

Seismological Bulletin of Syowa Station, Antarctica,
1977

Katsutada KAMINUMA

(National Institute of Polar Research, Tokyo, Japan)

The present report describes the seismological data of 1977 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 $69^{\circ}00'31.7''S$ in latitude and $39^{\circ}35'31.6''E$ in longitude. The elevation is 20 meters above the mean sea level.

Seismological observations up to January 1977 were carried out by T. Haneda, members of the 17th Japanese Antarctic Research Expedition. For the succeeding period of January 1977 to January 1978, S. Otaki, members of the 18th expedition, undertook the observations.

The seismograms were read again by Mr. R. Sakai and Miss K. Kokubun of Logistic 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

- Chiba, H. and Kaminuma, K.(1972): Seismological bulletin of Syowa Station, Antarctica, 1970. JARE Data Rep., 16, 66p.
- Chiba, H. and Kobayashi, H.(1973): Seismological bulletin of Syowa Station, Antarctica, 1971. JARE Data Rep., 19, 65p.
- Chiba, H. and Seto, N.(1974): Seismological bulletin of Syowa Station, Antarctica, 1972. JARE Data Rep., 21, 56p.
- Kaminuma, K.(1970): Seismological bulletin of Syowa Station, Antarctica, 1968-1969. JARE Data Rep., 6, 38p.
- Kaminuma, K.(1970): Seismological bulletin of Syowa Station, Antarctica, 1969. JARE Data Rep., 9, 62p.
- Kaminuma, K.(1976): Seismological bulletin of Syowa Station, Antarctica, 1974. JARE Data Rep., 34, 53p.
- Kaminuma, K.(1977): Seismological bulletin of Syowa Station, Antarctica, 1975. JARE Data Rep., 38, 59p.
- Kaminuma, K.(1978): Seismological bulletin of Syowa Station, Antarctica, 1976. JARE Data Rep., 43, 53p.
- Kaminuma, K. and Murauchi, S.(1969): Seismological bulletin of Syowa Station, Antarctica, 1959-1962 and 1967-1968. JARE Data Rep., 4, 94p.
- Takahashi, M.(1976): Seismological bulletin of Syowa Station, Antarctica, 1973. JARE Data Rep., 31, 44p.

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 x 10 ⁻⁵	1.96 x 10 ⁻⁵	1.86 x 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 x 10 ⁻⁹	1.49 x 10 ⁻⁹	1.38 x 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 x 10 ⁻¹⁰	5.0 x 10 ⁻¹⁰	4.0 x 10 ⁻¹⁰
R ₂ (Ω)	370	370	370
Ω ₂ (Ω)	1130	1130	1130
h ₂	1.0	1.0	1.0

T₁: Period of the pendulum. T₂: Period of the galvanometer.
 S₁: Sensitivity of the transducer. S₂: Sensitivity of the
 R₁: Resistance of the pendulum coil. galvanometer.
 R₂: Resistance of the galvanometer coil.
 Ω₁: External damping resistance of the transducer.
 Ω₂: External damping resistance of the galvanometer.
 h₁: Damping constant of the pendulum.
 h₂: Damping constant of the galvanometer.

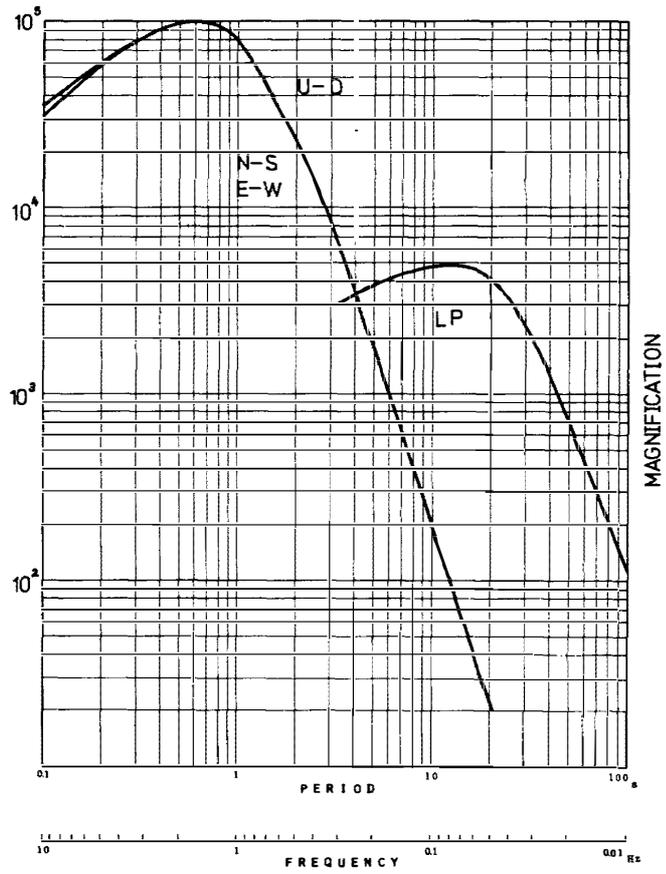


Fig. 1. Magnification curves of HES and long-period seismographs.

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JAN 01	+EPE	19	03	02.3	0.5	0.5	
	+EPN	19	03	02.0	1.0	1.2	
	EPZ	19	03	02.5			
	+EPE	19	14	22.0	1.0	0.6	
	-EPZ	19	14	21.9	0.9	1.1	
	LP+ESE	19	24	48.3	10.3	3.5	
	LP+ESN	19	24	50.6	9.4	4.5	
	LP-LRE	19	52	12.2	16.9	7.5	
	-IPE	20	47	27.5	0.9	2.5	
	+EPN	20	47	27.8	0.4	0.5	
	-IPZ	20	47	27.6	0.7	6.0	
	-EPE	23	33	46.3	1.6	1.9	
	-IPN	23	33	45.9	1.2	4.3	
	+IPZ	23	33	45.6	1.3	8.5	
	LP+LRE	23	52	16.9	16.9	3.0	
	02	+EPN	06	01	22.2	0.7	1.4
		-IPZ	06	01	22.2	1.0	3.0
LP EPN		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		-EXN	06	57	42.0	0.7	0.7
	+EXZ	06	57	40.6	2.2	1.7	
02	+EPE	10	07	22.0	1.3	0.7	
	+EPZ	10	07	21.6	1.4	0.7	
03	-EPE	10	13	35.5	1.5	1.2	
	-EPN	10	13	35.2	0.9	0.5	
	-EPZ	10	13	35.4	1.2	1.6	
04	+EPE	05	56	43.9	1.0	0.6	
	+EPN	05	56	43.0	1.0	0.6	
	+EPZ	05	56	44.0	1.2	0.8	
	+EPE	08	33	19.7	1.0	1.0	
	-EPN	08	33	21.9	0.7	0.9	
	+EPZ	08	33	20.0	1.2	1.5	
	+EPE	15	05	30.5	0.8	0.5	
	+EPZ	15	05	30.3	1.1	1.1	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JAN 04	+EXE	23	32	03.0	1.0	1.0	
	+EXN	23	32	04.1	1.1	0.6	
05	-EXZ	23	32	04.6	1.1	1.0	
	+EPE	23	32	36.0	1.1	0.6	
	+EPN	23	32	34.8	0.8	0.6	
	+EPZ	23	32	35.0	0.8	0.3	
06	+EPE	04	42	09.3	1.0	1.0	
	+EPN	04	42	10.1	0.6	0.4	
	+EPZ	04	42	10.9	0.8	0.5	
	-EPE	06	24	49.0	1.3	1.0	
	+EPN	06	24	51.0	0.8	0.4	
	+IPZ	06	24	48.3	1.0	1.5	
	+EXE	06	28	26.0	2.0	2.4	
	+EXZ	06	28	21.3	1.5	2.5	
	LP+SKSE	06	35	28.1	15.0	8.0	
	LP-ISE	06	35	48.8	11.3	20.0	
	LP+ISN	06	35	48.8	10.3	9.5	
	LP+PSE	06	37	10.5	13.1	23.0	
	LP+LRE	07	02	14.1	23.4	118.0	
	LP+LRN	07	02	22.5	21.6	71.0	
07	+EXE	07	20	59.3	1.1	1.5	
	+EXN	07	20	58.8	1.0	0.9	
	+EXZ	07	20	59.2	1.1	1.5	
	+IPE	08	15	28.0	1.3	1.5	
	+EPN	08	15	28.8	0.7	0.5	
	+IPZ	08	15	28.1	1.7	5.0	
	-EPE	09	48	05.8	0.8	0.6	
	-IPN	09	48	05.1	0.2	1.5	
	+IPZ	09	48	05.4	0.1	1.0	
	-ISE	09	48	19.9	0.4	5.5	
	-ISN	09	48	19.7	0.4	6.1	
	-ISZ	09	48	20.0	0.4	3.5	
	-EPN	10	11	49.0	0.9	0.7	
	-EPZ	10	11	49.4	0.8	0.5	
	08	LP+LRZ	15	01	37.5	22.5	2.5
		+EPE	07	53	45.2	1.4	0.9
	08	-EPN	07	53	37.7	1.1	1.0
		+IPZ	07	53	45.6	2.2	3.0
LP EPZ		07	53	45.0			
LP+LRE		08	28	45.0	20.6	2.0	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JAN 08	LP+LRZ	08	28	26.3	22.5	5.0	
	+EPE	11	08	21.3	0.8	0.6	
	+EPN	11	08	21.8	1.1	0.5	
	-IPZ	11	08	21.9	1.0	1.5	
	-IPE	12	07	51.4	1.0	1.0	
	-EPN	12	07	51.9	1.2	0.6	
	-IPZ	12	07	51.5	1.0	2.0	
	LP+LRZ	13	14	05.6	24.4	2.0	
	09	+EPE	09	36	42.0	1.0	0.6
		-EPN	09	36	41.0	0.8	0.9
		-EPZ	09	36	42.8	0.5	0.6
		-IXN	09	37	13.2	1.3	1.0
	10	-IXZ	09	37	13.6	1.2	2.5
+IPE		09	43	25.7	0.9	1.0	
+IPN		09	43	25.4	0.7	1.0	
-IPZ		09	43	25.4	0.9	3.0	
-EPE		22	55	45.0	1.1	1.0	
-IPN		22	55	47.0	0.9	0.9	
-IPZ		22	55	46.7	1.0	1.0	
11	-IPE	23	30	30.5	1.7	2.3	
	+IPN	23	30	30.3	1.6	1.7	
	-IPZ	23	30	30.3	1.9	5.1	
	-IPE	07	13	31.4	1.4	2.0	
	+IPN	07	13	32.0	1.1	1.5	
	+IPZ	07	13	31.4	1.4	4.7	
	+EPE	08	08	33.7	1.1	0.8	
	+EPN	08	08	34.8	0.9	0.7	
	+EPZ	08	08	34.9	1.0	0.5	
	12	+EXE	09	06	57.0	1.1	6.1
-EXN		09	06	57.7	0.9	1.6	
+EXZ		09	06	57.5	0.6	2.5	
+IPE		23	47	17.7	1.6	2.5	
+EPN		23	47	16.8	1.0	0.5	
+IPZ		23	47	17.7	1.7	6.0	
LP PCPZ		23	48	01.9			
LP+ESE		23	57	15.0	11.3	1.5	
LP-ESN		23	57	15.0	7.5	2.0	
LP-ESZ		23	57	13.1	9.4	3.0	
13	LP+PSE	23	58	26.3	11.3	3.0	
	-EPE	14	13	03.0	1.4	1.5	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JAN 13	+EPN	14	13	01.5	1.0	0.4	
	+EPZ	14	13	01.7	1.3	1.6	
14	+EPE	03	08	04.2	1.6	1.0	
	+EPN	03	08	05.3	1.0	0.6	
	EPZ	03	08	05.0			
	-EPE	11	10	25.9	0.6	1.0	
	+EPN	11	10	24.2	0.8	0.3	
	-EPZ	11	10	24.3	0.6	0.5	
	+ESE	11	11	00.0	1.4	2.0	
	+ESN	11	11	00.0	1.0	0.5	
	+ESZ	11	10	59.8	0.4	1.1	
	-EPN	18	10	44.8	0.8	1.0	
	+IPZ	18	10	44.8	1.1	2.1	
	-EPE	22	39	52.8	1.4	1.0	
	+EPN	22	39	51.8	1.3	0.6	
15	+EPZ	22	39	50.8	0.9	0.6	
	+ESE	22	42	04.8	1.1	1.4	
	-ESN	22	42	06.2	0.6	0.7	
	+ESZ	22	42	06.1	1.5	2.0	
	+EPE	00	42	24.1	0.5	1.1	
	+EPN	00	42	24.8	0.4	0.5	
	-EPZ	00	42	23.9	0.8	0.6	
	+ESE	00	43	04.0	2.1	1.7	
	-ESN	00	43	03.0	1.3	1.6	
	+ESZ	00	43	04.0	1.1	1.1	
	LP+LRZ	02	16	37.5	17.8	1.5	
	+IPN	23	17	57.7	1.7	2.0	
	+IPZ	23	17	57.8	1.5	11.0	
16	LP+LRZ	23	25	45.0	20.6	3.0	
	+EPN	12	57	46.8	1.1	0.9	
	+EPZ	12	57	48.2	1.0	0.9	
	+EPN	15	53	50.1	1.0	0.9	
	-EPZ	15	53	50.0	1.0	1.5	
	+EPN	16	36	52.2	0.8	0.4	
	+EPZ	16	36	52.5	0.8	1.0	
	+EXN	16	40	26.5	0.5	1.2	
	+EXZ	16	40	26.2	0.4	2.0	
	+EXN	16	50	14.0	0.4	0.5	
	+EXZ	16	50	14.1	1.2	1.4	
	17	LP-LRZ	07	32	57.2	17.8	6.0

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
JAN 17	LP+LRE	19	56	24.4	18.8	4.5
	LP+LRZ	19	56	31.9	17.8	16.0
	-IPE	21	38	41.9	1.0	1.7
	+EPN	21	38	41.3	0.9	0.7
	-IPZ	21	38	41.8	0.7	1.5
	LP+PCPE	21	39	21.6	7.5	5.5
	LP+PCPN	21	39	21.6	10.3	4.5
	LP-PCPZ	21	39	22.5	16.9	18.5
	-ESE	21	48	05.0	3.0	9.0
	+ISN	21	48	07.3	3.5	19.8
	-ESZ	21	48	05.0	4.4	16.1
	LP+ISE	21	48	05.6	10.3	42.0
	LP-ISN	21	48	09.4	7.5	13.0
	LP+ISZ	21	48	06.6	20.6	16.0
	LP-PPSE	21	49	33.8	11.3	16.5
	LP-PPSN	21	49	31.9	9.4	16.0
	LP+PPSZ	21	49	39.4	13.1	14.0
	LP+SSE	21	52	33.8	9.4	14.0
	LP-SSN	21	52	43.1	9.4	6.0
	LP-SSZ	21	52	45.0	15.9	10.5
	LP-LRZ	21	56	09.4	21.6	24.0
	+EPE	22	06	07.1	1.2	0.8
	+EPZ	22	06	07.1	1.4	3.6
	+EPE	22	25	38.1	1.3	2.8
	+EPN	22	25	39.8	1.0	0.7
	+EPZ	22	25	36.1	1.1	4.0
	+EPE	22	54	52.0	1.0	0.8
+EPN	22	54	51.8	0.7	0.8	
-EPZ	22	54	51.4	1.3	4.5	
18	-IPE	05	52	23.8	1.6	8.8
	+IPN	05	52	23.8	1.6	8.1
	-IPZ	05	52	23.8	1.8	22.9
	+EXE	05	52	33.1	0.9	2.9
	+EXN	05	52	34.7	1.2	3.9
	-EXZ	05	52	33.7	1.5	8.1
	LP-ESZ	06	01	24.4	7.5	4.0
	LP-PSZ	06	02	33.8	11.3	3.0
	LP+LRE	06	18	20.6	21.6	44.5
	LP-LRN	06	18	56.3	20.6	4.0
	LP+LRZ	06	18	35.6	20.6	8.5

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JAN 18	+IPE	22	54	44.4	1.0	1.3	
	+IPN	22	54	44.9	0.9	1.8	
19	+IPZ	22	54	44.3	1.1	3.1	
	+EPZ	01	04	55.4	1.7	2.7	
	-EXE	01	05	46.8	1.1	0.7	
	-EXN	01	05	48.0	1.1	0.9	
	+EXZ	01	05	47.5	2.0	2.1	
	LP+LRZ	01	48	05.6	18.8	4.0	
	+EPE	09	35	18.5	1.2	1.5	
	-EPN	09	35	17.8	0.8	0.8	
	-EPZ	09	35	18.9	0.7	0.7	
	-EXE	09	35	35.1	1.2	2.2	
	-EXN	09	35	33.2	1.1	1.0	
	-EXZ	09	35	35.2	1.2	1.5	
	+EPE	14	07	16.3	1.6	1.5	
	+EPN	14	07	16.3	1.1	0.8	
	+EPZ	14	07	16.8	0.8	0.7	
	+EXE	14	11	05.7	1.8	2.5	
	-EXN	14	11	03.0	0.9	0.9	
+EXZ	14	11	02.2	1.1	1.5		
20	LP-ESZ	14	18	15.0	7.5	2.0	
	LP-PSE	14	19	54.4	16.9	9.0	
	LP+LRZ	14	42	01.9	22.5	6.0	
	+EPZ	09	26	29.9	0.8	0.4	
	21	-EPN	02	39	05.2	1.2	1.0
		+EPZ	02	39	05.8	1.1	0.6
		-ESE	02	44	15.8	1.0	1.5
		+ISN	02	44	17.0	1.1	3.0
		-ESZ	02	44	17.1	1.5	4.1
		-IPE	06	22	57.5	1.2	5.0
		+IPN	06	22	57.8	1.1	5.5
		-IPZ	06	22	57.0	0.7	2.2
		+ESE	06	32	29.0	1.0	1.0
-ISN		06	32	28.0	1.3	1.1	
-ESZ		06	32	29.0	1.6	1.6	
22	+EXE	04	25	10.1	0.6	0.6	
	+EXN	04	25	11.0	0.7	0.5	
	+EXZ	04	25	10.9	0.8	0.8	
	-EXE	04	25	50.2	0.9	1.0	
	+EXN	04	25	50.1	0.7	1.0	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	N	S			
JAN 22	+EXZ	04	25	51.6	0.8	1.9	
	+EPE	01	51	19.1	1.2	1.2	
23	+EPN	01	51	20.2	1.3	1.2	
	-EPZ	01	51	20.5	2.0	6.0	
24	-EPE	02	02	21.5	1.0	3.0	
	+EPN	02	02	21.2	0.9	1.9	
	+EPZ	02	02	21.2	1.1	3.9	
	LP+LRE	02	27	41.3	18.8	2.0	
	+EPE	09	49	49.1	0.8	0.5	
	+EPN	09	49	47.9	0.5	0.4	
	+EPZ	09	49	48.2	0.7	0.6	
	+EPZ	10	42	30.0	1.5	1.3	
	25	-IPE	01	01	28.6	1.3	1.4
		-EPN	01	01	28.1	1.2	1.0
26	+IPZ	01	01	27.4	1.4	5.2	
	LP-LRE	01	28	26.3	20.6	2.0	
	-EPE	08	27	33.8	0.9	1.1	
	+EPN	08	27	33.8	1.0	1.0	
	-EPZ	08	27	33.8	1.0	3.0	
	-ESE	08	28	37.7	1.1	1.1	
	+ESN	08	28	37.0	1.3	1.1	
	+ESZ	08	28	36.9	1.7	2.8	
	-EPN	10	44	23.0	1.0	0.9	
	+EPZ	10	44	23.0	0.7	0.5	
	+EPE	11	36	05.5	1.2	1.0	
	-EPN	11	36	06.0	0.6	0.5	
	+EPZ	11	36	05.1	0.8	0.4	
	-IPE	13	23	22.2	1.1	1.0	
	+EPN	13	23	23.5	1.2	0.4	
27	+IPZ	13	23	22.1	1.2	3.4	
	+EPE	05	03	33.8	1.2	0.6	
28	-EPN	05	03	33.3	0.8	0.5	
	+EPZ	05	03	33.7	1.4	1.6	
	-EPE	14	12	49.4	1.4	1.7	
	+EPN	14	12	49.2	1.1	0.6	
	+IPZ	14	12	48.7	1.0	2.8	
	+IPE	18	13	35.8	1.3	2.2	
	+IPN	18	13	35.2	1.2	1.0	
	+IPZ	18	13	34.8	1.4	2.0	
	LP+LRE	19	51	45.0	16.9	3.0	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JAN 29	+IPE	01	06	00.5	0.8	2.1	
	+EPN	01	06	01.4	0.8	2.4	
30	+IPZ	01	06	00.7	1.3	4.2	
	+EXE	04	46	28.4	1.1	2.2	
	-EXN	04	46	27.2	0.8	1.0	
	+EXZ	04	46	31.9	1.0	0.8	
	-EPE	06	49	33.3	0.6	0.7	
	+EPN	06	49	34.0	1.0	0.8	
	-EPZ	06	49	32.0	0.8	0.7	
	+ESE	06	51	10.3	1.9	1.1	
	+ESZ	06	51	10.7	1.3	2.5	
	+IPZ	14	03	09.3	1.3	3.5	
	+EPN	00	21	12.2	1.2	0.5	
	+EPZ	00	21	12.8	1.3	1.5	
	LP-PPZ	00	22	52.5	9.4	3.0	
	FEB 01-02	NO RECORD					
	03	-EPE	17	50	50.0	1.0	1.4
+EPN		17	50	48.7	1.4	1.5	
+EPZ		17	50	50.5	1.1	0.9	
+IPE		23	31	27.0	0.7	0.8	
-IPN		23	31	27.0	0.6	0.6	
-IPZ		23	31	27.0	1.1	4.0	
+EPE		01	17	57.9	0.5	0.8	
+EPZ		01	17	58.9	0.6	0.5	
+EPE		01	24	44.4	0.6	0.5	
-EPN		01	24	43.0	0.7	0.9	
04	+EPZ	01	24	44.0	0.8	1.1	
	+IPE	07	57	01.1	0.6	22.0	
	IPN	07	57	01.1			
	IPZ	07	57	01.0			
	LP+EPZ	07	57	01.9	11.3	4.0	
	LP+EPPE	07	59	00.0	7.5	3.0	
	LP+EPNN	07	59	00.0	7.5	3.0	
	LP-IPPZ	07	59	00.0	7.5	7.0	
	LP-ISE	08	05	37.5	8.4	38.0	
	LP-ISN	08	05	37.5	9.4	59.0	
	LP+ESZ	08	05	37.5	9.4	6.5	
	LP-ISSE	08	09	07.5	11.3	35.0	
	LP+ISSN	08	09	08.4	12.2	32.0	
	LP-ESSZ	08	09	07.5	15.0	7.0	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S					H	M	S		
FEB 04	LP-LRZ	08	25	13.1	20.6	5.0	FEB 10	-EPE	17	28	19.7	0.8	1.3
	+EPE	23	00	43.9	1.0	0.9		-EPN	17	28	20.0	0.9	1.7
	+EPN	23	00	43.9	0.9	0.5		+EPZ	17	28	19.9	0.6	1.2
	+EPZ	23	00	43.9	1.2	1.9		+EPE	22	46	41.5	2.0	7.9
05	-IPE	03	03	43.0	1.3	3.9	-EPN	22	46	41.0	1.6	2.1	
	-IPN	03	03	43.0	1.4	5.5	+EPZ	22	46	39.0	1.2	1.5	
	+IPZ	03	03	43.0	1.3	13.5	-ESE	22	51	30.8	5.0	14.2	
	LP+EPE	03	36	48.8	9.4	4.0	-ESN	22	51	28.3	3.0	6.9	
LP-IPN	03	36	45.0	9.4	9.5	+ESZ	22	51	30.4	4.0	15.5		
LP+IPZ	03	36	45.0	10.3	14.0	LP-ISE	22	51	20.6	11.3	15.0		
LP+IPPE	03	38	17.8	9.4	9.5	LP-ISN	22	51	18.8	11.3	18.5		
LP+IPPN	03	38	17.8	10.3	20.0	LP+ISZ	22	51	30.0	7.5	13.0		
LP-IPNZ	03	38	17.8	10.3	27.0	LP-ISSE	22	52	20.6	11.3	16.0		
LP+ISE	03	42	45.0	13.1	12.0	LP+ISSN	22	52	18.8	13.1	20.0		
LP+ISN	03	42	45.9	15.9	23.0	LP+LQN	22	53	41.3	20.6	46.0		
LP+ISSE	03	45	31.9	14.1	16.5	LP+LQZ	22	53	41.3	25.3	21.5		
LP+ISSN	03	45	33.8	13.1	15.0	LP+LRE	22	54	16.9	15.0	16.5		
LP+ISSZ	03	45	33.8	15.0	37.0	LP+LRZ	22	54	35.6	16.9	49.5		
LP-LRE	03	50	52.5	22.5	93.0	LP+LRZ	21	30	15.0	18.8	4.0		
LP-LRN	03	50	50.6	22.5	63.0	11 LP-LRZ	03	16	58.1	16.9	2.5		
LP+LRZ	03	50	52.5	24.4	32.0	12	-EPE	13	19	42.1	1.8	6.5	
-ISE	08	05	35.8	2.0	43.5	13	+IPZ	13	19	41.6	1.3	8.0	
ISN	08	05	35.5			13-15	NO RECORD						
+ISZ	08	05	36.0	3.0	15.5	16	-EPE	10	53	16.0	1.0	0.6	
+EPE	09	39	33.1	0.8	0.7		+IPN	10	53	15.0	2.0	8.0	
+EPN	09	39	33.5	0.9	0.8		+IPZ	10	53	15.0	1.6	13.0	
+EPZ	09	39	31.8	1.2	1.0		-EXE	10	59	19.1	0.9	1.3	
+EPE	21	20	43.2	0.9	0.6		+EXN	10	59	18.5	1.1	0.6	
+EPN	21	20	44.3	1.2	1.5		-EXE	07	14	14.0	1.2	2.0	
-EPZ	21	20	42.4	0.7	0.6	17	-EXN	07	14	13.0	0.8	0.6	
06	+EPE	03	21	52.4	1.2	2.5	+EXZ	07	14	13.0	1.0	0.7	
	+EPN	03	21	52.2	1.1	1.7	+EPE	12	01	51.4	1.0	0.5	
	+EPZ	03	21	52.0	1.5	7.0	+EPN	12	01	50.9	1.0	0.8	
06-09	LP+LRZ	03	55	45.0	26.3	5.0	+EPZ	12	01	49.1	0.9	1.1	
09	NO RECORD						+EPE	20	02	31.2	0.9	1.4	
	-EPN	16	30	11.7	0.7	1.2	-EPN	20	02	31.2	1.1	1.0	
	-EPZ	16	30	11.1	0.7	2.2	+EPZ	20	02	31.6	1.0	1.5	
10	LP+LRZ	01	42	28.1	18.8	4.0	LP+EXZ	20	44	15.0	18.8	3.5	
	LP+LRZ	04	15	45.0	16.9	3.0	-EPE	21	10	22.9	1.3	1.4	
	LP-LRZ	08	40	24.4	22.5	4.0	+EPN	21	10	23.3	1.4	0.9	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
MAR 17	-EPE	04	18	54.4	0.6	2.0
	-EPN	04	18	54.0	0.5	0.9
18	EPZ	04	18	54.8		
	LP EPN	21	57	46.9		
	LP+EPZ	21	57	46.9	18.8	13.0
19	LP+LRZ	22	31	50.6	22.5	44.0
	LP+LRZ	20	32	22.5	20.6	12.0
20	+EPE	00	04	18.0	0.8	4.0
	+EPN	00	04	16.5	0.8	1.4
22	+EPE	20	12	46.5	0.9	3.4
	LP-EPN	22	05	45.0	24.4	37.0
	LP+EPZ	22	05	45.0	23.4	44.0
	LP-PPN	22	07	16.9	20.6	58.0
	LP+PPZ	22	07	13.1	22.5	82.0
	LP+PPP	22	10	13.1	18.8	27.0
	LP+PPPZ	22	10	13.1	18.8	43.0
	LP-ESN	22	15	57.1	16.9	21.0
	LP+ESZ	22	15	56.3	18.8	39.0
	23	LP+LRE	18	02	39.4	18.8
LP-LRN		18	02	20.6	20.6	10.5
LP-LRZ		18	02	35.6	20.6	21.0
23-25	NO RECORD					
25	+EPZ	17	43	30.7	0.5	1.3
26	LP-LRE	06	12	56.3	17.8	4.0
	LP+LRN	06	12	54.4	16.9	3.0
	LP+LRZ	06	12	50.6	17.8	11.5
	+EPZ	16	27	23.5	1.0	4.0
27-29	EXTREME MICROSEISMIC ACTIVITY					
30	+EPN	13	18	16.9	1.0	3.2
	EPZ	13	18	18.5		
31	-EPN	04	29	26.4	0.5	9.0
	EPE	19	01	29.0		
	+EPN	19	01	28.6	0.5	1.0
APR 01	-EPE	04	57	24.3	0.3	1.0
	-EPN	04	57	25.0	0.5	1.0
	-EPZ	04	57	26.0	0.8	1.2
	+EPN	22	28	05.8	0.4	1.2
	-EPZ	22	28	07.1	0.7	2.4
	+EPE	22	43	58.9	0.7	1.6
	-EPN	22	43	59.0	0.3	1.0

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
APR 02	IPE	07	28	27.7			
	+IPN	07	28	28.0	1.4	6.5	
	+IPZ	07	28	26.3	1.4	7.0	
	LP-PPE	07	32	16.9	16.9	14.0	
	LP-PPN	07	32	18.8	19.7	19.5	
	LP+PPPE	07	34	13.1	14.1	12.0	
	LP-PPP	07	34	09.4	15.0	20.5	
	LP+PSE	07	39	07.5	14.1	37.0	
	LP-ISN	07	39	05.6	14.1	44.0	
	+EPE	11	53	19.1	1.8	1.2	
	+EPN	11	53	18.5	0.6	0.8	
	-EPZ	11	53	19.0	1.3	2.3	
	-EPE	15	29	10.7	1.0	2.0	
	+EPN	15	29	11.0	0.8	1.0	
	+EPZ	15	29	11.5	1.0	1.6	
	+EPN	19	27	26.1	0.5	0.3	
	+EPZ	19	27	25.5	0.7	0.8	
	03	+EPN	12	35	22.8	0.5	0.9
+EPZ		12	35	22.6	0.6	1.0	
+EPN		20	35	29.0	0.6	1.5	
+EPZ		20	35	29.8	0.9	1.3	
04		IPE	05	03	49.0		
		+IPZ	05	03	48.0	1.1	1.8
05	-EPE	18	05	26.0	1.0	1.0	
	+IPZ	18	05	24.0	1.3	2.6	
	LP+LRE	18	45	11.3	15.9	4.0	
	+EPE	22	03	06.9	1.0	0.9	
	-EPN	22	03	07.0	0.8	0.6	
	+EPZ	22	03	06.8	0.7	1.2	
	-EPE	00	42	10.9	1.2	2.1	
	-EPN	00	42	11.0	1.0	1.0	
06	+EPZ	00	42	10.3	1.8	2.9	
	+EPE	03	00	30.8	0.6	1.0	
	+EPN	03	00	30.0	0.8	0.6	
	+EPE	06	31	39.5	1.0	1.1	
	+IPN	06	31	39.0	0.7	0.6	
	-IPZ	06	31	39.0	1.0	2.3	
06	LP+LRE	14	32	52.5	15.0	3.5	
	LP+LRN	14	32	58.1	18.8	5.0	
	LP-LRZ	14	32	55.3	18.8	14.5	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
APR 07	+EPN	02	48	52.3	0.3	2.0
	-EPZ	02	48	52.1	1.0	3.5
07-08	EXTREME MICROSEISMIC ACTIVITY					
08	+EPE	23	22	27.8	1.0	1.8
	+IPN	23	22	28.5	1.1	3.5
	+EPZ	23	22	28.8	0.6	1.1
09	+IPE	04	16	03.6	1.3	10.0
	+EPN	04	16	01.3	1.8	3.5
	+EPZ	04	16	02.7	2.3	7.0
	EPE	06	28	37.6		
	-EPN	06	28	36.0	0.6	1.0
10	+EPN	03	04	48.0	0.7	1.1
	+EPZ	03	04	46.0	0.5	0.6
	+EPN	03	06	48.8	0.8	2.4
	+EPZ	03	06	48.1	1.0	1.5
	-EPN	03	31	21.0	0.7	1.1
	+EPZ	03	31	20.9	0.5	0.8
	LP+LRZ	22	05	33.8	19.7	5.0
10-11	NO RECORD					
12	-EPE	06	56	31.9	0.8	2.0
	+EPZ	06	56	31.8	0.6	2.0
13	+EPN	22	01	30.4	0.7	1.0
14-15	NO RECORD					
15	-EPE	17	24	39.0	1.0	4.1
	+IPN	17	24	40.1	1.2	7.0
16	+EPE	06	38	51.1	0.7	3.5
	+EPN	06	38	50.3	1.0	2.5
16-18	NO RECORD					
19	+IPE	04	53	11.2	0.4	0.9
	+IPN	04	53	11.0	0.8	3.4
	EPE	11	16	03.1		
	+EPN	11	16	03.0	0.4	1.2
	+EPN	17	31	07.9	0.5	0.7
20	LP+LRE	00	03	30.0	18.8	20.5
	LP+LRZ	00	03	37.5	18.8	48.0
	+EPN	04	13	30.5	1.8	4.9
	-EPN	06	08	16.5	1.1	1.5
	+EPN	22	02	36.0	0.8	1.0
	EPN	23	26	15.5		
	LP-IPZ	23	26	18.8	15.0	13.5

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
APR 20	LP-ISE	23	37	18.8	12.2	59.5
	LP+ESZ	23	37	18.8	10.3	15.0
	+EPN	23	55	55.9	1.4	1.2
21	-ESN	00	08	48.8	3.9	12.0
	+EPN	03	28	02.0	0.9	0.7
	+IPN	04	37	12.0	1.1	1.0
	-ESN	04	47	42.3	2.1	2.8
	LP-LRE	05	10	13.1	24.4	62.0
	LP-LRZ	05	10	09.4	31.9	90.5
	+EPN	07	31	53.5	1.2	0.8
	-EPN	09	58	40.9	0.9	1.1
	-EPN	22	15	11.0	1.1	0.8
22	-EPN	03	01	37.0	0.9	0.8
	LP-LRZ	04	00	52.5	19.7	6.5
	+EPN	05	38	44.9	1.0	0.6
	+IXN	13	22	58.8	1.1	2.6
	+IXN	13	23	51.5	1.1	1.9
	+IXN	13	24	17.0	1.4	3.0
	EPN	13	25	22.8		
	-EXN	23	07	15.1	1.0	1.0
	+EXZ	23	07	15.4	1.4	2.0
	-EXN	23	10	55.0	1.1	2.1
	+EXZ	23	10	55.2	1.0	0.8
24	-EPN	02	31	11.3	1.0	0.7
	-EPZ	02	31	09.9	1.0	1.6
	+EPN	05	19	47.8	0.3	0.3
	+EPZ	05	19	46.8	0.9	0.9
	+EPN	07	32	35.4	1.0	1.3
	+EPZ	07	32	34.2	1.0	1.0
	+EPN	08	06	26.5	0.7	0.4
	+EPZ	08	06	26.8	0.8	0.3
	+EPN	10	21	15.0	0.8	0.8
	+EPZ	10	21	15.0	0.6	0.6
	EPN	20	58	58.3		
	+EPZ	20	58	57.4	1.6	3.0
	+EPN	23	25	53.5	0.8	0.6
	+EPZ	23	25	52.8	1.0	1.7
26	+EPN	04	35	21.0	0.9	1.1
	+EPN	11	46	24.3	0.8	1.1
27	+EPN	05	11	14.9	0.4	2.5

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
APR 27-28	NO RECORD					
29	+EPN	12	55	14.5	0.8	1.0
	+EPZ	12	55	14.4	1.2	1.8
	+EPN	12	58	36.0	0.3	0.5
	-EPZ	12	58	36.3	0.5	1.5
	+IPZ	13	42	52.5	1.0	3.7
30	+EPZ	16	34	09.9	0.5	1.1
MAY 01	+EPN	17	34	44.0	1.1	2.0
	+EPZ	17	34	43.4	1.8	3.2
02	+EPN	10	05	31.9	0.6	3.8
	+EPZ	10	05	31.9	0.7	5.7
03	+EPN	15	21	26.0	1.1	2.3
	-EPZ	15	21	28.0	1.1	3.0
	+EPN	18	45	55.1	1.0	1.2
	+EPZ	18	45	55.0	1.2	1.4
04	+EPN	07	49	54.0	0.7	1.0
	+EPZ	07	49	54.7	1.0	1.0
	-EPN	13	20	58.3	0.7	1.0
	+EPZ	13	20	58.6	1.1	3.5
	+EPN	20	30	00.8	0.8	2.3
	+EPZ	20	30	01.8	0.8	4.0
05-08	EXTREME MICROSEISMIC ACTIVITY					
09	-EPN	02	00	53.8	1.0	2.2
	-EPZ	02	00	55.0	0.6	2.0
	EPN	02	10	48.7		
	+EPZ	02	10	49.0	0.9	0.9
	+EXN	02	13	45.0	1.1	1.0
	-EXZ	02	13	47.4	1.4	1.1
	-EPN	03	11	14.9	1.4	2.5
	+EPZ	03	11	14.9	1.8	2.1
	+EPZ	10	54	11.1	1.1	1.6
	LP-LRZ	11	02	07.5	17.8	4.0
	+IPZ	12	30	47.5	0.9	2.5
10	+EPZ	22	41	23.0	0.7	1.6
11	+EPN	01	39	27.9	1.4	1.8
	+EPZ	01	39	28.6	1.0	0.9
	+EPN	02	52	20.6	0.7	0.7
	+EPZ	02	52	20.0	0.9	1.1
	LP-LRZ	03	18	13.1	18.8	4.0
	+IPZ	06	35	23.0	0.9	2.3

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
MAY 11	+EPN	11	47	06.4	0.7	1.1
	+EPZ	11	47	06.8	1.1	1.9
	+IPZ	18	22	59.9	1.0	2.0
12	LP+LRN	02	09	18.8	20.6	4.0
	+EPN	02	22	11.9	1.1	0.8
	+EPZ	02	22	11.3	1.1	0.9
	-EPZ	11	36	47.7	0.8	1.0
	-EPZ	12	34	35.0	1.4	2.0
	LP+LRN	13	08	37.8	20.6	2.5
	LP-LRZ	13	08	37.5	20.6	4.0
	+EPZ	14	53	03.5	0.3	0.5
	+EPN	18	12	10.0	1.1	0.9
	+EPZ	18	12	10.5	1.0	1.3
	+IPN	18	52	16.0	1.2	4.0
	+IPZ	18	52	15.1	1.2	7.0
	-ESN	18	55	53.0	1.1	1.1
	+ISZ	18	55	54.6	1.6	3.5
	+EPN	21	34	39.0	1.0	0.6
	+EPZ	21	34	39.5	0.7	0.7
	-IPN	21	56	54.0	1.0	2.3
	-IPZ	21	56	53.3	1.0	6.0
13	+IPN	11	31	32.1	0.6	0.6
	+IPZ	11	31	31.1	0.6	1.6
	+ESN	11	33	02.0	0.6	0.6
	+ESZ	11	33	01.1	2.3	8.0
14	EPN	05	23	24.1		
	-IPZ	05	23	24.5	0.3	1.1
14-15	EXTREME MICROSEISMIC ACTIVITY					
15	+EPN	23	25	50.9	1.5	4.4
	-EPZ	23	25	51.0	1.2	3.5
	-ESN	23	34	29.8	1.4	3.6
16	LP-LRZ	12	02	45.0	18.8	4.0
17	+EPN	07	46	02.1	0.6	0.5
	-EPZ	07	46	03.5	1.2	2.0
	+EPN	17	32	58.2	0.9	2.5
	+EPZ	17	32	56.4	1.1	1.6
	EPN	19	54	07.0		
	-EPZ	19	54	07.9	0.3	0.6
18	-EPN	17	21	30.0	0.8	0.5
	+EPZ	17	21	30.7	1.3	2.1

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
MAY 18	+EPN	20	19	29.0	0.6	0.7
	+EPZ	20	19	28.8	1.0	1.0
19	-EPN	06	21	28.0	0.5	0.8
	+EPZ	06	21	25.4	1.0	0.4
	EPN	06	36	10.5		
	+EPZ	06	36	11.1	0.4	0.5
	+EPZ	07	59	06.4	0.9	0.5
	EPN	08	03	18.0		
	+EPZ	08	03	18.7	0.3	0.4
	+EPE	17	08	45.0	0.5	0.6
	EPN	17	08	45.0		
	+EPZ	17	08	44.3	1.0	1.9
	LP+EXN	17	17	56.3	15.0	6.5
	LP+EXZ	17	17	54.4	18.8	4.5
	-EPE	17	41	06.5	2.2	3.0
	-EPZ	17	41	05.5	0.8	0.6
	+EPE	18	34	15.0	0.6	0.7
	20	EPN	18	34	15.0	
+EPZ		18	34	15.5	1.2	1.1
+EPE		19	00	46.1	1.1	1.0
+EPN		19	00	46.0	1.3	1.5
+IPZ		19	00	45.2	0.6	1.4
+EPZ		19	18	34.2	1.1	1.0
+IPE		21	17	22.3	1.3	2.0
-EPN		21	17	22.7	1.2	1.2
+IPZ		21	17	22.4	1.3	5.2
+EXE		21	19	20.8	0.8	0.6
-IXZ		21	19	20.8	1.0	3.2
-IPE		22	58	04.0	1.6	5.6
+EPN		22	58	04.8	1.6	1.6
+IPZ		22	58	04.0	1.5	10.0
+ISE		23	03	06.1	1.9	4.1
-ESN		23	03	06.0	1.4	2.1
-ESZ	23	03	04.5	2.0	2.5	
21	LP+LRN	23	28	16.9	21.6	3.0
	LP+LRZ	23	28	24.4	23.4	7.0
	LP+LRE	14	52	30.0	18.8	6.0
	+EPE	21	33	03.0	1.0	1.0
	-EPN	21	33	03.1	1.1	1.5
	-EPZ	21	33	02.9	1.0	1.2

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
MAY 21	+EPE	21	53	04.1	1.1	0.9
	+EPZ	21	53	05.0	0.6	0.5
22	+EPN	22	33	42.0	0.7	0.6
	+EPZ	22	33	41.0	0.8	0.8
	-EPN	19	45	35.0	1.0	1.0
	-EPZ	19	45	35.3	1.0	1.2
	+EPE	23	40	35.0	1.2	0.5
	-EPZ	23	40	34.2	1.0	1.3
	-IPE	23	49	00.8	1.1	7.0
	-IPN	23	49	00.7	1.5	3.0
	+IPZ	23	49	01.0	1.0	2.5
	23	-EPE	03	56	57.8	1.0
-EPN		03	56	57.3	0.9	1.0
+EPZ		03	56	57.4	1.2	1.9
+EPE		22	08	02.0	0.8	0.7
+EPN		22	08	02.0	1.1	0.7
-EPZ		22	08	01.3	1.1	1.7
24	-EPE	07	11	41.0	1.0	2.8
	+EPN	07	11	41.6	1.1	1.1
	+EPZ	07	11	40.9	1.2	1.4
	+EPE	08	06	16.7	1.3	1.3
	+EPZ	08	06	16.0	2.0	2.0
	+EPE	10	41	08.8	1.3	0.7
	+EPZ	10	41	07.1	1.2	1.0
	-EPE	20	29	51.5	0.6	0.6
25	-EPN	20	29	51.0	1.2	1.3
	+EPZ	20	29	51.5	1.2	1.6
	+IPE	12	21	56.7	1.5	4.4
	+IPN	12	21	56.0	1.1	3.0
	-IPZ	12	21	56.3	1.2	11.5
	+IPE	12	24	05.0	1.1	1.0
	+IPN	12	24	06.0	1.0	1.0
	+IPZ	12	24	05.0	1.5	3.6
	-IPE	15	08	03.0	1.1	5.5
	+EPN	15	08	03.9	1.4	2.4
	-IPZ	15	08	03.0	2.1	17.7
27	+EPE	17	19	39.2	1.2	1.0
	+IPN	17	19	39.0	1.0	2.1
	+IPZ	17	19	38.9	1.2	7.0
	+EPE	11	23	14.1	1.0	0.3

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
MAY 27	+EPN	11	23	14.9	0.8	0.6	
	+EPZ	11	23	16.1	1.6	1.9	
28	EPE	12	29	28.9			
	-IPZ	12	29	28.8	0.8	2.0	
	+IPE	06	04	19.9	2.1	8.2	
	-EPN	06	04	21.0	1.0	0.7	
	+IPZ	06	04	19.6	2.0	23.1	
	-IPE	15	18	10.1	1.0	1.5	
	-IPN	15	18	10.0	1.0	1.9	
	+IPZ	15	18	09.5	1.1	3.5	
	+ESE	15	19	45.5	1.0	1.0	
	-ESN	15	19	47.6	1.7	2.6	
	-ESZ	15	19	47.2	1.2	3.4	
	29	+IPE	03	15	55.0	1.1	0.7
		+IPZ	03	15	54.3	1.0	3.5
		+IPE	03	31	57.0	1.2	1.9
-EPN		03	31	56.9	1.2	1.8	
+IPZ		03	31	56.0	1.0	1.5	
+EPE		19	00	31.9	0.7	0.6	
+EPN		19	00	32.0	1.0	1.1	
-EPZ		19	00	30.0	0.8	0.6	
30		+EXE	07	13	11.0	2.2	1.6
		+EXN	07	13	14.3	1.3	0.9
	+EXZ	07	13	13.7	2.3	2.6	
	-EPN	15	36	05.5	0.8	0.6	
	+IPZ	15	36	05.0	1.2	1.1	
	+EXE	15	36	29.7	1.7	0.6	
	+EXN	15	36	30.2	1.2	0.7	
	-EXZ	15	36	28.9	2.2	3.5	
	+EPE	18	16	47.4	1.0	1.5	
	-EPN	18	16	48.4	0.8	1.0	
	+EPZ	18	16	48.8	0.6	1.1	
31	+EPE	05	55	30.1	0.5	1.0	
	-EPN	05	55	30.0	0.7	1.1	
	+EPZ	05	55	30.0	1.0	2.2	
	+EPE	06	32	48.6	0.9	0.5	
	+EPN	06	32	50.0	1.1	0.8	
	+EPZ	06	32	48.0	0.8	0.4	
	EPN	15	00	49.0			
	+IPZ	15	00	49.0	1.6	5.5	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
MAY 31	EPE	19	02	03.0		
	EPN	19	02	04.0		
	+IPZ	19	02	03.6	0.8	4.0
JUN 01	+EPN	20	34	47.1	0.8	1.3
	+EPZ	20	34	47.0	1.2	3.0
02	+EPN	08	43	39.0	0.9	0.6
	+EPZ	08	43	40.4	0.7	1.1
	+EPZ	17	02	35.4	1.0	1.7
	+EPZ	20	25	00.9	1.0	2.0
	+EPN	02	37	16.0	1.1	0.4
03	+EPZ	02	37	16.6	1.2	1.1
	-EPZ	02	49	05.0	1.1	1.0
	+EPZ	06	50	09.5	1.2	2.0
04	+EPE	15	30	17.0	2.0	1.6
	+EPN	15	30	18.0	1.8	0.5
	+IPZ	15	30	16.7	2.5	2.8
	-EPN	08	17	39.9	1.0	0.6
	-EPZ	08	17	40.2	1.6	2.0
05	+EPE	02	09	01.1	0.6	0.3
	-IPN	02	09	01.0	0.9	1.0
06	+IPZ	02	09	01.0	1.0	2.2
	+IPE	02	57	45.0	1.0	2.0
	+IPN	02	57	44.9	1.0	1.5
	+IPZ	02	57	44.0	2.0	2.4
	LP+LRZ	05	40	07.5	20.6	15.0
	-EPN	15	14	47.8	1.1	0.5
	+EPZ	15	14	46.1	1.2	0.9
	EPE	17	19	15.6		
	-EPN	17	19	16.5	0.7	0.4
	+EPZ	17	19	15.9	0.5	0.6
	+IPE	23	33	02.3	1.3	1.3
+IPN	23	33	02.1	0.9	1.0	
-IPZ	23	33	02.0	1.6	2.5	
06	LP+ESE	23	38	41.3	9.4	2.5
	LP+ESN	23	38	41.3	9.4	2.5
	+EPZ	01	20	56.4	1.3	1.1
	LP+LRE	01	31	18.8	46.9	3.0
	LP-LRN	01	31	18.8	15.0	4.0
	LP+LRZ	01	31	15.0	18.8	4.0
	+IPE	01	36	30.5	1.1	0.6

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JUN 06	+IPN	01	36	31.9	1.0	0.6	
	+IPZ	01	36	31.0	0.4	1.1	
	LP-LRE	02	56	37.5	15.0	2.0	
	LP+LRN	02	56	24.4	15.0	3.0	
	LP+LRZ	02	56	43.1	15.0	3.0	
	-IPE	12	58	38.0	1.5	1.5	
	+EPN	12	58	37.7	1.2	1.4	
	+IPZ	12	58	37.0	1.8	4.0	
	-EPZ	13	16	58.3	1.0	1.2	
	LP+LRN	23	45	08.4	15.9	5.0	
	LP+LRZ	23	45	06.6	19.7	7.5	
	07	+IPE	08	17	41.2	1.3	1.4
		+IPN	08	17	41.9	1.1	1.5
		+IPZ	08	17	41.3	1.8	4.7
-IPE		13	42	15.0	0.7	1.4	
+IPN		13	42	15.2	0.7	0.8	
+IPZ		13	42	15.0	0.6	2.7	
+EPE		23	08	57.1	1.8	1.6	
+IPN		23	08	58.0	0.9	0.9	
+IPZ		23	08	58.1	1.0	0.9	
08		+IPE	00	12	38.0	1.0	1.5
	-EPN	00	12	36.9	0.5	0.5	
	+IPZ	00	12	38.2	1.0	2.0	
	+IPE	12	00	04.0	1.3	2.0	
	+IPN	12	00	04.2	0.6	1.5	
	-EPZ	12	00	06.0	1.0	2.5	
	+IPE	13	36	45.1	1.1	4.5	
	-IPN	13	36	45.0	1.0	4.2	
	-IPZ	13	36	45.0	1.4	6.0	
	+EPE	14	17	51.9	1.3	1.0	
	-EPZ	14	17	52.4	1.2	2.5	
	+IPE	21	29	02.2	1.4	5.0	
	+EPN	21	29	03.5	1.2	0.6	
	+IPZ	21	29	02.1	1.3	9.7	
	09	-EPE	16	49	12.2	1.2	1.0
		+EPZ	16	49	11.4	0.6	1.2
+IPE		17	18	13.0	0.9	1.7	
+IPN		17	18	13.0	0.7	0.5	
+IPZ		17	18	13.3	0.7	1.8	
10	+EPN	02	47	09.2	0.3	0.3	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JUN 10	+EPZ	02	47	07.3	0.3	0.4	
	+EPE	03	36	05.3	0.3	0.3	
	+EPN	03	36	04.0	1.2	0.8	
	-EPZ	03	36	03.5	0.6	1.5	
	-EPN	04	44	02.3	1.5	1.4	
	+EPZ	04	44	02.9	1.0	1.0	
	+EPE	08	36	03.9	1.0	0.9	
	+IPZ	08	36	03.7	1.0	2.0	
	+EXE	15	00	52.0	1.1	0.9	
	+IPZ	15	00	53.1	1.0	2.3	
	+EXE	18	13	55.5	0.9	0.6	
	+EXN	18	13	55.9	0.9	0.5	
	+EXZ	18	13	56.0	0.7	0.4	
	-EPE	23	56	18.1	0.7	1.1	
	-EPN	23	56	18.8	0.6	0.4	
	+IPZ	23	56	17.0	0.8	1.1	
	12	+EPE	00	21	58.3	1.0	1.1
		+EPN	00	21	58.3	1.1	0.8
		+EPZ	00	21	57.8	2.0	1.6
		EPE	18	42	05.2		
		+EPN	18	42	04.0	0.7	0.6
		-EPZ	18	42	06.0	0.8	1.0
	13	-EPE	08	13	43.4	1.0	0.6
		+IPZ	08	13	43.0	1.0	1.5
+EXE		10	21	41.0	1.7	2.3	
-EXN		10	21	41.2	1.5	2.0	
+EXZ		10	21	41.3	1.7	7.1	
+EPE		20	38	53.0	0.9	1.0	
+EPN		20	38	53.4	1.0	0.6	
+EPZ		20	38	53.8	0.4	1.0	
+EPN		23	32	06.2	0.9	0.3	
+EPZ		23	32	07.5	1.2	1.1	
14		-EPE	08	24	06.2	1.8	2.0
		+EPZ	08	24	08.5	1.0	2.0
	+IPE	21	50	10.0	0.9	1.2	
	+IPN	21	50	11.0	1.0	1.0	
	+IPZ	21	50	10.2	0.9	2.4	
	+EPE	22	32	02.5	0.8	1.2	
	-EPN	22	32	02.8	0.4	0.6	
	+EPZ	22	32	03.1	0.6	1.0	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
JUN 15	+EPE	15	15	47.1	0.5	0.8
	+EPN	15	15	47.9	1.0	1.2
16	+EPZ	15	15	47.8	0.9	2.0
	+IPE	22	53	03.2	0.4	2.1
17	-IPN	22	53	03.2	0.3	1.4
	+IPZ	22	53	03.3	0.3	2.7
	+IPE	02	40	46.1	0.9	2.0
	+IPN	02	40	46.3	1.0	3.5
	+IPZ	02	40	46.1	1.0	11.5
	+ISE	02	43	09.9	1.6	2.2
	-ISN	02	43	09.8	1.0	1.9
	+ISZ	02	43	09.5	2.0	6.0
	+EXE	02	50	07.1	1.0	3.5
	+EXN	02	50	07.1	1.4	4.5
	-EXZ	02	50	07.7	1.8	4.2
	-IPE	22	28	36.7	0.7	1.5
	+IPN	22	28	36.6	1.0	3.0
	+IPZ	22	28	36.6	1.0	5.0
	+EXE	22	31	55.7	1.0	1.5
-EXN	22	31	55.7	0.6	0.8	
+EXZ	22	31	55.3	0.7	1.3	
18	LP+SKSE	22	34	31.9	9.4	3.5
	LP+LRE	23	03	23.4	17.8	6.5
	-IPE	02	01	35.5	1.8	4.5
	+IPN	02	01	35.2	1.4	2.6
	+IPZ	02	01	34.9	1.5	7.0
	-EXE	02	42	15.0	1.7	1.9
	-EXN	02	42	17.0	1.3	0.9
	-EXZ	02	42	16.0	1.2	1.4
	+IPE	17	01	20.2	1.6	8.2
	+IPN	17	01	20.0	1.8	4.3
	-IPZ	17	01	20.0	1.8	26.8
	+IPPE	17	02	09.0	1.4	5.8
	-IPPZ	17	02	08.7	2.2	24.7
	+EPE	20	17	23.7	1.3	2.0
	-EPN	20	17	25.7	1.2	1.0
	+EPZ	20	17	23.9	1.2	3.7
	-EPE	20	18	51.9	0.9	1.8
	+ISZ	20	18	51.2	1.3	3.8
	-EPE	22	23	57.8	1.2	1.0

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
JUN 18	+EPN	22	23	57.9	1.2	0.6	
	+EPZ	22	23	58.4	1.1	1.9	
19	+EPE	22	45	21.6	0.7	1.0	
	+EPN	22	45	20.8	0.8	0.7	
	+IPZ	22	45	21.5	0.5	2.5	
	-IPE	07	44	56.5	1.3	7.5	
	+EPN	07	44	57.2	1.0	1.2	
	-IPZ	07	44	56.6	1.6	20.5	
	+IPE	12	06	29.0	0.9	0.7	
	-IPZ	12	06	28.6	0.8	1.9	
	20	LP-LRE	20	58	15.0	16.9	4.0
	21	-IPE	09	01	25.7	1.0	1.7
		+EPN	09	01	25.4	1.0	1.2
		+IPZ	09	01	24.9	1.4	3.8
	22	+EXE	12	47	18.4	1.4	2.4
		+EXN	12	47	20.0	3.0	2.6
		+EXZ	12	47	16.3	3.9	14.5
23	-IPE	15	21	02.1	1.9	11.1	
	+IPN	15	21	02.1	1.5	11.0	
	-IPZ	15	21	02.0	2.0	35.5	
	+EPE	02	06	56.0	0.4	0.5	
	+EPN	02	06	56.1	0.4	0.9	
	+IPZ	02	06	56.0	0.5	3.1	
	24	+EPE	00	42	55.9	1.1	1.0
		+EPN	00	42	55.5	0.8	0.5
		-EPZ	00	42	54.2	0.6	1.0
	25	+EPE	10	15	23.0	0.6	0.6
		+EPN	10	15	24.3	1.0	0.4
		+EPZ	10	15	24.2	1.0	0.8
		+EPE	15	38	31.5	1.2	0.6
		+EPN	15	38	33.8	1.3	0.5
		+EPZ	15	38	33.0	1.9	2.4
27	+EPN	10	06	48.0	1.0	0.6	
	+EPZ	10	06	48.1	0.9	0.9	
	+EPE	12	31	28.1	1.0	1.0	
	+EPN	12	31	28.2	1.0	1.0	
	+EPZ	12	31	28.3	1.0	1.4	
	LP+LRE	15	01	13.1	17.8	4.0	
	LP+LRZ	15	01	02.8	18.8	6.0	
	-EPE	22	55	31.6	0.9	0.6	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
AUG 04	LP+PPZ	01	18	28.1	9.4	6.0	
	-ISE	01	22	27.6	2.2	16.3	
	-ISN	01	22	26.2	1.6	4.1	
	-ISZ	01	22	28.0	2.0	10.5	
	LP-ESN	01	22	26.3	9.4	4.0	
	LP+SSN	01	24	28.1	13.1	6.0	
	LP+SSZ	01	24	28.1	11.3	4.0	
	-EXE	01	27	42.0	1.0	1.7	
	-EXN	01	27	41.7	1.8	5.7	
	+EXZ	01	27	42.0	1.3	2.0	
	+IPE	11	04	31.0	0.9	1.6	
	+EPN	11	04	30.9	0.7	0.6	
	-IPZ	11	04	31.1	0.9	4.4	
	+EPE	16	59	39.3	1.4	1.6	
	-EPN	16	59	38.5	1.0	0.8	
	+IPZ	16	59	39.0	1.2	3.5	
	-EPN	22	37	49.3	1.6	1.8	
	+EXZ	22	37	47.4	1.1	0.6	
	05	+EPN	22	09	16.0	1.2	0.6
		+IPZ	22	09	15.4	1.5	4.6
	06	+EPN	08	09	49.9	0.8	1.9
+EPZ		08	09	50.0	0.9	2.4	
07	+IPE	01	58	09.9	1.8	3.1	
	-IPN	01	58	10.0	1.5	1.5	
	+IPZ	01	58	08.5	1.4	2.3	
	+IPE	02	17	54.9	1.5	1.6	
	+IPN	02	17	55.3	1.2	1.3	
	+IPZ	02	17	55.2	1.5	3.6	
	-EPE	07	52	52.0	0.7	0.6	
	+EPN	07	52	52.0	0.8	0.5	
	+IPZ	07	52	51.7	1.0	1.7	
	08	+EXE	04	58	56.2	1.2	0.6
-EXN		04	58	56.2	1.0	0.7	
-EXZ		04	58	55.8	1.2	1.0	
-EPN		13	11	46.8	1.0	0.6	
-IPZ		13	11	46.6	1.2	3.1	
+IPE		14	17	21.3	1.9	2.1	
-EPN		14	17	21.7	1.6	1.0	
+IPZ		14	17	21.4	2.0	3.8	
-EPE		15	17	42.7	1.6	1.2	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
AUG 08	+EPN	15	17	42.5	1.2	0.7	
	+EPZ	15	17	42.2	1.2	2.3	
	+EXE	20	09	10.5	1.6	1.7	
	+EXN	20	09	12.0	1.3	0.4	
	+EXZ	20	09	12.0	1.4	0.6	
	-IPE	22	32	31.4	0.7	0.8	
	-EPN	22	32	31.6	0.3	1.1	
	-IPZ	22	32	31.5	0.5	3.5	
	10	LP-LRE	02	16	48.8	15.0	3.5
		LP+LRN	02	16	28.1	15.0	4.5
	+EPE	10	49	00.2	1.0	1.1	
	+EPZ	10	49	00.0	1.3	2.2	
	+EPE	13	07	07.5	0.9	2.8	
	-IPN	13	07	08.0	0.8	2.0	
	-EPZ	13	07	08.3	0.8	3.0	
	+EPN	18	38	51.5	1.0	0.6	
	+IPZ	18	38	51.1	1.0	2.0	
	+ESE	18	40	56.8	1.2	0.6	
	+ESN	18	40	58.2	1.6	0.6	
	+ESZ	18	40	57.2	2.3	4.8	
	11	-IPE	01	55	42.2	1.6	2.5
-IPN		01	55	42.9	2.0	6.5	
-IPZ		01	55	42.2	2.0	9.5	
LP+EPN		01	55	41.2	7.5	2.5	
LP+ISN		02	06	26.3	12.2	16.5	
LP+ISE		02	06	31.9	15.0	11.5	
LP+PSE		02	07	22.5	14.1	14.0	
LP+LRE		02	38	37.5	15.0	3.0	
LP+LRN		02	38	33.8	16.9	5.0	
+EPE		04	01	12.1	0.9	0.5	
+EPN		04	01	12.8	0.9	0.3	
12	-EPZ	04	01	12.2	0.8	1.4	
	+EPN	21	26	52.8	0.6	0.3	
	+EPZ	21	26	53.0	0.8	0.6	
	-EXZ	21	58	24.8	1.2	0.7	
	14	+EPE	11	40	13.9	0.8	0.6
		EPN	11	40	14.2		
	+EPZ	11	40	14.0	1.0	1.8	
	+EPE	19	13	14.4	1.2	1.0	
	+EPN	19	13	17.0	1.2	0.4	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
AUG 23	+IPN	14	29	32.6	1.6	2.1
	-EPZ	14	29	30.5	1.0	2.0
24	+IPE	02	03	26.5	1.7	1.7
	+IPN	02	03	26.5	1.7	1.8
25	-EPZ	02	03	26.0	1.1	2.3
	-EXE	02	13	01.5	1.2	3.0
	+EXN	02	13	02.0	1.3	2.5
	-EXZ	02	13	02.2	1.5	3.5
	+EPE	02	41	34.0	1.7	1.5
	-EPZ	02	41	33.0	1.8	0.6
	+EPE	11	27	52.0	0.7	0.3
	+EPN	11	27	50.1	1.1	0.3
	+EPZ	11	27	50.6	1.1	1.0
	-IPE	18	16	55.7	1.7	2.3
	-IPZ	18	16	55.3	1.9	4.5
	-EXE	18	20	54.0	2.5	2.4
	-EXZ	18	20	54.8	1.9	4.5
	LP+ESE	18	26	43.1	13.1	4.0
	LP-ESN	18	26	43.1	13.1	3.0
	LP+LRE	21	44	54.4	19.7	8.0
	LP+LRN	21	44	56.3	19.7	22.5
	LP-LRZ	21	44	52.5	20.6	13.0
	+EPE	21	48	56.0	1.2	0.5
	-EPN	21	48	55.8	2.0	1.5
+IPZ	21	48	55.5	2.2	5.5	
-EPE	23	52	48.0	1.7	1.6	
+EPN	23	52	48.0	1.1	1.0	
+EPZ	23	52	47.1	1.5	2.0	
26	-IPE	00	01	36.9	0.7	1.0
	+IPN	00	01	37.0	0.7	1.3
	+IPZ	00	01	36.5	1.0	3.2
	+EPE	08	38	22.5	2.0	1.3
	-IPZ	08	38	23.4	2.3	4.1
	-IPE	16	06	45.6	0.6	6.5
	+IPN	16	06	45.5	0.7	0.6
	-IPZ	16	06	45.5	0.8	7.9
	-ESE	16	09	04.2	1.0	15.0
	ESN	16	09	03.5		
	+ISZ	16	09	04.4	1.0	22.5
	+IPE	19	55	36.8	2.0	21.5

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
AUG 26	+IPN	19	55	37.0	1.7	3.6	
	-IPZ	19	55	37.1	2.4	19.0	
	LP+IPE	19	55	38.2	15.5	62.0	
	LP+IPN	19	55	38.2	12.7	37.0	
	LP-IPZ	19	55	38.2	11.8	97.0	
	LP+IPPE	19	56	45.0	15.0	79.0	
	LP-IPPN	19	56	40.3	13.1	54.0	
	LP-IPPZ	19	56	42.2	12.2	78.0	
	LP-PPPE	19	57	07.5	14.1	61.0	
	LP-PPPN	19	57	06.6	14.1	36.0	
	LP-PPPZ	19	57	09.4	11.3	89.0	
	LP-ISZ	20	05	33.8	15.9	296.0	
	LP+SSZ	20	06	46.9	9.4	91.0	
	+IPE	22	44	34.8	1.2	0.8	
	+EPN	22	44	35.8	1.3	0.6	
	+IPZ	22	44	35.4	1.1	1.1	
	27	+IPE	07	24	37.0	1.2	5.3
		+EPN	07	24	38.5	0.6	0.7
		+IPZ	07	24	37.0	2.4	27.6
		LP+PCPZ	07	24	48.8	9.4	38.0
		LP+EPPE	07	27	37.5	16.9	4.0
		LP+IPPZ	07	27	37.5	11.3	14.0
	LP+ISE	07	34	46.9	14.1	13.0	
	LP-ISN	07	34	41.3	10.3	16.0	
	LP+ISZ	07	34	46.9	11.3	13.0	
	LP-PSE	07	35	39.4	15.0	20.0	
	LP-PSN	07	35	36.6	14.1	18.0	
	LP+PSZ	07	35	37.5	11.3	12.0	
	-EXE	07	37	17.0	1.0	3.2	
	-EXZ	07	37	16.0	1.6	3.9	
	LP-LRE	07	56	07.5	21.6	16.0	
	LP-LRN	07	56	13.1	20.6	63.0	
	LP-LRZ	07	56	13.1	26.3	27.0	
	+ESE	08	34	47.8	4.2	15.6	
	+ESN	08	34	45.5	3.2	8.0	
	-ESZ	08	34	47.7	4.0	7.8	
	+IPE	10	24	36.8	1.6	1.9	
	EPN	10	24	36.8			
	+IPZ	10	24	36.0	2.1	2.0	
	+IPE	10	54	44.4	1.7	3.2	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
AUG 27	+IPZ	10	54	44.5	1.8	7.5	
	+EPE	13	33	55.5	1.2	0.5	
	+EPZ	13	33	55.8	1.4	1.3	
	-EPE	21	01	56.4	0.7	0.7	
28	+EPZ	21	01	56.5	1.0	1.6	
	+IPE	14	23	27.9	1.3	1.8	
	-IPN	14	23	28.2	1.2	1.5	
	+IPZ	14	23	27.8	1.3	4.5	
	LP+ESE	14	33	33.8	13.1	2.5	
	LP-ESN	14	33	22.5	15.0	4.0	
	LP-LRE	14	57	18.8	17.8	3.0	
	LP+LRN	14	57	18.8	18.8	4.0	
	-EPE	20	23	26.0	1.0	0.9	
	-EPN	20	23	26.3	0.9	0.6	
	+EPZ	20	23	25.4	1.2	0.8	
	29	-IPE	12	38	18.1	2.0	2.5
		-EPN	12	38	19.6	1.5	0.8
+IPZ		12	38	17.9	2.0	4.5	
LP+ESE		12	42	58.1	14.1	2.5	
LP+ESN		12	42	58.1	12.2	5.0	
LP+LRE		12	46	28.1	18.8	6.0	
LP+LRN		12	46	13.1	16.9	9.0	
+EPE		14	37	41.6	1.6	0.7	
+EPN		14	37	39.9	1.7	1.1	
+EPZ		14	37	39.2	3.1	2.2	
LP+LRN		15	20	37.5	19.7	7.0	
+IPE		16	46	43.2	1.2	3.9	
+IPN	16	46	43.0	1.1	2.1		
-IPZ	16	46	42.2	1.3	11.5		
30	EPE	21	19	52.0			
	-EPZ	21	19	51.0	1.3	2.0	
	-IPE	14	52	11.3	1.5	1.6	
	+IPN	14	52	11.4	1.1	1.2	
	+IPZ	14	52	11.0	1.2	3.5	
	-IPE	21	22	38.4	1.4	3.3	
31	-IPZ	21	22	38.7	1.4	6.3	
	+ESE	01	00	53.7	1.3	3.0	
	-ESN	01	00	51.2	1.0	1.0	
	+ISZ	01	00	53.0	2.7	6.2	
	LP+EXN	01	06	54.4	9.4	2.5	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
AUG 31	LP+EXN	01	08	09.4	18.8	4.5
	LP-EXN	01	10	09.4	15.0	4.5
	LP+LRE	01	41	48.8	19.7	12.0
	LP+LRN	01	41	09.4	20.6	13.0
	-EPE	05	41	49.1	1.6	2.0
	+EPN	05	41	48.2	1.0	0.4
	+EPZ	05	41	48.0	1.0	0.7
	-EPE	23	15	36.0	1.2	1.2
	-EPN	23	15	36.9	1.2	0.9
	-IPZ	23	15	36.0	1.2	2.8
SEP 01	+EPE	03	19	28.8	1.2	1.0
	-IPN	03	19	28.5	1.2	1.0
	-IPZ	03	19	28.5	1.2	5.8
	+IPE	13	25	23.1	1.1	3.2
	+EPN	13	25	24.2	1.5	0.5
	-IPZ	13	25	22.8	1.5	7.1
	+EPE	14	02	57.0	1.0	1.5
	-EPZ	14	02	56.8	1.2	3.0
	+EXE	00	35	58.5	0.4	1.1
	+EXN	00	35	59.4	0.3	1.2
	+EXZ	00	35	59.4	0.5	1.6
	-IPE	10	48	13.0	2.0	15.9
+IPN	10	48	15.0	1.8	2.6	
-IPZ	10	48	13.0	2.0	19.0	
+ISE	10	57	54.3	4.0	4.0	
+ISN	10	57	54.0	2.2	2.6	
+ISZ	10	57	52.5	4.5	1.8	
LP-LRE	11	21	58.1	16.9	6.0	
LP+LRN	11	21	45.0	16.9	8.0	
+EXE	19	41	13.9	1.3	0.3	
+EXN	19	41	12.0	1.2	0.3	
-EXZ	19	41	12.0	1.9	1.8	
04	+IPE	09	01	33.1	2.0	12.5
	+IPZ	09	01	33.1	2.2	38.8
	-IPN	09	01	33.0	2.1	7.0
	-ISE	09	11	57.8	2.8	2.9
	+ISN	09	11	58.2	2.3	2.6
	-ESZ	09	11	57.0	1.2	1.1
	LP-PSE	09	13	43.1	16.9	8.0
	LP+PSN	09	13	41.3	20.6	9.0

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
SEP 04	-EPE	16	00	44.5	1.2	0.6	
	+EPN	16	00	42.0	1.4	0.5	
	+EPZ	16	00	43.3	1.4	1.6	
	+EPE	17	30	16.5	1.2	0.4	
	+IPZ	17	30	16.5	1.3	2.0	
	+EPE	17	44	33.5	1.2	0.6	
	+EPN	17	44	32.5	1.0	0.6	
	+IPZ	17	44	32.0	0.8	1.5	
	+EPE	23	40	40.3	1.1	0.5	
	+EPN	23	40	40.7	0.8	0.4	
	+EPZ	23	40	38.6	0.3	1.1	
	05	+EPE	03	21	55.5	0.7	0.7
		EPN	03	21	55.0		
		-IPZ	03	21	55.0	0.9	9.5
-EPE		09	28	48.0	1.0	0.7	
+EPZ		09	28	47.5	1.0	2.0	
+EPE		11	28	43.0	1.2	2.0	
+EPN		11	28	42.0	1.3	0.5	
-EPZ		11	28	42.5	1.7	3.3	
+EPE		15	24	44.0	1.0	2.5	
+EPN		15	24	43.8	1.1	0.6	
+IPZ		15	24	44.0	1.0	5.6	
06		-EPE	04	46	26.8	1.9	2.0
		+EPN	04	46	26.8	1.3	0.8
		+IPZ	04	46	26.0	1.8	3.6
	+EPE	05	13	35.3	1.1	1.7	
	+EPN	05	13	37.0	1.0	0.6	
	+IPZ	05	13	35.0	1.2	5.0	
	-EPE	09	05	24.8	1.5	1.8	
	+EPN	09	05	24.5	1.7	1.1	
	-EPZ	09	05	23.8	1.0	1.0	
	07	+EPE	01	31	09.9	1.8	1.3
		EPN	01	31	09.5		
		+EPZ	01	31	09.9	2.0	3.0
		-EPE	05	05	45.1	1.2	2.8
		+EPN	05	05	46.0	1.2	0.8
-IPZ		05	05	45.1	1.2	11.6	
+EPE		05	51	11.0	1.2	0.6	
+EPZ		05	51	12.4	1.1	0.7	
+IPE		13	54	35.0	1.0	1.5	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
SEP 07	-EPN	13	54	35.0	0.3	0.7	
	+EPZ	13	54	34.8	0.3	0.4	
	08	+EPE	03	12	05.0	1.1	1.0
		-EPN	03	12	05.0	0.9	1.2
	09	+EPZ	03	12	04.8	0.6	3.0
		-EXE	02	55	41.1	1.1	1.2
	10	-EXZ	02	55	41.2	1.0	2.0
		+EXN	04	31	29.5	1.6	0.6
	11	+EXZ	04	31	28.9	1.4	1.3
		+IPE	13	50	38.4	1.4	11.9
		+IPN	13	50	38.0	2.0	1.5
		+IPZ	13	50	38.0	1.8	26.5
		+IPE	05	15	22.7	1.8	3.0
		+IPN	05	15	23.2	1.2	2.1
+IPZ		05	15	22.8	2.0	6.5	
+ESE		05	21	49.2	4.5	3.4	
+ESN		05	21	51.6	2.8	2.0	
+ESZ		05	21	51.4	4.5	2.8	
LP+ESN		05	21	54.4	13.1	2.0	
LP-LRE		05	32	39.4	16.9	16.0	
LP+LRN		05	32	13.1	15.9	8.5	
+EPE		10	45	18.8	1.0	4.1	
12	-EPN	10	45	19.1	0.4	1.5	
	+EPZ	10	45	19.2	0.8	1.6	
	+EPE	14	25	40.5	1.6	1.3	
	+EPN	14	25	41.3	1.2	0.7	
	-EPZ	14	25	40.2	1.3	1.5	
	LP+LRN	15	08	45.0	17.8	3.0	
	-EXE	23	33	26.2	1.2	1.0	
	+EXN	23	33	29.5	1.4	1.1	
	+EXZ	23	33	28.4	1.5	2.2	
	-ESE	23	37	41.2	1.0	1.1	
	+ESN	23	37	41.0	1.1	0.6	
	+ESZ	23	37	41.0	1.3	1.1	
	LP-LRE	00	19	46.9	20.6	4.5	
	LP-LRN	00	19	52.5	20.6	6.0	
+EPE	14	28	51.8	2.0	2.0		
-EPN	14	28	51.8	2.0	1.5		
+IPZ	14	28	51.0	2.0	3.3		
-IPE	22	45	51.2	1.0	3.0		

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
SEP 12	-IPN	22	45	51.3	0.8	0.9
	+IPZ	22	45	51.2	1.3	5.1
13	LP+LRE	22	55	39.4	18.8	4.0
	LP+LRN	22	55	37.5	16.9	4.0
	+EPE	00	35	02.0	1.0	0.6
	-EPN	00	35	03.2	1.3	3.8
	+IPZ	00	35	02.0	0.8	1.9
	LP-EPZ	00	35	03.6	13.1	2.5
	LP-ESE	00	47	15.0	16.9	2.5
	LP+ESN	00	47	09.4	16.9	2.0
	LP-ESZ	00	47	18.8	13.1	2.5
	LP-LRE	01	17	54.4	17.8	7.0
	LP+LRN	01	17	54.4	16.9	7.0
	LP+LRZ	01	17	48.8	17.8	8.0
	14	-IPE	13	42	03.5	1.2
-IPZ		13	42	03.4	1.7	6.0
LP-ESE		22	50	41.3	15.0	2.5
LP-ESN		22	50	41.3	16.9	3.0
-EPE		04	08	27.0	1.2	1.9
+EPN		04	08	26.1	1.2	0.5
+EPZ		04	08	26.0	1.1	0.6
-IPE		14	57	17.0	1.9	6.2
-EPN		14	57	17.2	1.5	1.0
+IPZ		14	57	16.9	1.8	8.9
LP EPZ		14	57	18.8		
LP-PPE		14	58	22.5	11.3	3.5
LP+PPZ		14	58	20.6	11.3	5.0
LP+ISE	15	02	24.4	15.0	12.5	
15	LP ESN	15	02	22.5		
	LP+LRE	15	07	01.9	16.9	26.5
	LP+LRN	15	07	00.0	15.0	26.0
	LP-LRZ	15	07	04.7	15.0	16.0
	-EPE	10	46	17.1	1.8	0.7
	+EPN	10	46	17.0	2.0	1.1
	-EPZ	10	46	17.0	0.9	1.2
	LP+EPE	10	52	54.4	15.0	2.0
	LP-EPN	10	52	52.5	13.1	2.5
	LP+EPZ	10	52	56.3	11.3	2.5
LP+ESE	11	03	31.9	16.9	7.0	
LP+ESN	11	03	41.3	15.0	4.0	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
SEP 15	LP+ESZ	11	03	35.6	16.9	7.0	
	-IPE	21	41	14.3	1.6	6.5	
16	-EPN	21	41	14.4	1.2	1.4	
	+IPZ	21	41	14.5	1.1	6.0	
	+EPE	21	47	38.8	1.0	1.2	
	+IPN	21	47	39.0	1.8	0.9	
	+IPZ	21	47	38.5	1.2	5.0	
	+EPE	04	52	04.8	1.4	1.4	
	+EPZ	04	52	03.5	1.2	1.3	
	-EPE	06	42	02.3	1.7	1.6	
	-EPZ	06	42	02.4	1.8	2.7	
	+EPE	12	34	37.9	1.2	1.1	
	+EPN	12	34	39.0	1.2	0.4	
	+IPZ	12	34	37.9	1.4	4.5	
	+EPE	21	41	20.8	1.2	1.6	
17	-EPN	21	41	21.3	1.0	0.6	
	+IPZ	21	41	20.5	1.3	1.3	
	+EXE	05	41	57.4	1.5	1.8	
	-EXN	05	41	54.7	1.7	0.8	
	+IXZ	05	41	57.0	1.4	4.0	
	LP-LRE	06	25	35.6	16.9	9.0	
	LP-LRZ	06	25	20.6	17.8	10.5	
	LP-LRN	06	25	54.4	17.8	5.5	
	LP+LRE	21	51	07.5	15.0	3.5	
	LP+LRN	21	50	56.3	15.0	4.5	
	LP-LRZ	21	51	09.4	15.0	3.0	
	+IPE	09	59	01.5	1.5	1.1	
	+EPN	09	59	01.0	1.3	1.8	
18	+IPZ	09	59	00.9	1.6	6.9	
	+EPE	05	25	54.8	1.2	1.5	
	+IPZ	05	25	54.8	1.4	3.8	
	LP+ISE	05	36	33.8	18.8	11.5	
	LP+ESN	05	36	33.8	11.3	5.0	
	LP-EPSE	05	37	43.1	15.0	6.0	
	+EPE	06	04	18.5	1.0	0.5	
	+EPZ	06	04	18.5	1.0	0.6	
	-EPE	13	02	44.7	1.2	0.8	
	+EPN	13	02	43.5	1.2	0.8	
19	+IPZ	13	02	44.0	2.0	3.0	
	20	EPE	09	40	33.7		

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S					H	M	S			
OCT 03	+EPZ	00	26	45.5	1.2	3.0	OCT 07	+EPE	14	50	22.1	1.2	1.5	
	+EPE	12	32	50.8	1.2	1.8		-EPZ	14	50	21.5	1.3	2.5	
	-EPN	12	32	50.8	1.0	1.4		+IPE	17	12	00.5	1.2	1.8	
	-EPZ	12	32	50.3	1.2	3.0		+EPN	17	12	00.0	0.8	0.7	
	-EPE	19	30	29.4	1.0	2.0		IPZ	17	12	00.0			
	-EPN	19	30	28.8	1.1	0.8		LP+EXN	17	39	31.9	16.9	3.0	
	+EPZ	19	30	28.8	1.8	3.2		LP+EXZ	17	39	33.8	18.8	3.0	
	EPE	19	47	24.0				+IPE	17	48	35.1	1.1	1.4	
	+EPN	19	47	24.4	1.2	0.8		+EPN	17	48	34.8	0.8	0.6	
	+EPZ	19	47	22.0	1.2	0.6		IPZ	17	48	35.0			
	05	-IPE	04	45	21.5	1.0		6.0	LP EPZ	17	48	37.5		
		-IPN	04	45	21.4	1.0		1.1	-EPZ	19	16	04.5	1.2	2.0
		IPZ	04	45	21.4				+ISE	19	21	52.1	1.8	1.5
-IPE		10	39	45.0	1.3	1.6	+ISZ	19	21	52.0	2.9	4.0		
+IPN		10	39	44.5	1.2	2.3	-EPE	19	46	04.5	0.9	1.0		
06	+IPZ	10	39	43.3	2.0	6.5	-IPE	21	17	58.5	1.4	2.7		
	+EPE	08	23	30.0	0.8	1.7	+EPN	21	18	00.0	1.2	0.7		
	+EPN	08	23	29.5	1.0	4.0	IPZ	21	17	58.5				
07	+EPZ	08	23	29.5	1.2	4.5	LP EPE	21	57	46.9				
	LP EPE	02	22	37.5			LP+EPN	21	57	45.0	13.1	2.0		
	LP EPN	02	22	39.4			LP-EXN	22	13	54.4	18.8	3.5		
	LP+EPZ	02	22	33.8	7.5	4.5	LP-EXZ	22	13	56.3	22.5	3.5		
	+EPE	04	57	31.3	1.4	3.0	+EPE	03	17	09.6	0.8	1.5		
	-EPZ	04	57	30.1	2.0	4.2	-EPN	03	17	10.0	0.8	1.1		
	LP+EPZ	04	57	33.8	9.4	2.5	+EPZ	03	17	08.7	1.1	2.0		
	LP+LRE	05	35	12.2	15.9	3.5	+EPE	10	15	11.3	1.0	0.5		
	LP+LRN	05	35	05.6	16.9	3.5	+EPN	10	15	10.2	1.1	0.6		
	LP+LRZ	05	35	11.3	15.9	3.5	-EPZ	10	15	10.0	1.0	1.0		
	+EPE	05	51	24.4	1.5	1.5	+IPE	19	19	27.5	1.0	3.0		
	+EPN	05	51	26.0	1.2	0.3	EPN	19	19	28.5				
	+EPZ	05	51	25.0	1.1	3.0	IPZ	19	19	27.5				
	-EPE	12	22	31.0	1.3	3.5	-EPE	22	07	15.2	1.2	1.6		
	+EPN	12	22	32.0	0.6	0.3	+EPN	22	07	16.0	1.0	0.5		
	IPZ	12	22	31.0			+EPZ	22	07	15.0	1.4	2.5		
LP-ESE	12	32	19.7	15.0	5.5	-IPE	12	06	12.8	1.9	8.5			
LP+ISN	12	32	20.6	12.2	8.5	+IPN	12	06	12.5	1.8	9.5			
LP+EPZ	12	32	18.8	13.1	3.0	IPZ	12	06	12.5					
LP-LRE	13	00	03.6	15.9	17.5	LP+IPE	12	06	15.0	16.9	22.0			
LP+LRN	13	00	05.6	16.9	13.0	LP+IPN	12	06	15.0	13.1	24.0			
LP-LRZ	13	00	03.6	16.9	14.0	LP-IPZ	12	06	15.0	9.4	101.5			

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S					H	M	S			
OCT. 10	LP+EPPE	12	09	50.6	14.1	7.5	OCT 12	-EPN	06	43	12.1	1.5	1.0	
	LP-IPPN	12	09	52.5	11.3	35.5		-EPZ	06	43	12.1	2.0	2.5	
	LP+ISE	12	16	35.6	15.9	61.5		+EPN	21	32	03.9	0.8	0.7	
	LP-ISN	12	16	33.3	15.0	149.0		+EPZ	21	32	03.4	1.3	1.0	
	LP-ISZ	12	16	33.8	14.1	51.5		13 LP+ESE	00	05	54.4	17.8	32.0	
	LP-PSE	12	17	31.9	15.0	90.5		LP+ESZ	00	05	56.3	16.9	18.0	
	LP+PSN	12	17	33.7	15.0	84.0		+EPN	00	47	52.4	1.7	1.2	
	LP+PSZ	12	17	33.8	14.1	56.0		+IPZ	00	47	52.0	1.2	1.2	
	LP+SSE	12	22	11.3	15.9	64.5		LP+EPE	00	54	37.5	15.0	5.5	
	LP-SSN	12	22	10.3	16.9	39.0		LP-EPZ	00	54	39.4	10.3	4.0	
	+EXE	12	32	08.7	1.3	1.1		+EPN	21	31	41.9	1.2	0.8	
	+EXN	12	32	10.0	1.1	0.5		+IPZ	21	31	41.8	1.4	3.5	
	+EXZ	12	32	08.2	1.3	1.6		14 -IPN	05	08	43.2	1.9	2.0	
	+EXE	13	14	21.1	0.8	0.4		+IPZ	05	08	43.5	1.9	7.9	
	+EXN	13	14	20.5	1.0	0.4		LP+EXE	05	19	48.8	11.3	2.0	
	+EXZ	13	14	20.3	1.5	1.5		LP+EXN	05	19	45.0	13.1	2.5	
	-EPE	16	42	16.0	1.0	1.0		LP+LRE	08	47	35.6	18.8	3.5	
	-EPN	16	42	15.0	1.2	1.0		LP+LRN	08	47	46.9	18.8	3.0	
	+EPZ	16	42	15.1	1.4	2.0		LP+LRZ	08	47	37.5	20.6	2.5	
	+EPE	21	21	36.1	1.2	0.5		-IPN	12	41	51.7	1.3	2.3	
	-EPN	21	21	37.9	1.0	1.1		+IPZ	12	41	51.5	1.5	17.0	
	+IPZ	21	21	37.4	1.2	3.3		+EPE	16	54	35.1	1.1	0.3	
	11	+EPE	02	16	02.4	1.4		0.6	+IPZ	16	54	35.5	2.0	2.2
		+EPN	02	16	03.2	1.4		0.9	EPE	19	24	38.9		
		+EPZ	02	16	03.8	1.5		2.9	+EPZ	19	24	37.9	1.1	0.7
		+EXE	02	17	46.2	1.3		0.8	+EPE	02	42	50.0	1.2	0.6
		EXN	02	17	45.3				+EPN	02	42	49.9	1.6	0.8
		-EXZ	02	17	45.3	1.8		2.5	+EPZ	02	42	50.0	1.8	2.5
		+EPE	12	03	29.1	1.4		0.6	+IPE	03	17	55.5	1.8	1.5
+EPN		12	03	26.8	1.2	0.6	+IPN	03	17	55.9	2.2	1.6		
+EPZ		12	03	28.8	1.2	0.8	+IPZ	03	17	55.9	2.2	6.6		
-IPE		12	25	33.0	1.4	1.2	LP+ESE	13	35	56.3	13.1	2.0		
+IPN		12	25	33.0	1.0	1.4	LP+ESN	13	35	56.3	11.3	3.0		
+IPZ		12	25	32.8	1.0	3.0	LP+EPZ	13	26	31.9	9.4	2.0		
12		+IPE	01	33	54.2	1.7	2.6	+EPE	16	26	02.2	1.2	2.4	
		-IPZ	01	33	53.8	1.4	5.0	-EPN	16	26	03.6	0.5	1.1	
		+EPE	05	30	37.5	1.1	0.8	+IPZ	16	26	03.5	1.0	2.1	
		+EPN	05	30	36.1	1.0	1.0	+IPE	21	21	05.8	1.1	2.0	
	+EPZ	05	30	37.9	1.1	2.5	+EPN	21	21	07.2	1.0	0.5		
	+EPE	06	43	10.3	2.0	1.1	+IPZ	21	21	05.7	1.8	4.5		

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
NOV 24	IPZ	02	13	21.4			
	-EPE	02	25	58.0	1.1	1.5	
	-EPN	02	25	59.4	1.2	1.0	
	-EPZ	02	25	58.9	1.8	7.0	
	+EPE	03	30	51.0	1.4	1.7	
	+EPN	03	30	50.9	1.0	0.9	
	-IPZ	03	30	51.0	1.3	3.1	
	-IPE	16	31	07.1	1.1	4.5	
	-IPN	18	31	07.0	1.0	2.5	
	IPZ	18	31	07.0			
	-IPE	18	53	31.8	1.4	2.6	
	+EPN	18	53	32.0	2.0	2.1	
	+IPZ	18	53	31.7	2.0	5.0	
	-EPE	22	30	46.3	1.0	1.2	
	-EPN	22	30	46.0	0.6	0.6	
	+EPZ	22	30	46.1	1.1	3.0	
	+EPE	23	11	43.5	1.6	1.6	
	+EPN	23	11	44.0	1.2	0.8	
	+EPZ	23	11	43.1	1.5	2.2	
	25	+EPE	00	15	22.1	1.2	2.2
		+EPN	00	15	22.0	1.0	1.2
		+EPZ	00	15	21.8	1.1	1.5
		-IPE	03	35	25.6	0.9	2.6
		-IPN	03	35	25.6	1.0	1.5
IPZ		03	35	25.6			
+EPE		03	58	03.8	0.8	1.1	
+EPZ		03	58	03.5	1.2	2.0	
26		-IPE	00	54	59.0	1.1	1.4
		+EPN	00	54	59.3	1.2	0.6
		+IPZ	00	54	59.4	1.2	3.5
		+EPE	23	27	47.3	1.0	1.0
27	-EPZ	23	27	47.5	1.0	1.0	
	-EPE	09	46	22.0	1.2	7.7	
	IPZ	09	46	22.0			
	-EPE	12	52	01.2	1.0	1.9	
	EPN	12	51	59.8			
	IPZ	12	51	59.7			
	+EPE	17	38	39.9	1.1	0.7	
	+EPN	17	38	40.0	1.1	0.6	
	-EPZ	17	38	38.0	1.0	0.8	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)		
		H	M	S				
NOV 27	-EPE	20	25	52.8	1.0	1.8		
	+EPN	20	25	52.8	0.8	1.0		
	+EPZ	20	25	52.5	1.0	3.5		
	28	-IPE	00	28	15.8	1.2	3.1	
		-EPN	00	28	15.8	1.1	1.8	
		+IPZ	00	28	15.7	1.0	8.2	
		-IPE	04	30	23.0	1.2	2.2	
		+EPN	04	30	23.3	0.7	1.0	
		+IPZ	04	30	23.0	2.1	5.3	
		-IPE	05	08	20.0	0.9	1.1	
		+IPN	05	08	20.0	1.0	0.7	
		+IPZ	05	08	19.9	1.0	2.5	
		-EPE	05	50	19.2	1.1	1.6	
		-EPN	05	50	19.4	0.8	0.6	
		+IPZ	05	50	17.8	1.0	1.5	
		-EPE	06	42	19.7	0.6	1.6	
		-EPN	06	42	19.7	0.6	1.2	
		+IPZ	06	42	19.8	1.1	3.5	
	LP+ISE	06	51	15.0	12.2	6.0		
	LP-ISN	06	51	15.0	08.4	5.5		
	LP+ESZ	06	51	15.9	09.4	3.0		
	+EPE	18	51	02.2	1.2	1.5		
	-EPN	18	51	03.2	0.8	1.0		
	-EPZ	18	51	02.8	1.0	3.5		
	+EPE	19	29	10.6	1.0	0.5		
	-EPN	19	29	09.4	1.0	1.0		
	+EPZ	19	29	09.0	1.4	2.6		
	29	+EPE	08	59	30.2	1.0	1.0	
		+IPZ	08	59	30.0	1.0	2.0	
		30	+EPE	10	37	01.0	2.2	6.5
			+EXE	10	37	16.5	2.0	9.8
	DEC 01	+EPE	00	11	58.3	0.9	1.1	
		+EPN	00	11	57.7	0.9	1.9	
+EPZ		00	11	58.2	1.1	4.6		
+EPE		08	51	37.3	1.0	1.0		
+IPZ		08	51	37.1	1.0	1.0		
+EPE		23	49	59.0	1.7	1.2		
+EPZ		23	49	59.0	1.7	2.1		
LP EPN		23	51	16.9				
LP EPZ		23	51	18.8				

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
DEC 01	LP+EXN	23	55	37.5	13.1	2.5
	LP+EXZ	23	55	39.4	13.3	2.5
02	LP+LRE	00	02	05.6	16.9	7.0
	LP-LRN	00	02	07.5	16.9	5.0
	+IPE	04	26	52.3	1.2	1.6
	+IPZ	04	26	52.0	1.3	3.7
	LP+LRE	05	03	37.5	20.6	4.0
	-EPE	13	16	53.6	1.6	1.3
03	-EPZ	13	16	53.8	1.5	3.0
	+EPN	01	37	14.2	1.2	0.6
	+EPZ	01	37	14.0	1.0	0.6
	+EPE	13	53	38.1	1.0	0.5
	+IPN	13	53	40.0	1.2	2.0
	-IPZ	13	53	38.5	1.4	2.5
04	+EPE	01	03	31.3	2.1	2.0
	-EPN	01	03	31.1	1.2	1.0
	-EPZ	01	03	31.1	2.2	3.9
	-IPE	06	03	01.1	1.2	2.9
	+IPN	06	03	00.9	1.2	2.6
	-IPZ	06	02	59.8	1.3	3.5
	LP EPE	06	03	05.6		
	LP EPZ	06	03	07.5		
	+EPE	06	12	30.9	1.2	0.8
	+EPN	06	12	30.2	1.1	0.7
	+EPZ	06	12	29.5	1.2	2.3
	LP+ESE	06	13	26.3	15.0	6.0
	LP+LRE	06	39	45.0	18.8	10.5
	-EPE	11	43	49.8	1.2	0.7
-EPZ	11	43	51.9	1.0	3.0	
05 04	LP+ESE	13	36	46.9	14.1	5.0
	+EPE	14	35	48.8	1.6	1.2
05	-EPN	14	35	49.0	1.0	0.8
	-EPZ	14	35	48.4	0.8	1.0
	+EXE	14	37	02.0	1.2	1.0
	+EXN	14	37	01.6	1.2	0.9
	-EXZ	14	37	01.3	2.2	4.3
	-EPE	14	26	19.4	1.6	1.7
	+EPN	14	26	20.3	1.0	1.1
	+IPZ	14	26	18.7	1.6	3.7
	LP+LRE	15	02	03.6	17.8	06.0

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
DEC 05	+EPE	15	54	20.6	1.2	2.7
	-EPN	15	54	20.2	1.0	0.8
06	+EPZ	15	54	20.2	1.3	7.0
	-ESE	16	03	13.3	1.8	2.1
	+ESN	16	03	12.9	1.7	1.5
	-ESZ	16	03	11.9	1.2	1.0
	+IPE	04	43	56.9	1.2	1.6
	-IPZ	04	43	56.2	1.5	3.9
	+EPE	13	19	51.0	1.8	0.7
	+EPN	13	19	52.0	1.8	1.0
	+EPZ	13	19	51.2	1.2	1.3
	-IPE	17	15	59.0	1.7	9.1
07	-EPN	17	15	58.9	1.5	3.4
	+IPZ	17	15	59.0	2.2	10.2
	EPE	18	04	17.2		
	-IPZ	18	04	16.7	1.3	3.0
	+EXE	18	13	53.0	2.7	1.9
	+EXN	18	13	53.2	2.6	2.4
	+EXZ	18	13	53.7	3.7	2.0
	+IPE	00	43	30.6	0.8	3.5
	+IPN	00	43	30.6	0.9	1.9
	-IPZ	00	43	30.5	1.3	8.0
	+EPE	03	33	35.2	1.2	1.0
	-EPN	03	33	36.0	1.0	0.9
	+IPZ	03	33	35.0	1.2	2.1
	+EPE	06	12	13.9	1.2	0.9
08	-EPN	06	12	13.8	1.0	0.9
	+EPZ	06	12	13.7	1.5	2.6
	-IPE	06	27	44.2	1.1	2.1
	+EPN	06	27	44.1	1.0	1.5
	+IPZ	06	27	43.5	1.6	5.0
	LP+EXE	06	38	11.3	14.1	07.0
	LP+LRE	07	04	24.4	18.8	09.5
	+EPE	11	32	12.0	1.1	1.2
	+EPN	11	32	12.6	1.0	2.6
	+EPZ	11	32	12.2	1.1	2.5
09	-EXE	11	35	16.0	0.5	3.0
	+EXN	11	35	15.0	1.0	2.0
	+EXZ	11	35	15.0	1.2	2.0
	+EPE	05	14	05.6	1.8	2.0

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
DEC 09	-EPN	05	14	05.8	1.0	1.5	
	+EPZ	05	14	04.9	1.3	6.4	
	+EPE	06	48	22.0	1.2	1.5	
	+EPZ	06	48	22.5	1.0	1.1	
	+IPE	14	49	58.0	1.0	5.5	
	+EPN	14	49	58.1	1.0	0.7	
	+IPZ	14	49	58.0	1.2	8.0	
	+IPE	21	55	40.3	1.0	2.1	
	+IPN	21	55	40.0	0.8	1.0	
	+IPZ	21	55	40.0	1.0	4.5	
	10	+EPE	07	22	46.3	1.2	1.8
		+EPN	07	22	46.7	1.1	1.5
		+IPZ	07	22	46.0	1.8	5.5
+EPE		08	47	51.2	1.3	1.5	
+EPN		08	47	51.2	1.0	0.8	
10-12	+EPZ	08	47	50.7	1.4	5.0	
	NO RECORD						
12	-EPE	20	13	05.9	1.0	1.0	
	-EPN	20	13	04.8	1.2	1.4	
	+EPZ	20	13	05.0	1.8	3.5	
	LP+ESE	20	20	43.1	15.0	3.5	
	LP+LRE	20	34	33.8	15.9	7.0	
13	-EPE	01	32	55.0	1.7	1.5	
	-EPZ	01	32	55.5	1.0	1.0	
	LP+LRE	02	10	28.1	20.6	29.5	
	-EPE	10	17	08.0	1.2	2.5	
	+EPN	10	17	08.6	1.2	1.7	
14	+IPZ	10	17	08.1	1.1	7.0	
	-IPE	03	07	19.5	1.2	5.5	
	-IPN	03	07	19.6	1.0	10.1	
	IPZ	03	07	19.4			
	-EPE	04	53	26.8	1.1	0.6	
	-EPN	04	53	26.7	1.8	1.5	
	-EPZ	04	53	25.9	2.3	2.2	
	+IPE	15	49	39.6	1.2	4.5	
	-IPN	15	49	39.2	1.0	4.5	
	+IPZ	15	49	39.0	2.0	17.8	
	-IPE	19	04	08.4	1.1	1.8	
+IPN	19	04	08.5	1.0	1.5		
-IPZ	19	04	08.6	1.0	7.2		

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
DEC 14	+ESE	19	06	25.1	1.1	1.5	
	-ESN	19	06	25.0	1.2	0.8	
15	+ESZ	19	06	25.3	1.3	2.0	
	+EPE	23	31	30.8	0.8	0.5	
	+EPN	23	31	29.5	1.1	1.4	
	+EPZ	23	31	29.3	1.2	3.2	
	+EPE	17	20	30.1	1.0	0.7	
16	+EPZ	17	20	32.4	1.0	1.0	
	+EPE	14	48	09.9	1.0	1.7	
17	+EPZ	14	48	09.9	1.0	1.0	
	-EPE	16	35	18.7	1.8	2.2	
	+IPN	16	35	18.7	1.0	1.4	
	+IPZ	16	35	18.0	1.5	4.7	
	+EPE	17	47	54.1	1.3	1.7	
	+EPN	17	47	53.0	1.4	1.0	
	-EPZ	17	47	53.4	1.3	3.6	
	+EPE	00	10	18.8	1.2	0.7	
	+EPN	00	10	17.7	1.2	0.8	
	+EPZ	00	10	17.4	1.8	2.0	
18	-EPE	07	17	11.3	1.1	1.5	
	EPN	07	17	12.0			
	-IPZ	07	17	11.2	1.2	7.6	
	+EPE	17	55	34.0	0.8	0.6	
	+EPN	17	55	36.4	1.2	1.5	
	+EPZ	17	55	33.1	2.2	1.6	
	+EPE	22	36	30.6	0.9	0.6	
	+EPZ	22	36	31.0	0.9	0.6	
	19	+IPE	09	09	49.7	2.0	1.4
		+IPZ	09	09	49.5	1.3	3.5
	20	+EPE	11	43	33.8	1.8	1.0
+EPZ		11	43	33.9	1.2	2.3	
+EPE		13	57	01.5	1.3	0.8	
-EPZ		13	57	02.6	1.5	2.4	
-EPE		01	19	17.7	1.1	0.6	
+IPZ		01	19	16.9	2.0	2.1	
+EXE		01	20	34.7	1.3	8.5	
+EXN		01	20	36.0	1.0	2.0	
+EXZ		01	20	35.0	3.0	14.1	
LP+EPE		01	20	39.4	16.9	2.0	
21	LP-IPZ	01	20	37.5	11.3	7.5	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)	
		H	M	S			
DEC 21	LP-ESE	01	30	16.9	16.9	7.0	
	LP+ESZ	01	30	15.0	9.4	6.0	
	-IPE	03	58	21.0	1.0	8.5	
	-IPN	03	58	21.0	1.0	5.0	
	IPZ	03	58	21.0			
	+EPE	16	59	16.0	1.4	1.2	
	-EPN	16	59	16.2	0.7	0.6	
	+EPZ	16	59	15.1	1.1	2.0	
	+EPE	18	19	01.3	0.7	1.0	
	+EPZ	18	19	01.3	0.9	2.0	
	22	+EPE	02	12	20.2	1.7	1.2
		+EPZ	02	12	22.2	1.3	1.6
		-EPE	13	36	45.7	1.2	1.5
		+EPN	13	36	45.0	2.0	1.6
23	+EPZ	13	36	44.6	1.9	4.5	
	+IPE	02	36	20.0	1.0	1.9	
	+EPN	02	36	19.9	1.1	1.0	
	+IPZ	02	36	19.5	1.3	3.3	
	+EXE	21	24	43.7	1.4	1.8	
	-EXN	21	24	43.8	1.5	1.8	
	+EXZ	21	24	42.3	2.2	3.0	
	EPE	22	19	33.9			
	+EPZ	22	19	34.2	1.3	1.7	
+EXE	22	20	19.8	1.2	1.1		
+EXZ	22	20	19.4	1.3	2.0		
24-25	NO RECORD						
26	+EPE	06	57	56.7	0.6	0.5	
	+EPZ	06	57	56.5	1.7	2.2	
	-IPE	15	10	27.9	0.7	2.0	
	+IPN	15	10	27.8	0.8	3.0	
	+IPZ	15	10	27.8	0.8	3.5	
27	+EPE	01	40	13.7	1.9	2.2	
	-EPN	01	40	14.0	0.9	1.0	
	-EPZ	01	40	13.0	1.8	3.0	
	+IPE	11	50	18.0	1.1	1.5	
	-IPN	11	50	18.0	1.2	1.8	
	+IPZ	11	50	18.0	1.0	7.0	
	-ESE	11	52	24.2	1.2	1.1	
	+ESN	11	52	25.3	1.2	1.0	
	-ESZ	11	52	23.1	1.3	3.0	

DATE	PHASE	ARRIVAL TIME			PERIOD (S)	AMP (MM)
		H	M	S		
DEC 28	-IPE	02	58	15.0	2.0	1.5
	+IPN	02	58	14.0	2.2	2.5
	+IPZ	02	58	14.0	2.5	11.4
	LP EPN	02	58	15.0		
	LP-EPZ	02	58	16.9	9.4	5.5
	-EXE	03	01	33.7	1.4	0.9
	-EXN	03	01	33.0	1.8	1.2
	+EXZ	03	01	32.4	2.0	2.5
	LP+ISE	03	08	52.5	16.9	18.5
	LP+ESN	03	08	48.8	22.5	8.0
	LP+PSN	03	09	56.3	15.0	10.0
	LP-LRN	03	37	30.0	16.9	52.0
	LP-LRZ	03	37	15.0	16.9	39.0
	29	+EPE	00	05	41.8	1.3
+EPN		00	05	40.5	1.1	1.2
-EPZ		00	05	42.0	0.9	1.0
30	-IPE	10	51	27.1	1.0	3.0
	+EPN	10	51	27.0	1.6	2.0
31	+IPZ	10	51	26.0	1.6	8.0
	-EPE	14	10	18.0	0.6	1.0
	EPN	14	10	17.0		
	+EPZ	14	10	16.3	1.0	1.5
	+EPE	23	47	25.0	1.0	1.5
	-EPN	23	47	25.8	1.0	0.6
	+EPZ	23	47	25.0	1.0	0.6
	EPE	08	05	27.0		
	EPN	08	05	27.0		
	+IPZ	08	05	26.3	1.0	3.0
	LP+IPE	08	15	37.5	13.1	9.0
LP-IPN	08	15	37.5	10.3	9.0	