 43.6	
(7)	e(P)	Z	17 40 36	
	iS	NE	40 48	
(8)	e(P)	NEZ	18 25 31	
(9)	e(P)	NEZ	21 03 52.5	
	LR	Z'	05 46	
(10)	e(P)	NEZ	21 56 46.5	
	eX	N'	58 57	
	LR	Z'	22 01 10	
(11)	iP	NZ	22 50 40.5	130
	iS	E	50 56	
15 SEPT				
(1)	iP	Z	08 10 02.4	
(2)	iP	Z	10 14 56.0	
(3)	iP	Z	11 59 21.0	140
	iS	NE	11 59 37.0	
(4)	iP	NZ	12 34 52.2	
(5)	iP	EZ	15 39 39.0	

Date	Phase	Comp.	Time (GCT)	Distance (km)
15 SEPT				
(6)	iP	N	17 05 15.4	
(7)	iP	N	22 34 04.2	
(8)	iP	NEZ	23 42 34.2	
16 SEPT				
(1)	iP	NEZ	00 49 31	
(2)	iP	NEZ	06 34 36.7	
	iS	NE	34 40.8	
(3)	iP	NZ	06 58 00	260
	iS	E	58 27.8	
(4)	i(P)	NEZ	10 59 24	
	e(S)	E	59 52	
(5)	e(P)	NEZ	12 14 49	
	iS	E	15 07	
(6)	eP	NEZ	13 33 08	
(7)	iP	Z Z'	13 52 45	1170
	iX	N	52 53	7.1 N, 126.5 E
	iS	N'	54 43	(CGS)
(8)	e(P)	Z	19 31 17	
(9)	eP	Z	20 10 51	250
	iS	E	11 18.5	
(10)	e(P)	Z	21 12 22	
(11)	eP	Z	21 38 18	100
	iS	E	38 30	
(12)	eP	Z	23 55 01	
17 SEPT				
(1)	iP	Z	02 06 51.4	270
	iS	NE	02 07 20.6	14.5 N, 122.4 E
				(MO)
(2)	iP	Z	08 30 08.2	

Date	Phase	Comp.	Time (GCT)	Distance (km)
17 SEPT				
(3)	e(PKP)	Z'	11 33 30.0	
	e(SS)	E'	11 57 18.0	
(4)	iP	NEZ	13 04 54.6	
(5)	iP	NZ	13 26 36.2	
(6)	iP	Z	14 22 47.4	
(7)	e(P)	N'	14 28 06.0	
	eS	N'	14 33 09.0	
	LQ	E'	14 34 45.0	
	LR	Z'	14 36 14.0	
(8)	iP	Z	15 24 12.6	36.3 N, 141.2 E (CGS)
	eS	E'	15 28 48.0	
	LQ	E'	15 29 45.0	
	LR	Z'	15 31 29.0	
(9)	iP	Z	16 26 55.0	36.3 N, 141.1 E (CGS)
	iS	N	16 31 29.4	
	LQ	N'	16 33 01.4	
	LR	Z'	16 34 21.0	
(10)	iP	N	21 03 07.8	420
	iS	E	21 03 52.0	14 N, 117.8 E China Sea (MO)
(11)	iP	Z	21 16 30.4	
(12)	iP	Z	23 03 46.2	6070
	eS	N'	23 11 22.0	
	e(SS)	E'	23 15 11.6	
18 SEPT				
(1)	eP	Z	01 42 15	120
	iS	NE	42 29.5	16.5 N, 120.5 E (MO)
(2)	e(P)	Z	04 54 07	
(3)	e(P)	Z	05 17 30	
	eS	NE	17 45.5	
(4)	e(P)	NEZ	06 10 42.3	
(5)	iP	NEZ	14 48 37.5	
	iS	E	48 39.5	
(6)	iP	NEZ	16 11 31	
	iS	NE	11 35	

Date	Phase	Comp.	Time (GCT)	Distance (km)
18 SEPT				
(7)	iP	NZ	20 43 34.5	170
	iS	N	43 54	
(8)	eP	Z'	20 58 33	59.5 N, 145.1 W
	iS	N'	21 08 32	(CGS)
	(LR)	Z'	24 34	
(9)	iP	Z'	22 05 31.	8.2 N, 126.8 E
	iS	N'	07 38	(CGS)
(10)	e(P)	Z	22 25 48.5	
(11)	iP	Z	23 35 42	
19 SEPT				
(1)	iP	Z	00 25 47.6	
(2)	iP	Z	01 38 27.0	22.1 S, 174.9 W
	eP	Z'	01 38 27.0	(CGS)
	eS	N'	01 48 05.0	
	LQ	N'E'	01 59 14.0	
	LR	Z'	02 03 14.4	
(3)	i(P)	E	02 36 56.6	
	i(S)	N	02 37 19.6	
(4)	iP	E	04 17 06.6	
(5)	eX	E'	04 19 41.0	
	LQ	N'	04 19 58.0	
	LR	Z'	04 20 20.0	
(6)	iP	EZ	07 15 11.4	
(7)	iP	E	07 26 11.2	
	i(S)	N	07 26 21.2	
(8)	iP	Z	08 53 22.4	
(9)	eX	Z'	08 58 07.0	
	LR	Z'	09 01 09.0	
(10)	iP	N	09 28 12.4	
	i(S)	E	09 28 34.6	
(11)	iP	Z	11 44 48.4	230
	iS	EZ	11 45 13.8	
(12)	iP	Z	12 17 33.4	

Date	Phase	Comp.	Time (GCT)	Distance (km)
19 SEPT				
(13)	iP	Z	12 32 55.6	
(14)	iP	NZ	13 17 53.2	
	i(S)	N	13 19 23.6	
	LQ	N'E'	13 20 13.0	
	LR	Z'	13 20 29.0	
(15)	iP	Z	14 24 15.0	
(16)	e(P)	N'	14 30 33.0	
	eX	E'	14 41 24.0	
	(LR)	Z'	14 51 07.0	
(17)	iP	Z	16 10 30.0	
(18)	LR	Z'	16 21 52.0	
(19)	iP	Z	16 36 54.4	100
	iS	N	16 37 06.4	
(20)	iP	N	19 19 38.8	
(21)	iP	E	21 22 53.4	
(22)	iP	Z	23 42 54.4	
	iS	NE	23 43 05.6	
20SEPT				
(1)	iP	Z	03 31 27.0	310
	iS	N	03 32 00.0	
(2)	iP	Z	04 51 43.0	
(3)	iP	E	06 24 39.6	
(4)	iP	Z	08 58 02.4	220
	iS	N	08 58 26.4	
(5)	iP	Z	10 00 05.0	1224
	eS	E'	10 02 08.0	7.66 N, 137.4 E
	LQ	E'	10 03 07.0	(MO)
	LR	Z'	10 03 27.0	
(6)	iP	Z	10 09 42.2	290
	iS	N	10 10 13.2	

Date	Phase	Comp.	Time (GCT)	Distance (km)
20 SEPT				
(7)	iP	Z	10 52 30.0	
	iS	E	10 53 36.8	
(8)	iP	NEZ	11 03 22.8	
	iS	E	11 04 30.6	
	LQ	N'	11 05 24.4	
	LR	Z'	11 05 48.0	
(9)	iP	Z	12 33 43.2	
(10)	iX	N	12 51 06.4	
(11)	iP	Z	17 08 56.6	36.1 N, 141.8 E
	eS	N'	17 13 40.0	(CGS)
	LQ	E'	17 15 13.0	
	LR	Z'	17 16 11.0	
(12)	iP	NZ	17 13 18.8	12.1 N, 125.7 E
	iS	NE	17 14 31.0	(CGS)
(13)	iP	Z	20 23 23.0	270
	iS	N	20 23 51.8	
(14)	iP	Z	23 27 09.8	
	iS	E	23 27 18.2	
21 SEPT				
(1)	eiP	NEZ	01 41 44.5	29.1 N, 128.2 E
	iP	Z'	41 44.5	(CGS)
	iS	N	44 20.5	
(2)	iP	NEZ	06 28 32	60
	iS	N	28 40.1	
(3)	i(S)	N	07 22 38.5	
(4)	iX	N	07 43 31	
(5)	e(P)	Z	10 15 21	
	i(S)	N	16 11	
	eX	E'	17 16	
(6)	LR	Z'	12 57 57	
(7)	iS	N	14 11 29.2	

Date	Phase	Comp.	Time (GCT)			Distance (km)
21 SEPT						
(8)	i(P)	Z	18	58	17.5	
	i(S)	NE		58	27.5	
(9)	e(P)	Z	19	36	17.5	
(10)	e(P)	E	20	09	38	
22 SEPT						
(1)	iX	NEZ	00	06	09	
(2)	eiP	Z'	04	29	27	20.8 N, 99.3 E
	iP	NEZ		29	27	(CGS)
	iS	N'		33	19	
	LQ	N'E'		34	11	
	(LR)	Z'		36	05	
(3)	eiP	NZ	09	40	21	1.3 S, 134.0 E
	iP	N'E'Z'		40	21	(CGS)
	iPP	Z'		41	09	
	iS	N N'		44	26	
	LQ	N'		45	34	
	(LR)	Z'		46	33	
(4)	iP	NEZ	11	35	37	180
	iS	E		35	57	
(5)	eP	Z Z'	12	53	59	32.5 N, 131.4 E
	iS	E'		57	32	(CGS)
	LQ	E'		58	19	
	LR	Z'		59	47.5	
(6)	e(P)	Z	13	47	42	
	iS	NEZ		48	10	
(7)	eP	NE	17	18	25.2	
(8)	eP	NZ Z'	17	21	07.5	5440
	eS	N'E'		28	08	6.2 S, 164.78 E
	LR	Z'		36	07	(MO)
(9)	iP	NEZ N' E'Z'	20	09	00.5	5.4 S, 151.5 E (CGS)
	ePP	Z'		10	27	
	iS	N'E'Z'		14	45.5	
	(LQ)	N'		17	47	
	LR	Z'		19	44	
(10)	iP	NEZ	21	18	04.5	95

Date	Phase	Comp.	Time (GCT)			Distance (km)
22 SEPT						
	iS	E		18	17.2	
(11)	iP	Z Z'	22	13	38.5	36.4 N, 141.3 E
	iS	E'		18	09	(CGS)
	LQ	N'E'		21	28	
	(LR)	Z'		23	30	
(12)	eX	N	22	24	30	
23 SEPT						
(1)	LR	Z'	00	54	09.0	
(2)	iP	Z	05	16	07.8	3400
	e(S)	N'	05	21	06.0	
(3)	iX	E	05	39	13.6	
(4)	iP	Z	07	43	08.2	160
	iS	NE	07	43	26.2	
(5)	iP	Z	09	22	21.0	160
	iS	N	09	22	39.4	
(6)	iP	Z	09	30	52.4	
	eX	Z'	09	31	45.0	
	e(S)	E'	09	36	12.0	
(7)	iP	Z	10	20	13.2	
(8)	iP	Z	13	36	06.8	
(9)	iP	Z	17	26	43.4	100
	iS	E	17	26	55.4	
(10)	iP	NZ	19	09	41.4	
(11)	iP	Z	19	23	51.0	100
	iS	N	19	24	03.2	
(12)	i(P)	Z	19	44	14.4	
(13)	iP	NZ	20	34	42.6	90
	iS	N	20	34	53.8	
(14)	iP	Z	21	40	26.0	

Date	Phase	Comp.	Time (GCT)			Distance (km)	
23 SEPT							
	i(S)	E	21	41	31.6		
24 SEPT							
(1)	iX	N	01	01	00.2		
(2)	iP	Z	02	24	15.2	33	
	iS	N		24	21.4		
(3)	LR	Z'	03	41	24		
(4)	iP	Z	04	21	32		
(5)	iX	NE	07	34	11.6		
(6)	iP	EZ	08	51	43.2		
(7)	iP	Z	10	15	32	140	
	iS	NE		15	47.8		
(8)	iP	Z	10	41	36		
(9)	iP	Z	11	30	27.6		
(10)	iP	N	12	16	10		
(11)	iP	NE	15	31	21.6		
(12)	iP	Z	20	43	48.2		
	iX	N'		47	31		
	LR	Z'		51	24		
(13)	iP	E	22	07	28		
(14)	iP	Z	23	58	54.2	13.1 N, 145.3 E (CGS)	
25 SEPT	eS	E'	00	03	28		
	LQ	N'		03	47		
	LR	Z'		05	09		
25 SEPT							
(1)	iP	Z	02	28	42		
(2)	iP	NEZ	02	51	20	105	
	iS	NE		51	32.8	15.58 N, 120.05 E (MO)	
(3)	i(P)	NZ	09	42	57.5		

Date	Phase	Comp.	Time (GCT)			Distance (km)
25 SEPT						
	iS	NE		43	24	
(4)	iP	Z	09	57	44.2	
(5)	iP	Z	10	16	09	
(6)	iP	NEZ	12	17	31.7	80
	iS	N		17	42	15.92 N, 121.05 E
(7)	iP	Z	14	43	30	(MO)
	eP	Z'		43	30	39.7 N, 143.2 E
	eS	N'		48	28	(CGS)
	(LR)	Z'		51	14	
(8)	i(P)	Z	14	59	48	
(9)	iP	Z	15	57	04.5	4120
	iS	E'	16	03	00	5 S, 153.08 E
	LR	Z'		08	27	(MO)
(10)	iP	Z Z'	16	57	25.5	12.9 N, 145.3 E
	iS	E'	17	01	57	(CGS)
	(LQ)	E'		03	16	
	LR	Z'		03	43	
(11)	iP	Z	19	15	39	140
	iS	NE		15	55.2	
(12)	iP	Z	19	42	36.5	620
	iS	N		43	40.5	
(13)	iP	NEZ	22	21	34	160
	iS	E		21	51.8	
26 SEPT						
(1)	iP	Z	04	57	52.2	1090
	iS	NE		59	12.5	
	LR	Z'	05	00	01.0	
(2)	iP	NEZ	13	11	12.5	720
	i(S)	E		12	26.5	
	LR	Z'		13	21	
(3)	eP	NZ	19	45	47	
(4)	eP	Z	21	53	13.2	970

Date	Phase	Comp.	Time (GCT)			Distance (km)
26 SEPT						
	iS	Z N'E'		56	51.5	
27 SEPT						
(1)	iP	Z	04	01	21	
(2)	iP	Z	05	18	47	
(3)	e(P)	Z'	05	27	32	
	eX	N'		32	36	
	LR	Z'		35	36	
(4)	e(P)	Z'	06	51	23.6	
(5)	iP	NZ	07	18	48	
(6)	iP	NEZ	08	08	38	
(7)	eP	Z	10	10	27	
(8)	e(P)	Z	~~14~~	59	11.5	
(9)	iP	NEZ	16	43	57	180
	iS	NE		44	17	
(10)	iP	NEZ	18	09	37	720
	iS	E		10	51	12.55 N, 126.95 E
	(LR)	Z'		11	49	(MO)
(11)	iP	Z	18	38	24.5	20
	iS	NEZ		38	29.8	
(12)	eX	Z'	20	32	11	
(13)	iP	Z	21	01	08.7	210
	iS	N		01	31.3	
(14)	eX	Z'	21	48	40	
28 SEPT						
(1)	iP	N	06	41	54.6	
(2)	iP	Z	07	52	48.0	
(3)	iP	N	07	57	02.8	

Date	Phase	Comp.	Time (GCT)			Distance (km)
28 SEPT						
(4)	iP	Z	08	08	17.2	
(5)	iP	NE	10	02	44.4	
(6)	iP	N	10	10	10.6	
	i(S)	E	10	10	20.8	
(7)	e(P)	Z	11	12	28.0	
(8)	iP	N	13	03	37.2	
(9)	iP	Z	18	25	38.2	170
	iS	NE	18	25	57.0	
(10)	iP	Z	20	15	24.4	
(11)	iX	NE	20	55	33.2	
(12)	iX	N	21	03	08.4	
(13)	iP	EZ	23	10	20.2	
29 SEPT						
(1)	i(P)	Z	02	09	31	
	i(S)	E		09	43.5	
(2)	e(P)	Z	13	14	12	
(3)	eX	E'	13	16	35	
	eX	N'		17	13	
	(LR)	Z'		17	57	
(4)	iP	NEZ	15	33	40.5	
	iS	NE		33	50	
(5)	iP	NEZ	15	44	08	50
	iS	E		44	25.5	
(6)	e(P)	Z	18	23	09	
	i(S)	E		23	25.8	
(7)	eX	Z'	22	02	13	
	(LR)	Z'		06	48	
30 SEPT						
(1)	iP	Z	02	10	08.6	

Date	Phase	Comp.	Time (GCT)	Distance (km)
30 SEPT				
(2)	i(P)	Z	02 27 10.4	
(3)	iP	Z	07 16 46.4	
(4)	iX	Z	07 17 57.2	
(5)	iX	E	07 41 25.2	
(6)	eX	N'	07 50 33.0	
(7)	iX	N	08 53 38.2	
(8)	e(P)	Z	12 39 18.6	
(9)	i(P)	Z	14 37 38.8	
(10)	iX	EZ	15 43 52.4	
(11)	eX	Z	15 45 23.4	
(12)	iX	Z	15 51 52.4	
(13)	iX	Z	17 34 40.6	
(14)	iP	Z	18 10 09.0	410
	iS	E	18 10 52.0	
(15)	iX	Z	18 23 30.4	
(16)	iX	Z	19 06 30.2	
(17)	i(P)	NE	19 09 30.4	
(18)	iX	N	19 17 09.4	
(19)	iX	NE	19 48 20.4	
(20)	iP	Z	21 37 14.6	
	i(S)	N	21 37 35.0	
(21)	eX	E'	21 39 22.0	
	(LR)	Z'	21 39 32.0	
(22)	e(P)	Z	23 59 47.8	

BAGUIO STATION

QUARTERLY SEISMOLOGICAL BULLETIN

MANILA OBSERVATORY

PHILIPPINES

BAGUIO SEISMIC STATION

Baguio, Philippines

Latitude	16° 24' 39'' N
Longitude	120° 34' 47'' E
Elevation	1507 meters

Instruments: World-wide standardized seismographs (USCGS)

S. P.: Benioffs (designated as N, E, Z)

T_o - 1.0 sec.

T_g - 0.75 sec.

Magnification: usually 25,000

L. P.: Sprengnethers (designated as N', E', Z')

T_o - 15 secs.

T_g - 100 secs.

Magnification: usually 3,000

Date	Phase	Time (GMT)	Comp.	T_z(sec)	A_z(micron)
1 OCT.					
1.	iX	03 39 06.4	E		
2.	iX	05 09 25.0	N		
3.	iP	09 01 48.0	Z	1.4	0.46
	eS	09 45.0	E'		
	LQ	16 12.0	E'		
	LR	18 32.0	Z'		
4.	iX	09 44 02.2	Z		
5.	i(P)	10 05 53.8	Z		
	i(S)	06 11.0	NE		
6.	iP	10 27 26.4	Z		
7.	iP	12 16 21.8	NZ		
8.	iP	13 24 16.4	Z		
9.	iP	13 32 09.4	Z		
10.	iP	13 34 02.0	Z	1.1	0.35
	eS	40 06.0	N'E'		
	eX	43 21.0	E'		
11.	iP	14 01 44.6	Z		
12.	LR	20 21 10.0	Z'		
13.	iX	21 30 07.0	N		
14.	iX	21 32 45.2	N		
15.	iX	21 47 19.4	E		
16.	i(P)	22 12 56.2	N		
	i(S)	13 13.4	N		
17.	iP	22 45 26.8	Z		
18.	LR	23 35 47.0	Z'		
2 OCT.					
1.	i(P)	02 40 20.0	Z		
	iS	40 24.0	NE		
2.	iP	02 47 19.0	NEZ		
	iS	47 24.0	N'E'		
3.	iP	02 52 58.5	NEZ	0.5	0.10

Date	Phase	Time (GMT)	Comp.	T_Z (sec)	A_Z (micron)
2 OCT.					
4.	iP	02 54 36.0	NEZ		
	iS	54 40.0	E		
5.	i(P)	03 03 15.0	Z		
	iS	03 22.0	NE		
6.	iP	03 11 57.0	Z	0.5	0.03
	iS	12 02.4	NE		
7.	iP	03 17 17.0	NZ		
	iS	17 22.5	N		
8.	i(P)	03 34 38.5	Z		
	iS	34 42.5	N		
9.	i(P)	04 14 19.0	Z		
	iS	14 23.5	NE		
10.	i(P)	04 47 33.0	Z		
	iS	47 37.5	NE		
11.	iP	05 41 17.0	Z	0.4	0.12
	iS	41 57.5	N,E'		
12.	iP	06 17 48.0	NEZ		
	i(S)	18 03.5	N		
13.	i(P)	08 37 40.0	Z		
14.	(LR)	08 45 22.0	Z'		
15.	iX	09 00 04.0	Z		
16.	i(P)	10 33 18.0	NEZ		
	iS	33 22.5	N		
17.	iX	11 10 02.5	N		
18.	e(P)	12 12 53.0	Z		
19.	iX	12 37 54.0	Z		
20.	eX	12 47 10.0	N'E'		
	(LR)	50 08.0	Z'		
21.	iX	14 20 28.5	Z		
22.	i(P)	17 08 35.5	Z		
23.	iP	19 58 55.0	Z,N'Z'		
	i(S)	59 26.0	N'		
24.	i(P)	21 30 21.5	Z		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
3 OCT.					
1.	iX	01 00 10.4	E		
2.	iP	01 10 33.8	Z		
	iS	10 52.6	NE		
3.	iX	01 19 08.0	N		
4.	i(P)	01 58 05.4	Z		
	i(S)	58 22.6	E		
5.	iX	02 09 10.0	N		
6.	iP	02 29 35.8	Z		
	iS	29 40.8	N		
7.	iX	03 06 34.0	N		
8.	iP	05 25 10.2	Z		
9.	LR	05 56 51.0	Z'		
10.	iP	06 15 58.2	Z		
11.	iP	08 06 52.8	Z		
12.	iP	10 06 20.4	Z		
13.	iX	12 39 31.4	NE		
14.	iP	13 21 51.6	NEZ		
15.	eX	13 21 54.0	Z'		
16.	iP	14 14 13.6	NE		
	iS	14 22.0	E		
17.	iP	14 15 43.0	Z		
	iS	16 01.4	E		
18.	iP	14 34 07.4	Z		
4 OCT.					
1.	e(P)	04 35 26.5	Z		
	iS	35 44.6	NE		
2.	iP	05 43 13.0	Z		
	iS	43 17.5	NE		
3.	iP	06 42 41.8	NEZ		
4.	iP	07 44 31.3	NEZ		

Date	Phase	Time (GMT)			Comp.	T_Z(sec)	A_Z(micron)
4 OCT.							
	iS		44	33.8	NE		
5.	iP	11	22	35.7	Z	0.5	0.06
	iS		23	19.5	N		
6.	iP	14	43	43.5	NEZ		
7.	iX	19	05	03.5	NE		
8.	iP	19	34	02.0	NEZ		
	iS		34	12.6	NE		
9.	e(P)	23	04	26.0	Z		
5 OCT.							
1.	eX	05	40	30.0	Z		
2.	e(P)	08	03	30.0	Z		
3.	e(P)	09	54	25.0	Z		
4.	e(P)	10	10	07.5	Z		
	iS		10	28.0	NE		
5.	iX	14	50	44.0	Z		
6.	iP	15	56	49.5	Z		
	iS		56	54.0	E		
6 OCT.							
1.	iP	02	57	24.0	Z		
2.	LR	20	14	20.0	Z'		
3.	iP	23	23	17.6	Z		
7 OCT.							
1.	e(P)	01	19	13.0	Z	0.6	0.18
2.	eX	01	24	08.5	Z		
3.	iP	03	37	45.0	NEZ		
	iS		39	30.0	E'		
	(LR)		40	28.0	Z'		
4.	e(P)	04	04	06.0	Z		
5.	e(P)	04	19	13.5	Z		
6.	eiP	07	08	52.5	Z		
	iS		08	57.5	NE		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
7 OCT.					
7.	iP	08 20 54.4	Z		
8.	e(P)	08 50 34.0	Z		
9.	e(P)	09 29 10.5	Z		
10.	iP	12 00 24.6	Z		
	iS	00 34.0	N		
11.	eP	18 56 30.5	Z		
12.	eP	20 02 03.5	Z		
8 OCT.					
1.	iP	01 14 31.4	Z		
	LQ	17 51.0	N'E'		
2.	iP	01 53 56.6	Z		
3.	eX	02 13 23.0	Z'		
4.	iX	03 08 07.4	E		
5.	iP	03 40 31.0	Z		
6.	eX	03 46 44.0	N'		
	iX	46 58.2	N		
	(LQ)	50 04.0	E'		
	LR	54 35.0	Z'		
7.	iP	04 15 48.4	Z		
8.	iP	05 53 18.4	Z		
9.	iP	06 08 39.0	Z		
10.	iP	06 37 02.0	Z		
11.	iP	07 31 38.8	Z		
12.	i(P)	08 05 55.6	N		
13.	iP	11 28 44.0	Z		
	i(S)	28 52.0	N		
14.	iP	11 57 02.0	Z		
	LR	59 16.0	Z'		
15.	iP	12 46 57.4	Z	0.5	0.03
	iS	47 37.0	N		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
8 OCT.					
16.	iP	13 36 47.0	E		
	i(S)	36 51.2	N		
17.	i(P)	14 44 14.0	N		
18.	iP	14 56 05.0	Z		
	iS	56 07.4	E		
19.	iP	15 26 54.0	Z		
20.	eX	15 32 16.0	N'		
	LR	35 30.0	Z'		
21.	iP	16 42 50.4	Z		
22.	iP	17 55 19.0	Z		
	e(S)	56 54.0	N'		
	LR	57 19.0	Z'		
23.	iP	20 06 06.2	NZ		
24.	LR	22 35 38.0	Z'		
9 OCT.					
1.	e(P)	03 21 27.5	Z		
2.	e(P)	03 56 56.5	Z		
3.	e(P)	13 29 18.2	Z		
4.	eX	13 34 32.0	N'E'Z'		
5.	iX	15 49 05.5	N		
6.	e(P)	16 24 07.0	Z		
7.	iX	17 12 47.0	E		
8.	(LR)	18 06 20.0	Z'		
10 OCT.					
1.	iX	02 41 05.0	Z		
2.	i(P)	05 32 52.5	Z		
	iS	32 56.3	NE		
3.	i(P)	10 24 07.0	Z		
	e(S)	26 19.0	E'		
	LR	28 36.0	Z'		
4.	eP	14 12 44.5	Z		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
10 OCT.					
5.	i(S)	15 19 41.0	NE		
6.	e(P)	17 47 23.0	Z'		
	e(PKP)	48 08.0	Z'		
	e(S)	18 06 20.5	N'		
	LR	26 58.0	Z'		
7.	iP	18 48 08.7	NEZ		
	iS	48 17.0	N'E'		
8.	iP	23 47 21.5	Z		
	iS	47 26.7	NEZ		
11 OCT.					
1.	iP	02 15 53.8	N		
2.	iX	03 43 13.0	NE		
3.	iP	04 54 41.6	Z	1.2	0.07
	eS	56 46.0	Z'		
	LQ	57 18.0	N'E'		
	LR	58 08.4	Z'		
4.	iP	05 20 12.6	NZ		
5.	iX	07 24 27.4	N		
6.	i(P)	08 05 19.6	N		
7.	eX	08 18 35.0	E'		
	LR	23 58.0	Z'		
8.	eX	09 00 28.0	E'		
9.	iP	09 11 20.2	N		
10.	e(P)	10 10 45.0	E'		
11.	iP	12 56 33.6	N		
12.	iX	18 12 14.2	E		
13.	iP	20 08 31.2	NEZ		
14.	iP	23 00 39.0	NZ		
	iS	00 58.6	N		
12 OCT.					
1.	i(P)	04 30 49.0	Z		
	i(S)	31 21.0	E		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
12 OCT.					
2.	e(P)	04 38 31.0	Z		
3.	iP	05 29 29.0	NEZ	1.0	0.18
	iS	29 48.5	NEZ		
4.	eP	13 52 35.0	Z,Z'	1.0	0.07
	eS	14 02 08.0	E'		
	eSS	07 12.0	E'		
	LQ	12 47.0	N'		
	LR	20 58.0	Z'		
5.	iP	15 00 38.0	NEZ		
	iS	00 43.8	NE		
6.	iP	15 42 38.5	NEZ		
	iS	42 59.0	NE		
7.	e(P)	16 51 56.0	Z		
	i(S)	52 32.0	E		
8.	eP	18 59 42.0	Z		
	e(S)	19 02 46.0			
9.	e(P)	19 11 27.5	Z		
10.	i(P)	20 58 20.0	Z		
	i(S)	58 24.5	N		
11.	iP	23 55 58.5	Z	0.8	0.17
	iS	58 41.0	E'		
13 OCT.					
1.	eX	04 28 28.0	N'		
2.	iP	11 51 51.5	Z		
	iS	51 56.5	N		
3.	e(P)	12 51 41.0	Z		
4.	iP	14 31 09.5	Z		
	iS	31 14.0	NEZ		
5.	eP	14 56 50.0	ZN'Z'		
	eS	15 05 18.0	N'		
6.	e(P)	15 23 21.5	Z		
7.	e(P)	15 37 45.0	Z		
8.	e(P)	21 19 54.0	Z		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
13 OCT.					
9.	iP	22 12 48.5	Z		
	iS	13 10.5	E		
14 OCT.					
1.	iP	02 33 04.6	Z	0.8	0.06
	iS	33 22.6	N		
2.	iP	08 07 27.4	Z		
	e(S)	11 40.2	N'		
3.	iP	08 36 29.6	Z		
4.	iX	14 09 23.4	E		
5.	iX	16 25 31.1	E		
6.	iP	17 23 02.4	Z		
15 OCT.					
1.	LR	01 32 35.6	Z'		
2.	iP	07 18 02.8	Z	0.7	0.329
	iS	18 26.5	N		
3.	iP	10 17 52.4	Z		
	iS	18 13.2	E		
4.	LR	14 31 28.4	Z'		
16 OCT.					
1.	iP	08 26 25.2	Z	0.9	0.51
	eX	27 11.0	N' Z'		
	iS	29 15.5	N		
2.	iP	11 12 34.1	Z	0.7	0.309
3.	iP	14 42 30.2	Z	1.1	0.14
4.	iP	20 10 58.2	Z	0.7	0.219
	eS	18 20.4	N'		
	LQ	23 25.4	Z'		
5.	eX	22 35 03.6	E'		
	LR	47 53.6	Z'		

Date	Phase	Time (GMT)			Comp.	T_Z(sec)	A_Z(micron)
16 OCT.							
6.	iP	23	35	55.4	Z	0.4	0.20
	i(S)		36	08.0	E		
17 OCT.							
1.	iP	02	01	32.2	Z	0.9	0.66
	eS		07	58.6	N'		
	LQ		11	17.0	E'		
2.	eX	04	16	38.0	Z'		
	eX		26	36.4	Z'		
	LR		29	04.0	Z'		
3.	LR	05	01	46.0	Z'		
4.	iP	13	46	58.0	Z	0.5	0.0309
	iS		47	27.8	E		
5.	iP	14	47	38.1	Z	0.5	0.0206
	iS		48	07.2	N		
6.	iP	17	47	03.1	Z	0.75	0.0406
	iS		47	44.8	E		
7.	LR	17	59	00.0	Z'		
18 OCT.							
1.	iP	02	44	50.0	NZ	1.1	0.52
	iX		45	29.0	Z		
	iX		49	18.0	Z'		
	(LR)		50	14.0	Z'		
2.	iP	02	54	06.0	Z	0.4	0.07
	iS		54	18.0	E		
3.	eiP	10	07	34.0	Z	0.5	0.0516
4.	iX	10	45	37.0	N'		
	(LR)		49	16.0	Z'		
5.	iX	12	52	44.0	Z'		
6.	iP	20	49	49.0	NEZ	0.6	0.09
	iS		50	05.5	NE		

Date	Phase	Time (GMT)			Comp.	T_Z(sec)	A_Z(micron)
18 OCT.							
7.	iP	21	54	22.0	Z'	0.8	0.30
	i(S)		57	51.0	E'		
8.	iP	23	05	32.7	Z	1.5	0.428
19 OCT.							
1.	iP	04	42	24.6	Z	0.6	0.077
	LR		44	54.0	Z'		
2.	iP	06	20	52.2	Z	0.8	0.088
	iS		21	03.9	N		
3.	iP	14	21	19.8	Z	1.1	0.086
	eS		24	51.0	E'		
	LR		27	08.0	Z'		
4.	eP	20	58	18.6	Z'	2.0	0.60
	eS	21	06	00.0	N'E'		
	LQ		11	37.0	N'		
	LR		14	17.0	Z'		
20 OCT.							
1.	iP	02	46	52.2	Z	0.8	0.034
	i(S)		48	20.5	N		
	LR		49	11.0	N'Z'		
2.	eiP	07	12	45.5	Z	1.0	2.28
	i(S)		13	27.0	E'		
3.	iP	07	17	32.2	Z	0.9	1.10
	i(S)		18	12.4	E'		
	LR		18	21.4	Z'		
4.	iP	07	40	12.6	Z	0.8	0.08
	iS		40	41.2	N		
5.	iP	10	41	06.5	Z	1.0	0.06
	eP		41	24.4	Z'		
	eX		48	29.0	Z'		
6.	eP	11	18	49.3	Z	1.1	0.038
	eX		26	41.0	Z'		
	LR		39	08.0	Z'		

Date	Phase	Time (GMT)			Comp.	T_Z(sec)	A_Z(micron)
21 OCT.							
1.	eX	00	29	14.0	Z'		
	eX		34	51.0	N'E'		
	(LQ)		52	56.0	N'		
	(LR)		58	50.0	Z'		
2.	eX	07	52	09.0	N'E'Z'		
	LR		55	30.0	Z'		
3.	LR	09	54	04.0	Z'		
4.	iP	14	39	01.0	Z	0.4	0.023
	iS		39	19.7	N		
5.	LR	16	20	42.0	Z'		
6.	(LR)	17	55	40.0	Z'		
7.	e(P)	18	58	17.4	N'Z'		
	(LR)	19	02	52.0	Z'		
8.	iP	23	38	08.0	Z	0.5	0.10
	iS		38	19.2	N		
22 OCT.							
1.	iP	02	07	37.6	Z	0.7	0.056
	eS		11	48.6	N'		
	G		12	42.2	N'		
	LR		13	33.0	Z'		
2.	iP	03	11	21.8	Z	1.0	0.11
3.	iP	03	47	57.0	Z	0.4	0.13
	iS		48	06.9	E		
4.	iP	11	01	03.2	Z	0.4	0.366
	iS		01	05.2	N		
5.	iP	15	58	57.7	Z	0.7	0.36
	iS		59	19.6	E		
6.	LR	19	53	28.0	Z'		
7.	LR	20	50	30.0	Z'		
8.	i(P)	21	32	18.2	Z	0.5	0.007
	iS		32	36.8	N		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
23 OCT.					
1.	iP	06 11 44.7	Z	0.5	0.64
2.	LR	06 33 00.0	Z'		
3.	iP	11 39 25.0	Z	0.5	0.023
	i(S)	39 44.8	E		
4.	LR	09 09 30.0	Z'		
24 OCT.					
1.	eP	04 31 44.0	NEZ	1.0	0.05
2.	i(P)	07 45 02.5	Z	0.6	0.01
3.	i(P)	08 59 35.0	Z	0.4	0.04
4.	iP	14 35 17.0	Z,Z'	0.7	0.069
	e(S)	37 48.5	E'		
	(LR)	38 08.5	Z'		
5.	iP	18 23 10.6	Z,E'	1.0	0.32
	iX	23 15.0	E'Z'		
6.	e(P)	18 29 38.0	N'E'Z'		
	eX	33 17.0	E'		
	(LR)	36 45.5	Z'		
7.	iP	18 52 41.5	NZ	0.7	0.077
	eX	53 22.0	Z'		
8.	iP	19 06 34.5	Z	0.5	0.046
	iS	06 51.2	NE		
	LR	07 06.0	Z'		
9.	iP	20 27 16.0	NZ	0.6	0.167
	i(S)	28 03.0	N'E'		
10.	eP	21 19 58.8	Z	0.6	0.07
25 OCT.					
1.	eiP	00 17 08.5	Z	0.8	0.257
	eP	17 08.5	Z'		
	e(S)	19 14.0	E'		
	LR	20 13.0	Z'		
2.	iX	02 14 54.3	NE		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
25 Oct.					
3.	iX	06 55 22.0	NE		
4.	iP	07 12 16.8	NZ	0.4	0.025
	iS	12 36.0	N		
5.	eP	08 48 48.5	Z,Z'	1.4	0.088
	e(S)	57 14.0	N'		
	(LR)	09 08 40.0	Z'		
6.	iP	14 14 10.6	NEZ,N'E'Z'		
	iS	14 26.0	E'		
7.	eX	18 18 10.6	Z'		
	(LR)	27 25.0	Z'		
8.	i(P)	20 04 03.5	Z	0.4	0.02
		04 24.5	E		
9.	iP	20 45 12.0	Z	0.3	0.025
	i(S)	45 31.0	N		
10.	iP	22 40 58.5	NEZ	1.0	1.26
	e(PP)	42 32.0	Z		
	iS	46 14.7	NE,E'		
	LR	48 47.5	Z'		
11.	iP	23 44 39.6	NZ,Z'	1.3	0.22
	iS	47 22.5	E'		
	LR	49 41.0	Z'		
12.	i(P)	23 53 00.0	Z	0.6	0.017
	iS	53 20.5	E		
26 OCT.					
1.	iP	02 05 48.0	NEZ	0.5	0.245
	iS	06 16.0	NE		
2.	i(P)	04 56 54.7	Z	0.6	0.012
	(LR)	05 01 35.0	Z'		
3.	iP	05 50 21.0	NEZ,Z'	1.0	0.048
	i(S)	50 45.3	E		
4.	(LR)	08 51 17.0	Z'		
5.	iP	08 56 03.2	Z	0.4	0.033
	iS	56 32.0	E		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
26 OCT.					
6.	iP	10 31 49.0	Z	1.0	0.06
7.	(LR)	10 50 32.0	Z'		
8.	iP	12 23 37.8	Z	0.7	0.028
9.	iP	18 59 48.0	Z	0.7	0.025
	i(S)	19 01 03.0	E		
10.	iP	20 29 26.3	Z	0.7	0.077
	iS	29 42.7	N		
11.	iP	20 35 51.5	Z		
	iS	36 13.0	N		
12.	LR	20 44 09.0	Z'		
13.	iP	23 18 24.6	Z,Z'	1.5	0.38
	eS	20 35.0	E'		
	LR	20 48.5	Z'		
27 OCT.					
1.	iX	03 55 46.8	Z		
2.	iX	05 12 09.5	Z		
3.	i(P)	10 00 44.5	Z	0.8	0.028
4.	iP	13 45 33.8	NEZ,N'E'Z'		
	iS	45 43.8	N		
5.	iP	14 59 22.0	Z	0.5	0.015
	iS	59 32.8	E		
6.	LR	15 22 21.5	Z'		
7.	iP	15 44 46.0	NZ,N'Z'	1.0	0.50
	eX	47 46.0	E'Z'		
28 OCT.					
1.	iP	03 26 22.5	NEZ	0.8	0.197
	i(S)	26 52.5	N		
2.	i(P)	03 58 19.0	Z		
	iS	58 39.7	N		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
28 OCT.					
3.	eX	05 33 15.5	Z		
4.	eP	05 54 49.0	Z,Z'	1.0	0.072
5.	iX	06 02 26.0	Z		
6.	e(P)	09 02 44.0	N'E'Z'	1.2	0.342
	iS	06 14.0	E'		
	LQ	07 52.0	E'		
	LR	08 27.0	Z'		
7.	iS	10 08 27.0	NEZ		
8.	i(P)	18 21 41.0	Z		
9.	iP	22 25 07.8	Z	0.2	0.20
	iS	25 10.0	NEZ		
10.	i(P)	23 47 45.0	Z		
	iS	48 15.5	EZ		
11.	i(P)	23 57 01.5	Z		
	iS	57 15.0	N		
30 OCT.					
1.	eP	07 09 08.9	Z,Z'	1.0	0.052
	ePP	12 15.0	Z'		
	eS	18 50.0	N'		
	eSS	26 48.0	N'		
	LQ	29 15.0	N'		
	LR	31 52.0	Z'		
2.	iP	08 23 40.5	NZ	0.8	0.17
3.	iX	11 17 18.2	Z		
	i(S)	17 36.7	NE		
4.	iP	19 29 02.0	Z	1.0	0.84
5.	iP	19 45 24.0	Z,Z'	1.0	0.26
	eS	53 20.0	N'E'		
	eSS	57 20.0	N'		
	LQ	59 26.0	N'		
	LR	20 02 25.0	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
31 OCT.					
1.	(LR)	02 43 09.0	Z'		
2.	iP	02 53 51.5	NEZ	0.8	0.122
	eX	55 36.0	Z'		
	i(S)	55 54.0	E'		
	LR	56 29.0	Z'		
3.	i(P)	03 33 11.5	Z	0.6	0.012
	iS	33 30.5	E		
4.	eX	03 54 53.0	Z		
5.	eX	04 03 28.5	Z'		
6.	iX	04 10 13.0	Z		
7.	i(P)	06 51 17.0	Z	1.0	0.048
8.	i(P)	08 50 09.5	Z		
	iS	50 29.0	NE		
9.	iP	11 45 01.2	Z	1.0	0.14
	iS	45 14.5	E		
10.	iP	12 38 59.3	Z	0.5	0.043
	iS	39 34.0	NE		
11.	eX	15 14 11.5	Z		
12.	(LR)	15 33 35.0	Z'		
13.	iX	16 28 26.0	N		
14.	iP	17 31 35.0	NZ,N'E'Z'	1.0	0.232
	e(PP)	33 22.0	Z'		
	eS	37 36.0	E'		
	LQ	40 45.0	N'E'		
	LR	43 45.0	Z'		
15.	iP	18 17 38.0	Z		
16.	eX	19 40 54.5	Z		

Date		Phase	Time (GMT)			Comp.	T_Z(sec)	A_Z(micron)
1 NOV.								
	1.	i(P)	01	44	10.2	Z	0.5	0.046
		iS		44	11.5	N		
	2.	i(P)	01	53	51.9	NEZ	0.7	0.116
		iS		55	21.7	E		
	3.	eX	09	04	38.0	Z		
	4.	iP	10	11	28.9	NZ	0.9	0.26
	5.	i(S)	13	19	11.5	N		
	6.	eX	14	19	49.5	Z		
	7.	eiP	18	13	25.5	Z,Z'	1.0	0.18
		iX		13	32.5	N'		
		eX		16	14.5	Z'		
		(LR)		30	47.0	Z'		
	8.	iP	19	04	19.9	NZ	1.0	0.052
		iS		04	52.5	N		
2 NOV.								
	1.	e(P)	00	59	36.6	Z	1.0	0.068
	2.	e(P)	01	08	08.0	N'E'		
	3.	iP	02	01	59.6	Z	1.0	0.22
		eX		03	30.0	N'		
		(LR)		03	38.0	Z'		
	4.	eX	02	11	14.0	N'		
		(LR)		14	09.5	Z'		
	5.	iP	03	58	37.0	Z		
	6.	iP	05	57	22.0	Z	0.7	0.064
		iS		57	35.5	E		
	7.	i(P)	10	10	19.7	Z		
	8.	eX	10	13	30.0	Z'		
	9.	eP	15	53	18.0	Z'	1.0	0.12
		eS		58	19.5	N'		
		LQ	16	01	22.0	N'		
		LR		04	08.0	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
2 NOV.					
10.	iP	20 58 46.8	Z		
	iS	58 49.0	NEZ		
3 NOV.					
1.	iP	01 58 03.8	Z,Z'	1.5	0.76
	e(PP)	02 01 09.0	Z'		
	e(PPP)	03 06.0	Z'		
	iS	08 44.5	N'E'		
	(LQ)	22 50.0	E'		
	(LR)	26 48.0	Z'		
2.	eX	04 13 26.5	Z		
3.	i(P)	07 14 32.0	Z		
4.	e(P)	07 39 33.0	Z	1.0	0.04
5.	eX	07 41 27.0	Z'		
	(LR)	44 19.5	Z'		
6.	iP	16 45 25.0	Z,Z'	1.0	2.38
	eS	48 53.0	N		
	LR	50 36.0	Z'		
7.	eX	18 42 10.5	Z'		
	eX	59 48.0	N'		
	LR	19 20 25.0	Z'		
4 NOV.					
1.	iP	00 38 34.0	NEZ	0.5	0.018
	iS	39 03.9	N		
2.	eX	01 33 20.0	Z'		
	(LR)	36 30.0	Z'		
3.	i(P)	01 41 49.0	NZ	1.0	0.024
	i(S)	42 11.5	N		
4.	iP	04 56 06.0	Z	0.8	0.057
	iS	56 33.0	E		
5.	eX	07 45 40.5	Z'		
6.	iP	09 17 07.5	Z	0.5	0.025
	i(S)	18 06.2	N		

Date	Phase	Time (GMT)	Comp.	T_z(sec)	A_z(micron)
4 NOV.					
7.	iP	11 32 03.8	Z	0.6	0.237
	eX	35 11.0	Z'		
	(LR)	37 07.0	Z'		
8.	eX	14 07 25.5	E		
9.	iP	15 41 21.3	Z	0.6	0.125
	iX	42 27.0	E'		
	LR	43 15.0	Z'		
10.	iX	16 11 23.5	N		
11.	iP	16 23 34.0	NEZ	0.7	0.051
	LR	25 29.0	Z'		
12.	i(P)	17 01 57.0	NZ	0.5	0.015
	LR	03 51.5	Z'		
13.	iP	17 40 11.7	NEZ	0.4	0.066
	iS	40 14.0	NE		
14.	iX	19 47 18.5	Z		
	iS	47 21.0	N		
15.	iX	21 56 41.5	NE		
5 NOV.					
1.	iP	00 33 12.8	Z	0.3	0.05
	iS	33 33.5	E		
2.	i(P)	00 43 14.0	Z		
3.	iP	00 52 59.9	Z	0.8	0.50
	iS	53 30.8	N		
	(LR)	53 44.5	Z'		
4.	iP	09 24 05.5	Z	1.0	0.08
	iS	24 11.8	NEZ		
5.	iP	10 54 03.5	Z	0.5	0.046
	iS	54 07.5	E		
6.	eX	14 23 56.0	Z'		
	eX	25 35.0	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
5 NOV.					
7.	eP	19 07 12.0	Z, Z'	1.0	0.06
	iS	12 16.0	N'E'		
	LQ	13 53.0	N'		
	LR	15 26.5	Z'		
8.	iP	21 25 31.5	NEZ	0.5	0.245
	iS	25 34.5	NE		
9.	iX	21 29 31.0	Z		
10.	e(P)	22 08 03.0	Z	1.0	0.06
	LR	13 03.0	Z'		
7 NOV.					
1.	i(P)	00 56 10.5	Z		
	iS	56 30	N		
2.	i(P)	01 40 34.3	Z	1.0	0.024
	iS	40 47.0	NE		
3.	iP	06 02 18.0	NEZ	0.4	0.10
	iS	02 37.0	N		
4.	iP	15 04 42.1	NEZ	0.9	0.40
5.	iP	16 39 31.0	Z	1.0	0.068
	iS	39 50.5	N		
6.	eX	18 10 03.5	Z		
7.	iP	20 18 50.5	N		
	iS	19 11.2	E		
8 NOV.					
1.	i(P)	03 59 42.5	Z	2.0	0.10
2.	iP	06 07 43.7	Z	1.0	0.04
3.	iP	09 27 58.0	Z	0.6	0.112
	iS	28 17.0	NE		
4.	iP	12 32 34.0	Z	0.6	0.020
	iS	32 50.0	NE		
5.	iP	16 26 30.0	Z	0.8	0.031
	iS	26 53.0	E		

Date	Phase	Time (GMT)	Comp.	T_z(sec)	A_z(micron)
8 NOV.					
6.	iP	17 18 04.8	Z	1.0	0.068
	iS	18 24.0	N		
7.	iS	18 01 36.0	E		
8.	iS	19 15 41.0	E		
9 NOV.					
1.	iX	02 30 15.5	N		
2.	i(P)	05 39 51.5	Z		
	iS	40 16.8	E		
3.	iX	06 38 55.0	N		
4.	iP	10 14 03.0	Z	0.6	0.125
	iS	14 22.3	E		
5.	e(S)	11 55 22.0	N'		
	(LR)	12 01 54.0	Z'		
6.	i(P)	16 54 12.8	Z	2.0	0.160
7.	e(P)	17 08 20.0	Z		
8.	iP	17 59 19.0	Z	0.5	0.129
	i(S)	59 35.0	N		
9.	i(P)	18 16 46.5	Z	1.0	0.120
	i(S)	17 16.5	N		
10.	e(P)	18 31 49.0	Z	1.0	0.040
	i(S)	32 19.2	N		
10 NOV.					
1.	i(P)	02 50 56.0	Z		
	iS	51 07.5	NE		
2.	iP	03 24 36.3	Z	0.8	0.314
	iS	24 40.2	NEZ		
3.	eX	04 55 39.0	E'		
4.	iP	07 24 00.5	Z	0.6	0.120
	iS	24 24.0	E		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
10 NOV.					
5.	i(P)	16 55 44.0	E		
	i(S)	56 04.7	N		
6.	i(P)	17 15 15.0	E		
	iS	15 32.5	N		
7.	iX	20 43 32.0	N		
11 NOV.					
1.	iX	00 51 11.8	NEZ		
2.	iX	01 58 45.0	NE		
3.	LR	02 04 05.0	Z'		
4.	eX	03 09 55.0	Z'		
	eX	14 11.0	Z'		
	eX	19 21.0	N'		
	(LR)	24 31.0	Z'		
5.	LR	05 04 41.0	Z'		
6.	i(P)	05 33 19.1	Z		
	iS	33 43.5	NE		
7.	iP	08 19 26.6	Z	0.9	0.126
	iS	19 44.0	N		
8.	iX	10 27 27.0	Z		
9.	eX	17 20 11.0	E'		
	eX	26 21.0	Z'		
	(LR)	33 47.0	Z'		
10.	eP	18 05 13.0	Z	1.0	0.048
11.	iP	20 50 35.8	NEZ	0.8	0.034
	iS	50 49.2	E		
12.	eX	23 27 31.0	Z'		
	LR	31 13.0	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
12 NOV.					
1.	iP	00 04 53.0	Z	1.0	0.080
	iS	05 14.0	NE		
2.	iX	01 03 34.5	N		
3.	LR	03 03 30.0	Z'		
4.	iP	03 20 40.5	Z	0.8	0.077
5.	iP	03 32 35.5	Z	0.5	0.090
	iS	34 28.0	E'		
6.	iP	03 55 03.5	Z	1.0	0.140
7.	iP	07 04 00.0	E		
8.	iX	09 56 24.0	E		
9.	iX	12 17 29.0	NE		
10.	iP	17 19 18.0	Z,Z'	1.0	0.120
	iS	23 32.0	N'E'		
11.	iP	17 57 25.7	Z,Z'	1.1	1.012
	iS	18 01 50.8	E		
12.	iP	20 44 27.0	Z		
	iS	44 46.5	NE		
13 NOV.					
1.	iX	02 30 56.5	NE		
2.	iP	04 41 17.5	NEZ,N'E'Z'	1.1	1.204
	i(PP)	42 50.0	Z'		
	iS	47 13.0	N'E'		
	LQ	50 04.0	N'		
	LR	52 38.0	Z'		
3.	iX	06 23 37.9	Z		
4.	iP	07 16 09.5	Z	1.0	0.080
5.	i(P)	09 28 37.0	Z	1.0	0.040

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
13 NOV.					
6.	iP	11 57 09.0	Z	0.8	0.071
	iS	57 39.0	E		
7.	eX	14 50 04.5	Z'		
8.	eX	14 54 04.0	E'		
9.	eX	16 53 34.0	Z'		
10.	e(P)	18 19 42.0	Z'		
11.	LR	19 17 44.0	Z'		
12.	iP	19 58 36.0	Z	0.5	0.825
	iS	58 48.5	E		
13.	iP	20 56 24.5	NEZ	0.3	0.050
	iS	56 28.0	NEZ		
14.	iP	21 01 01.0	NEZ		
	iS	01 14.0	NE		
15.	iP	23 11 06.0	Z	0.3	0.225
	iS	11 26.5	E		
14 NOV.					
1.	iP	02 58 10.0	Z	1.0	0.020
	i(S)	58 30.1	N		
2.	eX	04 18 53.0	Z'		
3.	eP	05 59 49.5	Z	1.0	0.120
	e(S)	06 04 53.0	N'		
	LR	07 05.0	Z'		
4.	iP	09 43 07.2	Z	0.6	0.062
	iS	43 52.5	N		
5.	eX	12 27 02.0	Z		
6.	iP	13 20 37.0	Z	0.5	0.077
	LR	21 38.0	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
14 NOV.					
7.	eP	13 27 43.0	Z	1.0	0.040
	eS	27 49.0	E		
8.	i(P)	13 53 29.5	Z	0.6	0.037
	iS	54 03.0	E		
9.	eX	14 34 09.0	Z		
10.	iP	15 57 37.0	Z	1.0	0.116
11.	iP	16 04 50.0	Z	0.8	0.157
12.	eX	16 12 18.0	Z		
	eX	13 01.5	Z		
13.	eX	16 23 04.0	Z'		
	LR	44 22.0	Z'		
14.	iP	18 34 57.0	Z	1.0	0.120
15.	eX	18 52 24.0	Z'		
16.	iP	19 57 13.5	Z	1.0	0.112
17.	eX	20 56 37.5	Z		
18.	eX	21 13 45.0	Z'		
19.	eX	21 29 50.5	Z		
15 NOV.					
1.	iP	07 05 41.0	NEZ	1.0	0.580
	i(S)	05 59.0	N		
	(LR)	06 20	Z'		
2.	i(P)	07 15 35.9	Z	1.0	0.040
3.	iX	07 22 23.2	Z		
4.	iP	08 41 09.0	NEZ	0.7	0.309
	iS	41 19.0	NE		
5.	iX	09 20 06.0	NE		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
15 NOV.					
6.	e(P)	11 09 20.5	Z'		
	(LR)	11 09.0	Z'		
7.	e(P)	11 40 57.0	Z,E'	2.0	0.300
	eX	53 54.0	Z'		
8.	iX	15 34 23.0	E		
	iX	35 13.5	E		
9.	iP	19 28 15.5	EZ	0.4	0.093
	iS	28 31.2	E		
10.	iX	20 51 56.5	Z		
11.	iX	20 57 19.5	Z'		
12.	iP	21 50 23.5	Z	0.9	0.083
	i(S)	51 32.0	E		
13.	iP	22 23 54.5	Z	0.5	0.025
	iS	24 11.5	E		
14.	(LR)	23 29 17.5	Z'		
16 NOV.					
1.	iP	00 49 48.3	Z	1.0	0.040
	iS	50 09.3	NE		
2.	iP	01 12 13.8	Z	1.0	0.30
3.	eP	06 48 40.0	Z'		
	LR	52 13.0	Z'		
4.	iP	15 13 10.2	NZ	1.0	0.040
5.	eP	15 46 05.5	Z'		
	eX	16 04 22.0	N'		
	(LR)	29 28.0	Z'		
6.	iP	17 08 00.0	Z,Z'	1.0	0.800
	iS	09 54.0	N'		
	(LR)	10 28.0	Z'		
7.	iP	21 57 14.0	Z		
	iS	57 21.0	NE		

	Date	Phase	Time (GMT)			Comp.	T_z(sec)	A_z(micron)
17 NOV.								
	1.	(LR)	00	29	46.0	Z'		
	2.	iP	01	36	31.5	Z	0.5	0.038
		i(S)		37	18.5	E		
	3.	(LR)	03	29	38.0	Z'		
	4.	i(P)	04	38	07.2	Z		
		eS		38	27.5	E		
	5.	i(P)	04	43	30.0	N		
		i(S)		43	50.0	E		
	6.	iP	06	57	08.0	Z	0.5	0.020
		iS		57	26.8	N		
	7.	iP	07	16	48.0	Z	0.9	0.030
		iS		17	07.5	N		
	8.	iP	09	24	54.0	Z	1.0	0.112
	9.	iP	09	31	43.2	Z	1.0	0.044
		iS		31	55.5	N		
	10.	iX	10	47	31.0	N		
	11.	iX	10	52	37.5	NE		
	12.	iX	11	47	09.3	N		
	13.	i(P)	12	42	39.2	E		
		i(S)		43	10.0	N		
	14.	iP	16	22	18.7	Z	1.0	0.120
		eX		23	21.0	N		
		LR		24	04.0	Z'		
	15.	iX	19	54	39.0	Z		
	16.	iX	21	31	04.0	NZ		
	17.	i(P)	22	04	09.8	Z	0.9	0.023
		iS		04	51.0	NE		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
18 NOV.					
1.	iX	00 01 20.0	Z		
	(LR)	02 57.0	Z'		
2.	iP	01 29 27.5	Z	1.5	0.18
	iS	30 31.0	E		
	LR	31 12.0	Z'		
3.	iS	03 43 34.0	NEZ		
4.	e(P)	07 29 16.5	Z	1.0	0.040
	iS	30 22.2	E		
	LR	31 03.0	Z'		
5.	iX	09 05 37.0	N		
6.	iP	09 21 13.7	Z	0.8	0.157
	iX	21 32.5	N		
7.	iX	10 16 47.5	N		
8.	e(P)	17 22 28.8	Z,Z'	0.6	0.195
	iX	23 07.5	Z		
	i(PPP)	23 19.5	Z'		
	e(S)	26 39.0	N'		
	(LR)	27 40.0	Z'		
9.	iX	17 31 07.3	N		
10.	iP	20 10 48.5	Z,Z'	1.0	0.516
	iS	19 26.0	N'E'		
	LQ	27 21.0	N'		
	(LR)	29 56.0	Z'		
11.	iP	22 06 57.6	Z'	1.0	0.672
	iS	13 57.0	N'E'		
	LQ	18 44.0	N'		
	LR	22 38.0	Z'		
19 NOV.					
1.	eX	01 50 12.0	Z'		
2.	iX	03 35 58.0	Z		
3.	LR	03 41 35.0	Z'		
4.	iX	05 23 58.0	E		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
19 NOV.					
5.	iS	06 02 52.0	NE		
6.	e(P)	07 19 49.0	Z'	1.0	0.040
	iS	30 05.0	E'		
	LR	43 47.0	Z'		
7.	LR	09 40 39.5	Z'		
8.	eX	14 35 36.0	Z'		
	LR	36 54.5	Z'		
9.	i(P)	20 17 16.8	E		
	iS	17 19.9	N		
10.	e(P)	21 18 02.0	Z	1.0	0.032
11.	iP	22 33 08.5	Z,Z'	0.9	0.650
	iS	34 43.0	E'		
	LR	35 15.0	Z'		
12.	iX	23 04 53.0	Z'		
20 NOV.					
1.	e(P)	03 59 15.5	Z	1.0	0.036
2.	LR	04 20 54.0	Z'		
3.	iX	06 35 27.2	E		
4.	eP	07 00 00.0	Z,Z'	2.0	0.400
	eX	06 18.0	E'		
	(LR)	08 12.0	Z'		
5.	eX	09 03 27.3	Z		
6.	i(P)	09 05 48.0	Z	0.5	0.05
	iS	06 07.5	NE		
7.	eX	09 09 44.0	E'		
	(LR)	17 16.0	Z'		
8.	eP	10 04 03.8	Z	1.1	0.096
	e(S)	10 08.0	E'		
	LQ	13 03.0	E'		
	LR	15 48.0	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
20 NOV.					
9.	eX	11 54 19.0	E'		
	LR	12 00 21.0	Z'		
10.	eiP	15 10 51.0	Z	1.0	0.380
	i(S)	15 06.0	Z'		
	e(PKP)	21 25.0	N		
11.	i(P)	16 12 01.5	Z	1.0	0.092
	eX	17 03.0	Z'		
	(LR)	21 40.0	Z'		
12.	iX	17 31 13.0	Z		
13.	eX	18 11 14.0	E'		
	(LR)	13 36	Z'		
14.	iP	18 36 22.5	Z,Z'	1.0	0.580
	e(S)	38 09.0	E'		
	(LR)	39 21.0	Z'		
15.	e(P)	20 18 42.0	Z'		
	eX	20 48.0	Z'		
16.	iP	20 26 24.0	Z	0.8	0.028
	iS	26 42.7	N		
17.	(LR)	20 29 32.0	Z'		
18.	eX	20 56 20.0	E'Z'		
19.	eX	21 10 20.0	E'Z'		
20.	eX	23 00 12.0	E'		
21 NOV.					
1.	iS	04 40 39.5	NE		
2.	iX	05 14 18.0	N		
3.	iS	05 34 47.5	N		
4.	iP	10 37 02.5	Z,Z'		
	iS	41 06.0	E'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
22 NOV.					
1.	iP	00 59 08.8	Z	0.7	0.206
	iS	59 28.0	E		
2.	iP	01 47 04.3	NEZ	0.6	0.200
	iS	47 17.8	N		
3.	iP	03 01 02.0	NZ	0.7	0.064
	iS	01 24.0	N		
4.	i(P)	08 52 44.8	Z	0.9	0.040
	iS	52 25.5	E		
5.	(LR)	15 37 50.0	Z'		
6.	eP	20 35 25.0	Z'		
	eS	43 28.0	E'		
	LQ	50 13.0	E'		
	LR	52 42.0	Z'		
23 NOV.					
1.	iS	00 43 32.8	NE		
2.	eiP	01 20 49.0	Z	2.0	4.30
	iS	23 23.0	E'		
3.	i(P)	02 27 41.5	Z	1.0	0.040
4.	iP	02 39 39.5	Z	0.9	0.040
5.	iP	16 36 41.0	Z	2.5	1.09
6.	iP	20 21 36.0	Z	0.7	0.32
	iS	21 59.3	E		
7.	iX	20 41 00.0	N		
8.	iX	22 57 07.5	E		
24 NOV.					
1.	iP	01 54 42.9	Z	0.5	0.064
	iS	55 10.0	E		
2.	iX	08 53 51.0	NEZ		
3.	iP	15 12 45.5	Z	1.0	0.160

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
24 NOV.					
4.	iP	15 53 31.1	Z	1.1	0.077
5.	iP	18 23 58.5	Z	0.8	0.105
	iS	24 11.3	E		
6.	iP	20 53 10.8	Z	1.0	0.040
25 NOV.					
1.	iX	03 29 23.5	E		
2.	iP	03 44 06.5	Z	0.7	0.077
3.	i(P)	05 16 38.0	E		
	iS	16 48.2	N		
4.	iX	11 00 25.2	NE		
5.	iP	18 41 22.8	Z	1.0	0.048
6.	iP	22 41 58.8	Z	1.2	0.714
	eS	47 04.2	NE		
26 NOV.					
1.	iP	04 02 22.0	Z		
	iS	02 35.9	N		
2.	iS	05 42 17.8	N		
3.	iP	13 06 06.4	Z	0.9	0.070
	i(S)	06 37.0	N		
4.	iP	18 18 37.2	Z	1.2	0.457
	iS	18 54.0	N		
27 NOV.					
1.	eP	03 09 20.0	Z,Z'	1.8	0.740
	iS	13 32.0	N'		
	LR	15 16.0	Z'		
2.	iX	03 49 15.0	Z		
3.	LR	03 54 55.0	Z'		
4	iP	08 47 38.5	Z	0.8	0.04

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
27 NOV.					
5.	eP	12 10 20.5	Z,Z'	2.0	1.000
	i(S)	17 05.0	E'		
	(LQ)	20 42.0	E'		
	LR	24 40.0	Z'		
6.	iX	13 10 24.5	N		
7.	e(P)	15 04 23.0	Z'		
	LR	10 44.0	Z'		
8.	iP	17 19 06.2	Z	0.9	0.116
	iS	19 40.9	E		
9.	iP	18 15 44.5	Z	0.6	0.125
	iS	16 03.5	N		
28 NOV.					
1.	iX	00 14 44.0	E		
2.	iP	03 26 27.2	Z		
	e(S)	26 41.5	N		
3.	e(PKP)	04 16 31.0	Z,Z'		
	eX	25 08.0	Z'		
	e(SS)	39 16.5	E'		
	(LQ)	05 00 00.5	E'		
	(LR_1)	09 09.0	Z'		
	(LR_2)	37 05.0	Z'		
4.	iP	05 23 36.0	Z	0.8	0.142
	iS	24 03.5	N		
5.	iP	05 38 24.5	Z	1.0	0.520
6.	iS	09 00 52.0	E		
7.	iS	09 47 46.0	E		
8.	iP	11 37 25.9	Z		
	iS	37 33.0	E'		
9.	iX	13 17 56.7	Z		
10.	iP	14 06 17.0	Z	0.9	0.033
	iS	06 36.5	E		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
28 NOV.					
11.	eP	19 02 47.3	Z	1.5	0.095
	(LR)	07 26.0	Z'		
12.	iP	19 08 50.1	Z		
	iS	09 03.0	N		
13.	iP	19 53 13.0	Z	0.5	0.064
	iS	53 34.5	E		
14.	iP	21 37 25.2	Z	1.0	0.160
	e(S)	42 39.0	E'		
	LR	45 08.0	Z'		
29 NOV.					
1.	iX	08 46 26.5	Z		
2.	eiP	10 24 10.0	Z	1.0	0.588
	iX	26 42.5	E		
3.	iX	12 50 45.5	E		
4.	iP	13 50 59.5	Z,Z'	1.0	0.880
	eS	54 04.0	E' Z'		
	(LR)	56 49.0	Z'		
5.	iP	14 44 49.2	Z	0.5	0.025
	iS	45 02.0	NE		
6.	iP	14 47 59.0	Z		
	iS	48 18.0	NE		
7.	iX	14 52 43.8	N		
8.	iP	15 28 33.0	Z	1.0	0.020
	i(S)	29 18.0	N		
9.	iX	18 33 28.2	Z		
10.	eX	18 55 28.2	Z'		
11.	iP	22 42 00.5	Z,Z'	0.5	0.03
	iS	42 13.0	NE		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
30 NOV.					
1.	eX	01 53 23.0	Z'		
2.	eX	01 57 25.0	Z'		
3.	eX	02 15 14.0	Z'		
4.	eX	02 25 33.0	Z'		
5.	eX	02 30 33.0	Z'		
6.	eX	03 06 49.0	Z'		
7.	eX	03 15 18.0	Z'		
8.	eX	03 22 13.0	Z'		
9.	eX	03 29 43.0	Z'		
10.	eX	04 30 08.0	Z'		
11.	eX	05 10 56.0	Z'		
12.	eX	05 33 37.0	Z'		
13.	eX	05 38 41.0	Z'		
14.	eX	06 18 40.0	Z'		
15.	eX	06 28 31.0	Z'		
16.	i(P)	10 35 01.2	Z	0.8	0.034
17.	(LR)	10 38 52.0	Z'		
18.	eX	11 28 37.5	Z'		
19.	eX	11 32 46.0	E'		
	LR	34 42.0	Z'		
20.	iP	12 14 06.3	Z	1.0	0.280
21.	iS	12 19 41.5	N		
22.	eX	13 10 34.0	Z'		
23.	iX	13 42 44.7	E		
24.	iP	15 14 03.2	Z	0.4	0.100

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
30 NOV.					
24.	iS	15 14 06.0	NE		
25.	iP	16 09 55.6	Z	0.4	0.05
	iS	09 58.5	NE		
26.	iX	18 25 16.0	Z		
27.	iP	20 31 12.2	Z	0.8	0.04
	i(S)	32 12.0	NE		
28..	eX	20 39 30.0	Z'		

Date	Phase	Time (GMT)			Comp.	T_Z(sec)	A_Z(micron)
1 DEC.							
1.	iP	00	14	02.0	Z'	0.4	0.12
	iS		14	05.0	NE		
2.	eP	01	53	17.5	Z	1.0	0.04
	iS		54	00.0	N		
3.	eX	05	45	43.0	Z		
4.	iP	08	35	40.2	Z	1.0	0.03
	i(S)		36	02.0	E		
5.	eX	17	40	08.0	Z'		
2 DEC.							
1.	iX	01	18	12.0	Z		
2.	iP	02	18	14.5	NEZ	0.5	0.44
	iS		18	19.0	N		
3.	iS	02	53	13.0	NE		
4.	iP	02	54	49.5	Z	0.7	0.04
	iS		55	06.2	E		
5.	iX	07	49	18.2	N		
6.	iX	08	05	04.5	Z		
7.	iP	09	15	04.3	Z	1.2	0.19
8.	i(P)	20	04	21.0	NZ		
	iS		04	34.5	N		
9.	iX	22	28	32.5	E		
10.	iP	22	51	30.0	NZ	0.8	0.23
	iS		52	03.9	N		
3 DEC.							
1.	(LR)	00	12	10.5	Z'		
2.	iX	00	17	17.5	Z		
3.	eX	05	51	24.0	Z'		
4.	eP	06	56	37.7	Z,Z'	1.0	0.06

Date	Phase	Time (GMT)			Comp.	T_Z(sec)	A_Z(micron)
3 DEC. (cont'd)4.	eS	07	06	16.0	E'		
	eSS		11	09.0	E'		
	LQ		16	54.0	E'		
	LR		20	32.0	Z'		
5.	i(P)	08	43	21.5	Z		
	i(S)		43	43.0	Z		
6.	i(P)	09	39	31.0	Z		
	iS		39	44.5	Z		
7.	iP	14	19	33.0	Z	0.5	0.18
8.	eX	15	40	58.0	E'		
	LQ		48	31.0	E'		
	LR		53	02.0	Z'		
9.	iX	16	43	54.5	Z		
10.	iP	21	05	23.5	Z	0.7	0.25
	eX		17	10.0	E'		
	(LR)		26	44.0	Z'		
11.	eP	21	26	25.0	Z	1.0	0.05
12.	iX	23	52	54.0	Z		
4 DEC. 1.	eX	02	19	57.0	Z'		
2.	iP	02	22	23.0	Z	0.8	0.04
3.	(LR)	04	04	56.0	Z'		
4.	iP	05	02	36.0	NZ	0.6	0.06
	i(S)		03	12.8	N		
5.	eX	07	51	56.0	Z'		
6.	iX	08	29	48.2	Z		
7.	iP	11	17	19.8	Z	0.6	0.04
	iS		17	29.1	NZ		
8.	iX	12	28	25.5	N		
9.	iX	16	34	30.7	Z		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
4 DEC.					
10.	iP	18 28 03.5	Z	0.6	0.03
	iS	28 06.1	N		
11.	iS	19 44 31.5	N		
12.	e(P)	20 59 13.0	NZ		
13.	eX	21 01 11.0	E'		
	(LR)	02 36.0	Z'		
5.DEC.					
1.	eX	06 35 35.0	E'		
	eX	37 57.0	Z'		
2.	eX	09 15 18.0	E'		
	eX	17 08.0	Z'		
3.	iP	16 32 48.9	Z,Z'	0.9	0.32
	eS	34 10.0	E'		
4.	iP	18 24 18.0	Z,Z'	1.0	0.08
	iS	31 54.0	E'		
	LQ	37 09.0	E'		
	LR	40 09.0	Z'		
5.	eX	22 07 00.0	Z		
6 DEC.					
1.	iP	04 51 55.8	Z		
	iS	52 10.6	E		
2.	iP	06 56 50.0	Z	1.0	0.06
	iS	57 15.8	N		
3.	i(P)	08 00 36.0	Z	0.8	0.03
4.	eX	08 07 29.0	Z'		
5.	iP	09 07 19.0	Z	0.5	0.05
	iS	07 43.0	E		
6.	e(PcP)	11 55 13.0	Z'		
	e(S)	12 05 06.0	E'		
	e(SS)	12 12.0	E'		
	(LQ)	21 28.0	E'		
	(LR)	26 54.0	Z		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
6 DEC.					
7.	eX	19 12 58.0	Z		
	eX	19 44.0	E'		
	(LQ)	31 29.0	E'		
	(LR)	38 39.0	Z'		
7 DEC.					
1.	iX	04 28 40.0	NE		
2.	i(P)	06 03 58.0	Z	0.5	0.04
	iS	04 05.2	NE		
3.	iP	10 19 56.5	Z	0.9	0.04
	iS	20 38.0	E		
4.	iP	13 49 24.0	Z	1.2	0.06
	iS	50 04.5	NE		
5.	i(P)	16 30 12.5	Z	1.5	0.12
	iS	30 14.2	NE		
6.	iP	16 54 53.0	NEZ	0.5	0.26
	i(S)	55 01.5	N		
7.	iP	22 25 50.0	NEZ,Z'	0.8	0.71
	iS	31 06.7	N,E'		
8.	iS	22 32 44.5	NEZ		
8 DEC.					
1.	iX	02 42 41.0	N		
2.	iX	05 29 29.5	Z		
3.	iX	06 48 43.8	Z		
4.	iP	15 00 35.8	Z	0.5	0.01
	iS	00 38.3	NE		
5.	iP	18 16 52.0	Z'	1.0	0.40
	iS	26 20.0	E'		
	(LQ)	35 11.0	E'		
	LR	41 51.0	Z'		
6.	iP	18 58 28.5	NZ	0.8	0.14
	iS	58 32.5	NEZ		
7.	iS	20 31 41.2	N		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
8 DEC.					
8.	iX	22 23 44.0	E		
9.	iP	22 25 16.5	Z	0.5	0.05
	iS	25 26.5	NE		
10.	i(P)	22 55 54.2	Z		
9 DEC.					
1.	iP	00 15 47.8	NE	0.5	0.07
	e(S)	16 05.0	N		
2.	iP	06 06 35.0	Z	0.8	0.17
	iS	06 56.8	NE		
3.	i(P)	06 10 57.0	Z	0.9	0.03
	iS	11 00.0	NEZ		
4.	eX	06 26 53.0	Z'		
	eX	28 49.0	E'		
	eX	46 03.0	E'		
	(LR)	07 04 45.0	Z'		
5.	i(P)	12 38 55.0	Z	2.5	0.40
	iS	39 04.0	NEZ		
6.	iP	13 23 00.0	Z	1.0	0.18
7.	e(P)	13 25 07.0	Z'		
	e(S)	32 07.0	E'		
	(LQ)	35 08.5	E'		
	LR	36 23.0	Z'		
8.	eX	13 51 05.0	Z		
9.	iX	14 52 19.0	Z		
10.	iP	16 19 03.5	Z	1.5	0.19
	iS	19 21.5	NE		
11.	iS	16 43 45.8	NE		
12.	i(P)	16 55 36.5	Z	1.8	0.23
	iS	55 48.0	N		
13.	iP	17 08 51.0	Z	1.0	0.08
	iS	09 23.5	NE		
14.	iP	17 43 49.0	Z	0.8	0.11
	iS	44 03.3	NE		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
9 DEC.					
15.	iX	20 32 08.5	Z		
16.	eX	20 37 33.0	E'		
	(LR)	42 39.5	Z'		
10 DEC.					
1.	iP	06 03 48.0	Z	0.5	0.10
	iS	04 10.0	E		
2.	iP	06 06 32.0	NZ	1.0	0.94
	i(S)	07 00.5	E		
3.	iP	11 40 46.0	Z	0.8	0.02
4.	iP	22 02 29.5	Z,Z'	1.0	0.67
	eS	10 00.0	E'		
	LQ	15 47.0	E'		
	LR	18 44.0	Z'		
11 DEC.					
1.	iS	01 15 13.5	E		
2.	iX	01 44 17.5	E		
3.	iX	02 08 25.2	Z		
4.	(LR)	02 19 07.5	Z'		
5.	eX	09 55 21.0	Z'		
6.	iP	12 24 58.0	Z	1.0	0.08
7.	eX	20 48 44.0	E'		
8.	eX	23 15 20.0	Z'		
12 DEC.					
1.	eX	07 50 35.0	Z'		
	eX	55 33.0	Z'		
2.	iX	17 45 07.9	N		
3.	LR	17 46 21.0	Z'		
4.	iP	21 11 46.5	Z	1.2	0.09
	iS	12 06.5	E		
5.	iP	21 52 32.0	E		
	iS	52 56.0	E		

Date		Phase	Time (GMT)			Comp.	T_Z(sec)	A_Z(micron)
13 DEC.								
	1.	i(P)	03	50	17.0	Z		
	2.	eX	03	54	55.0	Z'		
	3.	iP	05	52	28.6	Z	1.0	0.50
		iS		52	43.2	E		
	4.	eX	06	00	09.0	E'		
		(LR)		05	58.0	Z'		
	5.	iP	10	59	21.5	NEZ,Z'	1.0	0.90
		ePP	11	01	27.0	Z'		
		iS		05	09.0	E'		
		LQ		08	07.0	E'		
		(LR)	12	47.0		Z'		
	6.	iP	14	53	24.5	NEZ,Z'	1.0	0.38
		ePP		56	03.5	Z'		
		iS		59	13.0	E'		
		LQ	15	02	11.0	E'		
		(LR)		06	50.0	Z'		
	7.	iP	17	49	02.5	NEZ		
	8.	iP	18	59	27.0	Z	1.0	0.20
		iS		59	39.2	E		
	9.	i(P)	22	04	39.0	Z		
		iS		05	01.0	E		
	10.	i(P)	22	44	52.5	Z	1.0	0.18
	11.	iX	22	53	35.5	Z		
	12.	(LR)	22	58	26.0	Z'		
	13.	iP	23	00	31.3	Z	1.0	0.11
	14.	(LR)	23	14	44.0	Z'		
14 DEC.								
	1.	iS	00	30	43.5	NE		
	2.	iX	02	11	20.0	Z		
	3.	i(P)	04	31	04.6	Z		
		iS		31	40.5	N		
	4.	iP	04	50	26.0	Z	0.7	0.05
		e(S)		51	26.0	E'		
		(LR)		52	16.0	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
14 DEC.					
5.	iX	07 47 02.2	Z		
6.	e(P)	08 51 59.2	Z		
	iS	52 31.0	NE		
7.	e(P)	16 13 09.0	Z	0.5	0.06
	iS	13 35.0	N		
15 DEC.					
1.	i(P)	01 07 12.5	Z	0.9	0.08
	iS	07 42.0	E		
2.	eX	03 37 17.0	Z'		
3.	iP	04 49 06.9	Z	0.9	0.13
	eX	54 12.0	E'		
	(LR)	56 09.0	Z'		
4.	iX	06 44 33.8	Z		
5.	iP	08 26 06.4	Z,Z'	1.0	0.48
	e(S)	29 13.0	E'		
6.	iP	09 09 58.8	Z	1.0	0.50
7.	iP	10 29 32.0	Z	1.0	0.10
8.	iX	10 38 21.5	E'		
	LR	43 09.0	Z'		
9.	iS	12 32 59.0	NEZ		
10.	eX	12 37 55.0	Z'		
	eX	43 21.0	E'		
	LQ	54 33.0	E'		
	LR	13 00 45.0	Z'		
11.	i(P)	14 44 27.0	Z		
	iS	44 51.0	E		
12.	iS	14 51 18.4	NE		
13.	iS	14 51 48.5	NE		
14.	iP	17 32 34.0	Z	0.6	0.06
	iS	32 43.0	NE		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
15 DEC.					
15.	iP	17 36 32.5	Z		
16.	iP	23 25 00.0	Z'	1.0	0.38
16 DEC.					
1.	eX	10 36 48.0	E'		
	(LR)	40 24.0	Z'		
2.	i(P)	20 23 38.0	Z		
	iS	24 14.0	N		
3.	iP	20 54 51.8	Z	0.4	0.06
	iS	54 54.0	NE		
17 DEC.					
1.	i(P)	00 48 05.8	Z	1.2	0.06
	iS	48 25.8	E		
2.	iS	05 31 48.8	N		
3.	i(P)	13 09 12.5	Z	1.8	0.16
	iS	09 32.5	E		
4.	iX	16 15 02.0	N		
18 DEC.					
1.	iP	04 15 55.0	Z		
	iS	16 05.8	N		
2.	iP	08 38 00.0	Z	1.0	0.07
3.	iS	12 59 47.9	NE		
4.	iP	13 27 36.9	Z	0.8	0.26
	eX	36 14.0	E'		
	(LR)	41 09.0	Z'		
5.	iP	19 20 40.0	Z	1.5	0.21
	iS	20 58.0	N		
6.	i(P)	21 24 15.0	Z		
	iS	24 26.0	N		
19 DEC.					
1.	iP	01 57 02.5	Z	0.5	0.08
	iS	57 12.5	NE		
2.	iX	03 37 55.5	N		
3.	iP	03 59 42.5	Z		
	iS	59 57.0	N		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
19 DEC.					
4.	iP	04 40 31.0	Z	0.7	0.03
	i(S)	41 21.3	N		
5.	iS	10 37 11.0	N		
6.	i(P)	16 41 09.2	NEZ		
	iS	41 28.0	NE		
7.	i(P)	16 44 56.8	E		
	iS	45 10.8	N		
8.	iP	17 25 27.8	N	0.9	0.52
	iS	25 43.5	E,E'		
9.	iX	19 20 45.0	Z		
10.	iP	20 06 28.5	NEZ	0.8	0.11
	e(S)	06 43.5	E		
11.	iP	22 16 54.5	Z'	2.5	1.45
	iS	25 28.5	E'		
	LQ	32 43.0	E'		
	LR	36 07.0	Z'		
20 DEC.					
1.	(LR)	01 01 24.0	Z'		
2.	iX	03 13 22.0	N		
3.	iS	05 33 57.1	N		
4.	iX	07 20 46.0	Z		
5.	iX	07 49 22.0	E		
6.	iP	08 28 51.8	Z		
7.	e(P)	18 12 32.0	Z		
	iS	12 45.5	N		
21 DEC.					
1.	i(P)	02 59 42.0	Z		
	i(S)	03 01 16.0	E'		
	(LR)	01 41.0	Z'		
2.	iX	07 40 31.0	N		
3.	iX	07 59 19.0	E		
4.	iX	08 51 19.0	Z		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
21 DEC.					
5.	iX	10 49 29.2	Z		
6.	iX	18 00 45.5	Z		
7.	iP	19 18 24.8	NEZ		
	iS	18 32.2	NEZ		
8.	i(P)	20 18 23.0	Z		
	iS	18 32.5	NE		
9.	iP	20 49 59.0	NEZ		
	i(S)	50 04.0	E		
10.	iX	23 12 44.5	Z		
22 DEC.					
1.	e(P)	00 37 25.0	Z'		
2.	iP	03 00 03.0	NZ	0.8	0.07
	iS	00 13.0	NE		
3.	iP	07 36 03.0	Z	0.9	0.13
4.	eX	07 42 55.0	E'		
	eX	47 33.0	E'		
	LR	55 11.0	Z'		
5.	iP	12 31 15.5	Z	1.0	0.04
	iS	31 25.2	E		
6.	iP	18 12 01.5	Z	0.9	0.17
	LR	13 29.0	Z'		
7.	iP	19 52 54.0	Z,Z'	0.8	0.43
	iS	20 02 23.0	NZ,E'Z'		
	eSS	07 49.0	E'		
	LQ	12 06.0	E'		
	(LR)	20 30.0	Z'		
23 DEC.					
1.	i(P)	03 02 31.0	Z		
	iS	02 51.7	N		
2.	eX	06 25 21.0	Z'		
3.	iP	19 49 32.0	NEZ	0.5	0.05
	iS	49 39.0	NEZ		
4.	eX	19 59 44.0	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
23 DEC.					
5.	eP	20 44 44.5	NEZ		
6.	eS	21 09 44.0	E'		
	eX	15 17.0	E'		
	(LQ)	23 05.0	E'		
	LR	29 21.0	Z'		
24 DEC.					
1.	iP	02 31 01.5	Z	0.8	0.59
	iS	31 22.3	E		
2.	iX	08 18 08.5	Z		
3.	iX	08 55 45.0	Z		
4.	i(P)	09 26 46.8	Z		
	i(S)	27 25.3	E		
5.	i(P)	09 32 38.1	Z		
	iS	33 07.0	N		
	(LR)	33 28.0	Z'		
6.	i(P)	10 27 22.0	Z		
7.	iX	11 54 13.0	N		
8.	iS	15 25 20.8	E		
9.	i(P)	15 55 47.0	Z		
	i(S)	56 03.2	E		
10.	i(P)	23 48 05.0	Z		
	iS	48 19.5	N		
25 DEC.					
1.	iX	00 42 54.0	Z		
2.	iP	01 09 56.5	Z	1.0	0.16
3.	(LR)	01 13 26.0	Z'		
4.	iP	02 08 54.5	Z	1.0	0.06
5.	iP	03 08 54.5	Z,Z'	1.0	0.58
	iS	16 18.0	E'		
	eX	20 26.0	E'		
6.	iP	06 59 12.5	Z	0.7	0.18
	iS	59 18.8	NE		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
25 DEC.					
7.	iX	13 58 33.0	Z		
8.	eX	14 12 07.0	Z'		
9.	iP	14 56 52.0	Z		
10.	iP	19 10 37.0	Z	0.8	0.41
11.	iP	19 30 49.0	Z	0.9	0.30
12.	iX	22 58 45.5	Z		
13.	i(P)	23 31 13.0	Z		
	i(S)	31 27.0	E		
26 DEC.					
1.	iP	03 50 26.6	NEZ		
2.	iP	04 00 20.0	NEZ,E'Z'		
	ePP	01 47.1	Z'		
	iS	06 03.0	NE,E'		
	(LQ)	09 58.0	E'		
	(LR)	11 14.0	Z		
3.	iP	10 59 56.1	Z	0.9	0.30
	iS	11 00 25.2	E		
4.	iP	13 41 41.1	Z		
	iS	42 13.5	E		
5.	iP	14 25 02.3	Z	0.8	0.67
	iS	25 28.7	E		
6.	iX	14 50 16.5	Z		
	iS	50 47.2	E		
7.	iX	18 16 02.3	Z		
27 DEC.					
1.	iX	04 13 05.8	Z		
2.	eX	04 19 41.0	E'		
3.	iP	04 28 33.0	Z	0.5	0.22
	iS	28 47.0	N		
4.	eX	07 16 10.0	E'		
	(LR)	16 58.5	Z'		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
27 DEC.					
5.	iX	10 13 12.3	Z		
	i(S)	13 30.8	E		
6.	eX	11 35 52.5	E'		
7.	eiX	13 37 36.0	Z		
8.	iX	17 53 11.0	E		
9.	iP	20 21 55.5	Z'		
	i(S)	25 13.5	E'		
	(LQ)	25 50.0	E'		
	(LR)	26 27.0	Z'		
10.	iX	22 46 06.0	E		
28 DEC.					
1.	LQ	07 15 21.0	E'		
	LR	17 03.0	Z'		
2.	iX	07 24 41.5	E		
3.	eX	07 34 18.5	E'		
4.	i(P)	07 42 17.2	Z	1.2	0.20
	LQ	46 24.0	E'		
	LR	46 59.0	Z'		
5.	iX	08 33 18.5	Z		
6.	eX	08 37 05.5	E'		
7	i(P)	09 28 16.8	Z		
	iS	28 35.0	NE		
8.	eX	10 41 36.5	Z'		
9.	iP	12 13 54.0	Z'		
	eS	16 44.0	Z'		
	(LR)	18 18.0	Z'		
10.	i(P)	16 13 06.3	Z		
	eX	13 31.0	Z'		
11.	i(P)	16 24 59.0	Z		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
28 DEC.					
12..	iX	18 47 48.9	E		
13.	iP	20 23 11.8	NEZ.		
	iS	23 32.9	E		
14.	iP	20 37 26.0	Z,E'Z'	0.8	0.23
	eS	41 38.0	E'		
	(LR)	43 35.0	Z'		
15.	eX	20 48 35.0	N		
29 DEC.					
1.	eP	04 22 34.0	Z,Z'	2.0	0.5
	(LR)	30 29.0	Z'		
2.	iX	09 12 44.0	N		
3.	iP	10 23 36.0	NEZ		
4.	eP	15 42 04.0	Z'		
	e(S)	45 33.5	E'		
	(LR)	48 10.0	Z'		
5.	iP	18 47 25.5	Z	0.8	0.14
6.	i(P)	21 18 17.5	Z		
	e(S)	19 13.2	E		
7.	eX	21 25 46.0	N'		
8.	eX	21 44 38.0	N'		
9.	eX	22 04 13.0	N'		
10.	eX	22 47 05.0	N'		
11.	eX	23 49 46.0	Z		
12.	eX	23 52 37.0	N'		
30 DEC.					
1.	eX	00 05 37.0	N'		
2.	iP	02 04 51.5	E		
3.	iP	02 12 02.3	Z	0.8	0.11
	iS	12 19.8	N		

Date	Phase	Time (GMT)	Comp.	T_Z(sec)	A_Z(micron)
30 DEC.					
4.	iP	02 17 31.5	E		
5.	e(P)	02 26 29.0	N'E'Z'		
	eX	34 35.0	N'		
	(LR)	38 16.0	Z'		
6.	iP	05 13 05.5	Z	1.0	0.14
7.	eX	05 53 31.5	N'		
8.	eX	06 27 33.0	E'		
	(LR)	31 37.0	Z'		
9.	eX	07 33 48.0	Z'		
31 DEC.					
1.	iP	02 33 24.0	Z		
2.	iP	10 34 13.5	Z	0.7	0.06
	iS	34 33.0	E		
3.	iX	13 32 28.0	N		
4.	iP	14 38 33.8	Z		
	eS	38 54.0	E		
5.	iP	19 49 17.2	Z	2.0	0.60
	i(S)	49 30.0	E		
6.	iX	19 54 07.0	Z'		
7.	iP	21 02 38.0	Z,Z'		
	eS	05 52.0	E'		
	(LQ)	08 30.0	E'		
	(LR)	10 14.0	Z'		
8.	iP	22 14 16.0	Z	1.2	0.10
	iS	14 35.7	E		