Seismological Bulletin of Syowa Station, Antarctica, 1978

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The present report describes the seismological data of 1978 recorded at Syowa Station. The data of the respective seismic events interpreted from the seismograms of HES and long-period seismographs are listed in chronological order.

The coordinates of seismographic vault are 69°00'31.7"S in latitude and 39°35'31.6"E in longitude. The elevation is 20 meters above the mean sea level.

Seismological observations up to January 1978 were carried out by S. Otaki, members of the 18th Japanese Antarctic Research Expedition. For the succeeding period of January 1978 to January 1979, K.Koike, members of the 19th expedition, undertook the observations.

The seismograms were read again by Mr. R. Sakai and Miss K. Kokubun of Logistics Section, National Institute of Polar Research.

1. Date
2. Identified phase with its sharpness indication (e or i) and ground motion direction (+: Up, E, N, -: Down, W, S).
   The phase identified by the vertical component is denoted with Z and the phase by horizontal components is denoted with E (detected by E-W component) or N (detected by N-S component).
   The data from long-period seismographs are denoted with LP.
3. Arrival time in G. M. T.
4. Period of the phase in seconds.
5. Trace amplitude in millimeters.

The instrumental constants and magnification curve of HES and LP seismographs are shown in Table 1 and Fig. 1. The seismographs were operated with attenuation factor $\mu=1/4$ since March 1, 1970.

The read-out data were sent from Syowa Station to Environmental Research Laboratories throughout the wintering period.

References

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Table 1. Instrumental constants of HES and long-period seismographs.

Component		Z	N-S	E-W
HES				
T_1	(s)	1.0	1.0	1.0
S_1	(A/mm)	2.84×10^{-5}	1.96×10^{-5}	1.86×10^{-5}
R_1	(Ω)	1133	1095	1092
Ω_1	(Ω)	1041	1738	1849
h_1		1.0	1.0	1.0
T_2	(s)	1.12	0.91	1.16
S_2	(A/mm)	1.18×10^{-9}	1.49×10^{-9}	1.38×10^{-9}
R_2	(Ω)	569	629	560
Ω_2	(Ω)	1823	1569	1058
h_2		1.0	1.0	1.0
LP				
T_1	(s)	20.0	20.0	20.0
S_1	(A/mm)	2380	2840	2830
R_1	(Ω)	3100	2900	3200
Ω_1	(Ω)	48	37	156
h_1		1.0	1.0	1.0
T_2	(s)	20.0	20.0	20.0
S_2	(A/mm)	4.4×10^{-10}	5.0×10^{-10}	4.0×10^{-10}
R_2	(Ω)	370	370	370
Ω_2	(Ω)	1130	1130	1130
h_2		1.0	1.0	1.0

T_1 : Period of the pendulum.
T_2 : Period of the galvanometer.
S_1 : Sensitivity of the transducer.
S_2 : Sensitivity of the galvanometer.
R_1 : Resistance of the pendulum coil.
R_2 : Resistance of the galvanometer coil.
Ω_1 : External damping resistance of the transducer.
Ω_2 : External damping resistance of the galvanometer.
h_1 : Damping constant of the pendulum.
h_2 : Damping constant of the galvanometer.

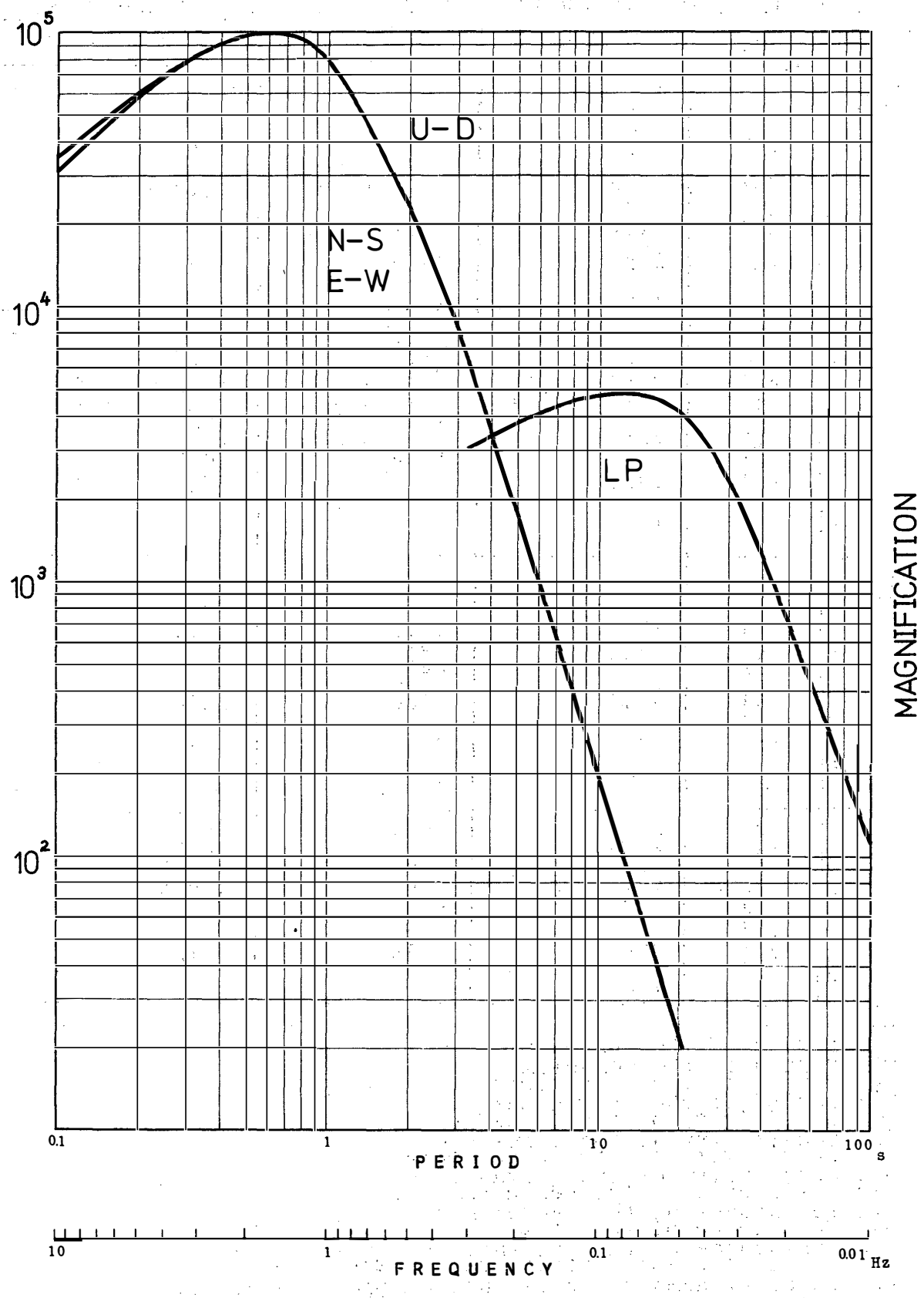

Fig. 1. Magnification curves of HES and long-period seismographs.

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JAN	01	+EXE	11	01	49.0	1.0	1.0
		+EXN	11	01	50.1	1.3	1.0
		-EXZ	11	01	49.0	1.1	3.0
		LP+ESE	19	24	48.8	10.3	3.5
		LP+ESN	19	24	50.6	9.4	4.5
		LP-LRE	19	52	12.2	16.9	7.5
		LP+LRE	23	52	16.9	16.9	3.0
	02	-IPE	08	37	47.0	0.6	1.5
		EPN	08	37	46.9		
		+IPZ	08	37	46.5	0.7	9.0
		LP EPE	10	07	22.5		
		LP EPZ	10	07	22.5		
		LP+ISE	10	17	09.4	14.1	11.0
		LP+ESN	10	17	13.1	11.3	2.0
		LP-ESSE	10	22	52.5	16.9	5.0
		LP-LRE	10	35	24.4	22.5	9.0
		LP-LRN	10	35	26.3	21.6	6.5
		LP-LRZ	10	35	28.1	20.6	4.0
	03	+EPE	20	28	03.8	0.9	1.5
		+EPN	20	28	03.5	1.1	1.0
		-IPZ	20	28	04.0	1.0	5.0
	05	+EPE	03	36	24.0	1.5	1.4
		+EPN	03	36	23.0	1.8	1.0
		+EPZ	03	36	22.5	1.8	2.5
		+IPE	16	48	03.3	1.2	1.5
		+IPZ	16	48	03.7	1.2	3.0
		+EXE	19	51	33.9	0.6	0.7
		-EXZ	19	51	33.8	0.4	0.7
		-EXZ	19	51	33.8	0.4	0.7
	06	LP-EPE	05	06	33.8	11.3	2.0
		-EPN	07	28	38.0	1.1	0.8
		+EPZ	07	28	39.3	1.4	1.1
	07	-EPE	03	45	16.4	1.4	1.3
		+EPN	03	45	17.0	1.0	0.5
		+EPZ	03	45	16.3	1.4	2.0
		+EPE	06	45	09.5	2.0	3.0
		+EPN	06	45	11.0	1.2	0.6
		+EPZ	06	45	10.5	1.4	1.6
	08	NIL					
	09	-EPE	08	16	51.8	1.0	1.1

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JAN	09	+EPN	08	16	50.6	1.0	1.2
		+EPE	09	28	34.8	1.8	1.6
		+EPN	09	28	33.0	1.2	0.6
		+EPE	20	41	35.9	1.0	2.0
		+EPN	20	41	35.0	0.6	1.2
		+EPZ	20	41	35.1	1.2	2.1
	10	+EPE	01	09	32.9	1.0	1.0
		EPN	01	09	34.0		
		+EPZ	01	09	32.5	1.0	1.7
	11	NIL					
	12	+IPE	18	18	07.5	1.5	1.5
		-EPN	18	18	07.6	0.9	1.2
		-IPZ	18	18	07.0	1.5	3.5
	13	-IPE	01	32	09.0	1.0	6.5
		-IPN	01	32	09.0	1.1	3.6
		+IPZ	01	32	09.0	1.0	20.0
		+EPE	10	53	02.4	1.2	1.1
		-EPN	10	53	04.0	1.0	1.0
		-EPZ	10	53	04.0	1.0	0.6
		+EPE	20	22	23.6	1.3	1.7
		+EPN	20	22	23.0	1.2	0.6
		+IPZ	20	22	22.2	1.7	3.0
	14	EPE	03	43	39.1		
		+IPZ	03	43	39.4	0.9	1.0
		ESE	03	56	49.0		
		ESN	03	56	48.3		
		-ESZ	03	56	49.8	2.3	4.0
		LP+PSE	03	59	11.3	15.0	5.5
		LP+LRE	04	30	15.0	22.5	12.5
		-EPE	14	02	42.2	0.8	1.0
		+EPZ	14	02	42.0	1.1	1.8
		+IPE	15	32	47.0	1.3	2.2
		-EPN	15	32	47.2	1.1	2.2
		-EPZ	15	32	46.0	0.7	1.1
		LP-ESE	15	42	37.5	13.1	11.5
		LP-LRE	16	06	54.4	18.8	14.0
		LP-LRZ	16	06	56.3	18.8	9.5
		+EPE	19	57	25.2	1.1	1.2
		+EPN	19	57	25.7	1.2	1.8
		+IPZ	19	57	25.2	1.2	3.0

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JAN	14	-EPE	20	06	49.6	1.0	0.9
		-EPZ	20	06	47.2	1.1	1.5
		-EPN	20	14	34.2	0.5	0.6
		-EPZ	20	14	34.1	0.5	1.0
	15	-EPE	07	09	34.7	1.2	1.6
		EPN	07	09	33.0		
		LP-ESE	07	18	24.4	13.1	6.0
		LP+LRE	07	42	33.8	18.8	13.0
		LP+LRZ	07	42	35.6	17.8	7.0
	16			NIL			
	17	+EPE	11	44	06.7	0.6	1.4
		-EPN	11	44	06.3	0.6	1.4
		+IPZ	11	44	06.3	0.9	4.5
		LP+ESE	11	53	01.9	7.5	1.5
		LP+LRE	12	19	54.4	15.9	6.5
		LP-LRZ	12	19	56.3	15.0	3.0
		-EPE	21	24	29.9	1.7	1.6
		-EPN	21	24	29.0	1.4	1.4
		+EPZ	21	24	27.9	1.1	1.0
	18	+EXN	03	55	10.4	2.2	1.4
		+EXZ	03	55	10.9	2.1	2.0
		LP-EPE	21	34	26.3	13.1	2.5
		LP+LRE	22	06	54.4	16.9	3.5
		LP+LRZ	22	06	52.5	17.8	2.5
	19			NIL			
	20	-IPE	04	53	25.6	1.5	4.0
		-IPN	04	53	24.0	1.3	1.5
		+IPZ	04	53	25.0	1.4	8.5
		EXE	05	22	04.8		
		-EXZ	05	22	02.9	1.7	2.7
		-EPE	21	43	42.2	1.8	2.0
		+EPN	21	43	42.7	1.0	0.6
		+EPZ	21	43	41.3	1.7	3.6
	21			NIL			
	22	-EPE	21	32	03.4	1.3	1.5
		+EPN	21	32	04.1	0.8	1.0
		+IPZ	21	32	03.8	1.4	5.2
	23	+EPE	06	43	00.3	1.3	1.0
		-EPN	06	43	01.8	0.7	0.6
	24	+EXE	06	13	41.5	2.0	1.2

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JAN	24	+EXZ	06	13	41.6	1.2	0.7
		-IPE	13	29	07.6	1.2	1.4
		+EPN	13	29	07.9	1.0	1.0
		+IPZ	13	29	06.7	1.2	4.2
		+IPE	15	45	20.0	1.8	3.2
		-EPN	15	45	20.0	0.8	0.9
		+IPZ	15	45	19.9	2.0	9.0
		+IPE	15	55	42.0	2.4	2.2
		+EPN	15	55	42.0	1.7	2.6
		-EPZ	15	55	43.0	1.2	1.0
		+IPE	17	56	48.2	1.2	6.5
		+IPN	17	56	48.3	1.1	3.0
		-IPZ	17	56	48.4	1.6	20.0
		LP-EPE	22	03	33.8	15.9	5.0
		LP-EPZ	22	03	35.6	15.0	4.5
	25	+EPE	02	42	11.5	1.1	0.5
		+EPN	02	42	11.5	1.2	1.0
		EPZ	02	42	11.0		
		-IPE	09	49	02.0	1.0	9.0
		+EPN	09	49	02.6	1.0	0.6
		-IPZ	09	49	01.8	1.0	22.0
		+IPE	23	32	05.4	2.0	4.2
		+IPN	23	32	06.1	1.4	1.6
		+IPZ	23	32	05.4	2.2	11.6
		-ISE	23	42	33.5	4.0	7.0
		+ISN	23	42	34.5	3.3	4.2
		+ESZ	23	42	37.6	1.3	1.1
		LP-ISE	23	42	35.6	13.1	6.5
		LP-IPPSE	23	44	22.5	17.8	12.5
	26	LP+LRE	00	09	35.6	21.6	40.0
		LP+LRZ	00	09	43.1	21.6	14.0
		+EPE	12	33	22.7	1.4	1.1
		+EPZ	12	33	22.8	1.2	2.1
		+IPE	22	02	29.4	1.2	1.5
		+IPN	22	02	30.0	1.2	0.6
		+IPZ	22	02	29.4	1.5	3.3
	27	+EPE	13	45	08.0	1.3	1.3
		EPZ	13	45	09.8		
	28	+IPE	19	48	46.0	2.0	8.5
		-IPN	19	48	46.0	1.5	7.5

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JAN 28	+IPZ	19	48	46.0	2.4	21.0
	+ISE	19	58	48.0	3.7	20.5
	+ISN	19	58	47.6	1.8	3.5
	+ISZ	19	58	50.0	1.2	1.8
	LP+ISE	19	58	50.6	13.1	10.0
	LP+IPSE	19	59	33.8	18.8	12.5
	-EPE	23	32	58.5	0.8	1.0
	+EPZ	23	32	58.1	1.2	2.7
29	-EPN	02	41	59.0	1.0	0.6
	-EPZ	02	41	58.8	2.2	4.5
	+IPE	05	12	38.0	1.2	1.4
	-IPN	05	12	37.8	1.3	2.3
	+IPZ	05	12	38.0	1.3	6.0
	+IPE	14	30	48.6	1.3	1.5
	EPN	14	30	48.5		
	-IPZ	14	30	48.4	1.0	2.0
	LP+ESE	14	41	25.3	13.1	2.5
	LP+PPSE	14	43	20.6	15.0	4.0
	LP+LRE	15	09	24.4	22.5	5.0
	+IPE	21	46	26.0	0.9	1.1
	+EPN	21	46	24.9	0.8	0.5
	-IPZ	21	46	24.8	1.0	2.0
	+EPE	22	10	51.2	1.0	0.5
	-EPN	22	10	50.9	0.9	0.6
	+EPZ	22	10	52.5	1.0	1.1
	-EXE	22	11	16.4	1.7	2.5
	EXN	22	11	16.7		
	-EXZ	22	11	15.2	1.4	2.9
30	+IPE	07	03	11.5	1.3	2.4
	-EPN	07	03	09.9	0.8	0.5
	+IPZ	07	03	09.5	2.0	4.0
	LP-ESE	07	13	16.9	13.1	3.5
	LP+LRE	07	37	22.5	17.8	4.5
	-EPE	13	28	12.0	1.3	1.0
	+EPZ	13	28	12.0	1.0	0.7
31	-IPE	02	23	24.0	1.3	5.0
	+EPN	02	23	24.3	1.1	1.3
	+IPZ	02	23	24.0	1.0	5.0
	+ISE	02	28	22.0	1.6	2.0
	+ISN	02	28	22.3	1.7	6.6

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JAN 31	+ESZ	02	28	22.0	1.4	1.2
	+IPE	20	37	29.0	0.6	1.0
	+EPN	20	37	29.9	0.8	0.6
	+EPZ	20	37	30.3	0.9	1.0
FEB 01	-EPN	02	10	58.8	0.9	0.5
	-EPZ	02	10	59.9	1.1	1.5
	+EPE	16	34	36.0	1.1	1.5
	+EPN	16	34	36.7	0.7	0.8
	+EPZ	16	34	36.0	1.0	2.0
	+EPE	23	02	54.4	0.9	1.0
	+EPZ	23	02	54.0	1.1	3.4
	-EPE	23	32	13.9	1.3	1.5
	+EPN	23	32	13.9	0.9	1.5
	+EPZ	23	32	13.2	1.0	1.8
02	+EPE	08	11	15.5	1.4	0.6
	+EPZ	08	11	14.0	1.5	1.0
	LP+LRE	08	52	54.4	16.9	4.0
	EPE	22	08	43.0		
	+EPN	22	08	43.3	1.0	1.2
	+EPZ	22	08	42.5	1.2	1.0
03	+EPE	13	26	15.1	1.0	1.3
	+EPN	13	26	15.1	0.8	1.4
	-IPZ	13	26	15.5	1.0	5.0
	+EPE	14	46	31.9	2.0	3.6
	+EPN	14	46	31.0	1.2	0.9
	+EPZ	14	46	31.0	0.8	1.0
04	NIL					
05	+EPN	07	16	14.8	1.1	1.3
	-EPZ	07	16	15.3	1.2	1.5
06	+EPE	03	42	34.0	1.2	1.1
	+EPN	03	42	34.8	1.1	0.8
	-EPZ	03	42	33.2	1.4	2.5
	+EPE	07	40	38.2	1.0	1.5
	+EPN	07	40	38.8	0.8	1.2
	+EPZ	07	40	39.2	0.7	1.0
07	+EPN	07	13	58.1	1.0	1.0
	+EPZ	07	13	58.2	0.6	0.5
	-EXE	07	14	22.0	1.1	3.0
	-EXZ	07	14	22.4	1.0	4.5
	+ESE	07	24	45.5	2.5	5.5

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
FEB 07	+ESN	07	24	47.3	2.0	8.5
	+ESZ	07	24	46.0	1.5	4.6
	LP+EXE	07	25	07.5	13.1	3.0
	-EXE	07	31	15.0	0.5	1.2
	+EXZ	07	31	14.9	0.9	2.0
	LP-LRE	08	10	07.5	18.8	5.0
	+EPE	12	43	38.4	1.4	2.4
	+EPN	12	43	39.0	1.1	1.0
	-IPZ	12	43	38.2	1.7	6.5
	-EPN	20	44	52.3	1.2	1.0
	+IPZ	20	44	52.0	1.1	1.7
08	+EPE	13	17	10.8	1.2	0.4
	EPN	13	17	10.3		
	+IPZ	13	17	09.1	0.8	1.2
09	+EPE	14	09	00.0	1.0	0.7
	+EPN	14	09	00.0	0.6	1.0
	-EPZ	14	09	00.5	0.7	1.0
	+EPE	21	47	01.0	1.0	1.0
	+EPN	21	47	01.8	0.9	0.6
	+IPZ	21	47	02.2	1.8	2.8
	LP+EXE	21	47	15.0	28.1	4.0
	LP+ISE	21	57	03.6	15.9	62.0
	LP+ISSE	22	02	28.1	18.8	27.0
	+IPN	22	03	51.0	0.9	2.5
	+IPZ	22	03	50.8	2.2	5.6
	LP+IPE	22	03	50.6	16.9	22.0
	LP+IXE	22	05	28.1	20.6	25.5
	LP-IXE	22	06	09.4	23.4	29.0
	LP+IXE	22	07	52.5	20.6	19.0
	LP+LRE	22	12	19.7	22.5	97.0
	+EXE	22	23	52.3	1.7	2.5
	+EXN	22	23	51.5	2.0	2.0
	-EXZ	22	23	51.6	1.3	4.5
	+EXN	22	33	38.2	1.1	4.0
	+EXZ	22	33	36.1	2.0	4.5
	+EPE	23	10	07.1	0.9	0.8
	+EPN	23	10	06.5	1.0	1.0
	+EPZ	23	10	06.0	1.2	3.5
10	+IPE	01	08	12.9	1.7	6.0
	-IPN	01	08	12.5	2.0	5.5

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
FEB 10	IPZ	01	08	12.5		
	LP+ISE	01	18	05.6	15.0	9.0
	LP+LRE	01	42	33.8	19.7	7.0
	+EPE	05	47	36.9	1.1	1.3
	-EPN	05	47	36.0	1.0	0.7
	+IPZ	05	47	35.6	1.2	1.7
	LP+LRE	06	30	20.6	16.9	4.0
	LP+ISE	19	54	26.3	13.1	14.0
	LP+LRE	20	15	46.9	18.8	21.0
11	LP+EPE	00	17	56.3	15.9	3.0
	LP+ISE	00	27	18.8	15.0	17.0
	LP-PPSE	00	29	24.4	13.1	7.0
	LP-SSE	00	32	33.8	15.0	9.0
	LP+LRE	00	47	50.6	22.5	36.0
	+EPE	05	15	27.5	1.1	1.4
	+EPN	05	15	26.9	1.1	1.1
	-EPZ	05	15	27.0	1.1	2.1
	+EPE	13	06	46.4	2.0	2.0
	+EPN	13	06	46.0	1.4	1.0
	-EPZ	13	06	45.7	1.6	4.0
	+EPE	22	11	07.0	1.0	0.4
	+EPZ	22	11	07.5	1.0	1.1
12	-IPE	03	46	28.7	1.3	5.5
	EPN	03	46	29.8		
	-IPZ	03	46	28.8	1.5	12.5
	-IPE	16	02	51.9	1.0	1.4
	+IPN	16	02	51.5	1.0	1.5
	+IPZ	16	02	51.0	1.2	3.0
	+EPE	19	30	09.2	1.6	1.5
	+EPN	19	30	10.2	1.7	2.0
	+EPZ	19	30	08.3	0.8	2.0
13	-EPE	05	45	30.8	2.2	1.5
	EPN	05	45	32.0		
	+EPZ	05	45	30.5	2.5	3.0
	+EPE	06	27	09.9	1.2	1.0
	+IPN	06	27	09.0	1.4	1.3
	+IPZ	06	27	08.0	2.0	2.0
	+IPE	13	22	39.3	1.1	0.5
	+IPZ	13	22	38.0	0.9	1.5
	+EPE	18	38	49.8	1.1	1.0

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
FEB 13	+EPZ	18	38	48.8	1.0	1.8
14	-IPE	00	15	23.3	1.3	2.5
	-IPZ	00	15	23.2	1.3	4.5
	-EPN	02	37	41.8	1.2	1.0
	-IPZ	02	37	41.0	1.0	1.9
	+EPE	23	29	36.0	1.2	0.5
	+EPN	23	29	36.1	1.3	1.0
	+EPZ	23	29	35.9	1.8	3.5
15-16	NIL					
17	+IPE	01	49	35.0	0.8	1.0
	-IPN	01	49	34.1	1.4	6.0
	+IPZ	01	49	34.5	2.0	10.0
	IPE	06	54	38.8		
	-EPN	06	54	39.5	1.1	0.6
	-IPZ	06	54	39.0	1.2	2.1
	+EPN	07	34	24.0	1.0	1.9
	+EPZ	07	34	24.0	2.2	4.2
	+EPE	12	21	40.0	1.1	1.1
	EPN	12	21	38.0		
	+EPZ	12	21	37.8	1.0	0.7
18	EPE	11	04	36.5		
	+EPN	11	04	36.9	1.0	3.3
	+EPZ	11	04	36.6	1.4	2.0
	+EPN	17	31	47.6	1.1	1.0
	+EPZ	17	31	48.0	1.1	3.2
19-20	EXTREME MICROSEISMIC ACTIVITY					
21	+EPE	03	34	40.0	1.0	3.5
	-EPN	03	34	40.7	1.0	2.5
	EPZ	03	34	40.0		
	EPE	07	25	39.2		
	+IPN	07	25	40.4	1.0	2.0
	LP+PPE	07	29	30.0	15.0	7.0
	LP+ESE	07	36	03.6	12.2	17.5
22	EPE	18	19	16.3		
	EPN	18	19	16.0		
	-EPZ	18	19	15.9	1.5	4.5
	+EPE	19	49	45.0	0.9	0.8
	EPN	19	49	44.8		
	+IPZ	19	49	45.1	1.2	1.2
23	+EPN	07	32	49.0	1.2	1.5

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
FEB 23	-EPZ	07	32	49.8	1.1	3.0
	+EXN	10	17	09.0	1.0	1.5
	+EXZ	10	17	09.5	1.2	3.2
	+EPE	10	34	55.5	0.9	1.2
	+EPN	10	34	55.5	0.9	0.5
	+EPZ	10	34	57.0	0.9	1.0
	-EPE	11	18	30.0	1.1	1.1
	EPN	11	18	29.2		
	+EPZ	11	18	30.0	1.1	1.5
	+EPE	17	19	39.4	1.2	2.5
	+IPN	17	19	39.5	1.8	4.0
	+IPZ	17	19	39.0	1.2	16.0
24	LP+IPE	06	47	16.9	13.1	80.0
	LP+ISE	06	59	22.5	18.8	45.0
	LP+EXE	07	00	58.1	18.8	162.5
	LP+EXE	07	04	11.3	11.3	42.5
	-EXN	10	26	30.5	1.0	0.6
	+EXZ	10	26	30.8	0.8	1.0
25	NIL					
26	+EPE	00	25	14.5	1.2	2.0
	+EPZ	00	25	14.5	1.0	4.5
	+EPE	02	31	40.5	0.8	1.5
	EPN	02	31	41.5		
	+EPZ	02	31	40.5	0.9	6.5
	+EPE	16	08	11.2	0.5	1.0
	+EPN	16	08	11.8	0.5	1.0
	-EPZ	16	08	11.8	0.6	1.5
27	LP+LRE	01	02	43.1	17.8	23.0
	-EPE	06	31	03.0	1.7	0.5
	-EPN	06	31	04.0	1.5	2.0
	+EPZ	06	31	03.1	1.2	2.0
	+EXE	11	49	06.3	1.2	3.0
	+EXN	11	49	07.1	0.5	1.0
	-EPZ	11	49	08.0	1.0	3.0
28	NIL					
MAR 01	+EPN	00	10	17.0	1.0	1.3
	+EPZ	00	10	18.9	1.0	2.0
	+EPN	01	04	11.6	0.6	1.5
	+EPZ	01	04	11.6	1.3	3.2
	+EPN	01	22	02.0	1.0	1.1

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
MAR	01	+EPZ	01	22	03.5	0.9	3.1
		-EPE	11	14	40.9	1.2	5.0
		+EPN	11	14	41.1	1.2	1.5
		+EPZ	11	14	41.0	1.6	2.2
	02	-EPN	15	19	36.5	0.7	0.9
		-EPZ	15	19	35.5	1.0	2.3
	03	+EPN	02	41	44.5	1.1	1.7
		+EPZ	02	41	45.3	2.2	7.0
		-EPZ	11	13	14.2	1.0	4.1
	04	+EPN	15	11	26.0	1.0	1.6
		-EPZ	15	11	24.0	0.8	3.3
	05		NIL				
	06	+EPN	00	33	37.5	1.8	3.0
		+EPZ	00	33	38.3	2.0	6.5
	07	EPE	03	06	41.5		
		-EPZ	03	06	43.0	0.6	1.8
		LP+EPPE	03	08	39.4	15.0	3.5
		LP+PPPE	03	10	09.4	17.8	4.5
		LP+ISE	03	13	16.9	15.0	8.0
		-EXN	03	20	06.2	1.1	1.0
		+EXZ	03	20	06.4	2.3	6.6
		+IPE	16	41	11.0	1.0	3.5
		+IPN	16	41	11.0	1.0	1.5
		+IPZ	16	41	10.3	1.1	4.5
		-EPE	16	47	36.2	1.0	2.1
		+EPN	16	47	36.0	1.0	0.5
		-IPZ	16	47	36.0	1.2	5.5
		-IPE	18	46	08.7	1.1	4.5
		+IPZ	18	46	08.7	1.2	5.0
		+EPE	23	37	42.6	1.0	0.6
		EPN	23	37	43.0		
		-IPZ	23	37	43.0	1.0	2.0
	08		NIL				
	09	+EPN	03	02	18.6	1.0	3.0
		+EPZ	03	02	18.7	1.1	2.0
		+EPN	17	07	46.0	1.1	1.5
		+EPZ	17	07	45.0	1.2	2.0
	10	+EXN	04	10	31.0	1.1	1.0
		-EXZ	04	10	33.0	0.5	1.0
		-IPN	11	33	34.1	1.1	3.0

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
MAR	10	IPZ	11	33	34.0		
	11	EPN	04	31	00.0		
		+IPZ	04	30	59.0	1.0	2.9
		+IPN	10	01	32.3	0.9	3.6
		-EPZ	10	01	31.9	0.9	2.5
		-EPE	18	57	19.9	1.0	2.5
		-EPN	18	57	19.0	0.9	1.5
		-EPZ	18	57	19.8	1.0	3.5
	12	-IPE	16	25	02.7	1.4	12.5
		+IPN	16	25	02.3	1.2	14.0
		+IPZ	16	25	02.1	1.0	10.0
	13	LP+EPZ	22	56	39.4	17.8	4.0
	14	+EPE	05	47	11.6	1.2	5.5
		+EPN	05	47	11.6	1.2	2.0
		-EPZ	05	47	12.1	1.0	2.0
	15	-EPE	22	22	57.1	0.7	1.7
		-EPN	22	22	57.6	0.6	0.7
		-IPZ	22	22	56.1	0.5	3.0
		+EXE	22	24	13.5	2.0	3.5
		+EXN	22	24	12.3	0.8	0.6
		+EXZ	22	24	13.6	1.7	5.2
	16		NIL				
	17	+EPE	11	13	13.9	1.3	7.5
		+IPN	11	13	13.2	1.5	5.5
		-IPZ	11	13	13.5	2.0	12.0
	18	+EPE	09	24	10.4	2.3	3.1
		-EPN	09	24	09.8	2.0	4.0
		+IPZ	09	24	09.4	2.4	12.0
		+EPE	18	24	51.0	1.1	1.3
		+EPN	18	24	52.0	1.6	2.0
		+EPZ	18	24	51.4	1.0	0.6
	19	LP-EXE	02	07	43.1	18.8	2.5
		LP-EXE	02	09	43.1	16.9	4.5
		LP-EXE	02	16	26.3	16.9	6.9
		LP+LRE	02	40	18.8	22.5	7.0
	20	+EPE	18	22	13.8	1.0	0.8
		+EPZ	18	22	13.0	1.1	1.5
	21	EXZ	19	26	47.1	1.8	3.5
	22	-EXZ	01	09	54.0	2.2	6.0
		LP+EPPE	01	13	13.1	14.1	5.5

DATE		PHASE	ARRIVAL TIME			PERIOD	AMP
			H	M	S	(S)	(MM)
MAR	22	LP-LRE	02	12	48.8	18.8	18.0
		-EPN	21	54	14.0	1.4	2.0
		-EPZ	21	54	14.5	1.6	3.2
		LP+EXE	21	57	31.9	15.0	4.0
		+EPE	22	27	05.6	0.9	2.5
		EPN	22	27	05.1		
		-EPZ	22	27	06.0	0.8	2.0
		LP-EPE	22	27	05.6	18.8	5.0
		LP+LRE	22	57	28.1	18.8	9.0
	23	+EPE	00	50	16.4	2.0	1.5
		+EPZ	00	50	15.3	1.5	1.3
		LP+EXE	00	53	45.0	16.9	5.0
		+EPZ	01	02	16.9	1.7	2.5
		LP-LRE	01	52	52.5	18.8	29.0
		-EPE	03	34	30.8	1.5	1.5
		+EPN	03	34	31.2	2.0	1.7
		+EPZ	03	34	30.4	0.8	1.0
		LP-PPE	03	38	13.1	16.9	14.0
		LP+IXE	03	38	58.1	15.0	19.0
		LP+PPPE	03	40	01.9	17.8	26.0
		LP-EXE	03	44	11.3	16.9	15.0
		LP-SPE	03	48	11.3	16.9	15.0
		LP+SSE	03	55	28.1	15.9	29.0
		LP+LRE	04	41	11.3	17.8	109.0
		+IPE	16	49	39.0	1.2	3.5
		+IPN	16	49	39.1	1.5	4.6
		IPZ	16	49	38.6		
		-EPE	19	31	48.0	1.3	2.0
		+EPZ	19	31	47.2	1.2	2.6
		LP+EXE	19	35	46.9	13.1	6.0
		LP-LRE	20	38	15.0	18.8	14.0
		-IPE	21	56	22.2	1.2	3.0
		+IPN	21	56	22.0	1.2	4.0
		+IPZ	21	56	21.8	1.2	9.0
		-EPN	21	58	08.5	1.8	8.0
		+EPZ	21	58	07.0	1.2	5.0
	24	-EPE	01	01	32.0	1.5	1.8
		+EPN	01	01	33.0	0.8	0.5
		-IPZ	01	01	33.0	1.4	8.0
		-EXE	01	03	18.0	3.0	3.5

DATE		PHASE	ARRIVAL TIME			PERIOD	AMP
			H	M	S	(S)	(MM)
MAR	24	-EXZ	01	03	16.0	3.6	9.7
		LP+PKPE	20	07	16.9	16.9	3.0
		LP-PPE	20	10	16.9	16.9	11.0
		LP+EXE	20	10	59.0	17.8	47.0
		LP+EXE	20	20	22.5	15.0	27.0
		LP+PPSE	20	22	28.1	14.1	22.0
		LP+EXE	20	23	22.5	15.0	27.0
		LP-EXE	20	24	46.9	16.9	25.0
		LP+EXE	21	01	58.1	24.4	45.0
	25	+EPE	19	37	43.8	1.2	2.8
		+EPN	19	37	44.0	1.4	2.8
		+IPZ	19	37	42.0	1.0	2.9
	26	+IPE	00	30	15.5	1.2	3.5
		+EPN	00	30	15.8	1.3	3.2
		EPZ	00	30	15.0		
		LP+LRE	13	57	24.4	17.8	8.0
		+IPE	21	24	45.9	1.1	3.9
		-EPN	21	24	47.0	1.2	2.1
		IPZ	21	24	46.0		
		-EPE	22	53	33.8	0.8	2.0
		-EPN	22	53	34.0	0.6	1.0
		+EPZ	22	53	33.5	1.0	3.0
	27	-EPE	10	48	11.0	1.1	2.0
		-EPZ	10	48	11.1	1.8	8.5
	28	+EPE	20	36	31.1	1.4	3.2
		+EPZ	20	36	31.1	1.3	7.0
	29	EPE	02	39	03.0		
		+EPN	02	39	03.0	0.6	1.5
		+EPZ	02	39	03.0	1.2	1.6
		LP+LRE	04	53	52.5	22.5	12.0
		LP-EPZ	07	34	13.1	18.8	2.0
		LP+EXZ	07	38	48.8	18.8	3.0
		LP+LRZ	07	54	07.5	17.8	4.0
		+EPE	17	08	12.5	1.1	2.2
		+EPN	17	08	11.4	1.8	2.5
		-EPZ	17	08	11.2	1.7	5.7
		-EPE	22	13	05.6	1.7	3.0
		+EPN	22	13	06.0	1.0	1.0
		-EPZ	22	13	06.0	0.9	1.9
		LP+EPZ	22	49	46.9	18.8	4.0

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
MAR	30			NIL			
	31	LP+LRZ	21	48	05.6	18.8	4.0
APR	01	LP+EXZ	11	04	15.0	17.8	5.0
		LP+EXE	15	35	45.0	17.8	2.5
	02	LP+EXE	06	18	35.6	15.0	4.5
		LP+EXN	06	18	35.6	16.9	4.0
		LP+EXE	06	20	09.4	18.8	4.5
		+IPE	09	19	02.0	1.4	4.5
		-EPN	09	19	01.5	0.8	0.8
		+IPZ	09	19	01.5	1.1	6.0
		LP+EPZ	14	08	15.0	18.8	5.0
	03	+EXE	10	01	18.9	1.8	6.5
		+EXN	10	01	22.0	1.8	3.3
		EXZ	10	01	20.0		
		LP+ESE	10	11	46.9	15.0	11.0
		LP-ESN	10	11	48.8	16.9	8.5
		LP+LRE	10	37	13.1	17.8	51.0
		LP-LRN	10	37	56.3	16.9	28.0
		EPE	14	07	56.9		
		+EPZ	14	07	56.0	0.9	3.0
		EPE	15	10	00.0		
		+EPZ	15	10	00.9	1.0	3.9
	04	LP+LRE	22	18	05.6	18.8	9.0
	05	EXTREME MICROSEISMIC ACTIVITY					
	06	+EPE	20	55	05.5	0.8	0.5
		+EPN	20	55	05.0	0.8	1.0
		+EPZ	20	55	04.9	0.9	1.2
	07	+EPE	11	24	31.1	0.7	1.3
		+EPN	11	24	31.0	0.7	1.0
		+EPZ	11	24	29.9	1.3	1.6
	08			NIL			
	09	+IPE	22	32	57.2	1.2	4.1
		-EPN	22	32	58.2	1.8	2.0
		+IPZ	22	32	59.0	1.6	5.0
		+ESE	22	42	01.8	1.3	1.7
		-ESN	22	42	03.1	1.0	1.6
		+ESZ	22	42	03.2	1.2	3.3
		+EXE	22	51	32.8	1.2	1.6
		+EXN	22	51	31.7	0.8	1.0
		+EXZ	22	51	32.0	0.8	1.5

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
APR	10	IPE	21	03	56.0		
		+IPN	21	03	57.0	1.6	3.5
		IPZ	21	03	55.0		
		LP+IPE	21	03	58.1	7.5	9.0
		LP+EPN	21	03	58.1	6.6	4.0
		LP+PCPE	21	04	35.6	15.0	9.0
		LP+PCPN	21	04	31.9	7.5	7.5
		LP-ISE	21	13	28.1	15.0	30.5
		LP-ISN	21	13	28.1	9.4	14.0
		LP-ISCSN	21	14	11.3	15.0	17.5
		LP-ISCSE	21	14	13.1	14.1	33.0
		LP+ISSE	21	18	07.5	14.1	40.0
		LP-LRE	21	36	46.9	16.9	24.0
		-EPN	22	14	10.0	0.9	1.8
		+EPZ	22	14	09.5	1.8	2.2
	11	+IPE	02	54	33.0	2.0	4.9
		+EPN	02	54	32.0	1.6	2.3
		IPZ	02	54	31.4		
	12	LP-EPE	04	13	58.1	16.9	4.5
		LP-ESE	04	27	52.5	18.8	10.0
		LP-ESN	04	27	50.6	16.9	14.0
		LP-LRE	05	15	56.3	17.8	22.0
		LP+LRN	05	15	52.5	18.8	35.0
	13			NIL			
	14	+EPE	06	10	58.4	1.3	1.6
		+EPN	06	10	59.1	1.0	1.5
		+EPZ	06	10	59.0	1.0	2.0
	15	+IPE	11	01	52.4	1.0	2.5
		+EPN	11	01	52.2	1.0	2.0
		+IPZ	11	01	52.6	1.1	5.8
	16	LP-LRN	00	27	39.4	22.5	4.0
		+EPE	01	28	26.0	2.1	6.2
		+EPN	01	28	25.1	1.2	1.3
		+EPZ	01	28	25.2	1.4	3.2
	17	EXTREME MICROSEISMIC ACTIVITY					
	18	+IPE	07	58	53.5	1.5	2.4
		+EPN	07	58	54.1	1.1	3.3
		-IPZ	07	58	53.3	1.5	6.2
		-IPE	17	40	36.2	1.0	7.8
		-EPN	17	40	35.5	0.8	1.2

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
APR 18	+IPZ	17	40	35.0	1.9	14.0
	+EPE	18	03	52.0	1.0	2.0
	+EPZ	18	03	52.4	1.2	7.0
19	IPE	16	59	25.8		
	+IPN	16	59	26.1	1.0	3.0
	IPZ	16	59	26.0		
20-23	EXTREME MICROSEISMIC ACTIVITY					
24	+EPN	15	56	58.5	1.4	1.3
	+IPZ	15	56	58.5	1.6	2.2
25	+EPE	00	47	41.0	0.8	0.5
	+EPZ	00	47	39.9	1.3	3.6
	+EPE	04	38	03.8	1.1	0.6
	+EPZ	04	38	03.3	1.6	4.0
	-EPE	07	47	55.0	1.0	1.8
	+EPN	07	47	53.8	1.2	1.1
	+IPZ	07	47	54.0	1.2	2.7
26	+EPE	05	23	02.8	0.9	1.0
	-EPN	05	23	03.0	0.8	0.5
	+EPZ	05	23	02.8	1.0	1.1
27	+EPE	04	34	14.9	1.5	2.9
	+EPN	04	34	14.5	1.2	0.7
	-IPZ	04	34	14.7	2.1	4.5
	+EPN	06	03	33.2	0.6	2.2
	EPZ	06	03	33.5		
28	+EXN	16	22	54.0	1.1	2.7
	+EXZ	16	22	54.0	1.0	3.0
	+EPE	16	37	30.7	1.1	0.9
	+EPN	16	37	29.9	1.2	1.1
	-EPZ	16	37	31.9	1.1	1.9
	+EPE	20	52	22.9	1.5	2.2
	+EPN	20	52	20.9	1.2	1.3
	+EPZ	20	52	21.4	1.7	2.8
29	+IPE	02	38	42.9	1.3	2.5
	+EPZ	02	38	42.8	1.6	5.0
	+EXN	04	37	55.8	1.2	1.5
	-EXZ	04	37	54.9	1.4	3.0
30	+EPE	18	30	06.0	1.1	2.1
	+EPN	18	30	08.1	1.1	1.2
	+EPZ	18	30	07.2	1.1	1.2
	-EPE	19	11	46.2	1.8	3.8

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
APR 30	+EPN	19	11	45.3	1.6	1.9
	+EPZ	19	11	45.5	1.9	6.6
MAY 01	+EPE	06	18	48.7	1.6	3.2
	+EPN	06	18	48.5	1.1	1.5
	-EPZ	06	18	48.4	1.1	4.0
	+EPN	16	19	19.9	2.0	2.0
	+EPZ	16	19	19.1	1.5	2.0
02	+IPE	23	24	25.2	1.8	9.5
	-IPN	23	24	25.8	1.6	3.0
	-IPZ	23	24	25.2	1.7	14.0
03	+EPE	06	04	28.0	1.0	2.3
	+EPN	06	04	26.0	0.9	0.7
	+EPZ	06	04	26.1	1.2	2.0
	+EPN	07	53	54.9	1.1	0.5
	-EPZ	07	53	54.9	1.0	3.0
04	-EPE	17	25	19.0	1.6	2.1
	+EPN	17	25	17.7	1.1	0.8
	-EPZ	17	25	19.0	1.4	2.0
05	-EPE	02	05	29.0	0.8	2.0
	+EPZ	02	05	28.5	1.0	1.5
06	NIL					
07	-EPE	12	30	01.5	1.3	4.0
	+EPN	12	30	03.2	0.7	0.7
	+EPZ	12	30	02.5	1.0	1.4
08	+EPE	04	30	00.3	1.2	7.8
	-EPN	04	30	00.7	1.2	4.6
	-EPZ	04	30	01.4	0.8	3.0
09	NIL					
10	+EPE	23	17	06.4	0.8	0.5
	+EPZ	23	17	05.9	0.9	1.1
11	+EPE	10	43	31.5	1.0	1.2
	+EPZ	10	43	30.1	1.4	2.0
12	-EPN	07	23	57.1	1.2	1.5
	-EPZ	07	23	57.1	1.0	1.5
13	+EPE	04	20	12.0	0.8	0.6
	+EPN	04	20	12.3	1.1	1.1
	-EPZ	04	20	12.0	2.6	4.0
	+IPE	07	21	24.2	2.4	22.8
	-IPN	07	21	24.1	2.1	16.9
	IPZ	07	21	24.1		

DATE		PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
			H	M	S		
MAY	13	LP+IPE	07	21	24.4	9.4	9.0
		LP+ISE	07	31	54.4	11.3	37.0
		LP-IPSE	07	33	03.6	15.0	32.0
		LP+PPSE	07	34	22.5	16.0	41.0
		+EXE	07	39	01.0	1.0	0.5
		+EXN	07	39	02.0	1.2	0.6
		+EXZ	07	39	01.6	1.3	3.2
		LP+LRE	07	58	24.4	18.8	33.0
		+ISE	08	01	34.0	3.5	7.8
		ESN	08	01	35.5		
		-ESZ	08	01	36.1	3.2	8.2
		-EXN	08	07	53.0	1.0	0.8
		+EXZ	08	07	51.7	2.4	3.0
	14	+EPE	12	14	15.0	1.3	1.8
		-EPN	12	14	15.2	1.6	1.5
		+IPZ	12	14	15.1	1.9	4.6
		+EXE	12	15	59.2	1.0	2.1
		+EXN	12	15	57.0	1.0	1.5
		-EXZ	12	15	57.5	2.0	6.5
		LP+EXE	12	20	41.3	13.1	3.0
		LP+ESE	12	23	46.9	15.0	2.0
		LP-LRE	12	31	09.4	18.8	11.0
		-EPE	18	23	15.0	1.0	1.5
		EPN	18	23	13.2		
		EPZ	18	23	13.0		
		LP+EPPE	18	24	13.1	11.3	3.0
		LP+ESE	18	28	16.9	11.3	5.0
		LP+EXE	18	31	41.3	13.1	8.0
		LP+IXE	18	32	30.0	15.0	2.0
		LP+IXE	18	33	26.3	16.9	34.0
	15	-IPE	00	48	31.8	0.6	1.2
		-IPN	00	48	32.0	1.0	1.8
		-EPZ	00	48	31.5	1.2	6.5
		-EPN	02	28	38.8	1.1	0.9
		+EPZ	02	28	37.8	1.0	1.0
	16	+EPE	20	30	03.9	1.5	4.4
		-EPN	20	30	02.4	0.6	0.6
		+EPZ	20	30	02.3	0.9	1.9
	17		NIL				
	18	EPE	05	05	47.8		

DATE		PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
			H	M	S		
MAY	18	+EPN	05	05	47.8	1.0	1.3
		-EPZ	05	05	47.8	1.0	3.5
		-EPE	05	29	01.9	1.0	1.6
		EPN	05	29	03.9		
		+EPZ	05	29	02.0	1.0	0.5
		EPN	20	29	02.8		
		+EPZ	20	29	02.1	1.0	1.5
		EPN	23	41	34.8		
		+EPZ	23	41	33.8	0.8	1.2
	19		NIL				
	20	+IPN	22	02	36.8	1.8	2.5
		-IPZ	22	02	36.3	1.5	3.5
	21	+EPN	18	06	39.5	1.1	0.6
		+EPZ	18	06	39.0	1.2	1.2
	22	+EPN	07	07	32.0	1.0	0.3
		-EPZ	07	07	32.0	1.4	2.3
		+IPN	15	57	24.5	1.6	4.5
		-IPZ	15	57	24.0	2.0	1.2
		LP+EPE	15	57	28.1	5.6	2.5
		-EXN	16	01	28.0	1.0	2.5
		-IXZ	16	01	26.0	1.2	5.0
		LP+ESE	16	01	50.6	11.3	17.5
		LP+IXE	16	03	54.4	15.0	38.0
		-EPN	20	11	08.0	0.8	0.6
		-EPZ	20	11	08.3	1.2	2.0
	23	+EPN	00	10	29.0	0.8	0.5
		+EPZ	00	10	30.0	1.0	0.6
		+EPZ	06	13	54.0	1.0	2.0
		-IPZ	08	08	59.0	2.0	5.5
		-EXN	08	19	14.0	1.2	1.0
		+EXZ	08	19	14.2	1.6	2.5
		EPN	08	22	22.1		
		-EPZ	08	22	22.9	1.9	2.0
		EPN	11	39	05.5		
		+EPZ	11	39	04.9	1.0	2.0
	24	-EPN	06	21	04.9	0.8	1.1
		+EPZ	06	21	03.3	0.9	1.5
		+EXZ	06	36	44.0	2.0	2.5
		+EXZ	06	40	39.0	2.0	3.0
	25	EXTREME MICROSEISMIC ACTIVITY					

DATE		PHASE	ARRIVAL TIME			PERIOD	AMP
			H	M	S	(S)	(MM)
MAY	26	+EPN	22	15	17.9	1.0	0.8
		+EPZ	22	15	17.1	1.4	1.0
	27			NIL			
	28	-EPN	13	31	29.3	1.3	2.5
		-EPZ	13	31	30.0	0.9	2.5
		+EPN	14	01	56.0	0.9	0.9
		+EPZ	14	01	56.9	0.8	1.7
		+EPN	17	30	17.0	1.1	0.8
		+EPZ	17	30	17.7	1.5	1.6
	29	+IPN	12	22	18.0	1.1	2.0
		+IPZ	12	22	18.0	1.2	2.0
		+EXN	12	55	17.9	1.0	0.6
		+EXZ	12	55	17.3	1.0	1.2
	30			NIL			
	31	-EPN	20	29	23.5	1.0	0.8
		+EPZ	20	29	22.8	1.1	1.0
JUN	01	+IPN	04	40	03.0	1.3	1.1
		+IPZ	04	40	03.0	1.8	4.4
	02	+EPN	11	43	29.6	1.4	0.8
		+IPZ	11	43	29.1	1.6	11.2
		-EXN	11	47	15.6	1.0	0.6
		+EXZ	11	47	14.1	1.2	1.5
		-IPN	15	53	03.0	1.0	1.1
		-EPZ	15	53	02.8	1.0	1.2
		+EXN	15	56	01.1	0.8	1.3
		+IXZ	15	56	01.3	0.6	1.5
	03	+EPN	02	55	34.2	0.6	0.6
		+EPZ	02	55	34.0	0.9	0.6
		+IPN	05	06	40.0	1.1	1.8
		+IPZ	05	06	40.9	1.2	1.8
		LP+LRE	05	55	07.5	15.9	6.0
	04	+EPE	15	20	07.0	1.2	1.3
		+EPN	15	20	07.5	0.6	0.9
		-EPZ	15	20	09.0	1.0	1.5
	05			NIL			
	06	+IPE	04	18	06.5	1.8	4.0
		+EPN	04	18	05.5	1.0	0.4
		+IPZ	04	18	06.4	1.2	6.0
		-EPE	07	44	10.0	0.7	5.5
		-EPN	07	44	10.0	0.7	5.0

DATE		PHASE	ARRIVAL TIME			PERIOD	AMP
			H	M	S	(S)	(MM)
JUN	06	+EPZ	07	44	10.5	0.8	1.0
	07	+EPE	04	48	57.3	1.1	0.8
		+EPN	04	48	56.9	1.0	1.1
		-EPZ	04	48	57.0	1.5	2.6
		+IPE	05	31	23.5	0.9	2.1
		-IPN	05	31	23.4	1.0	3.8
		-IPZ	05	31	23.2	1.1	3.2
		EPE	05	34	21.5		
		+EPN	05	34	21.9	0.8	0.6
		EPZ	05	34	21.2		
		+IPE	14	20	12.0	1.2	9.0
		+IPN	14	20	12.0	1.0	4.8
		IPZ	14	20	12.0		
		+EPN	19	02	55.5	0.9	1.2
		+EPZ	19	02	57.2	1.0	0.7
	08			NIL			
	09	+EPE	07	47	49.8	0.8	0.3
		-EPZ	07	47	48.7	1.4	2.6
		+EXE	07	48	28.5	0.7	1.2
		+EXN	07	48	28.5	0.7	0.3
		-EXZ	07	48	28.4	0.6	4.0
		+IPE	11	09	54.9	1.5	6.3
		-EPN	11	09	53.0	1.2	0.6
		-IPZ	11	09	54.6	1.6	5.5
		-EPN	18	15	21.8	1.0	1.3
		-IPZ	18	15	21.1	1.1	5.0
		+EPE	21	50	58.8	0.7	1.6
		-EPN	21	50	59.0	0.6	2.5
		-EPZ	21	50	59.0	0.8	2.5
	10	-EPE	08	13	22.4	0.7	2.0
		+EPZ	08	13	24.2	1.4	2.5
		-IPE	17	49	30.0	0.6	1.5
		+EPN	17	49	30.6	0.8	0.5
		IPZ	17	49	30.1		
		+EXE	17	51	26.0	0.8	1.3
		EXN	17	51	26.0		
		-EXZ	17	51	25.0	1.1	2.8
	11	+EPE	03	15	55.6	1.0	1.4
		EPN	03	15	55.7		
		+EPZ	03	15	54.6	1.1	4.1

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JUN 12	+EPE	00	48	02.4	1.1	1.4
	-EPN	00	48	03.2	1.1	0.7
	-EPZ	00	48	02.9	1.1	1.5
	-EPE	08	33	31.8	1.2	1.5
	-EPN	08	33	33.0	1.3	0.9
	+IPZ	08	33	31.0	2.3	4.4
	LP-ISE	08	35	58.1	18.8	12.0
	LP+IPSE	08	37	07.5	15.0	41.0
	LP+SSE	08	42	43.1	16.9	14.0
	+ISE	08	46	04.1	1.4	1.5
	+ISN	08	46	04.5	2.0	1.5
	+ISZ	08	46	05.1	2.5	4.3
	LP-LRE	09	24	15.0	26.3	28.0
13		NIL				
14	LP+IXN	10	39	31.9	14.1	52.0
	+EPE	12	45	56.2	1.6	1.8
	+EPZ	12	45	56.3	1.6	2.1
	LP+EPE	12	45	58.1	15.0	2.0
	LP+EPN	12	45	56.3	22.5	3.0
	-EXN	12	50	22.1	1.8	2.0
	+EXZ	12	50	20.9	2.1	3.6
	LP+ISE	12	56	35.6	15.0	14.5
	LP+ISN	12	56	35.6	15.0	11.5
	LP-PSN	12	57	11.3	20.6	25.5
	LP+PPSE	12	58	37.5	15.0	14.0
	LP-EXE	12	59	22.5	15.0	17.0
15	-EPE	03	40	29.4	1.6	2.0
	-EPN	03	40	31.0	1.0	0.6
	-EPZ	03	40	29.1	1.2	3.6
	+IPE	13	42	56.0	1.5	8.4
	-EPN	13	42	56.1	1.3	1.1
	-IPZ	13	42	56.0	1.7	2.0
16	-IPE	08	10	14.4	1.5	3.5
	EPN	08	10	15.0		
	+IPZ	08	10	14.0	1.8	6.0
	+ESE	08	10	49.9	2.0	6.0
	+ESZ	08	10	49.3	2.0	8.0
17	+EPN	08	58	20.6	1.0	0.5
	+EPZ	08	58	19.9	1.2	0.5
	+IPE	15	24	36.0	2.0	5.8

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JUN 17	+IPN	15	24	36.0	1.9	2.2
	-IPZ	15	24	36.1	1.8	13.1
	LP+EPE	15	24	33.8	13.1	4.5
	LP-SKSE	15	35	15.0	9.4	9.5
	LP+ISE	15	35	54.4	12.2	21.5
	LP+EXE	15	54	09.4	15.0	21.0
	LP+LRE	16	04	06.6	19.7	39.0
	+EPE	23	23	46.8	1.1	0.7
	-EPN	23	23	47.3	1.2	1.5
	-IPZ	23	23	47.5	1.0	4.5
	-EXE	23	25	40.2	1.7	1.5
	EXN	23	25	40.4		
	-EXZ	23	25	40.5	1.2	2.0
	+IPE	23	33	17.0	1.8	4.5
	+IPN	23	33	17.0	1.3	2.0
	+IPZ	23	33	18.0	1.9	3.5
	+ESN	23	46	12.0	2.0	2.3
	+ESZ	23	46	10.0	2.2	2.3
18		NIL				
19	+EPN	09	51	34.6	2.2	4.0
	+EPZ	09	51	35.0	2.5	7.7
20	EPN	23	21	56.0		
	+EPZ	23	21	57.6	2.2	1.7
	LP-PSE	20	33	28.1	22.5	2.5
	LP+PSN	20	33	24.4	24.4	6.0
	LP-SSE	20	38	18.8	18.8	4.0
	LP+SSN	20	38	16.9	22.5	7.0
	LP-LRE	21	07	07.5	21.6	11.5
	LP+LRN	21	07	09.4	20.6	15.0
21	+EPE	10	59	18.3	1.1	1.0
	EPN	10	59	19.3		
	IPZ	10	59	18.2		
	+IXE	11	32	21.8	1.2	4.0
	+EXN	11	32	22.5	1.2	2.5
	IXZ	11	32	21.0		
	-EXE	11	40	55.3	1.3	1.7
	-EXZ	11	40	53.3	2.0	5.5
	+EPN	23	12	55.0	1.1	0.5
	+EPZ	23	12	46.0	1.2	0.7
22-23		NIL				

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JUN 24	-IPE	03	39	58.0	1.4	2.7
	+IPN	03	39	58.0	1.4	2.0
	+IPZ	03	39	57.0	1.8	4.3
	+IPE	09	43	27.0	1.6	3.0
	+EPN	09	43	28.2	1.3	1.0
	+IPZ	09	43	27.0	2.0	6.0
	+ESE	09	47	01.4	1.1	0.6
	+ESN	09	47	01.0	1.1	1.2
	-ISZ	09	47	01.0	2.2	6.0
	LP+EPE	09	53	03.6	11.3	4.0
	LP+IPN	09	53	04.7	11.3	8.5
	LP-LRE	10	08	22.5	22.5	14.0
	LP-LRN	10	08	22.5	20.6	23.0
	+EPE	11	13	21.3	1.2	1.2
	-EPZ	11	13	20.5	2.0	2.0
25	+EPE	10	34	31.6	1.1	0.6
	-EPN	10	34	31.6	1.0	1.0
	+IPZ	10	34	31.4	1.0	2.9
	EPE	10	57	02.5		
	+EPN	10	57	02.0	0.6	0.6
	-EPZ	10	57	02.5	0.8	1.5
26	-IPE	19	00	06.2	0.6	1.6
	+EPN	19	00	06.2	1.0	1.0
	+IPZ	19	00	06.1	1.1	4.5
	+IPE	21	16	05.0	1.1	3.0
	-IPN	21	16	05.0	1.0	3.3
	IPZ	21	16	05.0		
27	+EPE	01	12	37.2	1.3	1.1
	+IPN	01	12	38.0	1.1	0.8
	+IPZ	01	12	37.3	1.6	2.5
	+ESE	01	19	32.8	1.8	2.5
	-ESN	01	19	32.8	2.0	2.0
	+ESZ	01	19	30.8	1.4	1.5
	LP+EPE	02	19	20.6	15.0	5.5
	LP-EPN	02	19	20.6	15.0	2.5
	LP-IXN	02	27	41.3	20.6	11.5
	LP+IXE	02	30	33.8	16.9	36.0
	LP-IXN	02	30	18.8	18.8	13.0
28	NO RECORD					
29	+EPE	04	07	11.3	1.1	0.7
JUN 29	-EPN	04	07	10.5	1.1	0.9
	+IPZ	04	07	11.0	1.1	2.0
	-IPE	14	07	31.0	1.5	2.0
	+IPN	14	07	31.0	1.6	1.7
	-IPZ	14	07	30.9	1.8	4.5
30-01	NIL					
JUL 02	+EPE	04	14	48.0	1.1	1.6
	-EPN	04	14	48.0	1.0	1.1
	+EPZ	04	14	48.0	1.2	2.8
	LP-EPPE	04	19	45.0	15.0	2.0
	LP-ESN	04	25	48.8	15.0	6.0
	LP-IPSE	04	27	31.9	12.2	10.5
	LP-IPSN	04	27	22.5	14.1	10.5
	LP+LRE	04	54	46.9	18.8	25.5
	LP+LRN	04	53	58.1	20.6	14.5
	EPE	08	34	32.8		
	EPN	08	34	33.2		
	+EPZ	08	34	32.8	0.7	1.2
03	+EPE	01	40	36.3	1.4	1.0
	+EPN	01	40	37.1	1.1	1.0
	+EPZ	01	40	36.5	2.2	2.2
	+EXE	01	42	26.8	1.3	1.8
	+EXN	01	42	23.1	1.5	1.6
	+IXZ	01	42	26.8	1.2	3.5
	LP+PPN	01	42	28.1	13.1	2.0
	LP+EXE	01	47	15.0	13.1	3.5
	LP+EXN	01	47	15.0	15.9	6.0
	LP+ISE	01	55	15.0	16.9	12.5
	LP+ISN	01	55	15.0	15.9	13.5
	LP+ISSE	01	58	18.8	15.9	16.5
	LP-ISSN	01	58	18.8	14.1	19.0
	-IPE	03	18	10.7	1.7	3.4
	+IPN	03	18	10.5	1.2	1.7
	+IPZ	03	18	10.0	1.6	7.0
	+EPE	07	15	47.5	1.5	1.8
	-IPN	07	15	47.5	1.8	2.0
	+IPZ	07	15	47.7	1.1	5.1
	+ESE	07	17	27.3	1.9	3.0
	-ESN	07	17	27.6	1.6	2.0
	-ESZ	07	17	28.1	2.4	5.0

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JUL 03	LP EXE	07	17	43.1		
	LP EXN	07	17	46.9		
	LP+EXE	07	22	26.3	13.1	5.5
	LP+EXN	07	22	20.6	14.1	5.5
	-EPE	21	22	27.6	1.5	1.8
	EPN	21	22	27.9		
	-IPZ	21	22	27.5	1.9	4.1
04	+EPE	06	20	39.4	1.6	1.7
	-EPN	06	20	39.5	2.0	1.8
	-EPZ	06	20	38.9	1.7	1.8
	-EPE	16	36	58.9	1.8	4.5
	-IPN	16	36	58.6	1.4	2.5
	-EPZ	16	36	58.9	1.5	4.5
05-06		NIL				
07	+IPE	22	49	42.5	1.3	4.0
	+IPN	22	49	44.0	1.9	0.5
	+IPZ	22	49	43.5	2.0	3.5
08	+EPN	08	24	30.0	2.0	0.7
	+EPZ	08	24	27.0	2.0	1.1
09	+EPN	00	03	27.0	0.8	1.0
	+EPZ	00	03	27.9	1.0	1.0
	+EPN	01	57	54.8	1.1	0.9
	+EPZ	01	57	55.0	1.8	1.5
	+EPN	02	26	32.8	1.1	0.8
	-IPZ	02	26	33.0	1.0	2.5
10	-EPE	02	56	08.3	1.0	1.0
	+EPN	02	56	08.4	1.1	1.2
	+IPZ	02	56	08.5	0.9	0.5
	-EPN	05	25	22.1	1.8	1.8
	+EPZ	05	25	23.2	1.5	2.2
11	-IPE	12	29	02.2	0.9	7.0
	+IPN	12	29	02.2	1.3	2.2
	-IPZ	12	29	02.2	2.0	7.0
	+EXE	12	31	16.0	1.0	1.1
	EXN	12	31	15.9		
	+IXZ	12	31	14.5	1.2	1.2
12	+EPE	17	19	39.8	1.3	2.2
	+IPN	17	19	39.9	1.6	3.3
	+IPZ	17	19	39.8	2.0	2.2
13	+EPE	14	35	11.0	1.5	4.0
13	+EPN	14	35	10.8	1.0	1.3
	+EPZ	14	35	11.0	1.0	1.6
14	+EPE	20	30	56.5	1.3	1.6
	+IPN	20	30	56.9	1.0	1.6
	+EPZ	20	30	56.9	1.2	3.5
15-16		NIL				
17	-EPE	00	17	40.1	1.5	2.8
	+EPN	00	17	40.9	1.0	1.5
	+EPZ	00	17	41.9	1.2	2.8
	+IPE	00	21	10.0	0.8	1.1
	+IPN	00	21	10.5	1.0	2.1
	+IPZ	00	21	10.0	1.0	5.5
	EPE	10	55	44.4		
	EPN	10	55	44.4		
	EPZ	10	55	44.6		
	-IPE	13	38	55.0	1.9	7.3
	+IPN	13	38	55.0	1.8	7.0
	IPZ	13	38	54.9		
	+ESE	13	48	54.2	2.2	2.1
	+ESN	13	48	55.0	2.5	1.8
	-ESZ	13	48	56.2	1.8	3.6
	LP-ISE	13	49	01.9	12.2	18.0
	LP+ISN	13	49	00.0	11.3	10.5
	LP+IPSE	13	49	31.9	9.4	7.5
	LP+IPSN	13	49	33.8	11.3	8.5
18		NIL				
19	+IPN	14	37	08.2	1.2	1.9
	+EPZ	14	37	08.1	1.2	1.5
20		NIL				
21	-IPE	11	09	07.0	1.0	2.0
	-EPN	11	09	07.2	0.8	0.6
	-IPZ	11	09	07.0	1.0	3.5
22	-IPE	12	05	03.0	1.7	2.0
	-IPN	12	05	02.0	1.2	1.0
	+IPZ	12	05	01.5	1.1	1.6
	LP+EPE	12	15	39.4	16.9	5.5
	LP EPN	12	15	39.4		
	LP-LRE	12	43	52.5	20.6	11.0
	LP-LRN	12	43	05.6	21.6	8.0
23	+EPE	14	56	58.0	1.4	1.9

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
JUL 23	EPN	14	56	58.0		
	+IPZ	14	56	58.1	2.8	4.0
	-EXE	15	01	18.8	2.0	4.1
	+EXZ	15	01	19.5	2.2	8.1
24	+EPE	11	18	44.0	1.1	0.5
	+EPZ	11	18	45.1	1.8	1.9
	-EPE	19	58	06.4	1.3	1.4
	+EPN	19	58	06.0	1.3	0.7
	+EPZ	19	58	06.1	1.2	1.2
	LP-EPE	14	57	05.6	15.0	3.0
	LP EPN	14	57	03.6		
	LP+IPPE	15	01	24.4	15.0	13.1
	LP+EPPN	15	01	24.4	22.5	8.5
	LP-ISN	15	09	09.4	17.8	24.0
	LP-IPSE	15	10	56.3	17.8	81.0
	LP-IPSN	15	10	57.2	13.1	34.0
	LP-PPSE	15	11	58.1	15.0	69.0
	LP-PPSN	15	11	55.3	15.0	37.0
	LP-ISSE	15	16	45.0	15.9	57.0
	LP+ESE	20	08	34.7	14.1	7.0
	LP+ESN	20	08	35.6	15.0	7.0
	LP-IXN	20	25	50.6	22.5	17.0
	LP-EXN	20	28	24.4	20.6	14.0
	LP-LRE	20	31	35.6	18.8	22.0
25			NIL			
26	+EPE	12	32	23.8	1.1	1.0
	-EPN	12	32	23.1	1.1	1.0
	+IPZ	12	32	23.6	1.0	3.5
	+IPE	20	10	22.2	1.2	1.5
	+IPZ	20	10	22.0	1.5	3.9
27-30			NIL			
31	+IPE	11	46	16.6	1.0	2.5
	-IPN	11	46	17.0	0.8	1.5
	IPZ	11	46	16.5		
	+IPE	17	13	15.4	1.4	1.7
	+EPN	17	13	15.0	1.0	1.0
	+IPZ	17	13	15.0	1.1	4.0
AUG 01-02			NIL			
03	+IPE	01	22	02.9	1.5	3.2
	+IPN	01	22	02.9	1.4	1.7

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
AUG 03	+IPZ	01	22	03.0	1.5	8.0
	+IPE	12	54	14.3	1.8	5.8
	-IPN	12	54	14.6	1.6	3.2
	+IPZ	12	54	14.2	2.0	16.0
	+IPE	18	23	38.5	1.0	2.9
	+IPN	18	23	38.8	1.2	2.0
	IPZ	18	23	38.5		
	LP+EPE	18	23	01.9	11.3	4.5
	LP+EPN	18	23	01.9	10.3	6.0
	+ESE	18	32	54.7	2.0	5.3
	+ESN	18	32	55.0	3.0	12.3
	-ESZ	18	32	56.4	2.5	5.5
	LP+ISE	18	31	58.1	11.3	76.0
	LP+ISN	18	31	58.1	9.4	16.5
	LP+EPSE	18	32	31.9	11.3	38.0
	LP-IPSN	18	32	31.9	15.0	52.0
	-EXE	18	51	17.5	2.0	2.4
	+EXN	18	51	15.2	1.5	0.6
	+EXZ	18	51	16.9	1.5	2.8
	+EPN	23	39	35.4	1.3	0.8
	+EPZ	23	39	34.7	2.5	2.6
	LP+EPE	23	49	41.3	11.3	4.5
	LP+EPN	23	49	31.9	11.3	8.0
04	+EPN	01	31	12.8	1.2	0.6
	+EPZ	01	31	11.0	1.2	2.0
	+EPE	14	20	09.2	1.9	1.5
	-EPN	14	20	09.9	1.3	1.1
	+EPZ	14	20	10.1	2.2	3.0
05	+EPE	06	50	20.0	0.6	1.5
	+EPN	06	50	20.0	0.6	0.6
	+IPZ	06	50	19.6	0.8	1.9
	-EPE	06	56	04.4	4.0	4.2
	-EPN	06	56	06.9	1.2	1.5
	+EPZ	06	56	05.2	1.8	1.6
	LP+ESE	06	56	09.4	9.4	4.5
	LP+ESN	06	56	13.1	11.3	4.5
	LP+LRE	07	00	30.0	18.8	14.0
	LP-LRN	07	00	28.1	22.5	20.0
	-EPE	15	59	29.0	0.8	1.6
	+EPN	15	59	29.5	1.5	2.3

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
AUG	05	IPZ	15	59	29.0		
		+EPE	19	03	58.0	0.9	0.9
		-EPZ	19	03	57.3	1.2	1.5
	06			NIL			
	07	+EPN	01	00	04.0	2.0	1.3
		+EPZ	01	00	03.9	2.0	2.5
		+IPE	07	59	17.8	2.0	4.5
		-IPN	07	59	17.9	1.6	2.4
		+IPZ	07	59	17.9	2.2	13.0
		+EPE	09	42	40.9	1.2	1.3
		+IPN	09	42	40.0	1.4	0.8
		+IPZ	09	42	39.8	1.8	3.0
		-EPE	13	22	34.0	1.0	1.1
		+EPN	13	22	34.0	0.9	0.7
		+EPZ	13	22	33.5	1.1	1.8
	08			NIL			
	09	+EPE	12	27	45.0	1.1	0.6
		+EPZ	12	27	46.1	1.0	1.6
		+EPE	15	48	20.1	1.6	2.9
		+EPN	15	48	19.8	1.3	0.7
		+IPZ	15	48	20.0	1.8	7.0
		+IPE	18	19	39.0	1.1	2.1
		+EPN	18	19	38.8	1.1	0.6
		IPZ	18	19	38.8		
		+EPE	20	52	13.4	1.5	2.1
		+EPN	20	52	12.6	1.5	1.0
		+EPZ	20	52	13.2	1.7	4.5
	10	+EPE	08	19	29.9	1.2	1.5
		+EPN	08	19	28.5	0.9	0.5
		-IPZ	08	19	29.2	1.8	4.0
		+EPE	17	02	00.0	1.0	2.5
		+EPN	17	02	00.3	1.1	0.7
		-IPZ	17	02	00.0	1.0	3.0
		LP-ESE	17	08	45.0	18.8	10.5
		LP-EXE	17	15	20.6	28.1	11.0
		-EPE	20	20	13.7	2.0	2.0
		+EPN	20	20	13.7	2.0	1.3
		-IPZ	20	20	13.6	2.3	6.6
		+EPE	21	54	08.5	0.8	0.9
		EPN	21	54	08.5		

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
AUG	10	EPZ	21	54	07.8		
	11			NIL			
	12	+EPE	14	27	04.4	2.0	3.0
		-EPN	14	27	05.0	1.4	0.6
		+EPZ	14	27	05.0	1.1	0.5
	13	-EPE	21	05	48.8	1.2	2.5
		+IPN	21	05	49.0	1.0	2.2
		IPZ	21	05	49.0		
		+EPE	23	14	26.4	1.0	1.1
		-EPZ	23	14	24.3	0.8	1.1
	14	+IPE	06	59	42.0	1.4	5.0
		+EPN	06	59	41.9	1.3	1.5
		IPZ	06	59	42.0		
		LP-ESE	07	04	28.1	15.0	3.5
		LP-ESN	07	04	28.1	9.4	2.0
		LP-EXE	07	08	22.5	20.6	6.0
		LP-EXN	07	08	22.5	18.8	7.5
		-IPE	19	05	50.4	1.4	4.0
		+EPN	19	05	51.5	1.2	1.0
		+EPZ	19	05	49.0	2.0	2.0
	15	+IPE	12	04	21.4	1.6	2.0
		+EPN	12	04	21.7	2.2	1.5
		-IPZ	12	04	21.2	1.6	4.0
		+IPE	12	49	03.7	1.6	12.5
		-IPN	12	49	03.7	1.6	12.5
		IPZ	12	49	03.8		
		LP-EPE	12	49	07.5	11.3	4.0
		LP+EPN	12	49	05.6	11.3	6.0
		-IXE	12	58	04.3	1.8	2.9
		+IXN	12	58	04.2	1.4	2.0
		-IXZ	12	58	04.2	1.2	4.5
		+ISE	12	58	46.0	2.0	5.5
		-ISN	12	58	44.0	1.6	3.0
		ESZ	12	58	46.6		
		LP+ISE	12	58	45.0	10.3	21.0
		LP+ISN	12	58	46.9	13.1	12.0
		LP+IPSN	12	59	18.8	11.3	14.0
		LP+LRE	13	19	52.5	24.4	41.0
		LP-LRN	13	19	52.5	22.5	23.0
		+EPN	16	22	28.0	0.9	0.9

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
AUG	15	+EPZ	16	22	27.6	1.7	1.5
		+EPE	17	23	12.1	1.1	1.4
		-EPZ	17	23	11.9	1.3	1.9
	16	-EPN	02	58	37.5	2.2	2.2
		+EPZ	02	58	36.0	2.0	1.3
	17	-IPE	08	43	52.9	1.5	5.3
		IPN	08	43	52.0		
		IPZ	08	43	52.9		
		-IPN	09	04	37.0	1.1	1.8
		+IPZ	09	04	37.1	1.5	5.5
		+EPE	20	16	58.0	0.8	1.5
		-EPN	20	16	58.2	0.6	0.6
		+IPZ	20	16	57.7	1.2	2.5
	18	EPE	15	55	04.3		
		-EPZ	15	55	06.0	1.8	3.3
		EPN	19	12	20.9		
		-EPZ	19	12	20.0	0.8	1.0
		+EXN	19	13	33.3	1.2	1.5
		-EXZ	19	13	33.0	0.6	1.0
	19	-EPZ	17	02	40.8	1.0	2.0
	20	+EPZ	19	26	57.1	0.7	0.5
		-EPZ	20	39	48.5	1.0	1.0
	21	+IPZ	00	39	17.4	1.2	5.0
		LP-IPE	22	09	56.3	15.0	22.0
		LP+IPN	22	09	56.3	15.0	32.0
		LP-ISE	22	14	01.9	15.9	75.0
		LP-ISN	22	14	01.9	16.9	92.0
	22	NO RECORD					
	23	+EPZ	00	57	36.6	1.4	1.2
		LP+EPE	01	03	43.1	15.0	3.0
		LP+EPN	01	03	41.3	15.0	4.0
		+EXE	01	07	57.9	1.1	0.5
		+EXZ	01	07	57.5	1.1	0.6
		-EPE	02	55	47.0	0.9	0.6
		-EPZ	02	55	46.0	0.8	0.7
		-EXE	06	17	26.4	1.1	0.9
		+EXZ	06	17	29.0	1.3	0.6
		LP+ESE	11	51	28.1	15.0	13.0
		+EPE	20	18	58.7	1.0	1.0
		+IPZ	20	18	58.9	1.0	4.0

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
AUG	24		NIL				
	25	+IPE	10	12	35.0	0.9	1.5
		+IPZ	10	12	34.9	1.0	4.0
	26	+EPE	11	47	17.9	1.5	1.4
		IPZ	11	47	17.8		
		+EPE	13	32	45.0	1.4	1.5
		+EPN	13	32	45.0	1.5	3.3
		-EPZ	13	32	46.2	1.5	4.0
	27	+EPN	04	12	58.8	0.7	0.5
		+IPZ	04	12	58.3	1.0	1.5
	28	-EPE	08	13	48.2	1.2	1.1
		+EPN	08	13	48.2	1.2	1.2
		-EPZ	08	13	48.2	1.9	2.2
		LP+EXE	08	35	52.5	15.9	6.0
	29	-EPE	02	56	04.6	0.6	1.0
		+EPN	02	56	05.6	0.7	1.1
		+IPZ	02	56	04.1	1.0	6.0
	30	-EPE	05	20	57.0	1.0	0.8
		EPN	05	20	58.0		
		+EPE	13	39	21.7	1.1	1.0
		+EPN	13	39	22.1	1.1	0.7
		+IPZ	13	39	21.5	1.6	3.0
	31	+EPE	10	21	28.5	1.2	2.0
		+IPZ	10	21	29.0	1.5	3.4
		+EPN	21	41	39.0	0.7	0.8
		-IPZ	21	41	41.0	1.1	2.0
SEP	01	-EPN	06	11	48.9	1.0	0.5
		-EPZ	06	11	48.0	2.0	2.1
		+EPN	07	26	30.2	0.8	0.6
		+EPZ	07	26	31.0	1.2	1.5
		-IXN	07	26	42.0	1.5	10.0
		IXZ	07	26	41.0		
		+IPN	04	29	24.5	1.3	4.3
		IPZ	04	29	23.0		
		LP+ESE	04	39	52.5	16.9	8.0
		LP+ESN	04	39	54.4	9.4	4.5
		LP-LRE	05	04	35.6	18.8	9.0
		LP-LRN	05	04	18.8	18.8	5.0
		-EPN	10	09	10.0	1.1	0.6
		-EPZ	10	09	09.0	1.2	1.5

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
SEP	01	LP-ESN	10	20	15.0	15.0	4.5
		LP+LRE	10	50	56.3	16.9	11.5
		LP+LRN	10	50	16.9	16.9	6.0
		+EPN	22	38	14.1	0.9	0.9
		+IPZ	22	38	14.1	1.6	3.0
		LP+IPE	22	38	16.9	15.0	8.0
		LP-EPN	22	38	16.9	13.1	2.5
		EXN	22	41	58.0		
		+EXZ	22	41	55.9	1.5	2.6
		LP-ISE	22	42	13.1	11.3	12.0
		LP-ISN	22	42	11.3	9.4	15.0
		LP-LRN	22	43	54.4	15.0	14.0
	02		NIL				
	03	EPN	07	50	44.0		
		-IPZ	07	50	44.0	1.3	4.0
		+EPN	22	37	37.0	1.4	1.2
		+EPZ	22	37	37.0	1.4	0.7
	04		NIL				
	05	+EPN	01	59	10.5	1.1	0.4
		-EPZ	01	59	10.1	1.1	1.5
	06	+EPE	04	14	23.6	1.1	1.0
		+EPN	04	14	22.8	1.1	0.5
		-IPZ	04	14	22.8	1.8	3.0
		LP-ESE	04	24	46.9	15.0	6.0
		LP-ESN	04	24	46.9	13.1	7.5
		LP+LRE	04	49	41.3	16.9	20.0
		+EPE	08	34	06.5	1.1	0.6
		+EPN	08	34	08.0	1.0	0.5
		-EPZ	08	34	08.0	1.0	2.0
		+IPE	11	20	22.0	1.1	16.0
		-IPN	11	20	22.0	2.0	9.1
		EPZ	11	20	21.8		
		LP-EPE	11	20	22.5	9.4	3.0
		LP+EPN	11	20	22.5		
		LP+SCSE	11	30	37.5	12.2	8.0
		LP-SCSN	11	30	37.5	13.1	6.0
		LP-ISE	11	30	58.1	13.1	31.0
		LP-ISN	11	30	58.1	12.2	23.0
		LP+IPSE	11	32	01.9	14.1	25.0
		LP-EPSN	11	32	01.9	12.2	9.0

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
SEP	06	LP-PPSE	11	33	28.1	15.0	24.0
		LP+PPSN	11	33	28.1	11.3	10.0
		LP-LRE	11	57	41.3	17.8	17.0
		LP-LRN	11	57	18.8	16.9	9.0
		EPE	15	36	45.5		
		+EPN	15	36	45.6	1.2	0.8
		+EPZ	15	36	45.9	0.5	0.5
	07		NIL				
	08	+IPE	06	15	35.0	1.4	1.4
		+IPN	06	15	35.4	1.4	1.5
		+IPZ	06	15	35.0	1.5	4.3
		+IPZ	12	41	49.7	0.8	1.8
		+EPE	21	16	16.8	1.1	0.6
		+EPN	21	16	15.6	0.8	0.4
		+EPZ	21	16	14.4	1.2	0.6
		+IPE	23	08	48.8	1.6	8.4
		-IPN	23	08	48.8	1.0	9.0
		IPZ	23	08	48.4		
	09	-EPE	12	55	19.0	1.2	1.3
		+EPN	12	55	19.6	1.6	0.9
		-IPZ	12	55	19.0	2.2	2.0
	10	+EPN	21	47	16.5	1.0	0.6
		+IPZ	21	47	16.0	1.0	1.0
		+EPE	23	44	04.0	1.4	1.5
		+EPN	23	44	02.8	1.0	0.6
		-IPZ	23	44	04.0	2.2	3.1
	11	EPE	07	59	29.2		
		+EPZ	07	59	27.8	0.9	1.6
		EPN	17	59	01.0		
		+EPZ	17	59	03.0	1.0	1.3
	12	LP+LRE	06	55	41.3	19.7	10.0
		LP-LRN	06	55	18.8	20.6	11.5
	13	-EPE	18	10	29.0	1.1	1.5
		-EPN	18	10	28.2	1.8	1.2
		-IPZ	18	10	29.0	1.6	3.0
		EPE	19	08	55.8		
		-EPN	19	08	56.2	0.6	1.0
		+EPZ	19	08	55.8	0.5	1.0
		EPE	20	51	18.5		
		+EPN	20	51	18.0	1.0	0.6

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
SEP 13	-EPZ	20	51	18.9	1.1	1.9
14	+EPE	00	37	49.9	1.2	1.1
	+EPN	00	37	46.0	1.3	1.1
	-EPZ	00	37	45.5	2.0	1.6
15	-EPE	02	13	58.7	1.0	1.1
	+IPN	02	13	58.1	1.0	1.7
	+IPZ	02	13	58.0	1.2	3.8
	-EPE	02	25	56.9	1.1	1.1
	+IPN	02	25	54.8	0.9	0.7
	+IPZ	02	25	54.9	1.2	3.0
	+IPE	09	10	23.5	1.0	1.0
	+EPN	09	10	23.6	0.8	0.5
	+IPZ	09	10	23.0	1.5	3.5
	-IPE	11	58	50.3	2.0	2.1
	-EPN	11	58	51.0	1.5	1.0
	-IPZ	11	58	50.5	1.0	12.0
16	-EPE	15	49	58.1	1.1	1.0
	EPN	15	49	58.5		
	+IPZ	15	49	58.0	3.2	9.0
	+EXE	15	53	56.8	1.7	2.0
	+EXN	15	53	56.3	2.7	3.5
	+EXZ	15	53	56.0	2.5	8.2
	LP-PPE	15	54	31.9	11.3	3.5
	LP-PPN	15	54	31.9	12.2	7.0
	LP-SKSN	16	00	33.8	17.8	32.5
	LP+ISE	16	01	56.3	17.8	54.0
	LP-IPSN	16	02	21.6	12.2	25.0
	LP-PPSE	16	03	58.1	15.0	18.0
	LP+PPSN	16	03	30.0	18.8	42.0
	LP+ISSN	16	09	09.4	21.6	56.0
	LP+LRE	16	30	35.6	19.7	90.0
	LP+LRN	16	30	39.4	19.7	84.0
	+EPN	23	50	06.3	1.1	0.8
	+IPZ	23	50	05.8	1.4	3.1
	+ISN	23	51	02.0	1.8	3.2
	ISZ	23	51	00.0		
17			NIL			
18	-EPN	01	52	12.6	0.7	0.5
	+EPZ	01	52	12.6	1.2	1.6
	+EPN	03	24	14.2	0.7	0.8

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
SEP 18	+EPZ	03	24	13.8	1.0	1.0
	EPN	08	30	07.8		
	+EPZ	08	30	05.3	1.3	2.7
19	-EPN	00	07	04.3	1.0	0.8
	-EPZ	00	07	05.0	1.0	1.5
	LP+LRE	00	22	50.6	16.9	3.0
	+IPN	01	51	42.5	2.1	3.1
	+IPZ	01	51	42.0	3.0	3.0
	EPE	01	51	42.3		
20			NIL			
21	-IPE	06	30	56.0	1.8	3.5
	-EPN	06	30	56.0	2.0	0.6
	-IPZ	06	30	56.0	1.8	9.0
22	-IPE	07	11	10.5	1.1	3.0
	+IPN	07	11	10.1	1.1	1.4
	IPZ	07	11	10.5		
23	-EPN	05	32	49.5	0.9	1.0
	+IPZ	05	32	48.3	1.0	4.0
	+IPE	16	44	47.0	1.2	6.5
	-IPN	16	44	47.2	2.2	7.5
	IPZ	16	44	46.9		
	LP EPE	16	44	46.9		
	LP EPN	16	44	46.9		
	+ESE	16	54	59.7	1.0	1.5
	+ISN	16	54	59.0	1.0	2.5
	+ISZ	16	54	59.5	1.6	1.5
	LP+ESE	16	55	18.8	15.0	11.0
	LP+ESN	16	55	18.8	10.3	4.5
	LP-PSE	16	56	48.8	12.2	19.0
	LP-PPSE	16	57	52.5	15.0	13.0
24	-IPE	02	04	29.0	1.0	2.5
	+IPN	02	04	29.1	1.0	1.4
	+IPZ	02	04	28.9	1.2	6.5
	-EPE	05	07	37.6	1.1	1.0
	+EPN	05	07	37.5	1.0	0.6
	+EPZ	05	07	37.0	1.8	2.5
	+EPE	07	55	45.8	1.0	0.5
	+EPZ	07	55	45.8	1.0	1.5
	+IPE	09	08	36.2	1.5	1.9
	-EPN	09	08	36.8	0.9	1.5

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
SEP 24	-IPZ	09	08	36.3	1.5	4.5
25	-IPE	23	01	35.0	2.0	3.6
	+IPN	23	01	35.0	1.8	2.0
	+IPZ	23	01	34.2	1.8	1.5
26	-EXE	00	53	49.6	1.8	2.5
	+EXN	00	53	49.5	1.4	1.4
	+EXZ	00	53	49.0	1.7	4.1
	-EPE	02	16	18.2	0.9	1.6
	-EPN	02	16	16.9	0.6	0.8
	+IPZ	02	16	18.0	0.8	1.5
	-EXE	12	18	51.5	0.6	1.4
	-EXN	12	18	51.3	0.6	2.1
	+EXZ	12	18	51.3	0.5	1.5
	-EPE	14	10	18.8	1.2	2.5
	+EPN	14	10	19.8	1.0	0.5
	-EPZ	14	10	17.7	1.3	4.0
27	-EPE	02	24	29.7	1.2	0.8
	+IPN	02	24	30.0	1.2	1.0
	-IPZ	02	24	29.8	1.2	4.0
	+EPE	12	24	07.2	0.4	0.7
	+EPN	12	24	07.5	0.9	1.0
	-IPZ	12	24	07.3	0.5	3.0
	+IPE	17	19	40.1	1.1	0.9
	+IPN	17	19	40.0	1.4	1.3
	+IPZ	17	19	39.6	1.4	3.0
	-EPE	17	39	29.7	0.8	1.5
	EPN	17	39	31.1		
	+EPZ	17	39	30.5	1.1	1.1
	-EXE	17	39	36.0	2.0	6.6
	+IXN	17	39	40.0	1.8	7.5
	+IXZ	17	39	39.8	2.2	16.0
28	+EPN	10	43	50.0	1.5	1.0
	+EPZ	10	43	49.5	1.1	1.1
	+IPN	00	44	09.8	1.0	1.1
	-EPZ	00	44	10.0	0.5	0.9
29-30			NIL			
OCT 01	-EPE	13	37	07.0	1.1	1.0
	+EPZ	13	37	06.0	2.0	2.3
02	+IPE	06	58	49.3	1.5	3.0
	+IPN	06	58	49.0	1.1	1.1

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
OCT 02	-IPZ	06	58	49.0	1.0	7.0
03			NIL			
04	-EPE	17	02	31.8	0.7	0.8
	+IPN	17	02	31.1	1.2	1.5
	+IPZ	17	02	30.8	1.6	4.0
	+EPE	20	15	09.3	1.3	0.8
	EPN	20	15	07.8		
	-EPZ	20	15	08.5	1.2	2.0
05	-EPE	08	54	13.5	0.8	0.5
	+EPZ	08	54	13.2	1.1	0.5
	+EPE	22	56	10.3	1.1	0.5
	-EPN	22	56	11.5	0.8	0.5
	+EPZ	22	56	10.3	1.5	2.0
06			NIL			
07	-EPE	08	29	15.8	0.8	0.8
	+EPN	08	29	15.9	0.8	1.0
	-EPZ	08	29	15.5	1.2	3.0
	+EPE	09	34	12.4	0.9	0.4
	EPN	09	34	12.0		
	+EPZ	09	34	12.5	1.5	1.0
08-10			NIL			
11	-EPE	00	00	50.0	1.5	1.4
	EPN	00	00	51.4		
	-IPZ	00	00	50.5	1.2	2.6
	-EPE	02	07	56.8	1.5	2.5
	+EPN	02	07	56.5	1.2	0.9
	+IPZ	02	07	56.1	1.2	4.0
12			NIL			
13	-EPE	03	30	43.4	0.6	0.5
	EPN	03	30	43.0		
	+EPZ	03	30	41.9	2.0	1.0
	-EPE	11	10	59.2	1.1	2.0
	EPN	11	10	59.2		
	-EPZ	11	10	59.5	1.4	1.0
	-IPE	12	26	01.1	1.3	4.1
	+IPN	12	26	01.1	1.0	4.5
	IPZ	12	26	00.5		
14	-IPE	13	56	01.1	1.3	4.1
	+IPN	13	56	01.1	1.0	4.5
	IPZ	13	56	00.5		

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
OCT 14	+IPE	22	09	16.3	1.3	1.5
	+IPN	22	09	16.8	1.3	0.7
	+IPZ	22	09	16.0	1.5	3.1
15	+EPE	04	49	03.3	1.2	1.1
	EPN	04	49	03.0		
	+IPZ	04	49	03.2	1.0	1.5
16	+IPE	17	15	15.8	1.2	0.7
	EPZ	17	15	15.0		
17	+IPE	00	07	13.2	1.2	2.0
	-IPN	00	07	13.2	1.3	1.7
	+IPZ	00	07	13.3	1.5	6.0
	EPE	23	08	19.8		
	-EPN	23	08	19.0	1.1	1.0
	-EPZ	23	08	18.7	1.2	2.0
18	+EPE	00	57	11.6	1.1	1.5
	+IPN	00	57	12.0	0.8	1.1
	+IPZ	00	57	12.0	1.0	2.5
	+EPN	09	57	30.5	1.0	0.6
	+EPZ	09	57	31.5	1.2	2.5
19	+IPE	01	51	49.9	1.8	1.5
	+IPN	01	51	50.0	1.3	0.6
	+IPZ	01	51	49.6	2.0	3.6
	+ESE	01	52	37.8	1.7	1.4
	+ESN	01	52	38.0	1.8	0.8
	+ESZ	01	52	37.5	1.1	2.5
	+EPE	05	57	12.0	0.8	0.5
	-EPN	05	57	14.2	0.6	0.5
	-EPZ	05	57	13.4	1.2	1.5
	+EPE	13	20	36.5	1.2	2.0
	+IPN	13	20	35.5	0.7	0.5
	-IPZ	13	20	35.5	0.6	1.6
	-EPE	20	58	05.7	1.1	1.0
	+EPN	20	58	05.6	1.1	0.7
	+IPZ	20	58	05.0	1.0	1.7
	EPE	22	17	09.3		
	EPN	22	17	09.5		
	+EPZ	22	17	09.0	1.1	1.0
20-21			NIL			
22	+EPE	19	54	47.5	1.5	1.0
	-EPN	19	54	47.5	0.8	1.0
OCT 22	+EPZ	19	54	47.1	1.2	2.2
23	+EPE	11	35	51.0	1.2	1.0
	-EPN	11	35	49.8	1.5	1.0
	+EPZ	11	35	49.9	2.0	3.0
	-IPE	22	05	05.5	1.0	2.0
	-IPN	22	05	05.0	1.1	1.5
	+IPZ	22	05	05.1	1.0	3.0
24			NIL			
25	-IPE	01	47	30.5	1.0	1.0
	+IPN	01	47	29.2	1.4	0.7
	+IPZ	01	47	30.6	1.0	4.0
26			NIL			
27	+EPE	06	36	37.7	0.7	0.9
	+IPN	06	36	37.8	1.0	1.0
	+IPZ	06	36	37.8	1.0	4.0
	EPE	10	17	59.9		
	IPN	10	17	59.1	1.0	4.0
	IPZ	10	17	59.0		
28	+IPE	16	49	39.4	1.3	4.8
	+IPN	16	49	40.0	1.0	0.8
	IPZ	16	49	39.0		
29	+IPE	04	19	12.0	1.2	2.1
	+IPN	04	19	12.5	0.9	1.0
	+IPZ	04	19	12.0	1.6	6.0
30	LP-LRN	19	27	30.0	18.8	4.0
	LP+LRE	19	27	13.1	17.8	8.0
31	-EPE	17	06	53.9	1.2	1.1
	+EPN	17	06	53.9	1.3	1.5
	+EPZ	17	06	53.5	1.2	2.5
	LP+ESE	17	17	01.9	15.0	3.0
	LP+ESN	17	17	00.0	11.3	5.5
	LP+LRE	17	42	43.1	16.9	8.0
	LP+LRN	17	42	01.9	18.8	4.5
NOV 01	+EPE	20	07	10.4	1.0	0.7
	+EPN	20	07	11.0	1.2	0.6
	+EPZ	20	07	10.0	1.0	1.3
	LP-ESN	20	13	43.1	13.1	4.0
	LP-LRE	20	49	30.0	18.8	10.5
	LP+LRN	20	49	13.1	17.8	14.0
	EPE	23	54	13.3		

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
NOV	01	+EPN	23	54	13.5	0.5	0.9
		+EPZ	23	54	14.9	0.5	3.0
	02	-EPE	05	41	11.8	1.2	0.8
		-IPN	05	41	10.0	1.0	0.6
		+IPZ	05	41	10.0	1.4	4.0
	03	+EPE	00	19	31.5	0.8	0.3
		+EPN	00	19	33.2	0.8	0.4
		+IPE	03	27	22.5	0.6	0.7
		+IPZ	03	27	22.2	0.8	1.1
		LP+ESE	03	32	18.8	16.9	4.5
		LP ESN	03	32	18.8		
		LP-LRN	03	37	30.0	15.0	4.0
	04	+EPE	05	24	56.0	1.1	0.7
		+EPN	05	24	57.0	0.7	0.8
		+IPZ	05	24	55.0	0.8	3.0
		-EPE	09	22	11.9	0.6	0.6
		-EPN	09	22	11.7	1.1	1.1
		-IPZ	09	22	11.1	1.6	2.5
		+EPE	13	23	49.6	1.5	1.3
		+EPN	13	23	50.4	1.0	1.0
		+EPZ	13	23	50.1	1.0	1.7
		+EPE	22	42	23.5	1.2	0.5
		+EPN	22	42	23.6	1.2	0.5
		+IPZ	22	42	23.0	2.0	1.5
		LP+EPE	22	42	45.0	13.1	2.5
		LP EPN	22	42	46.9		
		LP+ISE	22	53	13.1	12.2	33.0
		LP+IPSE	22	53	45.0	14.1	48.0
		LP+IPSN	22	53	45.0	13.1	38.0
		+EXE	22	59	19.5	1.1	0.8
		+EXN	22	59	20.0	1.1	0.3
		+EXZ	22	59	18.1	1.5	0.6
		-IXE	23	04	55.8	1.9	3.3
		+IXN	23	04	55.5	1.3	1.5
		-IXZ	23	04	55.6	1.6	9.0
		+IXE	23	15	27.2	3.5	4.6
		+IXN	23	15	26.9	3.3	3.6
		+IXZ	23	15	26.8	2.0	1.6
	05	+IPE	04	10	03.0	1.2	0.8
		+EPN	04	10	03.4	1.2	0.5

DATE		PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
NOV	05	-IPZ	04	10	05.2	1.6	2.5
		LP+EPE	04	20	41.3	12.2	3.0
		LP+LRE	04	49	03.6	17.8	5.0
		+EPE	09	37	30.0	1.1	1.0
		-EPN	09	37	30.0	0.6	0.5
		+IPZ	09	37	31.5	1.2	4.2
		+EPE	22	15	11.5	1.8	1.8
		+IPN	22	15	12.5	1.0	1.0
		+IPZ	22	15	11.5	2.0	6.0
		LP-EPE	22	15	15.0	15.9	4.0
		LP EPN	22	15	15.0		
		LP-ISE	22	25	43.1	15.0	41.0
		LP-ISN	22	25	43.1	12.2	11.5
		LP-IPSE	22	26	09.4	14.1	95.0
		LP-ISPN	22	26	09.4	16.9	56.0
		LP+SSE	22	32	13.1	13.1	24.0
		LP+EXE	22	52	48.8	18.8	68.0
		LP-EXN	22	52	11.3	16.9	38.0
	06				NIL		
	07	+EPE	17	17	02.8	1.2	0.8
		+EPN	17	17	03.2	1.1	0.5
		-EPZ	17	17	02.0	1.2	1.0
		LP-ESE	17	28	28.1	13.1	2.5
		LP-ESN	17	28	24.4	11.3	1.5
		LP+LRE	17	47	43.1	18.8	6.0
	08	-IPE	12	38	29.8	1.4	4.0
		+IPN	12	38	29.0	1.8	1.2
		IPZ	12	38	29.0		
	09	+IPE	20	33	15.0	1.2	1.8
		+EPN	20	33	16.0	1.6	0.7
		+IPZ	20	33	15.2	1.5	2.5
	10	+EXE	13	48	32.3	3.1	2.5
		+EXN	13	48	31.5	3.0	2.0
		+EXZ	13	48	31.7	2.7	1.8
		+IPE	14	08	02.0	1.6	2.0
		-IPN	14	08	02.2	1.0	0.8
		+IPZ	14	08	02.0	1.2	5.0
	11	+EPE	04	40	59.0	0.8	0.8
		EPN	04	40	59.9		
		EPZ	04	40	59.9		

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
NOV 12	+IPE	21	42	57.0	1.8	8.0
	-IPN	21	42	57.0	1.3	2.0
	-IPZ	21	42	57.0		
	LP EPE	21	42	56.3		
	-ISE	21	47	22.5	2.0	3.0
	+ESN	21	47	19.6	2.5	2.0
	+ISZ	21	47	21.8	2.6	5.3
	LP+ISE	21	47	22.5	12.2	16.0
	LP+ISN	21	47	22.5	11.3	34.0
	LP+LRN	21	49	13.1	15.0	14.0
13			NIL			
14	+IPE	05	25	33.3	1.5	1.5
	-EPN	05	25	33.1	1.4	1.1
	+IPZ	05	25	33.3	1.6	5.5
	-EPE	19	53	33.0	1.2	0.9
	+IPN	19	53	33.5	1.2	0.7
	+IPZ	19	53	33.0	1.6	1.5
15	-EPE	11	34	58.2	1.1	2.0
	-EPN	11	34	57.8	0.8	0.8
	-EPZ	11	34	58.1	1.0	1.2
16	-EPE	02	15	15.8	0.7	0.8
	+EPN	02	15	15.6	0.7	1.0
	+EPZ	02	15	15.7	0.9	1.5
	EPE	17	00	43.8		
	EPN	17	00	43.8		
	+EPZ	17	00	44.7	0.7	0.8
	+EPE	20	59	07.1	1.1	1.1
	EPN	20	59	07.4		
	+EPZ	20	59	05.4	1.1	0.7
17	-EPE	08	33	50.2	1.1	1.2
	+EPN	08	33	51.4	0.7	1.0
	+EPZ	08	33	50.9	0.8	1.0
	+EPE	18	29	53.8	0.9	2.0
	EPN	18	29	53.8		
	-IPZ	18	29	53.6	0.9	5.0
18	+EPE	01	38	08.8	1.0	1.7
	+EPN	01	38	08.8	0.8	1.0
	-EPZ	01	38	08.8	1.0	4.5
	+EXE	07	03	31.0	0.8	0.3
	+EXN	07	03	32.2	0.7	0.8

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
NOV 18	+EXZ	07	03	33.1	1.0	1.0
	+EPN	14	31	46.9	0.8	1.0
	+EPZ	14	31	45.8	0.8	0.3
	+EPE	15	45	16.7	0.5	0.6
	-IPN	15	45	16.7	0.6	0.7
	+IPZ	15	45	16.7	0.6	3.2
	-ESE	15	46	49.8	2.0	1.5
	+ESN	15	46	49.8	1.2	0.8
	+ESZ	15	46	48.4	2.2	3.1
	+IPE	19	19	40.4	1.2	1.6
	-EPN	19	19	40.0	1.1	1.2
	+IPZ	19	19	40.0	1.3	7.3
19	-IPE	00	36	05.0	1.3	3.5
	+IPN	00	36	05.0	1.2	3.5
	+IPZ	00	36	04.0	2.8	3.0
	+EPE	16	41	49.9	1.1	1.0
	-EPZ	16	41	49.0	1.3	1.0
	-EPE	20	02	28.1	1.1	0.6
	-EPN	20	02	27.6	1.0	0.6
	+IPZ	20	02	27.7	1.4	2.0
	-EPE	23	49	32.5	1.0	0.6
	+EPN	23	49	32.2	1.1	1.2
	+EPZ	23	49	32.3	0.6	1.5
20	+EXE	02	48	42.7	1.1	0.3
	+EXZ	02	48	42.7	1.1	1.0
21	LP+LRE	11	56	07.5	18.8	4.5
	+IPE	12	07	49.0	1.3	2.1
	EPN	12	07	50.2		
	+IPZ	12	07	48.9	1.7	5.0
22	-IPE	00	20	35.2	1.0	1.0
	+IPZ	00	20	35.0	1.1	2.5
23	+EPE	02	07	56.3	1.0	0.6
	+EPN	02	07	56.3	1.0	0.9
	-IPZ	02	07	56.4	1.1	6.0
	+IPE	04	53	38.0	1.4	4.5
	-IPN	04	53	38.0	1.2	5.5
	IPZ	04	53	37.9		
	-EXE	04	54	23.0	1.5	3.7
	+EXN	04	54	23.0	1.6	3.0
	-EXZ	04	54	23.0	1.8	11.2

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
NOV 23	+ESE	05	03	29.2	1.3	1.5
	+ESN	05	03	29.2	2.2	3.5
	+ESZ	05	03	29.2	1.7	1.7
	+EPE	15	39	14.0	1.3	1.0
	-EPN	15	39	14.2	1.2	1.3
	+IPZ	15	39	14.1	1.3	2.5
	-IPE	19	35	30.6	2.5	3.0
	+IPN	19	35	30.6	2.4	2.7
	+IPZ	19	35	30.4	2.3	6.5
24	-EPE	22	34	43.6	1.3	0.9
	+EPN	22	34	43.4	1.2	0.6
	+EPZ	22	34	43.0	0.9	0.6
	LP+ESE	22	44	48.8	15.0	2.5
	LP+ESN	22	44	48.8	9.4	2.5
	LP-LRE	23	14	52.5	15.0	3.0
25	+EPE	04	05	07.7	1.0	1.4
	-EPN	04	05	09.8	1.0	0.7
	+IPZ	04	05	08.9	1.1	1.5
26	NIL					
27	EPN	02	19	20.0		
	+EPZ	02	19	19.1	1.0	0.5
	LP+LRN	19	46	22.5	16.9	6.0
	+EPN	23	24	56.0	1.5	0.8
	+EPZ	23	24	55.0	1.9	2.0
	LP-ESN	23	32	56.3	18.8	3.5
	LP+LQE	23	43	09.4	18.8	6.0
	LP-LRN	23	46	52.5	17.8	16.5
28	+IPE	00	03	23.4	1.7	1.5
	+IPN	00	03	24.2	1.3	0.8
	+IPZ	00	03	23.7	1.9	5.1
	-EXE	00	14	18.2	2.8	7.4
	+EXN	00	14	19.0	2.0	1.7
	-EXZ	00	14	17.3	1.7	2.1
29	+EPE	01	48	04.8	0.8	0.4
	EPN	01	48	04.5		
	-EPZ	01	48	04.8	1.1	1.5
	-EPE	09	30	01.7	1.0	1.0
	+EPN	09	30	01.6	1.0	1.0
	+IPZ	09	30	01.3	1.1	2.9
	+EPE	04	52	01.0	1.1	1.4

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
NOV 29	+EPN	04	52	01.6	0.8	0.9
	IPZ	04	52	00.0		
	+EPE	11	23	41.3	1.3	1.8
	+EPN	11	23	40.0	1.9	1.0
	+IPZ	11	23	39.0	2.3	2.8
	LP-EPE	20	08	22.5	15.0	2.5
	LP-EPN	20	08	20.6	16.9	3.0
	EPE	20	11	43.0		
	EPN	20	11	41.0		
	-EPZ	20	11	43.0	1.4	2.8
	LP-ISE	20	13	20.6	15.0	15.0
	LP-ISN	20	13	20.6	17.8	21.0
	LP-IXE	20	18	46.9	13.1	16.5
	LP-EPE	20	08	22.5	15.0	2.5
	LP-EPN	20	08	20.6	16.9	3.0
	LP-PPE	20	13	20.6	15.0	15.0
	LP-PPN	20	13	20.6	17.8	21.0
	LP-SKSE	20	18	46.9	13.1	16.5
	LP-SKSN	20	18	46.9	15.0	23.0
	LP+EXE	20	20	09.4	15.0	22.0
	LP+EXN	20	20	07.5	18.8	29.5
	LP-EXE	20	21	08.4	19.7	20.5
	LP+EXN	20	21	07.5	22.5	23.0
	LP+PSE	20	22	58.1	16.9	90.0
	LP+PSN	20	22	58.1	18.8	102.0
	LP-SPPE	20	24	28.1	15.9	38.0
	LP-SPPN	20	24	28.1	15.0	38.0
	LP-SSPN	20	29	58.1	28.1	141.0
	LP+EXE	20	55	28.1	18.8	172.0
	LP-EXN	20	55	13.1	20.6	134.0
30	EPE	17	44	59.9		
	+EPN	17	44	59.0	1.1	1.1
	-IPZ	17	44	59.0	1.2	5.0
DEC 01	+EPE	12	03	06.0	1.2	2.8
	+EPN	12	03	06.3	1.0	0.8
	+IPZ	12	03	06.0	1.1	9.0
	-EPE	15	48	17.4	1.8	1.6
	EPN	15	48	19.0		
	+EPZ	15	48	17.0	1.9	2.5
02	+EPE	00	31	39.0	1.0	2.0

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
DEC 02	+EPN	00	31	37.0	1.0	0.4
	-EPZ	00	31	38.8	1.2	3.0
03	+EPE	00	20	16.4	0.7	0.6
	-EPN	00	20	16.8	1.1	1.2
	+EPZ	00	20	17.0	0.8	2.0
	+EPE	01	24	29.8	0.7	1.2
	+EPN	01	24	28.2	0.8	0.8
	+EPZ	01	24	28.5	1.0	1.1
	+EPN	03	22	07.0	1.0	0.5
	+EPZ	03	22	08.0	1.0	1.0
04	-EPE	03	50	30.4	0.8	0.8
	+EPZ	03	50	30.2	1.0	1.7
	+EPE	20	05	11.5	1.3	0.7
	-EPZ	20	05	09.2	2.2	1.8
	-EPE	22	32	03.2	1.2	1.5
	+EPN	22	32	05.5	1.2	1.0
	+EPZ	22	32	04.5	2.2	2.1
05	+IPE	18	44	12.0	1.0	4.1
	+IPN	18	44	12.0	1.0	2.1
	IPZ	18	44	12.0		
06	+IPE	02	10	44.0	1.5	3.0
	-EPN	02	10	43.9	1.4	1.6
	+IPZ	02	10	44.0	1.3	10.6
	+EPZ	12	12	17.9	1.3	0.7
	+EPE	14	21	09.2	1.0	0.7
	+EPN	14	21	09.5	0.6	0.5
	+EPZ	14	21	08.0	0.9	2.5
	LP-PPE	14	24	54.4	16.9	9.5
	LP+ISE	14	31	58.1	16.9	16.0
	LP+IPSE	14	32	48.8	13.1	19.0
	LP-ISSE	14	39	58.1	15.0	23.0
	+EXE	14	36	45.2	5.2	9.0
	+EXN	14	36	45.8	2.0	3.0
	+EXZ	14	36	48.0	3.9	19.0
	LP+LRE	14	44	05.6	16.9	21.0
	-EPE	15	06	40.0	1.0	0.7
	+EPZ	15	06	09.0	1.0	1.1
	-EPN	15	06	39.8	0.6	0.5
	EXE	15	20	38.5		
	+EXZ	15	20	38.2	1.9	1.0

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
DEC 07	+EPE	10	07	35.9	1.2	1.0
	+EPN	10	07	36.0	1.0	1.3
	+IPZ	10	07	35.9	1.2	3.6
08	-EPE	00	46	01.1	0.4	0.6
	-EPN	00	46	01.8	0.5	0.6
	-EPZ	00	46	01.9	0.6	0.8
09	NIL					
10	+EPE	01	50	43.0	1.0	0.7
	-EPZ	01	50	42.0	1.0	1.3
	-EPE	03	37	22.1	1.0	1.5
	+EPN	03	37	22.0	1.3	1.0
	+IPZ	03	37	21.6	1.4	2.5
	+EPE	04	27	55.9	1.0	1.2
	-EPN	04	27	55.0	0.8	0.6
	+EPZ	04	27	55.9	1.0	1.8
	+EPE	05	57	10.0	0.8	0.5
	EPN	05	57	09.1		
	-IPZ	05	57	09.9	1.2	1.3
	-EPE	19	45	40.9	1.0	1.1
	+IPZ	19	45	40.0	1.0	2.0
11	-EPE	03	45	11.0	1.1	5.5
	+IPN	03	45	11.9	0.6	1.9
	IPZ	03	45	10.7		
	-ESE	03	54	29.7	3.0	13.8
	+ESN	03	54	30.0	1.7	2.1
	-ISZ	03	54	31.0	2.0	5.6
	+IPE	13	44	17.0	1.6	1.6
	-EPN	13	44	16.1	1.4	1.0
	-EPZ	13	44	16.2	1.4	2.5
12	+EPE	07	08	46.0	0.9	2.0
	-EPN	07	08	46.1	0.9	1.5
	-EPZ	07	08	46.6	0.8	1.5
	LP+IPE	11	55	28.1	13.1	20.0
	-EPE	11	57	36.0	2.2	1.6
	EPN	11	57	38.0		
	+IPZ	11	57	37.0	1.9	3.0
	LP+IXE	11	59	05.6	20.6	40.5
	LP+IXE	12	00	35.6	15.0	59.0
	LP+IXE	12	01	20.6	13.1	207.0
	+EXE	12	08	03.8	1.3	0.8

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
DEC 12	+EXN	12	08	04.0	1.8	0.6
	+EXZ	12	08	04.8	2.0	1.5
	LP+IXE	12	11	30.0	17.8	55.0
	LP+IXE	12	12	13.1	16.9	98.0
	LP-IXE	12	18	22.5	16.9	57.0
	-EPE	22	43	17.1	1.3	1.6
	+EPN	22	43	17.0	1.4	1.6
	-EPZ	22	43	17.0	1.5	4.1
13			NIL			
14	+IPE	19	38	52.1	1.4	9.0
	+IPN	19	38	53.0	1.0	1.0
	IPZ	19	38	52.3		
15	-EPE	01	47	35.2	1.1	1.2
	+EPN	01	47	35.2	1.2	1.1
	+EPZ	01	47	34.9	1.5	2.3
	+EPE	08	50	28.5	1.0	1.0
	+EPN	08	50	28.1	0.8	0.4
	+EPZ	08	50	27.5	1.1	1.2
16	+IPE	15	49	40.8	1.2	3.5
	-IPN	15	49	40.5	1.2	3.5
	+IPZ	15	49	40.1	2.1	9.0
17	+IPE	22	52	41.0	1.4	2.5
	-EPN	22	52	40.0	1.0	0.7
	+EPZ	22	52	40.0	1.2	2.2
	+EPE	23	25	40.2	1.3	1.0
	+EPN	23	25	40.8	1.2	1.3
	-EPZ	23	25	41.0	1.2	1.4
	-EPE	23	50	37.0	1.8	1.8
	-EPN	23	50	35.4	1.8	0.8
18	-IPE	08	38	37.0	1.4	3.0
	-EPN	08	38	37.0	1.0	0.8
	-IPZ	08	38	37.0	1.5	8.0
	+EPE	09	06	42.4	0.9	0.4
	EPN	09	06	41.1		
	+EPZ	09	06	42.1	1.2	1.1
	+EPE	10	20	50.3	1.3	1.5
	+EPN	10	20	50.8	1.6	1.4
	+IPZ	10	20	50.5	1.9	5.7
	LP+EPE	10	21	01.9	15.0	14.0
	+EXE	10	25	04.1	3.0	14.5

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
DEC 18	+EXN	10	25	09.4	3.7	12.0
	EXZ	10	25	05.0		
	LP-IXE	10	26	11.3	19.7	37.0
	LP+ISE	10	26	56.3	18.8	68.5
	LP+IXE	10	27	46.9	15.9	119.0
	+EPE	19	06	04.0	1.2	0.8
	+EPN	19	06	03.3	1.1	0.5
	+EPZ	19	06	04.4	1.2	1.8
19	+EPE	07	40	33.8	1.2	0.7
	-EPN	07	40	32.2	1.6	0.8
	+EPZ	07	40	33.2	1.2	1.0
	-EPE	14	25	16.0	1.2	1.3
	+EPN	14	25	16.2	0.8	0.8
	+EPZ	14	25	16.9	0.8	1.0
20	+IPE	16	05	09.0	1.4	2.0
	+EPN	16	05	08.2	1.3	0.7
	+IPZ	16	05	09.0	1.4	3.5
21	+IPE	00	47	25.5	1.2	3.5
	-IPN	00	47	25.5	1.1	3.6
	+IPZ	00	47	25.3	1.0	10.0
	+IPE	00	56	50.0	2.2	3.6
	+IPN	00	56	50.0	1.4	1.5
	+EPZ	00	56	51.0	1.7	1.6
	-IPE	01	24	24.5	1.2	2.0
	-IPN	01	24	24.5	1.1	1.8
	+IPZ	01	24	24.3	1.8	6.5
	+EPE	03	05	42.9	0.5	0.3
	+EPN	03	05	42.9	0.7	1.0
	-EPZ	03	05	43.0	1.0	0.6
	LP+ESE	15	00	33.8	11.3	5.0
	LP+PSE	15	01	01.9	1.9	7.0
	LP-LRE	15	29	30.0	16.9	21.5
22			NIL			
23	+IPE	05	22	57.0	1.2	3.0
	-EPN	05	22	58.3	0.8	0.6
	+IPZ	05	22	56.0	1.4	5.6
	LP+IXE	11	02	30.0	15.0	10.5
	+EPE	11	37	06.5	0.8	0.5
	+EPZ	11	37	07.8	0.6	0.5
	+ESE	11	40	50.2	2.0	1.5

DATE	PHASE	ARRIVAL TIME H	M	S	PERIOD (S)	AMP (MM)
DEC 23	+ESN	11	40	52.2	1.5	0.8
	+ESZ	11	40	50.2	2.0	2.2
	LP+ISE	11	51	33.8	15.0	14.0
	LP-SSE	11	57	48.8	17.8	14.0
	LP-IXE	11	59	30.0	16.9	11.0
	+EXE	12	00	11.0	0.8	1.0
	+EXN	12	00	10.6	1.1	0.3
	-EXZ	12	00	12.5	3.0	2.0
24	-EPE	00	13	58.6	1.2	0.6
	-EPN	00	13	58.3	1.2	0.6
	+IPZ	00	13	58.0	1.5	5.0
25	NIL					
26	+EPE	04	54	23.5	1.0	0.8
	-IPZ	04	54	24.0	1.0	3.0
27	+EPE	12	31	12.7	1.1	1.5
	-EPZ	12	31	13.3	1.0	1.5
	+EPE	16	33	58.5	0.8	0.8
	+IPZ	16	33	58.2	0.9	1.5
28	NIL					
29	-EPN	15	39	32.0	1.4	1.4
	+IPZ	15	39	31.3	1.2	1.6
	-EPE	16	35	45.0	1.1	1.4
	+EPN	16	35	47.0	1.5	0.6
	+EPZ	16	35	46.9	1.2	0.8
	+EPE	20	31	10.0	1.1	3.1
	+IPN	20	31	10.0	0.9	4.4
	+IPZ	20	31	09.8	1.8	6.2
30	NIL					
31	+EPE	14	09	41.9	1.7	1.5
	+IPN	14	09	42.5	1.1	1.6
	+IPZ	14	09	42.3	1.0	3.0
	-EPE	14	47	00.0	1.1	4.3
	+EPN	14	47	00.3	0.8	1.2
	-EPZ	14	47	01.0	1.2	1.5
	+EXE	14	58	00.0	1.5	7.0
	+EXN	14	58	01.4	1.1	2.8
	+EXZ	14	58	01.4	1.2	3.2