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HARMONIC COEFFICIENTS OF SOLAR AND LUNAR DAILY VARIATIONS FROM LONG SERIES OF HOURLY GEOMAGNETIC DATA FROM CANADA

Jagdish C. Gupta

148 pp.

Dossier public de la Direction de la Physique du Globe No. 83-1
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ABSTRACT

Long series of mean hourly geomagnetic data available on the magnetic tapes from eight Canadian observatories located in the subauroral zone and at higher latitudes have been analyzed to obtain the daily solar (S) and lunar (L) harmonic coefficients as well as the O_1 and N_2 tide potential terms. The data were subdivided according to seasons, annual mean sunspot number, degree of magnetic activity and lunar distance. The first four harmonic terms of S and L have been tabulated for various cases.

RESUME

De longs enregistrements de données moyennes horaires géomagnétiques, disponible sur bandes et provenant de huit observatoires canadiens situés dans la zone subaurorale et à de plus haute latitudes sont traités afin d'obtenir les coefficients harmoniques diurnes solaire (S) et lunaire (L), ainsi que les termes potentiels de marée O_1 et N_2. Les données sont subdivisées selon les saisons, le nombre moyen annuel de tâche solaire, le degré d'activité magnétique et la distance lunaire. Les quatre premiers termes harmoniques de S et L ont été classés pour différents cas.

INTRODUCTION

The solar and lunar geomagnetic daily variations S and L have been studied for many years by harmonic analysis of observatory data from different parts of the world. The results have proven useful in a number of applications. These include the determination of associated global ionospheric current systems and their dependence on solar activity; the study of gravitational tides; the study of plasma winds and dynamics at E-region levels. During recent years large amounts of edited observatory data have become available in digital form on magnetic tape. The purpose of this study is to exploit digital data sets of this kind from eight Canadian magnetic observatories where derivation of S and L harmonic coefficients have not been previously attempted. A complex computer program developed to implement the method of Chapman and Miller (1940) for analysing magnetic mean hourly values has made it possible to derive well-determined coefficients even for high latitude stations where sub-storm activity and irregular disturbances are prominent. The results presented here include two sub-auroral stations, two stations lying within the auroral zone and four which are located farther north in the Canadian Arctic. The observatories that provided the data are shown in Figure 1 and their positions are given in Table 1. Earlier results of similar analyses of data from several North American stations including Agincourt, Meanook and Resolute Bay have been published elsewhere (Gupta, 1980).

In general, in terms of Fourier components (usually limited to 4) the daily solar and lunar variations are -

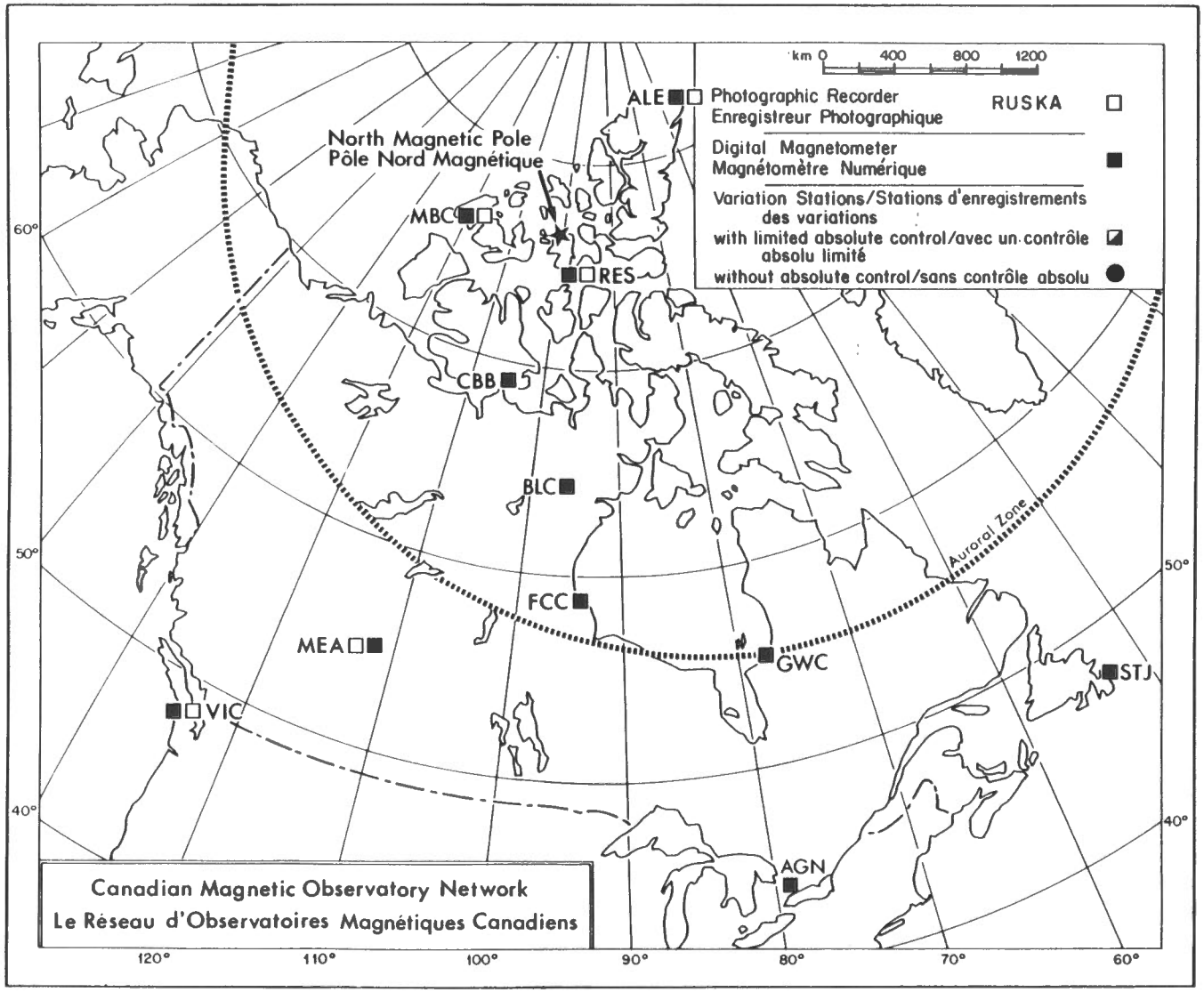
$$S = \sum_{n=1}^{4} S_n \text{ where } S_n = s_n \sin(nt + \sigma_n)$$

$$L = \sum_{n=1}^{4} L_n \text{ where } L_n = l_n \sin(2\tau + (n-2)\, t + \lambda_n)$$

where t and τ are the local mean solar time and the local mean lunar time respectively; and (S_n, σ_n) and (l_n, λ_n) are the amplitudes and phases of the four (n=1 to 4) solar and lunar harmonics respectively. The periods of these harmonics are 24, 12, 8 and 4 hours for the solar case and differ only marginally for the lunar case.

For the last few years all Canadian observatories have been producing mean hourly geomagnetic data for the X, Y and Z-components. At some observatories in earlier years H and D-hourly values were available instead of X and Y hourly values . To make the series of the data homogeneous the H and D hourly values have been converted into X and Y. All the original hourly data were edited by using the computer method of Morris and Gupta (1978).

The corrected hourly values of each component were analyzed by the Chapman-Miller method (1940) as detailed by Gupta (1973) and the amplitudes and phases of the S and L harmonics were calculated. The vector probable error of the amplitude is determined by the method suggested by Leaton et al. (1962). A harmonic is considered well determined if its amplitude exceeds the vector probable error by a factor of 2.08.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Photographic Recorder
Enregistreur Photographique
RUSKA
Digital Magnetometer
Magnétomètre Numérique
Variation Stations/Stations d'enregistrements des variations
with limited absolute control/avec un contrôle absolu limité
without absolute control/sans contrôle absolu
North Magnetic Pole
Pôle Nord Magnétique
ALE
MBC
RES
CBB
BLC
FCC
MEA
GWC
STJ
VIC
AGN
Auroral Zone
Canadian Magnetic Observatory Network
Le Réseau d'Observatoires Magnétiques Canadiens
60°
50°
40°
120°
110°
100°
90°
80°
70°
60°

FIGURE 1.

TABLE 1

No.	NAME	CODE	Geographic Latitude	Geographic Longitude East	Geomagnetic Latitude	Geomagnetic Longitude East	Duration Data Analysed
1.	Victoria	VIC	48.51°N	236.6°	54.3°N	292.7°	Jan. 1, 1966 - Dec. 31, 1977
2.	St. John's	STJ	46.60°N	307.3°	58.7°N	21.4°	Aug. 1, 1968 - Dec. 31, 1979
3.	Great Whale River	GWC	55.30°N	282.3°	66.8°N	347.2°	Jan. 1, 1967 - Dec. 31, 1979
4.	Fort Churchill	FCC	58.80°N	265.9°	68.8°N	322.5°	Jan. 1, 1967 - Dec. 31, 1979
5.	Baker Lake	BLC	64.33°N	264.0°	73.9°N	314.8°	Jan. 1, 1966 - Dec. 31, 1979
6.	Cambridge Bay	CBB	69.10°N	255.0°	76.7°N	294.0°	Jan. 1, 1973 - Dec. 31, 1979
7.	Mould Bay	MBC	76.20°N	240.6°	79.1°N	255.4°	Aug. 1, 1962 - Dec. 31, 1979
8.	Alert	ALE	82.50°N	297.5°	85.7°N	168.7°	Jan. 1, 1963 - Dec. 31, 1979

Note 1 - For St. John's the H,D hourly data for Aug. 1, 1968 - Dec. 31, 1973 were converted to X,Y and then combined with the X,Y hourly data for the remaining years.

Note 2 - For Mould Bay and Alert the hourly values of the X, Y, and Z-components for Jan. 1, 1964 - Dec. 31, 1965 were not available.

Different tables give harmonic coefficients of the solar and lunar variations for each component for a different set of days. These are -

Table A - All days

Table B - All days excluding International Disturbed Days

Table C - International Quiet Days only

Table D - Individual years

Table E - Calendar Months

Table F - Sunspot groups: $R \leq 30$ (Table F-1), $30 < R \leq 70$ (Table F-2) and $R > 70$ (Table F-3)

Table G - Magnetic activity groups: $Cp \leq 0.5$ (Table G-1), $.5 < Cp \leq 1.2$ (Table G-2) and $Cp > 1.2$ (Table G-3)

Table H - Lunar distance groups: Perigee ± 3 days and Apogee ± 3 days (Tables H-1 and H-2), Moon approaching (Days between A +3 days and P-3 days Table H-3) and Moon receding (Days between P +3 days and A-3 days Table H-4)

Table I - O_1 - lunar declinational diurnal constituent

N_2 - lunar distance constituent

(for details see Malin and Chapman (1970) and Gupta (1979)).

In each of the above cases (except for Table D) the calculations were done for season J (April 22 to August 20), season E (February 20 to April 21 and August 21 to October 21), season D (October 22 to February 19) and for the year Y - all days in the seasons J,E and D. Harmonic coefficients derived from all days data are defined as average day values in this study. Not all of the above noted tables have been reproduced for each station.

The daygraphs and vectograms shown are obtained from the data of Table B for each station.

The harmonic coefficients given in this volume contain information from high latitudes where the presence of the Sq-current system was confirmed earlier (see Gupta, 1980) from analysis of long series of geomagnetic data. From the tables of these harmonic coefficients the following comments can be made:

1. At the auroral zone stations Fort Churchill and Great Whale River the amplitudes of XS_1 and YS_1 (Solar diurnal harmonics of X and Y - components respectively) are larger by factors of 2 in Summer than in winter and also larger by a factor of more than 2 on an average day than on an International Quiet day. This suggests a large seasonal change of the ionospheric conductivity and also its considerable enhancement on even an average day in this Zone.

2. The amplitude of ZS_1 is normally largest at Baker Lake but it becomes largest for International Quiet days at Cambridge Bay. This suggests a poleward shift of the auroral zone and hence a contraction of the polar cap during the periods of magnetic quiescence.

3. Baker Lake is normally located inside the area surrounded by the auroral oval. However the observation of relatively stable and comparable amplitudes of XS_1 and XS_2 strongly suggests that this station comes under the direct influence of overhead oval currents at least twice a day.

4. Compared to Baker Lake the amplitudes of ZS_2 are found to be nearly 3 times larger at Cambridge Bay to the north and at Fort Churchill to the south. This may be due to the current systems of the eastward and westward electroejets which have been reported occurring frequently near the poleward edge of the auroral oval (i.e. near Baker Lake) because of a preferred precipitation of the geomagnetic tail particles there.

5. An examination of ZS_4 (period 6 hours) from Alert, Resolute Bay, Mould Bay and Cambridge Bay reveals that its amplitude is largest at Mould Bay. Earlier results of the analysis of long period (5 hours) geomagnetic data by DeLaurier et al (1974) and of seismic surface wave data by Wickens and Pec (1968) obtained from the region of Mould Bay suggested the presence of both a conducting and a low velocity layer in the upper mantle. A conducting layer does not appear to be consistent with the large ZS_4 amplitude observed at Mould Bay in this study. A good conductor in the upper mantle would be expected to suppress ZS_4, not enhance it.

6. The amplitudes and phases of the semi-diurnal terms XL_2 and YL_2 are noted to be comparable at St. John's on the east coast of Canada and at Victoria on the west coast. But, the amplitude of ZL_2 is found to be larger by a factor of over 3.5 at St. John's than at Victoria and the phases of this term at the two stations differed by almost 180°. The observed values of L contain contributions from the ionospheric dynamo (L_I) and the oceanic dynamo (L_O). These were separated by a method suggested by Malin (1971) using data given in Tables B (all days) for the stations:

Victoria $ZL_o = .6 \sin (2\tau + 125°)$

St. John's $ZL_o = 2.8 \sin (2\tau + 308°)$

Clearly the amplitude of ZL_o at St. John's is 4.7 times larger than that at Victoria and the phases differ by 183°. This ocean-effect seems to account for the observed large enhancement of the semi-diurnal lunar-tide at St. John's.

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References

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Acknowledgement

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References

Chapman S. and J.C.P. Miller, 1940; The statistical determination of lunar daily variations in geomagnetic and meteorological elements, Mon. Not. R. Astr. Soc. Geophys. Suppl. 4, 649-559.

De Laurier J.M., Law, L.K., Niblett, E.R. and F.C. Plet,1974; Geomagnetic variation anomalies in the Canadian arctic II. Mould Bay anomaly, J. Geomag. Geoelectr. 26, 223-245.

Gupta, J.C., 1973; The solar and lunar daily geomagnetic variations at Sodankyla, 1914-1966. Veroff. Geophys. Obs. Helsinki, No. 56, 79-181.

Gupta, J.C., 1979; Solar and lunar daily geomagnetic variations at Sodankyla 1914-1966, Supplement, Veroff. Geophys. Obs. Helsinki 63, 1-31.

Gupta, J.C., 1980; Harmonic coefficients of solar and lunar daily variations obtained from long series of hourly geomagnetic data, E.P.B. Geomag Ser. No. 18, Ottawa, Canada.

Leaton, B.R., Malin S.R.C. and H.F. Finch, 1962; The Solar and Luni-Solar daily variations of geomagnetic field at Greenwich and Abinger, 1916-1957,R. Greenwich obs. Bull. 63.

Malin, S.R.C. and S. Chapman, 1970; Lunar tidal components O_1 and N_2 in the atmospheric pressure, Pure and Appl. Geophys. 80, 309-318.

Malin, S.R.C., 1970; Separation of Lunar daily variations into parts of ionospheric and oceanic origin, Geophys. J. Roy. Astr. Soc. 21, 447-455.

Morris, J. and J.C.Gupta, 1978; Program DATACK (editing of hourly magnetic and meteorological data); IAGA News No. 17, 113, 1978.

Wickens, A.J. and K. Pec,1968; A Crust-Mantle Profile from Mould Bay, Canada, to Tucson, Arizona, Bull. Seism. Soc. Am., 58, 1821-1831.

VICTORIA

January 1, 1966 - December 31, 1977

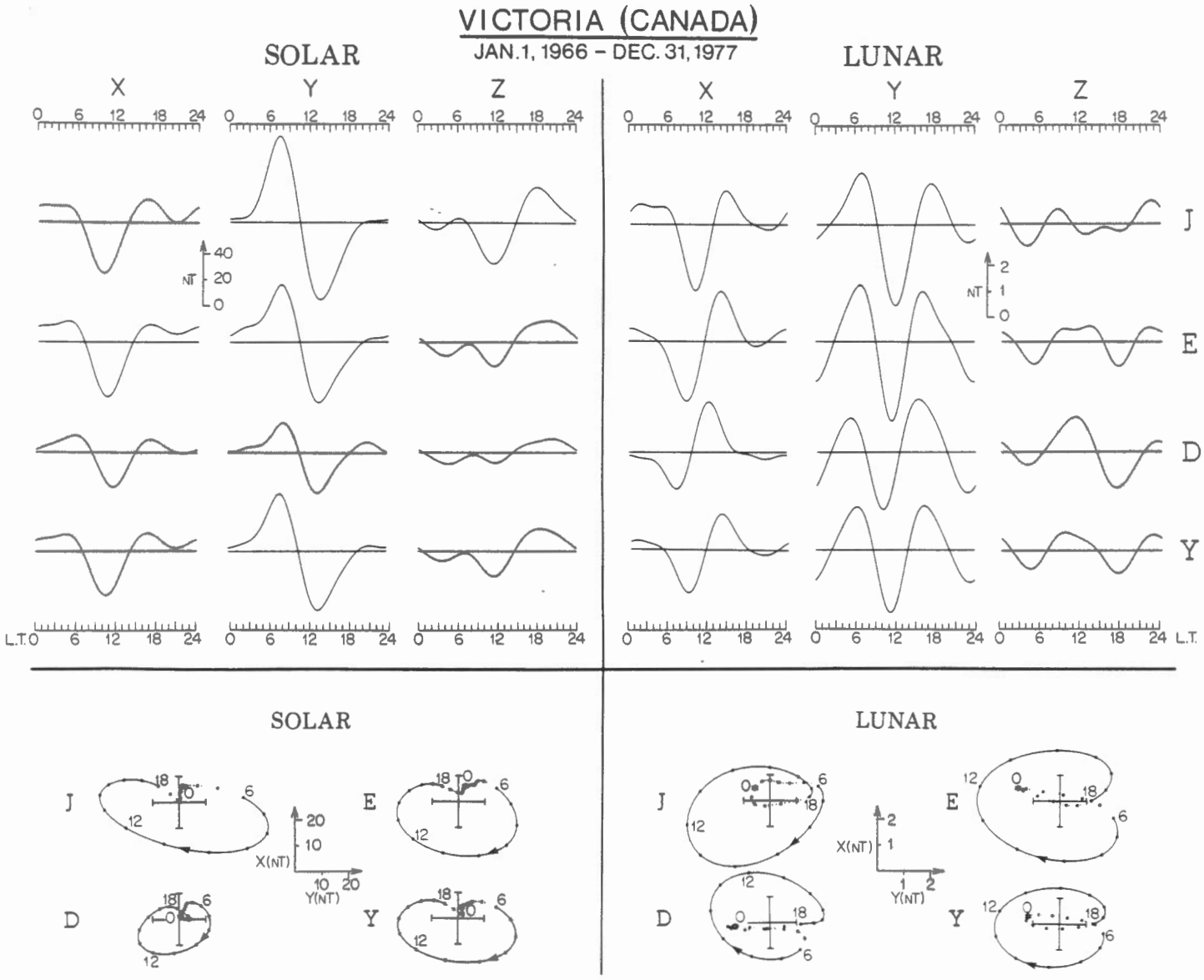
VICTORIA (CANADA)
JAN.1, 1966 – DEC. 31, 1977
SOLAR
LUNAR
X
Y
Z
J
E
D
Y
NT
L.T.
X(NT)
Y(NT)

FIGURE 1 VIC

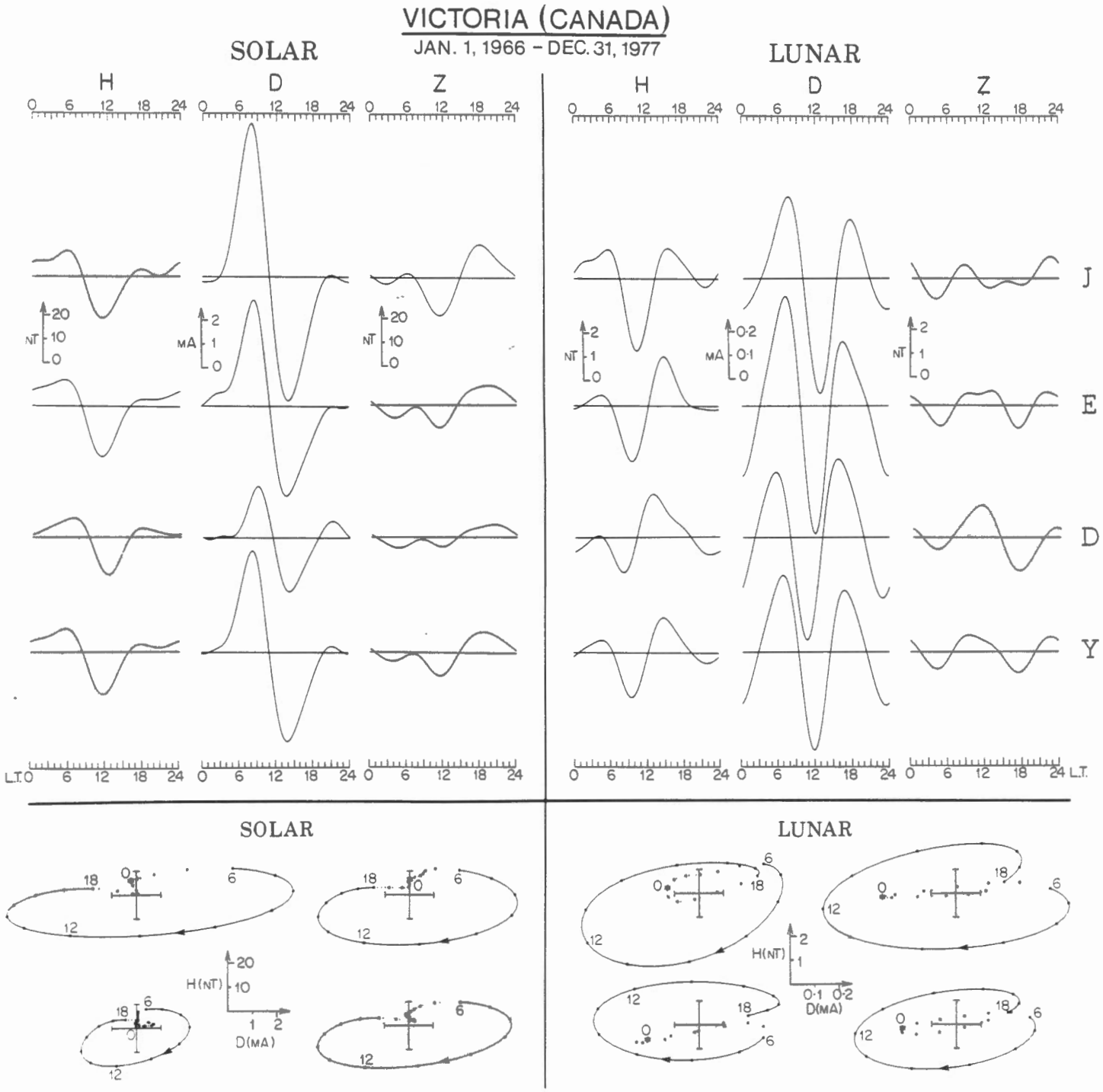
VICTORIA (CANADA)
JAN. 1, 1966 - DEC. 31, 1977
SOLAR
LUNAR
H
D
Z
J
E
D
Y
L.T.
H(NT)
D(MA)

FIGURE 2 VIC

VIC TABLE-A

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.5CN LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	1445 DAYS			1445 DAYS			1449 DAYS		
1	8.2	.3	133	18.6	.2	22	11.1	.3	153
2	9.0	.1	337	15.3	.1	214	8.0	.2	260
3	2.4	.2	152	4.7	.1	72	1.9	.1	101
4	1.0	.1	95	1.2	.1	323	.2	.1	73
				*** SEASON E ***					
	1471 DAYS			1471 DAYS			1475 DAYS		
1	8.8	.2	112	13.8	.2	34	10.4	.3	169
2	8.3	.2	320	9.6	.2	216	3.9	.2	235
3	3.4	.1	158	3.7	.1	58	1.9	.1	119
4	.7	.1	75	1.8	.1	282	.7	.1	322
				*** SEASON D ***					
	1448 DAYS			1448 DAYS			1450 DAYS		
1	4.3	.2	83	6.7	.2	51	7.0	.3	171
2	6.3	.1	291	7.0	.2	209	2.3	.2	200
3	2.6	.1	115	2.4	.1	33	1.0	.1	106
4	.4	.1	340	1.7	.1	246	.5	.1	300
				*** ANNUAL Y ***					
	4364 DAYS			4364 DAYS			4374 DAYS		
1	6.7	.2	114	12.8	.1	31	9.4	.2	163
2	7.5	.1	318	10.6	.1	214	4.4	.1	244
3	2.7	.1	144	3.5	.1	59	1.6	.1	109
4	.5	.0	73	1.4	.1	280	.4	.1	323

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	1445 DAYS			1445 DAYS			1449 DAYS		
1	.70	.34	125	.84	.23	74	.37	.38	141
2	1.32	.12	343	1.76	.13	275	.54	.22	166
3	.42	.17	172	.72	.12	96	.27	.15	130
4	.37	.10	6	.23	.10	270	.10	.12	267
				*** SEASON E ***					
	1471 DAYS			1471 DAYS			1475 DAYS		
1	.98	.25	163	.19	.20	77	.58	.38	259
2	1.40	.22	10	1.93	.18	282	.64	.23	90
3	.58	.12	185	.62	.10	131	.25	.13	178
4	.21	.14	64	.39	.12	282	.10	.14	304
				*** SEASON D ***					
	1448 DAYS			1448 DAYS			1450 DAYS		
1	.68	.25	236	.14	.23	210	.26	.37	56
2	.67	.11	70	1.85	.18	314	1.04	.20	110
3	.41	.08	283	.46	.10	175	.09	.12	220
4	.18	.06	107	.15	.09	352	.05	.09	212
				*** ANNUAL Y ***					
	4364 DAYS			4364 DAYS			4374 DAYS		
1	.58	.17	171	.31	.14	81	.15	.26	186
2	.97	.10	10	1.77	.09	290	.65	.10	117
3	.32	.07	204	.51	.07	128	.17	.08	163
4	.19	.05	45	.23	.07	290	.07	.08	273

VIC TABLE-B

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	1221 DAYS			1221 DAYS			1225 DAYS		
1	8.4	.1	123	18.7	.1	19	8.9	.2	136
2	8.4	.1	340	15.2	.1	215	7.6	.1	267
3	2.4	.1	159	4.8	.1	71	2.2	.1	97
4	1.1	.1	86	1.1	.1	326	.3	.1	88
				*** SEASON E ***					
	1207 DAYS			1207 DAYS			1211 DAYS		
1	9.8	.2	109	14.1	.2	27	6.6	.1	151
2	7.9	.2	321	9.8	.1	216	3.4	.1	246
3	3.0	.1	159	4.2	.1	57	2.1	.1	109
4	.7	.1	56	1.7	.1	280	.8	.1	318
				*** SEASON D ***					
	1221 DAYS			1221 DAYS			1221 DAYS		
1	4.8	.2	86	6.4	.2	37	4.2	.2	159
2	6.1	.1	293	7.1	.1	209	1.7	.1	213
3	2.3	.0	111	2.6	.1	34	1.0	.1	96
4	.4	.1	326	1.5	.1	247	.5	.1	296
				*** ANNUAL Y ***					
	3643 DAYS			3649 DAYS			3657 DAYS		
1	7.4	.1	109	13.0	.1	25	6.5	.1	146
2	7.1	.1	320	10.7	.1	214	4.0	.1	254
3	2.4	.0	145	3.8	.1	58	1.7	.0	102
4	.6	.0	60	1.3	.1	280	.4	.0	320

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	1221 DAYS			1221 DAYS			1225 DAYS		
1	.68	.15	120	.66	.12	70	.18	.18	126
2	1.11	.09	345	1.76	.12	272	.54	.08	156
3	.55	.10	167	.67	.10	85	.36	.06	105
4	.29	.06	14	.13	.08	309	.07	.07	258
				*** SEASON E ***					
	1207 DAYS			1207 DAYS			1211 DAYS		
1	.84	.19	171	.10	.24	45	.14	.15	265
2	1.15	.16	21	1.98	.15	281	.68	.14	116
3	.53	.11	198	.73	.09	119	.17	.10	154
4	.13	.09	50	.37	.10	287	.20	.10	310
				*** SEASON D ***					
	1221 DAYS			1221 DAYS			1221 DAYS		
1	.73	.20	234	.49	.16	211	.65	.18	324
2	.79	.09	70	1.71	.14	320	.88	.10	120
3	.45	.06	277	.40	.08	183	.10	.06	213
4	.20	.06	120	.18	.06	16	.06	.06	56
				*** ANNUAL Y ***					
	3649 DAYS			3649 DAYS			3657 DAYS		
1	.52	.08	173	.11	.10	107	.19	.13	322
2	.85	.07	18	1.68	.07	290	.68	.07	124
3	.37	.04	205	.49	.06	117	.16	.04	131
4	.15	.04	51	.18	.06	311	.08	.04	311

VIC TABLE-C

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL QUIET DAYS ONLY)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	238 DAYS			238 DAYS			240 DAYS		
1	9.1	.2	119	18.1	.2	13	7.1	.2	106
2	7.1	.2	335	14.3	.3	219	6.7	.1	274
3	2.6	.2	171	4.9	.2	66	2.5	.1	94
4	1.4	.1	78	1.2	.1	320	.4	.1	88
				*** SEASON E ***					
	234 DAYS			234 DAYS			234 DAYS		
1	11.3	.4	112	13.7	.2	16	3.7	.1	101
2	8.0	.3	316	10.0	.2	214	3.2	.1	261
3	2.5	.1	161	4.5	.2	52	2.1	.1	96
4	.9	.1	48	1.7	.1	273	.8	.1	318
				*** SEASON D ***					
	243 DAYS			243 DAYS			243 DAYS		
1	6.7	.2	103	5.6	.2	18	1.1	.1	129
2	6.7	.1	295	6.7	.1	206	1.3	.1	235
3	2.4	.1	113	2.9	.1	28	1.0	.0	78
4	.6	.1	312	1.5	.1	239	.5	.1	292
				*** ANNUAL Y ***					
	715 DAYS			715 DAYS			717 DAYS		
1	9.0	.2	112	12.4	.2	15	3.9	.1	107
2	7.0	.2	316	10.3	.1	214	3.6	.1	266
3	2.3	.1	150	4.0	.1	52	1.8	.1	92
4	.6	.1	50	1.2	.1	273	.3	.0	323

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	238 DAYS			238 DAYS			240 DAYS		
1	.59	.27	119	.74	.27	57	.45	.16	135
2	1.16	.23	326	1.71	.33	271	.58	.13	161
3	.68	.19	146	.67	.17	73	.38	.10	88
4	.30	.12	340	.31	.12	268	.11	.10	249
	234 DAYS			234 DAYS			234 DAYS		
1	1.15	.47	207	.87	.24	140	.20	.16	244
2	.94	.28	29	2.31	.25	317	.91	.15	101
3	.53	.15	226	.62	.21	125	.27	.13	144
4	.03	.15	59	.13	.13	310	.20	.07	276
	243 DAYS			243 DAYS			243 DAYS		
1	.71	.25	244	.51	.18	164	.14	.16	334
2	1.07	.13	84	1.52	.14	327	1.08	.06	119
3	.60	.11	286	.41	.12	184	.14	.05	233
4	.25	.07	115	.24	.07	25	.13	.07	81
	715 DAYS			715 DAYS			717 DAYS		
1	.57	.22	209	.59	.17	121	.16	.10	180
2	.65	.17	29	1.74	.15	306	.77	.12	118
3	.30	.10	220	.41	.09	121	.17	.06	127
4	.06	.07	44	.12	.07	318	.06	.04	251

VIC TABLE-E

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** JANUARY ***									
	312 DAYS			312 DAYS			311 DAYS				312 DAYS			312 DAYS			311 DAYS		
1	3.8	.2	81	5.2	.2	35	3.6	.3	156	1	1.15	.24	279	.38	.18	217	.72	.30	342
2	5.9	.1	288	6.9	.2	203	1.3	.2	197	2	.91	.16	110	2.17	.18	345	.96	.24	124
3	2.8	.1	108	2.9	.1	19	.8	.1	69	3	.45	.15	292	.52	.13	201	.20	.12	198
4	.9	.1	312	1.7	.1	234	.4	.1	287	4	.34	.14	122	.36	.15	10	.11	.13	89
										*** FEBRUARY ***									
	279 DAYS			279 DAYS			279 DAYS				279 DAYS			279 DAYS			279 DAYS		
1	6.7	.2	84	8.6	.3	27	4.8	.3	149	1	1.22	.26	235	.60	.37	213	.70	.37	333
2	6.6	.2	284	7.8	.2	196	2.0	.2	212	2	.76	.18	67	1.80	.24	325	.77	.19	110
3	2.2	.2	94	2.9	.2	23	1.4	.1	82	3	.40	.20	258	.30	.17	192	.24	.10	272
4	.2	.1	9	1.6	.1	239	.6	.1	290	4	.18	.14	147	.10	.15	278	.18	.08	227
										*** MARCH ***									
	312 DAYS			312 DAYS			312 DAYS				312 DAYS			312 DAYS			312 DAYS		
1	10.2	.3	91	13.6	.4	26	7.3	.6	151	1	.39	.33	165	.35	.42	187	.87	.64	292
2	8.4	.2	298	9.7	.3	191	3.6	.2	222	2	.98	.21	18	1.74	.37	271	.54	.18	111
3	2.9	.2	120	4.2	.2	33	2.2	.2	97	3	.49	.23	217	.69	.21	109	.12	.21	209
4	.3	.2	14	1.6	.2	248	.7	.1	304	4	.07	.19	13	.41	.18	313	.47	.16	291
										*** APRIL ***									
	298 DAYS			298 DAYS			299 DAYS				298 DAYS			298 DAYS			299 DAYS		
1	10.1	.3	116	17.4	.3	21	8.4	.5	152	1	1.48	.35	133	.18	.38	122	1.11	.53	231
2	8.5	.2	325	11.8	.3	206	4.6	.3	249	2	1.40	.21	0	2.41	.31	262	.36	.30	176
3	2.6	.1	139	3.4	.2	50	1.3	.2	92	3	.84	.15	174	.53	.17	105	.41	.22	115
4	.8	.2	107	1.4	.2	325	.4	.2	349	4	.18	.25	352	.30	.20	185	.12	.23	210

VIC TABLE-E---CONT'D

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** MAY ***									
	309 DAYS			309 DAYS			312 DAYS				309 DAYS			309 DAYS			312 DAYS		
1	8.1	.4	129	19.0	.3	20	9.5	.3	139	1	1.26	.42	122	.58	.28	114	.66	.37	198
2	8.9	.3	346	13.9	.3	215	6.9	.1	270	2	1.07	.27	6	1.93	.29	269	.64	.16	148
3	1.8	.2	165	4.2	.2	73	1.6	.2	100	3	.58	.20	151	.72	.20	50	.46	.18	90
4	1.5	.2	109	1.2	.2	352	.5	.2	92	4	.01	.20	162	.19	.17	323	.09	.19	91
										*** JUNE ***									
	299 DAYS			299 DAYS			299 DAYS				299 DAYS			299 DAYS			299 DAYS		
1	8.3	.3	126	19.4	.2	15	9.7	.2	133	1	.98	.33	68	1.04	.26	55	.71	.24	95
2	8.1	.2	338	15.3	.3	213	8.3	.2	270	2	1.44	.25	322	1.24	.32	269	.87	.21	173
3	2.3	.2	154	4.2	.2	63	2.3	.1	92	3	.57	.21	141	.70	.19	63	.15	.16	90
4	1.0	.1	96	.8	.1	349	.6	.1	98	4	.50	.14	25	.10	.15	345	.22	.13	264
										*** JULY ***									
	311 DAYS			311 DAYS			311 DAYS				311 DAYS			311 DAYS			311 DAYS		
1	7.8	.4	118	18.9	.3	17	8.1	.3	133	1	.01	.40	175	.96	.30	63	.68	.35	71
2	7.9	.2	335	16.9	.2	215	8.6	.2	262	2	.99	.25	351	2.04	.24	277	.18	.21	191
3	2.7	.3	155	5.3	.2	68	2.6	.1	86	3	.70	.27	183	.81	.23	111	.39	.11	141
4	1.0	.2	59	1.1	.1	309	.3	.1	99	4	.48	.22	359	.34	.16	274	.14	.12	219
										*** AUGUST ***									
	311 DAYS			311 DAYS			311 DAYS				311 DAYS			311 DAYS			311 DAYS		
1	10.7	.3	120	17.3	.4	25	7.7	.4	138	1	.92	.30	180	.67	.38	2	.26	.44	104
2	9.4	.2	341	16.2	.2	224	6.9	.2	269	2	.99	.25	345	1.72	.24	264	.74	.22	135
3	3.8	.1	175	7.2	.2	79	3.2	.1	115	3	.22	.14	182	1.01	.20	117	.35	.15	109
4	1.4	.2	57	1.8	.2	302	.4	.1	351	4	.19	.18	48	.26	.19	304	.14	.14	347

VIC TABLE-E---CONT'D

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** SEPTEMBER***								
	295 DAYS			295 DAYS			299 DAYS				295 DAYS			295 DAYS			299 DAYS		
1	10.5	.3	125	14.8	.4	29	6.1	.4	156	1	.88	.36	184	.30	.43	74	.62	.39	137
2	9.0	.2	345	11.1	.3	243	2.9	.2	275	2	1.50	.23	22	2.23	.28	287	1.10	.22	97
3	4.5	.2	180	5.1	.2	83	2.5	.2	134	3	.51	.21	185	.86	.18	123	.09	.19	156
4	1.2	.1	68	2.4	.1	294	1.0	.1	324	4	.15	.15	63	.59	.14	292	.33	.16	333
										*** OCTOBER ***								
	312 DAYS			312 DAYS			312 DAYS				312 DAYS			312 DAYS			312 DAYS		
1	7.7	.3	103	10.9	.4	33	5.3	.3	151	1	1.42	.29	171	.38	.42	20	.94	.37	26
2	7.3	.2	320	7.5	.2	221	3.1	.2	230	2	1.09	.24	18	1.87	.21	295	.75	.24	122
3	2.8	.1	178	3.9	.2	57	1.7	.2	105	3	.55	.15	229	.83	.19	129	.27	.19	139
4	1.1	.2	42	2.3	.2	276	1.4	.1	306	4	.35	.18	51	.23	.21	284	.20	.16	36
										*** NOVEMBER ***								
	300 DAYS			300 DAYS			300 DAYS				300 DAYS			300 DAYS			300 DAYS		
1	6.4	.4	93	7.2	.4	41	4.4	.3	164	1	.73	.41	169	.44	.43	232	.72	.27	309
2	6.5	.2	302	7.6	.2	219	2.0	.1	230	2	.92	.21	57	1.55	.21	297	.96	.14	121
3	2.2	.2	123	2.8	.1	54	1.2	.1	113	3	.45	.18	283	.30	.14	172	.07	.15	170
4	.3	.1	5	1.6	.2	259	.6	.1	303	4	.10	.14	129	.28	.20	63	.07	.13	54
										*** DECEMBER ***								
	311 DAYS			311 DAYS			312 DAYS				311 DAYS			311 DAYS			312 DAYS		
1	2.9	.3	72	4.8	.3	44	3.8	.3	167	1	.48	.37	256	.63	.28	218	.83	.35	289
2	5.7	.2	284	6.7	.2	207	1.6	.2	207	2	.80	.27	69	1.65	.22	312	.92	.23	129
3	2.6	.2	100	2.4	.2	20	.8	.1	103	3	.42	.18	261	.25	.21	188	.06	.10	123
4	.6	.2	291	1.3	.2	237	.3	.1	275	4	.22	.19	128	.27	.18	356	.15	.09	27

VIC TABLE-F-a-1

*** 0≤ R ≤ 30 ***

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** SEASON J ***								
	309 DAYS			309 DAYS			309 DAYS				309 DAYS			309 DAYS			309 DAYS		
1	7.4	.3	121	16.6	.3	20	7.7	.3	142	1	.27	.35	137	.45	.32	65	.34	.35	118
2	7.5	.2	341	13.7	.3	217	6.5	.3	266	2	1.40	.21	357	1.77	.29	280	.58	.27	120
3	1.9	.2	167	4.7	.3	77	2.1	.1	115	3	.54	.20	170	.91	.26	96	.16	.12	128
4	1.1	.2	77	1.0	.1	322	.3	.1	94	4	.27	.18	11	.17	.15	13	.21	.08	333
										*** SEASON E ***								
	301 DAYS			301 DAYS			302 DAYS				301 DAYS			301 DAYS			302 DAYS		
1	7.1	.3	107	11.8	.3	31	6.1	.3	157	1	.85	.35	210	.09	.32	262	.38	.35	185
2	6.9	.2	331	8.7	.2	224	2.9	.2	251	2	1.16	.24	31	1.77	.25	282	1.02	.18	111
3	2.6	.2	163	3.7	.2	71	1.9	.2	127	3	.36	.21	241	.69	.20	150	.11	.23	7
4	.7	.2	68	1.3	.2	287	.8	.1	327	4	.11	.18	69	.52	.21	280	.49	.14	331
										*** SEASON D ***								
	302 DAYS			302 DAYS			301 DAYS				302 DAYS			302 DAYS			301 DAYS		
1	2.5	.4	67	5.3	.3	54	5.1	.4	168	1	.88	.41	210	1.11	.33	257	1.14	.45	300
2	5.0	.3	299	7.1	.3	216	1.5	.2	207	2	.54	.27	51	1.96	.30	325	.97	.27	141
3	2.0	.1	103	1.9	.2	54	1.0	.1	122	3	.23	.14	243	.23	.22	200	.16	.15	218
4	.4	.2	0	1.4	.1	243	.6	.1	318	4	.08	.19	101	.18	.14	12	.20	.14	66
										*** ANNUAL Y ***								
	912 DAYS			912 DAYS			912 DAYS				912 DAYS			912 DAYS			912 DAYS		
1	5.4	.2	108	11.0	.1	29	6.2	.2	154	1	.55	.22	199	.38	.13	269	.22	.21	283
2	6.2	.1	327	9.8	.1	219	3.4	.1	255	2	.97	.12	16	1.65	.12	295	.86	.15	128
3	1.9	.1	147	3.4	.1	71	1.6	.1	121	3	.31	.09	204	.48	.11	124	.04	.08	145
4	.7	.1	62	1.1	.1	280	.4	.0	335	4	.14	.08	36	.22	.12	313	.24	.06	349

VIC TABLE-F-a-2

*** 30< R ≤ 70 ***

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	512 DAYS			512 DAYS			514 DAYS				512 DAYS			512 DAYS			514 DAYS		
1	7.7	.2	123	18.2	.2	19	8.9	.3	138	1	.98	.21	128	.83	.23	77	.33	.35	138
2	8.4	.2	342	15.0	.2	215	7.3	.2	267	2	1.27	.22	341	1.84	.18	267	.55	.19	173
3	2.2	.1	160	4.6	.1	72	2.0	.1	97	3	.73	.12	163	.70	.15	71	.34	.12	99
4	1.0	.1	86	1.2	.1	320	.3	.1	67	4	.33	.12	6	.10	.11	248	.13	.15	220
*** SEASON E ***																			
	496 DAYS			496 DAYS			496 DAYS				496 DAYS			496 DAYS			496 DAYS		
1	8.9	.3	110	13.5	.3	29	7.4	.3	159	1	1.02	.35	165	.32	.32	321	.41	.34	306
2	7.5	.3	323	9.7	.2	216	3.3	.3	244	2	1.27	.28	28	2.22	.25	279	.64	.30	111
3	3.0	.1	158	3.8	.2	60	2.1	.2	109	3	.67	.14	184	.72	.19	105	.14	.20	143
4	.7	.1	50	1.9	.2	276	.7	.1	317	4	.29	.14	24	.40	.20	293	.20	.16	290
*** SEASON D ***																			
	514 DAYS			514 DAYS			515 DAYS				514 DAYS			514 DAYS			515 DAYS		
1	3.9	.3	85	5.9	.2	43	4.2	.2	161	1	.41	.31	225	.48	.27	207	.83	.21	318
2	5.9	.1	296	7.0	.2	208	1.8	.1	218	2	.64	.12	68	1.53	.16	325	.96	.12	120
3	2.3	.1	112	2.7	.1	34	1.1	.1	99	3	.45	.08	257	.41	.08	175	.15	.14	209
4	.4	.1	301	1.5	.1	251	.6	.1	294	4	.20	.08	122	.31	.10	30	.06	.07	99
*** ANNUAL Y ***																			
	1522 DAYS			1522 DAYS			1525 DAYS				1522 DAYS			1522 DAYS			1525 DAYS		
1	6.6	.2	110	12.4	.1	26	6.7	.2	150	1	.66	.18	160	.19	.15	87	.28	.21	309
2	6.9	.1	323	10.5	.1	214	4.0	.1	254	2	.89	.11	18	1.75	.12	287	.63	.12	128

VIC TABLE-F-a-3

*** 70< R ***

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	400 DAYS			400 DAYS			402 DAYS		
1	10.0	.3	124	20.8	.3	18	9.8	.3	130
2	9.2	.2	335	16.6	.2	214	8.7	.2	267
3	2.9	.2	154	5.2	.2	65	2.6	.1	86
4	1.3	.2	92	1.2	.1	335	.4	.1	106
	410 DAYS			410 DAYS			413 DAYS		
1	12.8	.2	109	16.8	.2	22	6.4	.1	137
2	9.4	.2	314	10.9	.2	210	3.8	.2	246
3	3.4	.2	157	5.2	.1	48	2.4	.1	99
4	.8	.1	55	1.8	.1	282	.9	.1	314
	405 DAYS			405 DAYS			405 DAYS		
1	7.6	.3	92	8.3	.2	25	3.5	.2	148
2	7.3	.1	285	7.4	.2	204	1.9	.1	212
3	2.6	.1	116	3.2	.1	25	1.1	.1	74
4	.6	.1	329	1.6	.1	245	.5	.1	280
	1215 DAYS			1215 DAYS			1220 DAYS		
1	9.9	.1	109	15.3	.1	21	6.5	.1	136
2	8.1	.1	313	11.6	.1	211	4.5	.1	254
3	2.8	.1	145	4.4	.1	49	2.0	.1	89
4	.6	.1	61	1.3	.1	281	.3	.0	308

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	400 DAYS			400 DAYS			402 DAYS		
1	.74	.35	102	.63	.31	51	.17	.36	5
2	.76	.18	332	1.64	.21	269	.65	.18	166
3	.34	.19	170	.49	.23	91	.54	.15	104
4	.26	.19	33	.28	.15	309	.07	.08	202
	410 DAYS			410 DAYS			413 DAYS		
1	.82	.21	147	.48	.25	95	.05	.16	179
2	1.04	.19	3	1.81	.20	283	.52	.18	132
3	.58	.16	199	.86	.14	114	.38	.12	165
4	.12	.13	139	.22	.13	284	.06	.14	260
	405 DAYS			405 DAYS			405 DAYS		
1	1.02	.30	253	.52	.25	153	.50	.27	35
2	1.16	.15	79	1.75	.18	312	.79	.10	103
3	.72	.11	301	.51	.13	187	.01	.10	339
4	.28	.08	123	.08	.10	297	.08	.10	305
	1215 DAYS			1215 DAYS			1220 DAYS		
1	.38	.13	162	.31	.16	94	.24	.13	28
2	.70	.09	19	1.60	.08	288	.62	.08	133
3	.30	.07	232	.49	.09	123	.26	.06	127
4	.15	.07	89	.20	.07	296	.06	.05	266

*** SEASON J ***

*** SEASON E ***

*** SEASON D ***

*** ANNUAL Y ***

VIC TABLE-G-1

*** 0.0≤ CP ≤ .5 ***

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	787 DAYS			787 DAYS			790 DAYS				787 DAYS			787 DAYS			790 DAYS		
1	8.7	.1	120	18.7	.1	16	7.8	.1	120	1	.92	.14	120	.64	.16	67	.59	.15	114
2	7.8	.1	339	14.8	.1	218	7.1	.1	271	2	1.13	.15	331	1.75	.14	271	.58	.12	155
3	2.6	.1	165	4.9	.1	67	2.4	.1	96	3	.48	.09	146	.56	.09	81	.45	.08	100
4	1.2	.1	77	1.1	.1	326	.3	.0	86	4	.39	.10	8	.24	.10	228	.04	.05	129
*** SEASON E ***																			
	690 DAYS			690 DAYS			691 DAYS				690 DAYS			690 DAYS			691 DAYS		
1	10.6	.2	111	13.9	.2	19	4.1	.1	121	1	.81	.19	188	.45	.20	147	.26	.13	252
2	8.1	.2	320	10.0	.2	216	3.2	.1	257	2	.99	.19	35	1.96	.23	305	.91	.09	106
3	2.9	.1	161	4.6	.1	53	2.1	.1	104	3	.48	.08	214	.67	.12	123	.20	.07	163
4	.9	.1	53	1.8	.1	277	.8	.0	316	4	.12	.08	64	.30	.09	295	.13	.05	322
*** SEASON O ***																			
	788 DAYS			788 DAYS			788 DAYS				788 DAYS			788 DAYS			788 DAYS		
1	5.4	.1	96	6.0	.1	24	2.0	.1	144	1	.77	.14	235	.45	.12	166	.30	.14	355
2	6.2	.1	294	6.8	.1	208	1.5	.1	225	2	1.02	.11	73	1.75	.09	322	1.12	.11	111
3	2.4	.0	112	2.8	.1	31	.9	.1	88	3	.60	.05	287	.55	.06	182	.07	.07	195
4	.5	.1	311	1.6	.1	242	.5	.0	299	4	.24	.06	103	.19	.06	15	.08	.04	58
*** ANNUAL Y ***																			
	2265 DAYS			2265 DAYS			2269 DAYS				2265 DAYS			2265 DAYS			2269 DAYS		
1	8.0	.1	111	12.8	.1	18	4.6	.1	124	1	.55	.06	182	.36	.08	126	.11	.09	88
2	7.0	.1	319	10.5	.1	215	3.9	.1	262	2	.75	.06	26	1.67	.06	299	.82	.08	120
3	2.4	.0	148	4.0	.0	54	1.8	.0	97	3	.26	.04	224	.45	.04	129	.19	.04	123
4	.6	.0	53	1.2	.1	276	.3	.0	323	4	.18	.04	45	.13	.05	291	.04	.02	23

VIC TABLE-G-2

*** .5< CP ≤1.2 ***

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

*** SEASON J ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	549 DAYS			549 DAYS			550 DAYS		
1	7.5	.3	132	19.1	.3	25	12.9	.4	157
2	9.5	.2	341	16.0	.2	212	8.6	.3	257
3	2.2	.1	145	4.8	.2	77	1.8	.1	103
4	1.0	.2	112	1.2	.1	330	.4	.1	72

*** SEASON E ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	586 DAYS			586 DAYS			589 DAYS		
1	8.5	.3	104	15.1	.3	37	11.1	.4	164
2	7.9	.2	325	9.6	.3	216	3.9	.2	236
3	3.3	.2	156	3.7	.2	68	2.1	.2	117
4	.6	.2	66	1.6	.1	289	.8	.1	332

*** SEASON D ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	536 DAYS			536 DAYS			536 DAYS		
1	4.2	.3	61	8.0	.3	57	8.3	.2	168
2	5.9	.2	288	7.5	.3	210	2.3	.1	199
3	2.4	.1	108	2.3	.1	37	1.2	.2	111
4	.5	.1	342	1.7	.1	249	.5	.1	299

*** ANNUAL Y ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1671 DAYS			1671 DAYS			1675 DAYS		
1	6.1	.1	106	13.8	.2	35	10.8	.3	163
2	7.3	.2	323	11.0	.2	213	4.6	.1	243
3	2.5	.1	139	3.5	.1	66	1.7	.1	111
4	.5	.1	77	1.3	.1	285	.4	.1	337

LUNAR HARMONICS

*** SEASON J ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	549 DAYS			549 DAYS			550 DAYS		
1	.51	.31	120	1.13	.38	71	.32	.44	147
2	1.05	.24	12	1.84	.20	279	.45	.27	135
3	.68	.16	205	.82	.18	95	.38	.10	137
4	.28	.20	14	.31	.16	3	.09	.16	239

*** SEASON E ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	586 DAYS			586 DAYS			589 DAYS		
1	.91	.34	146	.99	.31	344	.78	.39	8
2	1.23	.26	2	2.36	.34	259	.35	.23	154
3	.55	.23	183	.69	.20	109	.19	.20	106
4	.11	.20	31	.43	.14	283	.32	.16	332

*** SEASON D ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	536 DAYS			536 DAYS			536 DAYS		
1	.80	.33	242	.60	.33	268	.58	.24	343
2	.51	.20	75	1.83	.29	309	.91	.14	116
3	.24	.13	265	.40	.13	163	.17	.16	203
4	.24	.13	116	.30	.08	40	.10	.10	209

*** ANNUAL Y ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1671 DAYS			1671 DAYS			1675 DAYS		
1	.43	.14	162	.49	.17	6	.35	.27	8
2	.85	.18	15	1.93	.18	280	.53	.13	127
3	.45	.11	200	.58	.11	112	.21	.10	138
4	.15	.11	49	.22	.09	336	.12	.09	297

VIC TABLE-G-3

*** 1.2< CP ***

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	109 DAYS			109 DAYS			109 DAYS				109 DAYS			109 DAYS			109 DAYS		
1	18.6	3.1	190	17.8	2.2	45	43.3	3.0	188	1	.66	3.35	77	.90	2.43	61	1.85	3.29	32
2	16.0	1.4	316	15.9	1.2	205	14.9	2.0	227	2	4.73	1.57	335	1.44	1.27	291	1.38	2.18	224
3	3.9	1.4	108	3.4	.8	78	1.6	1.5	241	3	.64	1.48	352	2.11	.93	128	1.53	1.63	254
4	1.2	1.3	151	2.7	.9	299	1.3	1.1	274	4	.67	1.43	347	1.80	.99	257	1.10	1.24	289
*** SEASON E ***																			
	195 DAYS			195 DAYS			195 DAYS				195 DAYS			195 DAYS			195 DAYS		
1	5.1	1.5	158	15.7	.9	78	37.7	1.8	189	1	3.46	1.58	143	1.34	1.01	78	2.37	1.92	164
2	10.7	1.0	305	7.8	1.0	218	8.7	1.3	205	2	3.40	1.08	1	2.03	1.04	281	3.27	1.37	37
3	6.0	.8	158	.8	.6	31	2.3	.7	187	3	1.27	.83	139	1.23	.62	184	1.19	.75	198
4	1.5	.8	140	2.5	.4	282	.3	.8	291	4	1.11	.81	68	.66	.48	249	.75	.83	170
*** SEASON O ***																			
	124 DAYS			124 DAYS			126 DAYS				124 DAYS			124 DAYS			126 DAYS		
1	1.4	1.4	4	17.0	1.2	104	34.1	2.3	184	1	.10	1.57	11	1.92	1.29	29	3.95	2.50	128
2	8.7	1.0	282	5.5	.9	210	8.4	2.1	174	2	.86	1.06	288	2.68	.94	295	1.08	2.23	91
3	5.3	.7	136	.8	.8	28	1.6	1.1	172	3	.28	.72	295	.20	.83	142	.39	1.21	318
4	1.5	.4	74	2.4	.9	250	.5	1.0	307	4	.42	.43	290	1.48	.95	255	.64	1.10	234
*** ANNUAL Y ***																			
	428 DAYS			428 DAYS			430 DAYS				428 DAYS			428 DAYS			430 DAYS		
1	6.4	1.1	179	15.4	.6	77	38.0	.9	187	1	1.78	1.21	144	1.45	.64	53	1.91	1.00	134
2	11.2	.6	304	9.2	.5	211	9.5	.8	206	2	2.84	.64	347	2.03	.54	287	1.29	.86	43
3	5.0	.5	142	1.3	.4	59	1.8	.7	194	3	.26	.55	133	1.00	.41	154	.85	.70	232
4	1.2	.4	124	2.4	.5	278	.6	.7	286	4	.46	.43	34	1.15	.54	256	.52	.69	225

VIC TABLE-H-1 and H-2

*** LUNAR HARMONICS ***

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	PERIGEE ± 3 DAYS										APOGEE ± 3 DAYS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	309 DAYS			309 DAYS			310 DAYS				298 DAYS			298 DAYS			299 DAYS			
1	.99	.40	149	.45	.26	61	.32	.38	332	1	.26	.37	102	.89	.31	39	.39	.38	207	
2	1.39	.24	6	2.09	.29	279	.49	.19	164	2	1.06	.31	353	2.05	.27	273	.32	.22	146	
3	.62	.21	193	.57	.23	98	.27	.11	76	3	.65	.24	147	.69	.14	113	.38	.18	128	
4	.43	.13	49	.30	.21	316	.11	.12	294	4	.06	.15	221	.22	.13	32	.07	.16	259	
*** SEASON E ***																				
	310 DAYS			310 DAYS			310 DAYS				305 DAYS			305 DAYS			306 DAYS			
1	.48	.39	159	1.05	.52	272	.90	.46	50	1	.47	.38	195	.48	.30	147	.56	.44	262	
2	1.03	.26	36	2.09	.23	291	.87	.35	102	2	.73	.27	48	1.42	.24	286	.70	.30	113	
3	.10	.24	196	.38	.28	136	.10	.18	274	3	.40	.26	218	.52	.20	94	.04	.21	9	
4	.09	.24	116	.31	.23	292	.19	.20	313	4	.21	.15	64	.54	.25	298	.26	.14	296	
*** SEASON D ***																				
	308 DAYS			308 DAYS			307 DAYS				306 DAYS			306 DAYS			306 DAYS			
1	1.40	.35	233	.70	.36	216	.80	.48	316	1	.18	.38	190	.85	.26	208	1.13	.25	322	
2	.99	.23	77	2.24	.33	323	1.14	.26	125	2	.72	.18	61	1.60	.23	315	.41	.21	113	
3	.74	.10	278	.50	.22	166	.23	.18	174	3	.31	.14	260	.43	.10	201	.10	.15	236	
4	.22	.17	109	.48	.15	21	.24	.12	50	4	.26	.16	70	.08	.11	47	.10	.11	47	
*** ANNUAL Y ***																				
	927 DAYS			927 DAYS			927 DAYS				909 DAYS			909 DAYS			911 DAYS			
1	.71	.18	190	.48	.26	251	.53	.21	358	1	.35	.21	161	.18	.18	142	.52	.14	293	
2	.97	.13	33	1.94	.14	299	.84	.11	127	2	.78	.16	27	1.53	.11	291	.52	.13	126	
3	.35	.13	234	.40	.16	129	.08	.09	125	3	.36	.12	200	.43	.09	124	.14	.13	147	
4	.21	.10	71	.28	.12	334	.12	.08	351	4	.17	.10	70	.24	.13	330	.11	.08	322	

VIC TABLE-H-3 and H-4

*** LUNAR HARMONICS ***

STATION - VICTORIA (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1977
LATITUDE= 48.50N LONGITUDE=123.41W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

*** SEASON J ***

	MOON RECEDING									MOON APPROACHING								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	298 DAYS			298 DAYS			300 DAYS				316 DAYS			316 DAYS			316 DAYS		
1	1.16	.30	96	.70	.29	59	.96	.22	96	1	.70	.21	124	.90	.34	114	.43	.46	192
2	1.43	.28	314	1.66	.22	245	.86	.14	138	2	.75	.22	339	1.39	.19	282	.62	.16	177
3	.65	.14	137	.94	.18	59	.68	.22	84	3	.38	.16	187	.63	.23	65	.20	.14	131
4	.64	.18	343	.29	.20	226	.06	.10	15	4	.29	.19	43	.16	.14	332	.14	.16	229

*** SEASON E ***

	310 DAYS			310 DAYS			313 DAYS				282 DAYS			282 DAYS			282 DAYS		
1	1.75	.40	154	.82	.43	1	.75	.40	214	1	.98	.38	188	.97	.38	107	.41	.23	297
2	1.90	.34	3	2.74	.37	263	.45	.36	131	2	1.02	.34	19	1.74	.26	287	.74	.16	128
3	.76	.25	179	1.14	.28	120	.31	.19	150	3	.81	.23	204	.86	.27	121	.40	.20	139
4	.06	.15	68	.31	.23	262	.25	.21	279	4	.27	.24	7	.35	.18	281	.23	.18	354

*** SEASON D ***

	302 DAYS			302 DAYS			302 DAYS				305 DAYS			305 DAYS			306 DAYS		
1	.58	.44	210	.16	.32	170	.35	.24	314	1	.76	.30	241	.19	.43	232	.46	.37	354
2	.75	.20	45	1.73	.30	303	.99	.16	106	2	.83	.24	94	1.48	.22	336	.91	.19	132
3	.21	.13	260	.55	.17	165	.10	.14	214	3	.58	.13	291	.22	.15	234	.13	.11	279
4	.12	.16	115	.25	.16	266	.08	.08	250	4	.38	.16	165	.35	.16	44	.07	.13	108

*** ANNUAL Y ***

	910 DAYS			910 DAYS			915 DAYS				903 DAYS			903 DAYS			904 DAYS		
1	.85	.19	141	.43	.18	16	.24	.21	135	1	.47	.15	192	.63	.17	114	.17	.23	277
2	1.15	.13	353	1.95	.13	267	.70	.14	124	2	.58	.18	31	1.49	.13	301	.65	.11	139
3	.43	.08	165	.68	.13	107	.28	.11	107	3	.40	.11	223	.37	.12	106	.16	.09	141
4	.19	.09	1	.26	.12	249	.09	.08	274	4	.11	.09	71	.14	.09	345	.03	.08	301

VIC TABLE - I

The O_1 and N_2 Tides Derived From Hourly Magnetic Data of VICTORIA (1966-1977). The International Disturbed Days have been Excluded From the Computations.

	X		Y		Z	
	Amp. ± p.e. (nT)	Phase	Amp. ± p.e. (nT)	Phase	Amp. ± p.e. (nT)	Phase
			SEASON-J			
	1221 days		1221 days		1225 days	
O_1	0.54 ± 0.18	174°	0.70 ± 0.15	157°	0.34 ± 0.19	207°
N_2	0.35 ± 0.17	28°	0.25 ± 0.14	318°	0.31 ± 0.09	183°
			SEASON-E			
	1221 days		1221 days		1221 days	
O_1	0.35 ± 0.25	52°	0.28 ± 0.24	214°	0.63 ± 0.35	256°
N_2	0.45 ± 0.11	47°	0.70 ± 0.11	308°	0.17 ± 0.16	37°
			SEASON-D			
	1221 days		1221 days		1221 days	
O_1	0.41 ± 0.18	182°	0.43 ± 0.22	133°	0.53 ± 0.22	239°
N_2	0.24 ± 0.12	94°	0.33 ± 0.08	347°	0.33 ± 0.13	132°
			SEASON-Y			
	3649 days		3649 days		3657 days	
O_1	0.25 ± 0.12	165°	0.44 ± 0.11	156°	0.48 ± 0.17	238°
N_2	0.30 ± 0.05	51°	0.41 ± 0.08	315°	0.15 ± 0.07	143°

ST. JOHN'S

August 1, 1968 – December 31, 1979

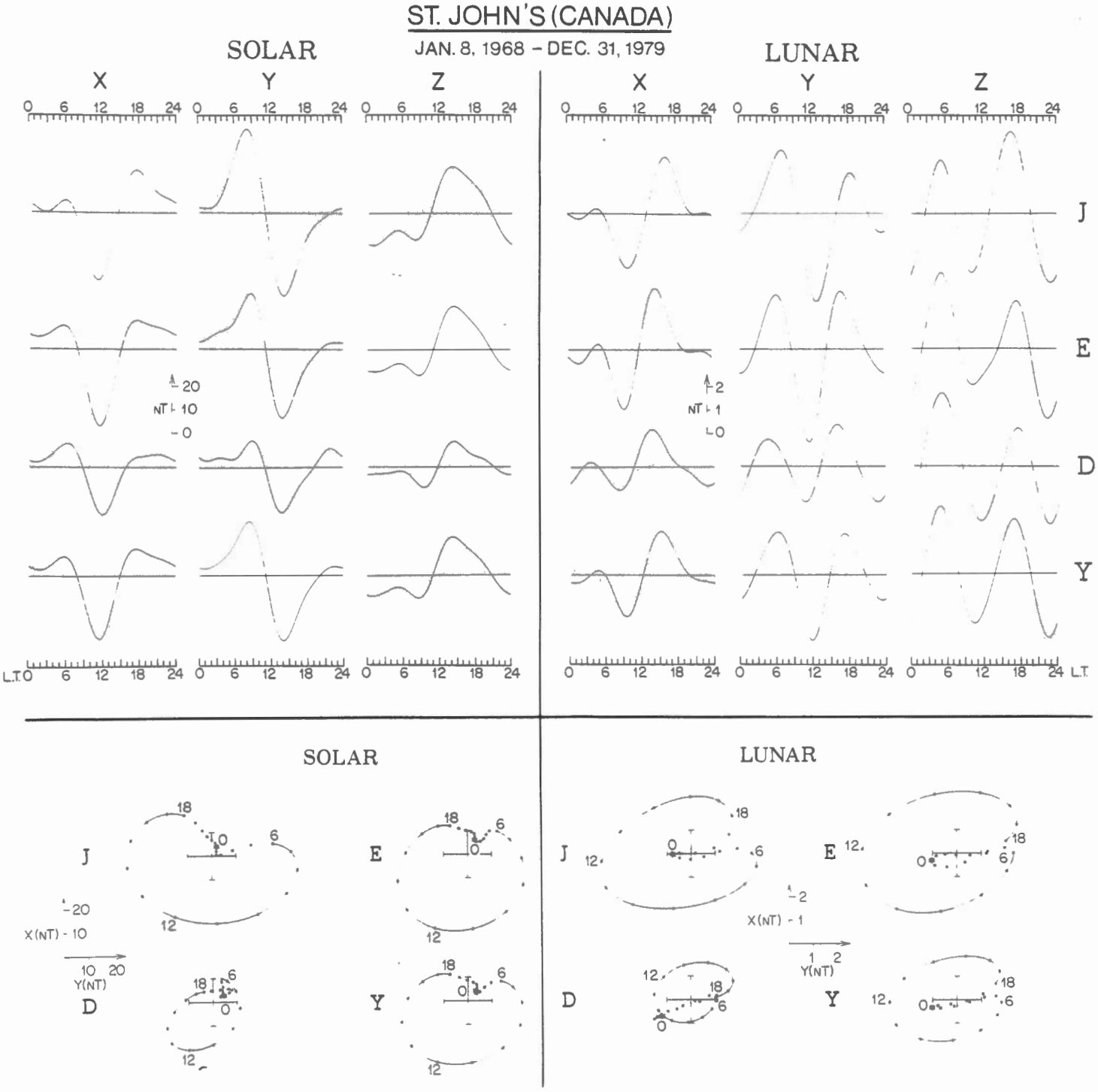
ST. JOHN'S (CANADA)
JAN. 8, 1968 – DEC. 31, 1979
SOLAR
LUNAR
X
Y
Z
0 6 12 18 24
L.T.
J
E
D
Y
20
NT 10
0
2
NT 1
0
SOLAR
LUNAR
X(NT) - 10
10 20
Y(NT)
X(NT) - 1
1 2
Y(NT)
18
6
0
12

FIGURE 1 STJ

STJ Table - A

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	1339 DAYS			1339 DAYS			1347 DAYS				1339 DAYS			1339 DAYS			1347 DAYS		
1	14.9	.4	141	23.5	.3	17	20.9	.5	224	1	1.92	.38	163	1.16	.29	53	1.64	.57	212
2	12.7	.2	287	15.7	.1	204	5.1	.2	336	2	.88	.25	294	2.25	.14	263	2.68	.26	306
3	5.0	.2	120	4.7	.2	45	3.1	.3	238	3	.67	.17	144	.47	.16	26	.64	.28	181
4	.3	.2	86	.2	.1	195	.8	.2	83	4	.35	.20	200	.10	.11	28	.26	.23	151
*** SEASON E ***																			
	1401 DAYS			1401 DAYS			1412 DAYS				1401 DAYS			1401 DAYS			1412 DAYS		
1	14.5	.4	114	16.9	.2	31	18.2	.3	219	1	1.22	.40	191	.85	.22	95	.78	.32	262
2	12.9	.2	284	11.5	.1	197	6.1	.3	336	2	1.56	.20	351	2.20	.14	271	2.61	.31	314
3	5.1	.2	117	5.1	.1	16	2.4	.2	195	3	.70	.20	158	.64	.13	124	.33	.23	275
4	1.1	.2	264	1.9	.1	228	.7	.2	26	4	.09	.17	279	.09	.12	249	.14	.23	52
*** SEASON D ***																			
	1361 DAYS			1361 DAYS			1394 DAYS				1361 DAYS			1361 DAYS			1394 DAYS		
1	8.9	.2	85	9.8	.2	53	8.6	.5	204	1	.77	.25	237	.28	.27	354	.92	.51	79
2	8.1	.1	266	7.6	.1	187	4.2	.2	338	2	.64	.12	3	1.69	.14	319	2.48	.24	301
3	3.4	.1	118	2.6	.1	10	2.1	.1	181	3	.23	.10	229	.16	.13	134	.24	.15	343
4	.8	.1	269	2.4	.1	216	1.3	.1	9	4	.15	.11	43	.16	.11	307	.08	.15	116
*** ANNUAL Y ***																			
	4101 DAYS			4101 DAYS			4153 DAYS				4101 DAYS			4101 DAYS			4153 DAYS		
1	11.9	.1	118	16.2	.2	28	15.7	.3	218	1	1.15	.15	185	.66	.19	63	.51	.31	210
2	11.1	.1	281	11.5	.1	198	5.1	.1	336	2	.92	.12	339	1.88	.08	291	2.58	.13	307
3	4.5	.1	118	4.0	.1	25	2.3	.2	208	3	.48	.11	160	.29	.09	94	.18	.17	230
4	.5	.1	266	1.5	.1	220	.8	.1	32	4	.07	.10	209	.07	.06	311	.12	.15	120

STJ Table - B

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	1132 DAYS			1132 DAYS			1140 DAYS				1132 DAYS			1132 DAYS			1140 DAYS		
1	13.6	.2	129	22.3	.2	13	15.5	.3	222	1	1.17	.20	164	1.16	.21	52	.88	.31	227
2	11.6	.1	289	16.3	.1	205	4.9	.2	349	2	1.22	.11	322	2.20	.11	256	2.76	.21	312
3	4.8	.1	120	4.8	.1	48	3.1	.1	241	3	.49	.13	132	.56	.14	57	.21	.14	202
4	.3	.1	39	.3	.1	153	.7	.1	74	4	.09	.07	158	.05	.12	319	.12	.12	124
*** SEASON E ***																			
	1143 DAYS			1143 DAYS			1155 DAYS				1143 DAYS			1143 DAYS			1155 DAYS		
1	14.9	.2	104	15.8	.3	23	12.8	.2	213	1	1.10	.24	192	.73	.28	102	.64	.21	336
2	12.1	.1	283	11.7	.2	200	5.7	.2	344	2	1.20	.12	352	2.37	.20	282	2.40	.21	304
3	4.9	.1	118	5.2	.2	25	2.5	.1	206	3	.82	.11	182	.78	.17	113	.37	.15	294
4	.9	.1	282	2.0	.1	227	1.0	.1	37	4	.12	.09	56	.15	.09	259	.30	.14	103
*** SEASON D ***																			
	1156 DAYS			1156 DAYS			1181 DAYS				1156 DAYS			1156 DAYS			1181 DAYS		
1	8.7	.2	81	9.0	.1	45	5.9	.2	198	1	.66	.19	234	.22	.15	232	.80	.17	26
2	8.0	.1	265	7.5	.1	190	4.0	.1	341	2	.72	.11	12	1.46	.09	313	2.34	.14	303
3	3.2	.1	115	2.7	.1	20	2.2	.1	189	3	.33	.09	243	.15	.09	114	.19	.12	328
4	.8	.1	276	2.2	.1	219	1.2	.1	4	4	.07	.07	350	.13	.08	295	.06	.09	24
*** ANNUAL Y ***																			
	3431 DAYS			3431 DAYS			3476 DAYS				3431 DAYS			3431 DAYS			3476 DAYS		
1	11.8	.1	108	15.3	.1	23	11.2	.1	214	1	.82	.12	189	.46	.14	78	.26	.13	329
2	10.4	.0	281	11.7	.1	200	4.8	.1	345	2	.96	.05	344	1.83	.08	291	2.50	.09	307
3	4.3	.1	118	4.1	.1	33	2.4	.1	215	3	.42	.06	178	.42	.07	93	.17	.08	282
4	.5	.0	287	1.5	.1	218	.8	.1	32	4	.04	.04	65	.11	.06	279	.14	.07	99

STJ Table - C

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL QUIET DAYS ONLY)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	221 DAYS			221 DAYS			222 DAYS				221 DAYS			221 DAYS			222 DAYS			
1	12.8	.3	117	20.0	.4	6	9.1	.2	219	1	.94	.36	109	.77	.38	66	.39	.21	264	
2	10.4	.3	292	15.6	.3	208	5.4	.2	20	2	1.13	.33	331	1.97	.27	263	2.79	.16	308	
3	4.7	.2	123	5.6	.2	46	3.6	.1	229	3	.39	.22	148	.62	.22	64	.30	.12	226	
4	.2	.1	317	.4	.1	142	.6	.2	74	4	.13	.12	63	.13	.12	257	.16	.16	199	
*** SEASON E ***																				
	228 DAYS			228 DAYS			230 DAYS				228 DAYS			228 DAYS			230 DAYS			
1	15.4	.3	100	14.2	.3	3	6.9	.3	204	1	1.21	.36	170	.88	.29	111	.62	.30	333	
2	11.2	.2	284	10.8	.3	199	5.3	.2	4	2	1.64	.22	355	2.26	.29	302	2.26	.18	309	
3	4.6	.1	111	6.1	.2	29	3.2	.2	197	3	.71	.14	177	.76	.23	108	.58	.18	306	
4	1.1	.1	292	2.0	.1	216	1.1	.1	23	4	.08	.10	301	.11	.14	190	.14	.11	33	
*** SEASON D ***																				
	230 DAYS			230 DAYS			230 DAYS				230 DAYS			230 DAYS			230 DAYS			
1	8.9	.2	86	6.7	.3	23	2.9	.1	192	1	.64	.23	212	.32	.31	70	.29	.14	44	
2	7.8	.1	268	6.7	.1	192	4.1	.1	354	2	.96	.13	4	1.39	.13	298	2.55	.13	302	
3	2.9	.1	103	3.1	.1	27	2.3	.1	188	3	.34	.11	198	.26	.12	93	.29	.09	318	
4	.8	.1	289	2.2	.1	220	1.2	.1	13	4	.15	.09	37	.12	.09	289	.07	.07	107	
*** ANNUAL Y ***																				
	679 DAYS			679 DAYS			682 DAYS				679 DAYS			679 DAYS			682 DAYS			
1	12.1	.2	102	13.4	.1	8	6.1	.1	209	1	.56	.17	161	.69	.16	110	.35	.13	351	
2	9.7	.1	282	10.9	.1	202	4.9	.1	7	2	1.10	.14	351	1.73	.14	294	2.55	.08	305	
3	4.0	.1	114	4.9	.1	35	2.8	.1	207	3	.41	.09	178	.45	.11	94	.28	.11	299	
4	.7	.1	293	1.5	.1	213	.9	.1	28	4	.08	.06	26	.12	.09	239	.02	.07	83	

STJ Table - E

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
										*** JANUARY ***										
	284 DAYS			284 DAYS			286 DAYS				284 DAYS			284 DAYS			286 DAYS			
1	8.0	.3	78	8.4	.4	54	5.3	.4	194	1	1.21	.32	273	.93	.38	229	1.14	.41	27	
2	7.4	.2	263	7.6	.2	189	3.5	.2	339	2	.75	.19	40	1.61	.25	331	2.32	.24	302	
3	2.9	.1	112	2.4	.2	13	2.2	.3	189	3	.58	.16	277	.26	.17	331	.10	.26	24	
4	.8	.2	273	2.2	.1	221	1.2	.2	4	4	.19	.22	24	.18	.16	13	.26	.18	225	
										*** FEBRUARY ***										
	255 DAYS			255 DAYS			255 DAYS				255 DAYS			255 DAYS			255 DAYS			
1	9.6	.3	82	10.3	.4	37	7.4	.4	187	1	.94	.33	220	.84	.40	12	1.10	.39	358	
2	8.3	.2	260	8.2	.3	187	4.2	.2	330	2	1.06	.25	8	1.63	.33	307	2.32	.20	302	
3	3.3	.2	104	2.7	.2	3	2.6	.2	177	3	.51	.17	177	.61	.21	104	.41	.25	302	
4	.6	.1	221	2.3	.2	199	1.2	.2	10	4	.08	.12	269	.28	.22	299	.19	.20	97	
										*** MARCH ***										
	286 DAYS			286 DAYS			286 DAYS				286 DAYS			286 DAYS			286 DAYS			
1	13.8	.4	95	15.2	.6	29	12.8	.6	203	1	1.02	.46	205	.19	.66	116	1.40	.66	307	
2	11.0	.2	271	11.5	.2	189	6.2	.3	334	2	1.24	.21	330	2.27	.23	265	2.54	.35	307	
3	4.6	.2	105	4.7	.2	12	2.4	.3	179	3	1.09	.17	179	.56	.26	89	.31	.30	246	
4	.8	.2	242	1.8	.2	216	.9	.3	30	4	.47	.24	44	.36	.22	311	.37	.31	134	
										*** APRIL ***										
	269 DAYS			269 DAYS			275 DAYS				269 DAYS			269 DAYS			275 DAYS			
1	13.5	.5	117	19.1	.5	24	15.4	.8	218	1	.83	.51	191	.78	.53	121	.19	.84	284	
2	12.4	.4	283	13.3	.4	200	6.0	.5	329	2	1.28	.41	328	2.40	.47	255	2.71	.56	313	
3	5.5	.4	116	4.7	.3	25	1.7	.4	244	3	.78	.37	143	.94	.28	90	.34	.38	270	
4	.6	.2	312	1.8	.2	236	1.6	.3	56	4	.16	.20	235	.11	.23	207	.65	.33	52	

STJ Table - E...Cont'd

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
						*** MAY ***													
	284 DAYS			284 DAYS			285 DAYS				284 DAYS			284 DAYS			285 DAYS		
1	12.2	.3	131	22.0	.3	18	16.0	.5	221	1	1.38	.37	188	1.09	.30	53	.75	.49	230
2	11.7	.3	290	15.9	.3	209	4.7	.4	348	2	1.56	.30	320	2.29	.27	254	3.53	.44	313
3	5.3	.2	122	5.0	.2	55	2.9	.3	253	3	.59	.19	109	.47	.21	39	.43	.35	229
4	.3	.2	346	.3	.2	218	1.0	.2	74	4	.31	.23	203	.13	.21	200	.27	.22	170
						*** JUNE ***													
	272 DAYS			272 DAYS			273 DAYS				272 DAYS			272 DAYS			273 DAYS		
1	12.8	.2	132	23.8	.4	9	15.3	.4	218	1	1.97	.21	128	.94	.45	35	1.13	.44	210
2	11.7	.3	285	17.4	.3	202	5.0	.3	354	2	1.20	.31	268	1.74	.33	252	3.11	.29	297
3	4.6	.2	114	4.4	.1	42	3.1	.3	242	3	.18	.23	113	.44	.17	53	.27	.30	209
4	.7	.2	62	.5	.2	106	.4	.2	78	4	.16	.23	145	.44	.25	338	.17	.25	238
						*** JULY ***													
	286 DAYS			286 DAYS			286 DAYS				286 DAYS			286 DAYS			286 DAYS		
1	13.9	.4	126	22.7	.4	9	14.6	.6	224	1	.94	.43	192	1.53	.38	53	.90	.63	247
2	11.3	.3	286	16.8	.3	201	4.6	.3	352	2	1.16	.28	347	2.40	.32	256	2.03	.36	315
3	4.4	.2	118	4.8	.3	44	3.2	.3	239	3	.69	.26	161	.60	.28	58	.03	.28	228
4	.3	.2	61	.6	.1	129	.7	.2	70	4	.21	.17	84	.26	.16	167	.41	.20	82
						*** AUGUST ***													
	306 DAYS			306 DAYS			311 DAYS				306 DAYS			306 DAYS			311 DAYS		
1	17.3	.3	123	20.6	.7	15	15.8	.5	224	1	1.40	.37	175	2.09	.78	60	1.04	.52	231
2	12.7	.3	296	16.6	.3	211	5.9	.3	360	2	1.52	.33	350	2.67	.36	259	2.48	.36	313
3	5.1	.3	126	6.3	.2	53	4.0	.2	225	3	.86	.27	154	.82	.19	98	.15	.22	224
4	.1	.2	278	.4	.2	196	.3	.2	90	4	.15	.19	100	.18	.26	93	.17	.21	109

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEPTEMBER***																				
	294 DAYS			294 DAYS			299 DAYS				294 DAYS			294 DAYS			299 DAYS			
1	17.0	.4	110	17.1	.5	21	14.2	.3	222	1	1.71	.43	167	1.15	.53	120	.58	.33	55	
2	13.6	.2	295	11.6	.3	215	5.4	.4	2	2	1.41	.19	357	2.84	.29	291	1.87	.42	303	
3	5.5	.2	131	5.8	.2	38	3.5	.3	224	3	.74	.23	200	1.07	.18	129	.17	.31	261	
4	1.3	.1	285	2.1	.2	235	.7	.2	50	4	.16	.13	54	.18	.19	258	.33	.17	154	
*** OCTOBER ***																				
	304 DAYS			304 DAYS			310 DAYS				304 DAYS			304 DAYS			310 DAYS			
1	14.4	.3	91	12.3	.4	25	9.9	.5	212	1	.97	.32	172	.27	.47	247	.66	.58	8	
2	11.9	.2	277	9.5	.3	187	5.0	.3	332	2	1.09	.18	356	2.01	.36	299	2.72	.29	310	
3	4.7	.2	123	5.5	.2	19	2.4	.2	193	3	.55	.19	197	.66	.26	100	.43	.25	322	
4	1.4	.1	306	2.7	.1	230	1.3	.2	20	4	.23	.11	300	.36	.15	226	.15	.22	66	
*** NOVEMBER ***																				
	283 DAYS			283 DAYS			298 DAYS				283 DAYS			283 DAYS			298 DAYS			
1	10.2	.3	84	9.1	.3	39	6.2	.2	201	1	.64	.34	190	.59	.32	156	.40	.27	42	
2	9.0	.2	269	8.6	.2	194	5.2	.2	352	2	.67	.21	342	1.66	.21	308	2.45	.26	304	
3	3.9	.2	120	3.0	.2	29	2.3	.2	188	3	.16	.18	215	.24	.20	117	.22	.20	307	
4	1.1	.2	293	2.5	.2	221	1.5	.2	7	4	.03	.17	125	.28	.17	280	.41	.24	49	
*** DECEMBER ***																				
	308 DAYS			308 DAYS			312 DAYS				308 DAYS			308 DAYS			312 DAYS			
1	6.2	.3	75	7.8	.4	53	4.4	.3	198	1	.63	.37	275	.26	.39	285	.79	.29	44	
2	6.3	.1	262	6.1	.2	188	3.5	.2	344	2	.65	.14	27	1.14	.24	319	2.33	.23	300	
3	2.4	.1	111	2.0	.2	21	1.9	.2	192	3	.42	.12	277	.29	.18	234	.38	.17	358	
4	.8	.1	255	2.0	.1	219	.9	.2	356	4	.03	.12	129	.11	.15	330	.11	.20	304	

STJ Table - F-a-1

*** 0≤ R ≤ 30 ***

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	310 DAYS			310 DAYS			310 DAYS				310 DAYS			310 DAYS			310 DAYS			
1	11.6	.3	130	19.1	.3	19	13.2	.5	223	1	.59	.33	157	1.38	.31	48	.62	.58	220	
2	9.1	.2	297	14.5	.2	209	3.7	.4	354	2	1.21	.20	328	2.16	.26	255	2.73	.47	310	
3	4.4	.1	128	4.1	.3	57	2.7	.2	249	3	.60	.12	147	.77	.26	59	.26	.26	236	
4	.2	.1	258	.4	.1	170	.6	.2	80	4	.18	.14	81	.24	.14	44	.11	.23	270	
*** SEASON E ***																				
	299 DAYS			299 DAYS			302 DAYS				299 DAYS			299 DAYS			302 DAYS			
1	11.4	.3	105	13.3	.5	34	10.0	.3	215	1	1.52	.29	203	1.13	.53	98	1.26	.32	281	
2	9.5	.2	284	10.8	.3	205	5.0	.4	342	2	1.24	.21	348	2.75	.34	279	2.46	.38	296	
3	4.5	.2	125	4.3	.3	33	2.2	.2	216	3	1.12	.17	192	.98	.29	118	.46	.22	242	
4	.8	.1	290	1.8	.1	224	1.1	.2	14	4	.36	.16	61	.24	.16	225	.45	.20	104	
*** SEASON D ***																				
	296 DAYS			296 DAYS			303 DAYS				296 DAYS			296 DAYS			303 DAYS			
1	5.0	.3	78	8.8	.4	65	5.2	.4	201	1	.69	.32	227	.57	.40	260	1.38	.44	10	
2	6.7	.2	269	6.9	.3	199	3.6	.4	333	2	.60	.21	11	1.36	.31	322	2.69	.44	308	
3	2.9	.1	127	1.8	.3	33	2.0	.3	188	3	.63	.15	284	.39	.30	73	.49	.32	299	
4	.8	.2	264	2.0	.2	224	.8	.3	4	4	.22	.18	346	.04	.20	148	.36	.28	326	
*** ANNUAL Y ***																				
	905 DAYS			905 DAYS			915 DAYS				905 DAYS			905 DAYS			915 DAYS			
1	8.9	.2	111	13.2	.2	33	9.4	.2	217	1	.78	.22	196	.45	.24	57	.51	.25	306	
2	8.3	.1	285	10.8	.1	206	4.0	.2	343	2	.97	.13	342	1.84	.15	279	2.52	.18	305	
3	4.0	.1	127	3.3	.1	43	2.1	.2	221	3	.49	.09	198	.62	.15	86	.36	.17	260	
4	.6	.1	275	1.3	.1	220	.7	.1	24	4	.20	.10	46	.01	.09	292	.08	.15	33	

STJ Table - F-a-2

*** 30< R ≤ 70 ***

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	406 DAYS			406 DAYS			409 DAYS				406 DAYS			406 DAYS			409 DAYS			
1	12.7	.3	130	22.5	.5	13	16.1	.3	223	1	1.18	.36	148	.66	.50	12	.88	.35	209	
2	11.4	.1	285	15.9	.2	203	4.8	.3	339	2	1.08	.16	292	2.10	.20	250	2.76	.28	317	
3	4.6	.2	121	4.3	.2	47	3.1	.3	242	3	.42	.23	103	.65	.21	40	.36	.30	219	
4	.4	.1	52	.4	.2	149	.7	.2	70	4	.11	.13	276	.06	.23	226	.17	.25	54	
*** SEASON E ***																				
	388 DAYS			388 DAYS			397 DAYS				388 DAYS			388 DAYS			397 DAYS			
1	13.5	.3	107	15.3	.5	26	13.1	.4	216	1	1.23	.37	199	.71	.57	67	1.00	.44	9	
2	11.4	.2	281	11.6	.2	199	5.5	.3	340	2	1.27	.22	346	2.29	.20	284	2.88	.28	302	
3	4.7	.2	123	4.5	.2	15	2.4	.2	197	3	.71	.19	192	.95	.23	108	.70	.22	285	
4	.8	.2	271	2.1	.2	229	.9	.2	72	4	.10	.17	47	.27	.17	286	.36	.24	151	
*** SEASON D ***																				
	399 DAYS			399 DAYS			408 DAYS				399 DAYS			399 DAYS			408 DAYS			
1	7.1	.3	79	8.4	.4	49	5.5	.3	197	1	.79	.31	238	.64	.44	241	1.06	.32	28	
2	7.1	.1	260	7.6	.2	187	3.9	.3	339	2	.87	.14	13	1.57	.22	320	2.04	.28	303	
3	3.0	.2	113	2.4	.2	12	2.2	.1	184	3	.29	.16	256	.30	.18	99	.29	.14	341	
4	.6	.1	274	2.2	.1	214	1.3	.1	0	4	.02	.12	338	.28	.11	296	.15	.11	194	
*** ANNUAL Y ***																				
	1193 DAYS			1193 DAYS			1214 DAYS				1193 DAYS			1193 DAYS			1214 DAYS			
1	10.5	.2	110	15.0	.3	23	11.4	.2	216	1	.85	.19	192	.22	.28	22	.41	.25	15	
2	9.8	.1	278	11.7	.1	198	4.7	.1	339	2	.88	.09	336	1.77	.13	291	2.54	.16	307	
3	4.1	.1	120	3.6	.1	27	2.3	.1	211	3	.28	.09	181	.53	.12	86	.33	.14	281	
4	.4	.1	285	1.5	.1	216	.8	.1	41	4	.03	.08	337	.18	.11	294	.14	.14	142	

STJ Table - F-a-3

*** 70< R ***

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	416 DAYS			416 DAYS			421 DAYS				416 DAYS			416 DAYS			421 DAYS			
1	16.0	.2	127	24.4	.3	11	16.7	.4	219	1	1.67	.27	170	1.55	.34	64	1.16	.45	235	
2	13.8	.2	288	18.1	.1	204	5.9	.3	356	2	1.50	.22	331	2.29	.15	259	2.86	.32	308	
3	5.5	.2	113	5.9	.2	45	3.4	.2	236	3	.53	.22	135	.37	.18	74	.26	.25	132	
4	.5	.2	39	.2	.2	143	.7	.2	72	4	.25	.20	166	.16	.18	276	.36	.17	141	
*** SEASON E ***																				
	456 DAYS			456 DAYS			456 DAYS				456 DAYS			456 DAYS			456 DAYS			
1	18.4	.4	101	18.1	.4	16	14.4	.3	211	1	.76	.46	168	.70	.46	139	.44	.36	6	
2	14.4	.2	283	12.4	.2	197	6.3	.3	349	2	1.08	.19	0	2.17	.23	283	2.00	.36	313	
3	5.5	.2	111	6.4	.1	28	2.9	.2	209	3	.76	.21	165	.46	.14	116	.36	.25	4	
4	1.1	.1	284	2.0	.1	226	1.2	.2	29	4	.02	.16	232	.05	.11	234	.34	.18	61	
*** SEASON D ***																				
	461 DAYS			461 DAYS			470 DAYS				461 DAYS			461 DAYS			470 DAYS			
1	12.4	.2	83	10.2	.2	31	6.6	.2	197	1	.43	.17	233	.34	.26	81	.33	.24	74	
2	9.5	.2	267	8.0	.2	187	4.4	.1	347	2	.64	.17	6	1.45	.16	302	2.40	.13	301	
3	3.5	.1	111	3.5	.1	20	2.5	.1	193	3	.40	.11	192	.22	.13	227	.10	.15	85	
4	1.0	.1	283	2.5	.1	220	1.3	.1	8	4	.04	.10	2	.11	.15	295	.23	.10	71	
*** ANNUAL Y ***																				
	1333 DAYS			1333 DAYS			1347 DAYS				1333 DAYS			1333 DAYS			1347 DAYS			
1	14.9	.2	104	17.2	.1	17	12.3	.2	212	1	.78	.17	176	.71	.12	91	.13	.20	251	
2	12.4	.1	281	12.5	.1	198	5.5	.1	351	2	.99	.11	348	1.85	.11	231	2.41	.15	307	
3	4.8	.1	112	5.2	.1	32	2.7	.1	214	3	.52	.10	163	.19	.08	116	.13	.10	59	
4	.7	.1	294	1.6	.1	220	1.0	.1	29	4	.07	.06	175	.11	.09	267	.25	.09	89	

STJ Table - G-1

*** 0.0≤ CP ≤ .5 ***

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	716 DAYS			716 DAYS			717 DAYS				716 DAYS			716 DAYS			717 DAYS			
1	12.9	.2	121	21.4	.2	10	11.6	.2	218	1	1.10	.20	151	.86	.19	39	.74	.23	241	
2	10.9	.1	290	16.0	.1	206	5.1	.2	9	2	1.21	.13	327	2.21	.14	258	2.73	.16	310	
3	4.8	.1	121	5.3	.1	47	3.4	.1	234	3	.49	.10	143	.72	.12	47	.33	.12	226	
4	.2	.0	6	.4	.1	139	.5	.1	93	4	.16	.05	163	.07	.10	61	.04	.10	189	
*** SEASON E ***																				
	617 DAYS			617 DAYS			623 DAYS				617 DAYS			617 DAYS			623 DAYS			
1	15.4	.2	100	14.9	.2	11	8.5	.2	210	1	1.16	.17	176	1.14	.25	130	.94	.22	338	
2	11.5	.1	283	11.1	.2	200	5.2	.1	1	2	1.27	.12	4	2.14	.25	293	2.33	.15	311	
3	4.8	.1	115	5.7	.1	31	3.1	.1	205	3	.68	.11	186	.72	.12	106	.37	.09	304	
4	1.1	.1	288	2.2	.1	221	1.1	.1	22	4	.15	.07	2	.21	.09	229	.08	.08	90	
*** SEASON D ***																				
	735 DAYS			735 DAYS			752 DAYS				735 DAYS			735 DAYS			752 DAYS			
1	8.6	.1	84	7.8	.2	34	3.8	.1	192	1	.79	.16	228	.26	.19	120	.49	.11	44	
2	7.8	.1	267	7.0	.1	192	3.9	.1	352	2	.76	.09	12	1.49	.12	308	2.46	.11	300	
3	3.1	.1	109	2.8	.1	27	2.2	.1	191	3	.39	.06	226	.21	.10	136	.14	.08	320	
4	.8	.1	279	2.2	.1	218	1.3	.1	9	4	.10	.06	42	.17	.09	343	.11	.07	128	
*** ANNUAL Y ***																				
	2068 DAYS			2068 DAYS			2092 DAYS				2068 DAYS			2068 DAYS			2092 DAYS			
1	11.7	.1	104	14.4	.1	15	7.7	.1	211	1	.80	.09	183	.54	.14	111	.32	.07	339	
2	9.9	.1	281	11.3	.1	201	4.7	.1	1	2	.95	.07	353	1.73	.10	296	2.51	.10	307	
3	4.2	.1	116	4.5	.0	37	2.7	.1	213	3	.41	.06	185	.41	.05	84	.18	.05	275	
4	.6	.0	290	1.5	.1	215	.8	.1	27	4	.04	.03	63	.07	.06	296	.06	.06	117	

STJ Table - G-2

*** .5< CP ≤1.2 ***

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	506 DAYS			506 DAYS			512 DAYS				506 DAYS			506 DAYS			512 DAYS			
1	15.6	.3	140	24.3	.5	20	23.8	.5	224	1	1.21	.37	142	1.21	.54	49	1.25	.52	155	
2	13.1	.2	288	16.6	.2	202	6.2	.3	319	2	1.23	.26	300	2.18	.27	257	2.49	.33	315	
3	4.8	.3	117	4.1	.2	50	3.0	.3	260	3	.49	.29	94	.26	.25	62	.40	.35	159	
4	.4	.1	92	.2	.2	170	.7	.2	54	4	.07	.15	13	.15	.23	273	.40	.27	106	
*** SEASON E ***																				
	575 DAYS			575 DAYS			577 DAYS				575 DAYS			575 DAYS			577 DAYS			
1	14.4	.4	107	17.4	.4	36	18.6	.4	217	1	1.14	.47	210	.72	.45	32	.24	.47	344	
2	12.7	.2	282	12.4	.2	199	6.8	.5	328	2	1.19	.22	337	2.44	.24	275	2.57	.48	298	
3	5.0	.2	123	4.7	.3	20	1.9	.3	210	3	.81	.23	179	.82	.29	126	.30	.30	269	
4	.8	.2	264	1.7	.1	230	1.2	.2	35	4	.34	.19	113	.19	.13	294	.67	.23	113	
*** SEASON D ***																				
	514 DAYS			514 DAYS			525 DAYS				514 DAYS			514 DAYS			525 DAYS			
1	9.3	.3	78	11.4	.4	59	9.8	.4	201	1	.46	.36	264	.41	.47	328	.47	.47	71	
2	8.3	.2	262	8.3	.2	186	4.3	.3	328	2	.66	.23	10	1.71	.19	326	2.28	.28	305	
3	3.4	.2	123	2.4	.2	1	2.2	.3	185	3	.24	.18	236	.06	.25	255	.28	.27	4	
4	.7	.2	266	2.3	.2	217	1.1	.2	1	4	.05	.17	259	.40	.22	280	.10	.20	263	
*** ANNUAL Y ***																				
	1595 DAYS			1595 DAYS			1614 DAYS				1595 DAYS			1595 DAYS			1614 DAYS			
1	12.0	.2	113	17.1	.4	34	17.2	.3	217	1	.71	.20	193	.83	.40	32	.33	.29	145	
2	11.2	.1	280	12.3	.1	197	5.7	.2	325	2	.97	.13	329	1.96	.16	290	2.47	.19	305	
3	4.4	.1	121	3.6	.1	26	2.0	.2	223	3	.37	.14	161	.32	.14	116	.05	.20	263	
4	.4	.1	263	1.4	.1	220	1.0	.1	27	4	.11	.12	112	.23	.11	281	.34	.15	113	

STJ Table - G-3

*** 1.2< CP ***

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
	*** SEASON J ***																			
	117 DAYS			117 DAYS			118 DAYS				117 DAYS			117 DAYS			118 DAYS			
1	40.5	2.6	186	35.3	1.9	33	65.6	4.0	229	1	5.22	2.78	179	1.84	2.06	123	4.62	4.33	238	
2	22.5	2.1	275	10.6	1.1	197	11.0	2.4	280	2	4.23	2.23	171	3.44	1.16	298	3.43	2.61	266	
3	7.0	1.9	128	4.4	.9	5	4.3	2.1	186	3	3.63	2.05	179	1.82	1.01	324	4.33	2.26	182	
4	1.8	1.7	126	2.3	.7	273	3.4	1.8	100	4	3.68	1.79	214	1.42	.80	52	2.14	1.95	197	
	*** SEASON E ***																			
	209 DAYS			209 DAYS			212 DAYS				209 DAYS			209 DAYS			212 DAYS			
1	21.0	2.4	163	26.4	1.5	55	46.2	2.4	226	1	1.69	2.56	141	.66	1.65	60	3.33	2.58	193	
2	17.4	1.3	288	10.7	.8	182	9.4	1.3	311	2	3.35	1.38	354	3.66	.90	221	4.13	1.44	350	
3	6.5	1.0	107	7.2	.7	328	3.6	1.4	142	3	1.84	1.09	89	.74	.79	181	.68	1.45	253	
4	2.5	.9	230	1.7	.5	251	1.3	1.4	218	4	1.38	1.00	273	.37	.60	106	1.65	1.46	322	
	*** SEASON D ***																			
	112 DAYS			112 DAYS			117 DAYS				112 DAYS			112 DAYS			117 DAYS			
1	11.3	1.6	116	20.7	1.9	82	36.1	2.5	217	1	3.23	1.70	230	1.58	2.10	53	1.79	2.76	140	
2	10.1	1.3	274	8.8	.9	157	7.3	1.8	313	2	1.17	1.42	271	2.45	1.02	338	4.10	1.88	298	
3	6.3	.7	134	4.6	.6	318	3.6	1.0	122	3	.53	.80	99	.37	.69	60	.38	1.14	5	
4	1.6	1.1	239	3.5	.6	205	1.9	1.0	26	4	1.32	1.15	48	.63	.70	132	.87	1.07	91	
	*** ANNUAL Y ***																			
	438 DAYS			438 DAYS			447 DAYS				438 DAYS			438 DAYS			447 DAYS			
1	22.1	1.4	169	26.1	1.1	53	48.5	2.0	225	1	3.68	1.48	189	1.30	1.21	52	3.34	2.16	212	
2	16.8	1.0	281	9.9	.7	181	9.0	1.1	302	2	.79	1.06	325	2.48	.71	262	3.14	1.22	316	
3	6.4	.8	120	5.5	.6	333	3.4	1.2	150	3	1.53	.86	130	.21	.61	349	1.28	1.25	200	
4	1.5	.7	215	2.0	.4	239	.8	1.0	104	4	1.05	.73	242	.62	.43	74	.48	1.06	281	

STJ Table - H-1 and H-2

L U N A R H A R M O N I C S

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

*** PERIGEE ± 3 DAYS ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	300 DAYS			300 DAYS			303 DAYS		
1	1.58	.32	177	1.82	.70	50	1.15	.41	293
2	1.97	.25	327	3.07	.38	254	3.59	.30	328
3	.71	.24	130	.80	.28	47	.39	.20	180
4	.14	.14	152	.19	.21	338	.26	.14	172
*** SEASON E ***									
	295 DAYS			295 DAYS			296 DAYS		
1	.80	.24	260	.38	.48	43	.94	.55	65
2	.53	.24	4	2.31	.46	291	3.22	.50	298
3	.90	.27	193	.82	.35	125	.94	.29	291
4	.20	.19	34	.19	.21	259	.32	.28	32
*** SEASON D ***									
	293 DAYS			293 DAYS			296 DAYS		
1	.80	.29	217	.49	.32	83	.91	.45	48
2	.76	.22	27	1.94	.26	305	2.61	.28	314
3	.46	.19	235	.29	.21	99	.24	.25	15
4	.21	.14	28	.28	.14	306	.17	.18	74
*** ANNUAL Y ***									
	888 DAYS			888 DAYS			895 DAYS		
1	.83	.25	217	.82	.27	53	.56	.23	31
2	.89	.13	345	2.27	.17	279	3.06	.13	313
3	.48	.18	180	.46	.22	90	.29	.11	286
4	.12	.07	61	.16	.13	305	.11	.15	72

*** APOGEE ± 3 DAYS ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	274 DAYS			274 DAYS			277 DAYS		
1	1.16	.29	193	1.51	.49	73	.95	.70	267
2	1.19	.31	324	2.30	.26	268	2.99	.45	305
3	.20	.33	125	.58	.31	83	.34	.39	231
4	.24	.26	171	.09	.22	192	.35	.27	195
*** SEASON E ***									
	282 DAYS			282 DAYS			285 DAYS		
1	.47	.31	173	.85	.73	126	.52	.50	16
2	.49	.27	5	1.78	.32	274	2.16	.36	305
3	.69	.19	196	.37	.29	104	.45	.29	312
4	.18	.17	23	.39	.24	266	.33	.26	143
*** SEASON D ***									
	283 DAYS			283 DAYS			293 DAYS		
1	.89	.54	276	1.51	.29	244	1.20	.41	5
2	.57	.24	352	1.08	.35	331	2.00	.35	302
3	.34	.21	270	.25	.22	197	.18	.28	31
4	.12	.12	130	.15	.19	356	.15	.21	165
*** ANNUAL Y ***									
	839 DAYS			839 DAYS			855 DAYS		
1	.57	.16	217	.37	.28	138	.60	.34	342
2	.70	.12	339	1.55	.15	293	2.38	.19	304
3	.29	.11	206	.28	.11	106	.17	.17	298
4	.08	.11	129	.15	.12	271	.25	.14	168

STJ Table - H-3 and H-4

L U N A R H A R M O N I C S

STATION - ST. JOHNS (CANADA) M2 - TIDE PERIOD AUG 1 1968 - DEC 31 1979
LATITUDE= 47.60N LONGITUDE= 52.70W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

*** MOON RECEDING ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	284 DAYS			284 DAYS			285 DAYS		
1	1.32	.51	121	.67	.36	71	1.14	.66	185
2	.72	.21	291	1.57	.29	251	2.67	.28	288
3	.17	.22	165	.52	.22	29	.16	.31	248
4	.17	.17	39	.10	.19	146	.37	.28	56
				*** SEASON E ***					
	274 DAYS			274 DAYS			281 DAYS		
1	2.46	.41	171	.80	.67	81	1.87	.47	298
2	2.11	.25	337	3.55	.33	267	1.97	.40	294
3	1.02	.27	171	1.34	.27	104	.69	.29	253
4	.09	.20	143	.14	.21	219	.29	.29	113
				*** SEASON D ***					
	293 DAYS			293 DAYS			298 DAYS		
1	.41	.38	221	.51	.28	180	.59	.26	28
2	.60	.17	341	1.78	.17	310	2.75	.23	286
3	.29	.16	234	.25	.18	78	.21	.19	314
4	.17	.13	341	.16	.11	257	.07	.18	132
				*** ANNUAL Y ***					
	851 DAYS			851 DAYS			864 DAYS		
1	1.21	.16	159	.44	.20	106	.46	.35	281
2	1.06	.09	329	2.06	.15	274	2.46	.15	289
3	.44	.13	183	.59	.15	93	.32	.14	262
4	.09	.10	21	.10	.11	231	.21	.11	85

*** MOON APPROACHING ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	274 DAYS			274 DAYS			275 DAYS		
1	1.14	.34	171	1.09	.34	14	1.77	.32	203
2	1.12	.20	333	1.91	.32	252	2.17	.37	322
3	.89	.25	135	.53	.24	68	.10	.27	202
4	.13	.15	231	.15	.16	306	.21	.20	51
				*** SEASON E ***					
	292 DAYS			292 DAYS			293 DAYS		
1	1.50	.49	194	1.21	.51	119	.95	.57	329
2	1.75	.31	2	2.22	.39	301	2.30	.37	321
3	.70	.16	178	.67	.32	121	.39	.31	79
4	.16	.13	73	.08	.22	37	.51	.29	117
				*** SEASON D ***					
	287 DAYS			287 DAYS			294 DAYS		
1	.70	.31	212	.52	.37	10	.62	.42	28
2	1.10	.17	28	1.22	.22	318	2.22	.28	315
3	.28	.16	235	.09	.14	100	.40	.25	283
4	.21	.14	288	.10	.20	237	.37	.28	334
				*** ANNUAL Y ***					
	853 DAYS			853 DAYS			862 DAYS		
1	1.02	.31	185	.49	.24	63	.26	.19	250
2	1.23	.10	360	1.54	.14	290	2.26	.21	319
3	.50	.09	164	.37	.13	93	.01	.14	316
4	.07	.07	283	.08	.09	298	.18	.14	60

The O_1 and N_2 Tides Derived From Hourly Magnetic Data of St. John's (1968-1979). The International Disturbed Days have been Excluded From the computations.

	X		Y		Z	
	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase
			SEASON-J			
		1132 days		1132 days		1140 days
O_1	1.03 ± 0.20	246°	1.00 ± 0.17	161°	0.66 ± 0.31	316°
N_2	0.32 ± 0.13	310°	0.19 ± 0.13	240°	0.65 ± 0.18	335°
			SEASON-E			
		1143 days		1143 days		1155 days
O_1	0.45 ± 0.18	314°	0.30 ± 0.34	262°	0.50 ± 0.35	295°
N_2	0.36 ± 0.14	339°	0.79 ± 0.23	306°	0.62 ± 0.18	304°
			SEASON-D			
		1156 days		1156 days		1181 days
O_1	0.37 ± 0.11	173°	0.16 ± 0.19	212°	0.74 ± 0.19	310°
N_2	0.24 ± 0.13	39°	0.27 ± 0.12	330°	0.61 ± 0.17	326°
			SEASON-Y			
		3431 days		3431 days		3476 days
O_1	0.43 ± 0.12	258°	0.41 ± 0.16	175°	0.67 ± 0.17	314°
N_2	0.20 ± 0.06	342°	0.36 ± 0.08	304°	0.61 ± 0.12	320°

GREAT WHALE RIVER

January 1, 1967 - December 31, 1979

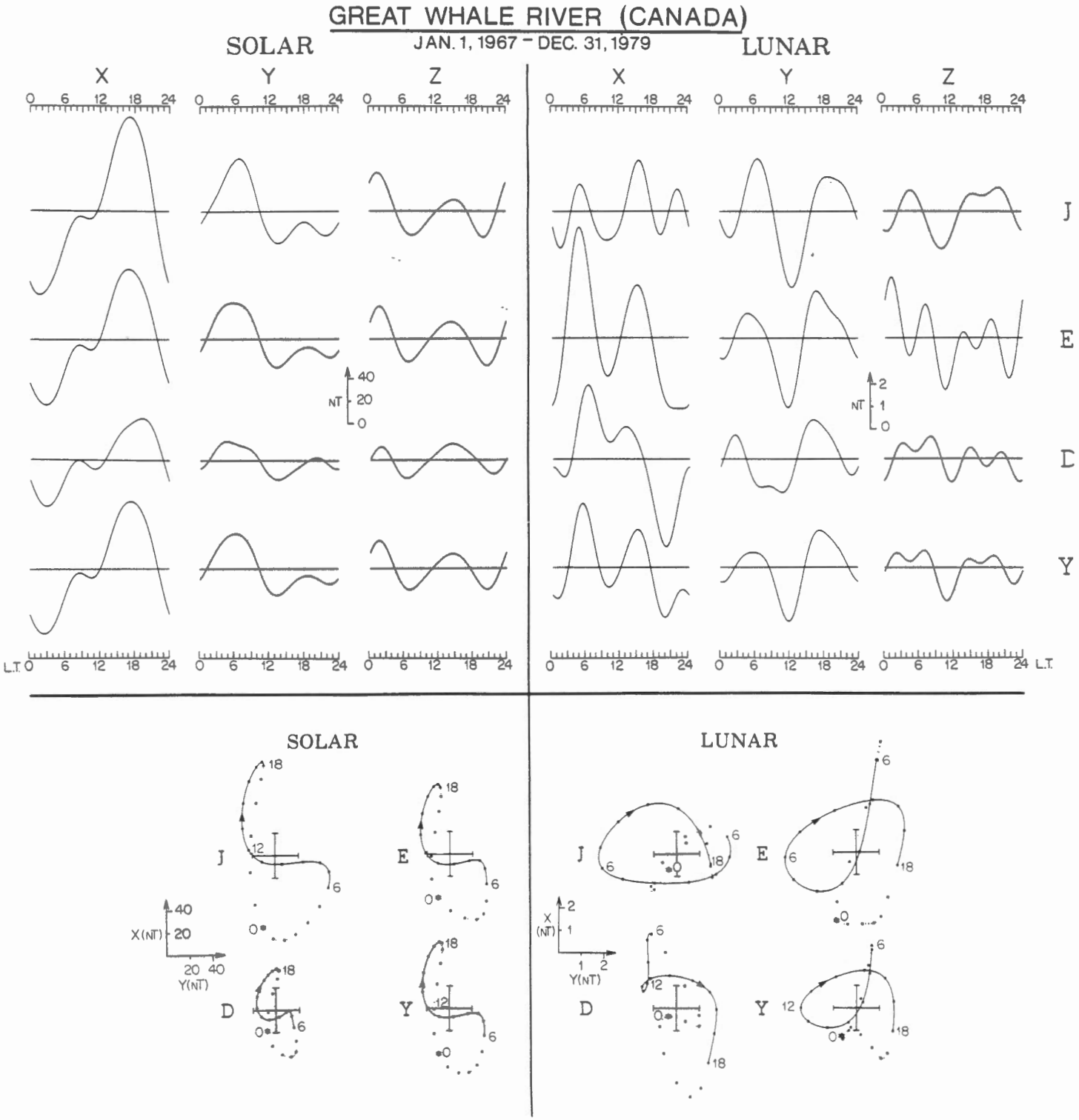
GREAT WHALE RIVER (CANADA)
JAN. 1, 1967 – DEC. 31, 1979
SOLAR
LUNAR
X
Y
Z
J
E
D
Y
L.T.
NT
SOLAR
LUNAR
X(NT)
Y(NT)

FIGURE 1 GWC

GWC TABLE-A

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	1566 DAYS			1566 DAYS			1564 DAYS		
1	83.0	1.7	214	33.2	.5	359	18.7	.9	57
2	24.2	.8	270	17.6	.3	268	25.2	.7	40
3	3.8	.7	90	4.1	.3	89	4.1	.5	30
4	4.0	.5	320	1.3	.3	28	1.2	.5	107
				*** SEASON E ***					
	1576 DAYS			1576 DAYS			1586 DAYS		
1	66.9	.8	212	27.0	.5	8	12.6	.9	42
2	15.1	.6	261	14.9	.3	279	26.5	.7	39
3	5.9	.7	95	1.8	.2	354	7.3	.5	9
4	3.8	.7	329	1.6	.2	278	.4	.5	330
				*** SEASON D ***					
	1551 DAYS			1551 DAYS			1554 DAYS		
1	42.2	1.1	204	13.2	.3	21	1.1	.7	247
2	15.5	.6	215	9.3	.2	262	15.2	.3	29
3	4.8	.4	128	3.5	.2	287	6.5	.3	351
4	2.4	.5	318	2.3	.1	248	1.8	.3	316
				*** ANNUAL Y ***					
	4693 DAYS			4693 DAYS			4704 DAYS		
1	64.0	.7	211	24.3	.3	7	10.0	.6	50
2	16.8	.4	252	13.8	.1	271	22.3	.4	37
3	4.6	.4	104	1.0	.1	12	5.8	.1	7
4	3.4	.4	323	1.0	.1	279	.4	.2	348

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	1566 DAYS			1566 DAYS			1564 DAYS		
1	1.75	1.82	191	.50	.57	32	1.93	1.00	33
2	1.38	.91	333	1.86	.35	244	.87	.73	1
3	.69	.72	210	.80	.28	107	.48	.56	192
4	.84	.56	230	.09	.28	163	.60	.50	148
				*** SEASON E ***					
	1576 DAYS			1576 DAYS			1586 DAYS		
1	1.69	.83	305	.20	.58	266	1.47	.95	43
2	2.89	.60	329	1.61	.32	273	.44	.73	279
3	1.03	.74	239	.40	.28	76	.35	.49	91
4	.42	.68	267	.11	.21	274	.73	.54	23
				*** SEASON D ***					
	1551 DAYS			1551 DAYS			1554 DAYS		
1	.67	1.23	44	.83	.36	189	1.33	.80	323
2	1.47	.70	1	1.21	.20	324	.80	.36	297
3	.75	.46	164	.21	.21	209	.68	.30	250
4	.07	.51	102	.29	.12	262	.28	.37	305
				*** ANNUAL Y ***					
	4693 DAYS			4693 DAYS			4704 DAYS		
1	.50	.78	246	.11	.31	212	1.37	.64	19
2	1.89	.48	337	1.36	.16	273	.59	.43	322
3	.70	.41	210	.38	.10	105	.26	.17	207
4	.39	.41	241	.12	.11	254	.18	.19	50

GWC TABLE-B

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	1321 DAYS			1321 DAYS			1323 DAYS		
1	66.8	1.2	214	29.1	.3	5	8.0	.8	83
2	27.8	.9	262	17.6	.2	263	21.5	.4	36
3	2.9	.5	108	4.2	.2	74	6.3	.4	43
4	2.9	.5	318	1.2	.2	34	.8	.5	113
				*** SEASON E ***					
	1293 DAYS			1293 DAYS			1300 DAYS		
1	51.9	.8	209	23.3	.5	12	.4	.8	49
2	18.4	.6	254	14.0	.3	270	20.8	.5	36
3	5.5	.7	115	2.8	.3	10	7.2	.5	26
4	2.7	.5	326	2.0	.2	281	1.3	.4	352
				*** SEASON D ***					
	1309 DAYS			1309 DAYS			1313 DAYS		
1	30.4	.7	197	11.3	.1	25	6.5	.7	216
2	16.0	.5	223	8.6	.2	251	11.1	.4	29
3	4.5	.5	144	2.5	.1	306	4.6	.3	7
4	1.7	.4	314	2.1	.2	252	1.9	.2	333
				*** ANNUAL Y ***					
	3923 DAYS			3923 DAYS			3936 DAYS		
1	49.4	.6	209	21.1	.2	11	2.0	.5	132
2	20.0	.5	250	13.3	.1	263	17.8	.2	34
3	4.2	.4	124	2.0	.1	25	5.8	.1	27
4	2.4	.3	320	1.1	.1	282	.9	.2	353

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	1321 DAYS			1321 DAYS			1323 DAYS		
1	.49	1.32	202	.99	.29	81	.64	.82	146
2	.77	.96	330	2.05	.22	243	.87	.43	298
3	1.07	.52	173	.53	.22	115	.54	.47	216
4	.63	.53	204	.15	.19	176	.12	.49	274
				*** SEASON E ***					
	1293 DAYS			1293 DAYS			1300 DAYS		
1	1.80	.92	323	.90	.52	124	.71	.87	69
2	2.79	.69	323	1.70	.36	279	.67	.55	342
3	.98	.74	200	.38	.31	103	.71	.52	73
4	.38	.57	170	.38	.23	239	1.26	.44	27
				*** SEASON D ***					
	1309 DAYS			1309 DAYS			1313 DAYS		
1	2.45	.79	326	.99	.14	160	.31	.79	350
2	.65	.57	2	1.03	.18	334	.51	.42	278
3	.99	.54	147	.31	.16	10	.09	.31	126
4	.48	.41	110	.32	.16	295	.54	.24	290
				*** ANNUAL Y ***					
	3923 DAYS			3923 DAYS			3936 DAYS		
1	1.15	.61	320	.75	.18	126	.28	.54	82
2	1.33	.48	328	1.33	.13	272	.68	.27	307
3	.94	.47	173	.29	.11	86	.15	.16	121
4	.38	.28	168	.22	.14	252	.44	.23	357

GWC TABLE-C

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL QUIET DAYS ONLY)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	256 DAYS			256 DAYS			256 DAYS				256 DAYS			256 DAYS			256 DAYS		
1	23.9	1.5	200	21.8	.3	17	8.7	.4	207	1	1.67	1.58	91	1.11	.30	58	1.38	.38	339
2	17.8	.7	260	16.5	.3	242	5.5	.4	326	2	1.46	.74	300	1.80	.37	237	1.72	.47	300
3	4.6	.7	208	4.7	.3	71	2.7	.4	45	3	.86	.74	264	.80	.35	68	.59	.37	222
4	3.0	.5	282	.7	.1	28	1.2	.4	119	4	.81	.51	302	.34	.16	197	.21	.44	108
*** SEASON E ***																			
	256 DAYS			256 DAYS			255 DAYS				256 DAYS			256 DAYS			255 DAYS		
1	15.6	1.1	174	16.9	.3	18	9.6	.6	223	1	.84	1.21	46	1.23	.30	150	.66	.60	173
2	12.7	.5	258	10.8	.4	237	2.6	.4	360	2	1.99	.60	26	1.47	.40	314	.63	.47	297
3	6.1	.5	170	4.5	.2	38	2.5	.3	58	3	.31	.58	84	.71	.25	140	.13	.32	113
4	1.6	.5	252	2.2	.2	270	.8	.3	12	4	.58	.57	66	.13	.20	185	.15	.30	105
*** SEASON D ***																			
	259 DAYS			259 DAYS			258 DAYS				259 DAYS			259 DAYS			258 DAYS		
1	8.8	.8	144	7.7	.3	24	6.6	.6	211	1	2.00	.84	214	.46	.28	303	1.25	.67	354
2	8.9	.5	240	6.4	.3	220	.8	.3	53	2	1.16	.54	29	1.35	.30	306	1.02	.33	325
3	3.5	.4	153	2.0	.2	27	.2	.2	262	3	.32	.41	86	.17	.20	156	.33	.24	340
4	.9	.4	309	1.7	.2	244	1.5	.2	316	4	.67	.46	76	.10	.19	76	.28	.23	32
*** ANNUAL Y ***																			
	771 DAYS			771 DAYS			769 DAYS				771 DAYS			771 DAYS			769 DAYS		
1	15.0	.4	182	15.4	.2	18	8.2	.4	214	1	.56	.45	111	.40	.22	122	.66	.38	348
2	13.0	.4	255	11.1	.2	237	2.7	.2	342	2	1.16	.38	7	1.15	.21	285	1.05	.20	305
3	4.4	.4	178	3.5	.1	50	1.7	.2	50	3	.04	.38	298	.40	.13	110	.18	.18	245
4	1.7	.4	278	1.1	.1	267	.4	.2	9	4	.34	.37	34	.16	.10	185	.15	.21	67

GWC TABLE-E

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** JANUARY ***									
	338 DAYS			338 DAYS			335 DAYS		
1	29.7	1.6	191	10.4	.7	28	8.0	1.6	220
2	15.6	1.1	215	9.0	.4	243	10.1	.8	26
3	4.7	.9	139	1.9	.2	298	3.9	.8	359
4	2.4	.9	285	2.8	.3	252	2.2	.5	339
*** FEBRUARY ***									
	300 DAYS			300 DAYS			299 DAYS		
1	38.3	2.3	196	14.3	.8	13	6.5	2.0	236
2	19.0	1.8	218	9.6	.3	253	14.9	1.2	20
3	5.5	1.0	138	3.1	.4	303	6.5	1.0	1
4	2.2	.7	249	2.0	.3	237	2.5	.6	316
*** MARCH ***									
	330 DAYS			330 DAYS			336 DAYS		
1	55.3	2.9	205	23.0	.9	10	3.7	1.7	352
2	18.2	1.7	235	11.5	.5	260	22.2	1.5	28
3	7.5	1.5	112	2.1	.4	336	7.7	.6	10
4	2.2	.9	318	2.4	.4	266	1.9	.8	359
*** APRIL ***									
	324 DAYS			324 DAYS			323 DAYS		
1	65.8	2.1	212	29.3	1.3	5	11.6	2.6	53
2	22.5	1.7	270	15.3	.6	276	25.5	1.3	39
3	6.4	2.0	82	2.3	.5	46	6.0	1.2	28
4	2.1	1.0	350	1.6	.5	312	1.2	.8	19

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** JANUARY ***									
	338 DAYS			338 DAYS			335 DAYS		
1	3.91	1.77	309	.95	.74	198	.70	1.72	46
2	.53	1.21	151	1.42	.44	8	1.12	.88	146
3	.82	.92	118	.30	.24	328	.65	.82	79
4	.29	.98	299	.31	.36	202	1.33	.57	289
*** FEBRUARY ***									
	300 DAYS			300 DAYS			299 DAYS		
1	4.88	2.46	12	1.59	.86	123	2.14	2.13	294
2	2.20	1.86	5	1.26	.37	334	1.41	1.29	309
3	1.40	1.11	201	.52	.46	159	.12	1.10	103
4	.90	.82	130	.81	.32	260	.47	.64	323
*** MARCH ***									
	330 DAYS			330 DAYS			336 DAYS		
1	9.51	3.10	319	1.66	.94	99	3.08	1.86	112
2	6.08	1.79	294	1.45	.51	330	1.55	1.56	122
3	3.70	1.63	216	.74	.48	6	1.47	.67	67
4	1.38	1.05	140	.44	.43	293	2.10	.89	23
*** APRIL ***									
	324 DAYS			324 DAYS			323 DAYS		
1	2.98	2.33	271	.89	1.46	81	2.75	2.85	93
2	2.56	1.77	328	3.08	.66	241	1.16	1.38	19
3	2.11	2.05	134	1.24	.54	100	.15	1.29	230
4	1.74	1.11	149	1.07	.52	208	1.09	.90	303

GWC TABLE-E---CONT'D

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** MAY ***								
	337 DAYS			337 DAYS			337 DAYS				337 DAYS			337 DAYS			337 DAYS		
1	69.8	2.1	215	29.4	.4	6	9.4	1.4	79	1	2.57	2.26	234	1.53	.40	57	.93	1.53	178
2	27.8	1.5	273	16.6	.5	274	23.2	.7	41	2	1.90	1.57	15	2.60	.48	248	.78	.75	331
3	4.5	1.3	85	4.8	.3	86	5.1	.6	57	3	1.41	1.41	36	.23	.36	96	.52	.66	208
4	2.3	1.3	322	1.0	.3	54	1.0	.6	146	4	1.93	1.39	280	.19	.30	101	1.04	.65	172
										*** JUNE ***								
	322 DAYS			322 DAYS			322 DAYS				322 DAYS			322 DAYS			322 DAYS		
1	72.4	2.0	212	30.6	.7	1	7.8	1.1	88	1	1.48	2.14	84	.91	.73	157	1.44	1.21	300
2	27.0	2.0	255	17.9	.6	260	20.5	1.2	35	2	3.20	2.15	284	1.72	.63	223	1.56	1.25	340
3	3.7	1.4	113	3.9	.5	80	5.5	1.0	30	3	.67	1.51	181	1.06	.50	77	1.22	1.07	157
4	3.2	1.4	302	1.4	.4	41	.6	.9	75	4	.85	1.50	134	.31	.41	312	.96	.93	0
										*** JULY ***								
	335 DAYS			335 DAYS			338 DAYS				335 DAYS			335 DAYS			338 DAYS		
1	61.0	2.4	214	28.6	.7	3	5.9	1.5	102	1	.58	2.57	43	1.55	.81	63	.49	1.65	39
2	30.7	.8	255	17.6	.6	255	18.8	1.4	29	2	1.47	.91	209	2.00	.60	243	1.74	1.43	288
3	1.7	1.3	136	4.3	.3	59	7.8	.5	45	3	2.48	1.33	204	.69	.35	162	.34	.58	211
4	2.8	.8	334	1.3	.3	58	.5	.7	155	4	.84	.89	174	.53	.34	191	.20	.77	45
										*** AUGUST ***								
	336 DAYS			336 DAYS			337 DAYS				336 DAYS			336 DAYS			337 DAYS		
1	58.6	2.2	213	26.6	.7	10	5.4	1.5	111	1	5.24	2.37	174	.29	.75	34	1.37	1.59	128
2	25.9	1.5	262	20.6	.4	262	21.2	.8	34	2	.74	1.59	19	2.80	.39	260	1.92	.82	326
3	2.2	1.3	189	5.1	.3	64	7.3	.8	44	3	2.34	1.42	185	.34	.34	125	1.03	.90	329
4	4.5	1.1	306	1.8	.3	1	1.5	.7	130	4	2.25	1.16	205	.26	.33	100	.89	.74	26

GWC TABLE-E---CONT'D

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEPTEMBER***																			
	321 DAYS			321 DAYS			319 DAYS				321 DAYS			321 DAYS			319 DAYS		
1	53.1	1.6	211	24.0	.7	17	2.5	1.4	195	1	3.73	1.73	111	1.95	.75	156	.42	1.57	298
2	18.5	1.4	268	17.8	.4	278	21.8	1.0	39	2	1.61	1.52	2	1.98	.41	267	1.95	1.06	282
3	4.5	1.0	113	3.1	.5	36	7.8	.7	33	3	1.01	1.02	252	.64	.56	122	.14	.77	254
4	5.2	1.0	326	2.1	.4	298	.1	.5	33	4	.35	1.05	298	.24	.42	258	1.15	.57	31
*** OCTOBER ***																			
	327 DAYS			327 DAYS			333 DAYS				327 DAYS			327 DAYS			333 DAYS		
1	38.4	1.7	209	18.4	.7	18	2.1	1.1	219	1	1.69	1.80	355	.97	.73	224	2.21	1.21	313
2	18.3	1.2	244	9.8	.4	274	18.1	.7	42	2	3.35	1.25	336	1.55	.39	276	1.57	.78	267
3	6.6	1.2	137	5.1	.5	342	8.2	1.1	32	3	.55	1.24	123	.23	.52	44	.94	1.14	99
4	2.4	1.0	37	2.8	.4	264	2.8	.6	338	4	1.02	1.06	7	.85	.42	340	1.37	.64	77
*** NOVEMBER ***																			
	322 DAYS			322 DAYS			324 DAYS				322 DAYS			322 DAYS			324 DAYS		
1	28.9	1.8	201	11.9	.4	23	6.2	.9	212	1	.11	1.98	288	.49	.48	169	.78	.95	341
2	14.9	1.2	233	9.1	.4	252	10.2	.8	34	2	.91	1.24	47	1.05	.39	325	1.27	.87	344
3	6.0	1.0	159	2.4	.3	313	4.1	.4	6	3	1.70	1.10	96	.34	.29	25	.49	.48	343
4	2.1	.5	346	1.7	.3	247	1.3	.3	330	4	1.34	.56	112	.29	.31	322	.48	.35	284
*** DECEMBER ***																			
	331 DAYS			331 DAYS			333 DAYS				331 DAYS			331 DAYS			333 DAYS		
1	25.6	1.8	197	8.5	.5	36	7.6	.9	207	1	2.41	1.92	284	.57	.50	153	1.82	.95	109
2	15.1	.9	223	7.0	.5	248	8.0	1.0	30	2	.51	.95	45	.91	.55	340	.59	1.03	188
3	2.6	.9	127	2.4	.4	293	3.5	.7	12	3	.80	.93	87	.49	.40	11	1.02	.73	196
4	2.3	.8	318	2.1	.3	261	1.3	.6	337	4	.66	.87	353	.07	.28	237	.69	.60	245

GWC TABLE-F-a-1

*** 0≤ R ≤ 30 ***

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
	308 DAYS			308 DAYS			309 DAYS				308 DAYS			308 DAYS			309 DAYS			
1	64.1	2.6	219	24.2	.5	12	8.1	2.0	111	1	1.69	2.84	118	1.42	.53	98	2.40	2.20	219	
2	31.0	1.9	249	17.9	.6	269	19.1	1.4	35	2	.99	2.05	301	2.14	.60	260	2.20	1.53	296	
3	4.5	1.3	172	2.3	.6	59	9.0	.9	43	3	1.19	1.43	172	.68	.62	156	.55	.98	282	
4	2.3	1.3	307	1.1	.5	1	1.1	.7	75	4	.74	1.41	151	.51	.52	144	.27	.75	197	
	299 DAYS			299 DAYS			300 DAYS				299 DAYS			299 DAYS			300 DAYS			
1	47.2	2.1	215	19.5	.8	23	4.2	1.1	206	1	2.72	2.24	278	.61	.92	75	2.15	1.21	71	
2	21.6	1.9	245	14.5	.6	272	18.4	.6	34	2	4.50	1.97	316	2.73	.67	297	3.04	.64	21	
3	4.7	1.0	137	2.7	.5	351	9.8	.9	24	3	3.77	1.05	261	.37	.52	116	1.52	.91	64	
4	1.8	.9	8	1.8	.4	300	2.7	.9	23	4	3.50	1.00	219	.48	.43	243	1.39	.93	59	
	298 DAYS			298 DAYS			300 DAYS				298 DAYS			298 DAYS			300 DAYS			
1	31.4	1.6	203	8.6	.4	40	6.2	1.5	204	1	5.74	1.70	1	.26	.41	103	.10	1.65	199	
2	18.0	1.2	228	9.8	.5	259	10.4	.8	29	2	1.83	1.30	53	.68	.49	350	.57	.88	262	
3	4.1	1.2	194	2.6	.3	287	4.7	.7	13	3	1.65	1.23	81	.96	.33	34	.56	.80	101	
4	3.0	.9	271	2.2	.3	277	1.7	.6	353	4	1.63	.97	55	.38	.34	283	.45	.63	236	
	905 DAYS			905 DAYS			909 DAYS				905 DAYS			905 DAYS			909 DAYS			
1	47.5	1.2	214	17.3	.3	20	4.3	1.0	165	1	1.47	1.33	358	.58	.34	98	.38	1.11	162	
2	23.3	1.0	242	14.0	.3	268	16.8	.5	33	2	1.68	1.02	330	1.62	.27	284	1.41	.59	336	
3	4.1	.7	167	1.6	.3	350	7.7	.4	29	3	.80	.70	233	.37	.28	85	.50	.46	58	
4	1.9	.5	305	1.5	.2	302	1.6	.4	23	4	.82	.57	194	.24	.26	226	.26	.42	73	

*** SEASON J ***

*** SEASON E ***

*** SEASON D ***

*** ANNUAL Y ***

GWC TABLE-F-a-2

*** 30< R ≤ 70 ***

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	410 DAYS			410 DAYS			410 DAYS				410 DAYS			410 DAYS			410 DAYS			
1	68.5	1.7	218	30.6	.5	5	12.4	1.1	69	1	1.63	1.82	181	1.10	.51	76	.83	1.23	102	
2	30.0	1.0	262	17.1	.4	270	24.6	.9	38	2	1.02	1.04	270	2.05	.40	237	.57	.95	34	
3	2.3	1.5	89	3.7	.3	62	8.1	.7	45	3	.65	1.55	173	.50	.36	95	1.16	.74	156	
4	2.5	1.0	315	1.7	.3	36	1.1	.7	117	4	.22	1.03	325	.12	.34	240	.70	.77	216	
*** SEASON E ***																				
	388 DAYS			388 DAYS			387 DAYS				388 DAYS			388 DAYS			387 DAYS			
1	60.3	2.3	213	24.3	.9	12	5.8	1.3	56	1	3.50	2.54	356	.43	.95	169	.33	1.46	137	
2	19.9	1.5	252	15.2	.9	276	24.7	1.3	41	2	4.69	1.60	337	1.59	.95	278	1.35	1.34	123	
3	5.2	1.3	118	2.5	.4	334	8.0	.8	31	3	1.48	1.43	274	.40	.45	96	1.74	.86	105	
4	3.4	1.2	306	2.4	.3	282	1.6	.6	344	4	1.21	1.24	18	.52	.32	327	1.10	.62	46	
*** SEASON D ***																				
	408 DAYS			408 DAYS			406 DAYS				408 DAYS			408 DAYS			406 DAYS			
1	32.4	1.4	202	11.4	.3	26	7.1	.9	212	1	3.55	1.54	326	1.41	.35	174	.05	1.00	212	
2	18.5	1.0	221	8.5	.5	253	10.9	.7	28	2	.21	1.11	280	1.40	.52	346	1.69	.72	185	
3	5.2	.7	148	3.2	.4	305	5.7	.4	16	3	1.41	.77	140	.04	.42	93	.49	.41	205	
4	1.5	.9	310	2.3	.2	248	2.2	.4	350	4	.87	.92	17	.19	.25	269	.97	.43	276	
*** ANNUAL Y ***																				
	1206 DAYS			1206 DAYS			1203 DAYS				1206 DAYS			1206 DAYS			1203 DAYS			
1	53.4	1.4	213	21.9	.3	11	4.2	.7	82	1	1.70	1.52	340	.70	.30	145	.32	.72	125	
2	21.8	.8	248	13.5	.4	269	20.0	.5	37	2	1.69	.88	324	1.19	.43	275	.72	.53	152	
3	3.9	.8	125	1.9	.1	356	7.1	.3	32	3	.56	.84	195	.30	.16	97	.90	.28	137	
4	2.4	.5	310	1.2	.2	287	1.0	.2	3	4	.72	.51	13	.22	.19	297	.23	.27	291	

GWC TABLE-F-a-3

*** 70< R ***

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	603 DAYS			603 DAYS			604 DAYS		
1	67.6	1.7	208	30.6	.6	1	5.7	1.1	85
2	25.4	1.2	270	18.0	.3	256	20.6	.6	34
3	4.1	.9	86	5.6	.3	82	3.7	.7	43
4	3.5	.9	324	1.0	.3	49	.5	.7	146
				*** SEASON E ***					
	606 DAYS			606 DAYS			613 DAYS		
1	49.4	1.7	203	24.9	.6	8	1.5	1.2	282
2	16.2	.9	261	13.0	.6	264	19.7	.9	32
3	6.5	1.2	106	3.7	.4	33	5.4	.7	22
4	3.1	.9	328	1.9	.4	271	.8	.5	310
				*** SEASON D ***					
	603 DAYS			603 DAYS			607 DAYS		
1	28.9	1.2	190	12.7	.3	19	6.4	.5	225
2	13.4	.6	221	8.1	.3	245	11.5	.4	29
3	5.3	.6	125	2.1	.2	317	4.0	.3	354
4	2.0	.3	347	2.1	.2	242	2.0	.4	311
				*** ANNUAL Y ***					
	1812 DAYS			1812 DAYS			1824 DAYS		
1	48.3	.8	203	22.6	.3	7	1.2	.5	186
2	17.3	.4	256	12.9	.2	256	17.3	.4	32
3	5.1	.4	107	2.7	.2	49	4.2	.3	20
4	2.8	.3	331	1.0	.2	265	.8	.4	308

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	603 DAYS			603 DAYS			604 DAYS		
1	.98	1.89	299	.54	.65	64	.81	1.19	93
2	1.39	1.27	3	2.04	.36	237	.94	.62	279
3	1.19	.95	176	.61	.29	98	.84	.73	241
4	1.24	.97	214	.08	.36	220	.52	.73	7
				*** SEASON E ***					
	606 DAYS			606 DAYS			613 DAYS		
1	1.08	1.82	305	1.49	.66	128	.54	1.29	37
2	1.05	.99	292	1.37	.58	265	1.67	.99	286
3	2.66	1.27	130	.34	.42	99	.46	.79	328
4	1.00	.91	103	.66	.38	207	1.55	.59	5
				*** SEASON D ***					
	603 DAYS			603 DAYS			607 DAYS		
1	1.61	1.30	257	1.05	.34	154	.78	.55	351
2	1.06	.69	334	.98	.29	320	1.51	.47	332
3	1.17	.64	189	.34	.25	332	.21	.35	358
4	1.34	.39	172	.39	.24	308	.52	.41	326
				*** ANNUAL Y ***					
	1812 DAYS			1812 DAYS			1824 DAYS		
1	1.06	.87	277	.82	.31	128	.52	.59	36
2	1.04	.48	331	1.27	.24	262	1.30	.47	302
3	1.50	.41	154	.27	.21	73	.34	.33	284
4	.88	.36	170	.27	.17	239	.84	.40	358

GWC TABLE-G-1

*** 0.0≤ CP ≤ .5 ***

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** SEASON J ***									
	815 DAYS			815 DAYS			815 DAYS				815 DAYS			815 DAYS			815 DAYS		
1	44.7	1.2	208	25.2	.2	11	6.9	.5	186	1	1.17	1.26	125	.31	.26	79	1.06	.56	270
2	24.9	.9	256	17.1	.2	250	11.9	.5	14	2	1.07	.93	319	2.14	.23	247	1.67	.51	300
3	3.1	.5	191	4.5	.2	66	6.5	.3	47	3	.85	.56	206	.62	.22	87	.39	.36	157
4	2.4	.4	304	1.1	.2	25	1.4	.4	85	4	1.07	.46	240	.19	.21	183	.32	.42	96
										*** SEASON E ***									
	712 DAYS			712 DAYS			715 DAYS				712 DAYS			712 DAYS			715 DAYS		
1	26.6	.8	198	19.5	.3	17	8.9	.6	216	1	1.63	.91	24	1.47	.32	159	.37	.70	271
2	17.2	.8	248	11.7	.2	253	9.0	.4	27	2	2.16	.79	27	1.46	.21	284	1.03	.43	296
3	5.4	.7	164	4.3	.2	23	6.0	.4	40	3	.22	.69	312	.48	.21	129	.16	.43	15
4	2.1	.3	325	2.4	.2	278	1.6	.3	15	4	.68	.38	345	.13	.17	256	.24	.30	32
										*** SEASON D ***									
	821 DAYS			821 DAYS			823 DAYS				821 DAYS			821 DAYS			823 DAYS		
1	16.0	.9	183	9.7	.2	27	8.9	.5	214	1	.10	.96	172	.51	.23	167	.71	.59	332
2	13.7	.5	227	7.3	.2	236	4.3	.4	14	2	1.08	.53	26	1.03	.17	308	.76	.40	293
3	4.2	.3	157	1.6	.2	346	2.7	.3	12	3	.64	.34	215	.03	.17	232	.17	.32	176
4	.9	.3	302	2.1	.1	257	1.7	.2	345	4	.58	.31	174	.12	.10	266	.06	.24	188
										*** ANNUAL Y ***									
	2348 DAYS			2348 DAYS			2353 DAYS				2348 DAYS			2348 DAYS			2353 DAYS		
1	28.8	.6	201	18.0	.2	16	8.0	.4	207	1	.81	.62	78	.69	.20	161	.65	.38	292
2	18.3	.3	246	11.9	.1	248	8.3	.3	19	2	1.15	.34	13	1.33	.11	269	1.20	.27	294
3	4.1	.3	168	3.0	.1	37	4.9	.2	38	3	.51	.29	216	.31	.11	103	.14	.22	162
4	1.7	.2	311	1.3	.1	283	1.2	.2	24	4	.40	.21	239	.12	.09	235	.16	.20	74

GWC TABLE-G-2

*** .5< CP ≤1.2 ***

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	617 DAYS			617 DAYS			617 DAYS		
1	109.7	1.6	217	37.3	.6	357	28.2	1.7	57
2	30.7	1.9	272	20.2	.3	281	39.9	.8	46
3	10.0	1.5	73	3.9	.4	97	4.5	1.1	22
4	4.9	1.3	330	1.6	.4	52	.7	.9	154
*** SEASON E ***									
	644 DAYS			644 DAYS			648 DAYS		
1	85.4	1.7	214	29.0	.7	9	12.0	1.3	44
2	20.7	1.3	262	17.9	.4	284	37.0	.9	39
3	9.6	1.4	81	1.8	.5	329	9.4	.8	16
4	3.6	1.3	333	1.1	.5	288	.7	.7	315
*** SEASON O ***									
	597 DAYS			597 DAYS			601 DAYS		
1	59.2	1.4	205	15.3	.4	23	1.0	1.2	245
2	20.1	1.2	214	12.2	.3	270	24.1	.8	34
3	5.7	1.0	122	5.3	.5	280	8.8	.7	357
4	3.8	.7	313	2.4	.4	242	2.3	.5	301
*** ANNUAL Y ***									
	1858 DAYS			1858 DAYS			1866 DAYS		
1	84.8	.7	213	26.9	.3	6	13.1	.9	52
2	21.7	1.0	254	16.7	.2	280	33.7	.6	40
3	8.0	.9	86	1.0	.2	313	7.5	.3	10
4	4.0	.7	326	.6	.2	278	.8	.4	296

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	617 DAYS			617 DAYS			617 DAYS		
1	4.41	1.78	129	2.17	.66	105	1.79	1.84	29
2	1.39	1.96	317	2.80	.31	223	1.30	.86	331
3	.92	1.58	170	.95	.40	136	2.12	1.13	215
4	.68	1.37	193	.14	.40	302	.67	.93	212
*** SEASON E ***									
	644 DAYS			644 DAYS			648 DAYS		
1	1.46	1.84	341	.50	.78	4	1.41	1.39	103
2	4.49	1.39	304	1.89	.45	293	.71	1.00	65
3	1.40	1.44	218	.84	.50	78	.89	.85	115
4	2.33	1.36	211	.37	.50	218	1.91	.78	22
*** SEASON O ***									
	597 DAYS			597 DAYS			601 DAYS		
1	2.07	1.47	316	.87	.45	162	1.02	1.28	1
2	.75	1.28	335	1.64	.34	342	.94	.81	323
3	1.61	1.03	125	.25	.47	293	.64	.70	253
4	1.30	.78	34	.28	.38	319	1.12	.54	266
*** ANNUAL Y ***									
	1858 DAYS			1858 DAYS			1866 DAYS		
1	.22	.76	110	.78	.37	97	1.13	.96	52
2	2.42	1.08	311	1.49	.23	274	.79	.62	351
3	.95	.96	168	.47	.18	110	.82	.35	205
4	.59	.76	203	.17	.19	266	.45	.45	331

GWC TABLE-G-3

*** 1.2< CP ***

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
						*** SEASON J ***													
	134 DAYS			134 DAYS			132 DAYS				134 DAYS			134 DAYS			132 DAYS		
1	194.8	6.9	214	70.1	3.6	340	120.5	4.9	41	1	10.39	7.51	304	5.34	3.86	285	4.70	5.36	77
2	32.2	6.2	9	20.2	2.5	305	48.4	3.2	55	2	4.05	6.53	224	2.35	2.64	359	6.04	3.39	66
3	6.3	4.4	35	9.3	2.1	150	14.4	4.2	247	3	4.69	4.65	313	2.73	2.19	61	7.71	4.40	42
4	10.4	5.0	319	3.2	1.4	329	3.9	2.4	119	4	1.14	5.30	226	1.30	1.49	101	4.55	2.55	137
						*** SEASON E ***													
	220 DAYS			220 DAYS			223 DAYS				220 DAYS			220 DAYS			223 DAYS		
1	146.7	3.9	218	47.4	2.1	356	83.1	4.0	39	1	3.96	4.25	274	4.15	2.28	284	7.60	4.36	350
2	12.8	3.2	24	23.2	1.5	308	53.0	3.0	47	2	6.75	3.36	320	3.92	1.60	208	5.15	3.23	231
3	12.4	3.0	49	5.8	.8	225	15.2	2.8	311	3	4.56	3.16	247	1.33	.92	353	.92	2.93	134
4	10.3	3.2	328	.7	1.1	201	4.2	1.9	197	4	3.15	3.34	17	1.11	1.13	12	.77	2.10	192
						*** SEASON D ***													
	133 DAYS			133 DAYS			130 DAYS				133 DAYS			133 DAYS			130 DAYS		
1	136.8	5.7	216	27.7	2.7	2	50.0	5.3	29	1	1.54	6.17	200	2.05	2.94	249	5.14	5.79	344
2	18.2	5.1	150	18.5	2.3	303	44.6	3.6	27	2	4.52	5.39	3	2.04	2.47	332	2.75	3.80	48
3	12.5	3.6	74	12.8	1.3	264	23.8	2.9	327	3	1.35	3.84	167	2.23	1.42	216	5.10	3.07	292
4	6.1	3.7	346	2.9	1.1	227	2.8	3.1	258	4	2.96	3.87	246	2.48	1.18	230	3.31	3.26	38
						*** ANNUAL Y ***													
	487 DAYS			487 DAYS			485 DAYS				487 DAYS			487 DAYS			485 DAYS		
1	157.1	3.7	216	47.7	1.9	350	84.2	2.5	38	1	4.85	4.07	271	4.41	2.02	292	6.23	2.72	18
2	11.5	2.7	32	21.1	1.0	306	48.7	2.1	44	2	4.62	2.86	332	1.02	1.11	252	1.20	2.18	146
3	10.4	2.1	55	6.0	.7	222	14.9	1.5	304	3	2.90	2.27	265	.63	.77	75	1.23	1.58	19
4	9.1	2.7	328	1.2	.7	265	2.5	1.2	188	4	1.14	2.78	328	.10	.72	336	1.51	1.31	112

GWC TABLE-H-1 and H-2

*** L U N A R H A R M O N I C S ***

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

PERIGEE ± 3 DAYS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	341 DAYS			341 DAYS			342 DAYS		
1	3.84	2.01	326	2.14	.90	48	.18	1.74	270
2	4.55	1.59	5	1.92	.57	226	1.50	1.48	118
3	1.09	.89	150	.70	.35	131	2.04	.81	172
4	1.14	.97	214	.28	.36	135	.67	.78	104
				*** SEASON E ***					
	335 DAYS			335 DAYS			334 DAYS		
1	4.50	2.48	35	2.59	1.00	178	1.88	1.48	259
2	8.07	1.36	315	2.04	.73	264	2.97	1.39	299
3	2.25	1.67	299	1.54	.48	70	2.52	1.10	135
4	2.19	1.16	107	.35	.43	343	1.19	1.02	62
				*** SEASON O ***					
	330 DAYS			330 DAYS			333 DAYS		
1	.12	2.33	313	.97	.48	123	.62	1.01	68
2	1.85	1.54	87	2.02	.46	301	1.01	.88	319
3	1.64	1.13	109	.55	.44	49	.47	.84	199
4	.63	1.04	147	.64	.47	298	.62	.72	279
				*** ANNUAL Y ***					
	1006 DAYS			1006 DAYS			1009 DAYS		
1	2.15	1.04	12	.87	.35	135	.53	1.08	268
2	3.63	.74	338	1.79	.25	259	.95	.64	305
3	.07	.71	184	.82	.20	78	1.57	.55	157
4	.94	.52	142	.22	.27	317	.40	.31	67

APOGEE ± 3 DAYS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	324 DAYS			324 DAYS			324 DAYS		
1	2.47	3.38	214	1.78	1.15	20	2.84	2.14	135
2	.94	2.24	47	1.55	.61	265	1.19	1.40	203
3	1.03	1.51	124	.47	.51	167	2.67	.76	285
4	1.27	1.38	317	.51	.49	226	1.46	.72	288
				*** SEASON E ***					
	324 DAYS			324 DAYS			326 DAYS		
1	2.50	1.98	29	.85	.64	119	1.83	1.89	48
2	2.06	1.89	56	1.78	.64	252	1.67	1.05	340
3	1.05	1.92	147	.28	.54	211	1.31	.89	11
4	.52	1.67	8	.11	.38	251	1.11	.76	39
				*** SEASON O ***					
	329 DAYS			329 DAYS			328 DAYS		
1	6.88	1.75	334	1.55	.68	213	.80	1.32	226
2	2.95	1.33	315	1.25	.40	3	1.73	.79	184
3	.98	.90	210	.61	.33	9	.55	.65	72
4	.31	.87	310	.56	.29	339	.19	.38	225
				*** ANNUAL Y ***					
	977 DAYS			977 DAYS			978 DAYS		
1	2.20	1.45	333	.11	.52	99	.93	.93	108
2	1.25	1.23	4	1.08	.31	280	.50	.62	228
3	.84	1.08	158	.03	.20	65	.94	.39	323
4	.67	.84	327	.26	.21	287	.48	.37	329

GWC TABLE-H-3 and H-4

*** L U N A R H A R M O N I C S ***

STATION - GREAT WHALE RIVER (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 55.30N LONGITUDE= 77.75W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	MOON RECEDING									MOON APPROACHING								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	326 DAYS			326 DAYS			326 DAYS				330 DAYS			330 DAYS			331 DAYS		
1	6.27	2.45	83	2.44	.73	168	2.77	1.37	265	1	4.64	2.05	226	1.19	.67	82	3.03	1.28	95
2	1.92	1.40	237	2.77	.37	222	4.47	1.11	284	2	.56	1.33	199	2.37	.48	267	1.46	.83	19
3	2.16	1.13	268	1.01	.39	72	1.34	.76	157	3	2.33	1.41	144	.65	.42	140	.24	1.11	96
4	2.29	1.65	185	.40	.37	213	.22	.79	63	4	.97	1.63	65	.52	.36	73	.55	.91	193
*** SEASON E ***																			
	319 DAYS			319 DAYS			327 DAYS				315 DAYS			315 DAYS			313 DAYS		
1	5.83	1.86	257	1.94	.90	36	1.23	1.72	56	1	2.80	2.57	310	1.10	.67	131	1.90	1.46	99
2	2.59	1.99	288	1.78	.74	277	.93	.87	72	2	1.63	1.18	336	1.73	.73	321	1.82	1.03	134
3	1.66	1.22	146	.45	.44	150	1.13	1.07	46	3	2.29	.92	206	.13	.32	159	.36	.88	71
4	1.11	.86	189	1.22	.42	230	1.05	.62	2	4	1.61	.83	256	.28	.32	207	1.94	.63	12
*** SEASON O ***																			
	324 DAYS			324 DAYS			325 DAYS				326 DAYS			326 DAYS			327 DAYS		
1	1.71	1.81	288	1.42	.56	162	.66	.86	59	1	1.76	1.82	343	1.18	.47	122	1.57	1.68	321
2	.22	1.15	273	.84	.45	337	1.06	1.03	297	2	1.11	1.01	47	.69	.34	21	.83	1.18	330
3	.98	1.15	184	.22	.34	298	.61	.80	333	3	1.75	1.02	116	.16	.40	9	.58	.85	144
4	.83	.72	84	.14	.32	24	.66	.76	338	4	1.06	1.14	91	.59	.36	219	1.03	.54	279
*** ANNUAL Y ***																			
	969 DAYS			969 DAYS			978 DAYS				971 DAYS			971 DAYS			971 DAYS		
1	.18	1.33	220	.95	.39	143	.54	.90	303	1	1.96	1.22	278	1.13	.37	112	1.21	.97	83
2	1.46	.77	264	1.39	.31	252	1.68	.69	292	2	.61	.91	2	1.23	.27	300	.54	.55	54
3	.90	.81	210	.33	.19	85	.33	.44	84	3	1.65	.73	157	.19	.18	146	.30	.44	112
4	1.11	.70	172	.49	.19	228	.59	.47	0	4	.13	.57	75	.21	.20	186	.56	.50	331

GWC TABLE - I

The O_1 and N_2 Tides Derived From Hourly Magnetic Data of GREAT WHALE RIVER (1967-1979). The International Disturbed Days have been Excluded From the computations.

	X		Y		Z	
	Amp. ± p.e. (nT)	Phase	Amp. ± p.e. (nT)	Phase	Amp. ± p.e. (nT)	Phase
			SEASON-J			
	1321 days		1321 days		1323 days	
O_1	0.64 ± 1.17	265°	1.02 ± 0.38	179°	0.52 ± 0.53	280°
N_2	0.87 ± 0.95	360°	0.55 ± 0.25	260°	1.73 ± 0.64	15°
			SEASON-E			
	1293 days		1293 days		1300 days	
O_1	4.05 ± 1.09	314°	0.82 ± 0.54	42°	1.27 ± 0.91	121°
N_2	2.72 ± 1.14	313°	0.49 ± 0.33	304°	0.33 ± 0.65	27°
			SEASON-D			
	1309 days		1309 days		1313 days	
O_1	1.69 ± 1.20	266°	0.88 ± 0.39	72°	0.23 ± 0.71	197°
N_2	0.64 ± 0.51	112°	0.39 ± 0.25	293°	0.74 ± 0.35	355°
			SEASON-Y			
	3923 days		3923 days		3936 days	
O_1	1.98 ± 0.85	301°	0.51 ± 0.27	103°	0.37 ± 0.51	152°
N_2	0.98 ± 0.40	326°	0.47 ± 0.16	277°	0.93 ± 0.26	7°

FORT CHURCHILL

January 1, 1967 - December 31, 1979

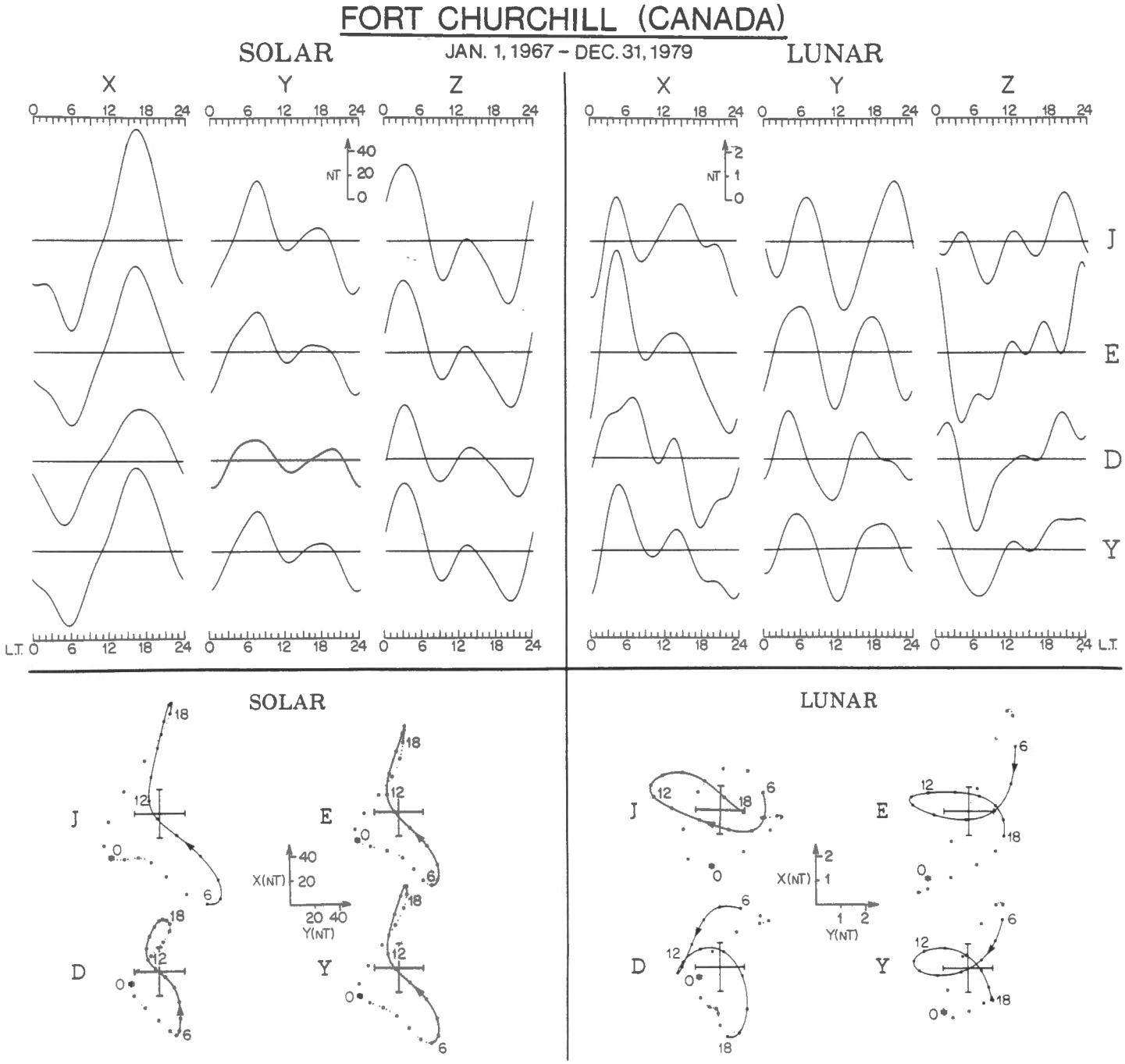
FORT CHURCHILL (CANADA)
SOLAR
JAN. 1, 1967 - DEC. 31, 1979
LUNAR
X
Y
Z
0 6 12 18 24
NT
40
20
0
2
1
J
E
D
Y
L.T.
SOLAR
LUNAR
X(NT)
Y(NT)
20 40
1 2

FIGURE 1 FCC

FCC TABLE-A

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1563 DAYS			1559 DAYS			1544 DAYS		
1	81.7	1.1	199	32.4	.7	304	52.7	1.5	29
2	18.5	.8	343	22.0	.5	272	32.4	.7	19
3	8.5	.7	345	6.0	.5	82	4.1	1.0	213
4	4.1	.6	255	5.0	.4	353	5.9	.4	100
	1591 DAYS			1590 DAYS			1584 DAYS		
1	67.5	.7	201	23.8	.4	309	46.6	1.2	23
2	15.5	.9	9	18.8	.2	278	31.4	.5	10
3	4.5	.8	2	1.0	.3	41	3.7	.7	279
4	2.8	.7	242	4.4	.3	317	3.9	.6	73
	1544 DAYS			1542 DAYS			1540 DAYS		
1	53.2	.8	198	9.2	.4	305	24.5	1.0	17
2	5.1	.7	107	14.9	.2	254	27.1	.5	360
3	4.0	.4	22	3.5	.3	253	8.1	.3	306
4	2.4	.5	291	2.4	.2	269	1.2	.3	10
	4698 DAYS			4691 DAYS			4668 DAYS		
1	67.5	.6	199	21.8	.3	306	41.2	.8	24
2	10.6	.5	3	18.3	.2	269	30.0	.4	10
3	5.5	.4	358	1.1	.2	79	4.2	.4	279
4	3.0	.4	260	3.4	.2	323	3.3	.2	82

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1563 DAYS			1559 DAYS			1544 DAYS		
1	.67	1.21	163	.30	.79	237	1.71	1.59	28
2	1.45	.84	317	1.88	.51	238	.92	.80	137
3	.46	.75	225	.35	.49	101	.60	1.08	230
4	.27	.68	302	.15	.40	135	.29	.46	238
	1591 DAYS			1590 DAYS			1584 DAYS		
1	1.41	.76	327	.85	.46	327	1.07	1.30	110
2	2.39	.98	337	1.38	.26	277	1.16	.57	124
3	.77	.80	278	.31	.31	92	.64	.71	106
4	.07	.78	340	.32	.35	285	.68	.66	105
	1544 DAYS			1542 DAYS			1540 DAYS		
1	1.59	.83	20	.65	.46	203	1.18	1.04	242
2	1.59	.77	8	1.33	.26	314	1.01	.52	144
3	.64	.40	251	.36	.29	194	.78	.38	295
4	.42	.57	282	.17	.25	298	.18	.34	319
	4698 DAYS			4691 DAYS			4668 DAYS		
1	.61	.65	356	.37	.32	272	.38	.85	48
2	1.77	.54	340	1.33	.19	272	1.02	.46	133
3	.59	.42	257	.25	.20	124	.19	.40	242
4	.24	.40	293	.12	.17	285	.13	.27	119

FCC TABLE-B

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1320 DAYS			1318 DAYS			1304 DAYS		
1	73.0	.8	198	26.0	.5	308	37.1	1.1	33
2	15.5	.8	328	23.6	.4	266	34.4	.9	17
3	9.2	.5	356	5.3	.3	72	2.6	.6	224
4	4.8	.4	258	4.4	.3	357	5.2	.3	106
	1303 DAYS			1304 DAYS			1297 DAYS		
1	58.9	.6	200	18.2	.4	314	30.9	.7	22
2	10.3	.9	352	18.6	.3	270	31.1	.5	10
3	4.1	1.0	17	1.4	.3	36	4.0	.5	301
4	3.2	.6	254	4.0	.3	307	3.2	.6	63
	1301 DAYS			1299 DAYS			1297 DAYS		
1	44.7	.9	195	6.3	.3	316	14.0	.7	16
2	3.9	.6	154	14.2	.2	250	25.1	.5	2
3	3.2	.4	39	2.5	.2	262	7.4	.3	309
4	2.0	.4	294	2.6	.2	265	1.6	.2	348
	3924 DAYS			3921 DAYS			3898 DAYS		
1	58.9	.4	198	16.9	.2	311	27.2	.5	26
2	7.2	.4	338	18.6	.2	263	30.1	.4	10
3	5.3	.5	9	1.4	.2	56	4.0	.2	294
4	3.2	.2	264	3.0	.1	318	2.6	.2	78

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1320 DAYS			1318 DAYS			1304 DAYS		
1	.74	.90	268	1.10	.55	94	.96	1.19	150
2	1.04	.89	322	1.96	.43	227	.20	.95	167
3	.80	.53	236	.48	.32	167	.93	.67	274
4	.43	.47	224	.15	.29	216	.09	.36	241
	1303 DAYS			1304 DAYS			1297 DAYS		
1	1.96	.69	335	.39	.43	28	1.75	.79	155
2	1.94	.92	330	1.91	.35	288	1.22	.57	104
3	.85	1.00	264	.19	.29	53	.81	.49	98
4	.25	.61	212	.28	.30	323	.89	.62	105
	1301 DAYS			1299 DAYS			1297 DAYS		
1	2.19	.95	354	.48	.36	78	1.61	.77	146
2	.55	.62	7	1.30	.26	318	.75	.56	87
3	.47	.45	188	.23	.23	215	.65	.31	326
4	.54	.44	343	.34	.17	245	.43	.23	309
	3924 DAYS			3921 DAYS			3898 DAYS		
1	1.37	.47	337	.57	.22	83	1.36	.50	154
2	1.15	.45	330	1.38	.18	272	.62	.44	102
3	.64	.51	237	.17	.18	170	.24	.26	320
4	.19	.27	266	.21	.15	264	.15	.24	81

*** SEASON J ***

*** SEASON E ***

*** SEASON O ***

*** ANNUAL Y ***

FCC TABLE-C

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL QUIET DAYS ONLY)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** SEASON J ***									
	256 DAYS			256 DAYS			255 DAYS				256 DAYS			256 DAYS			255 DAYS		
1	38.7	1.9	188	14.9	.6	342	6.1	1.0	59	1	2.04	2.05	60	1.26	.70	84	.88	1.07	328
2	9.7	.6	266	21.9	.4	246	21.4	.5	357	2	1.72	.70	326	2.00	.44	248	.21	.52	298
3	3.4	.8	357	2.6	.3	42	5.2	.4	355	3	1.25	.83	257	.38	.32	30	.55	.41	157
4	3.9	.8	312	2.0	.3	347	1.1	.5	128	4	.27	.89	204	.15	.31	347	.48	.51	88
										*** SEASON E ***									
	255 DAYS			256 DAYS			255 DAYS				255 DAYS			256 DAYS			255 DAYS		
1	26.2	1.0	188	11.3	.4	350	1.6	.7	4	1	.77	1.08	88	1.26	.38	84	.98	.77	226
2	6.8	.9	261	13.8	.4	242	14.4	.8	3	2	1.36	.98	59	1.56	.45	331	.75	.89	129
3	2.9	.5	147	2.1	.3	12	5.1	.8	352	3	.34	.53	155	.56	.36	106	.76	.82	132
4	2.5	.8	291	3.4	.3	276	2.1	.7	340	4	.82	.79	107	.23	.33	104	.29	.70	184
										*** SEASON D ***									
	253 DAYS			253 DAYS			252 DAYS				253 DAYS			253 DAYS			252 DAYS		
1	16.8	1.5	180	4.4	.4	7	2.7	.5	217	1	1.04	1.61	226	.34	.45	236	2.29	.57	359
2	7.3	.6	206	9.3	.3	228	8.6	.7	358	2	1.70	.71	48	1.07	.36	314	.39	.72	14
3	2.4	.6	135	.9	.3	308	4.1	.3	329	3	.08	.67	115	.08	.31	137	.18	.35	317
4	.9	.4	348	2.5	.3	247	2.9	.3	324	4	.37	.44	111	.10	.30	273	.66	.34	67
										*** ANNUAL Y ***									
	764 DAYS			765 DAYS			762 DAYS				764 DAYS			765 DAYS			762 DAYS		
1	27.2	.5	186	10.1	.3	349	1.5	.4	55	1	.80	.59	63	.80	.29	96	.84	.46	326
2	7.1	.4	247	14.9	.2	241	14.8	.3	359	2	1.15	.47	29	1.09	.23	296	.25	.32	137
3	1.0	.3	103	1.6	.2	18	4.7	.2	347	3	.40	.36	232	.24	.17	84	.38	.24	149
4	2.3	.4	309	2.1	.2	282	1.3	.3	337	4	.44	.43	121	.02	.20	96	.33	.32	86

FCC TABLE-E

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** JANUARY ***																			
	337 DAYS			335 DAYS			335 DAYS				337 DAYS			335 DAYS			335 DAYS		
1	44.6	1.6	192	3.6	.8	307	13.0	1.5	13	1	4.85	1.78	319	.53	.89	284	3.42	1.59	121
2	5.4	1.4	149	14.5	.5	240	24.7	1.2	356	2	2.38	1.47	190	2.49	.54	348	2.20	1.23	114
3	3.5	.9	37	2.7	.4	236	7.8	1.0	292	3	2.01	.97	94	.50	.39	280	.68	1.09	301
4	3.0	1.2	307	3.1	.4	270	.9	1.0	330	4	2.66	1.22	6	.33	.42	252	.60	1.03	260
*** FEBRUARY ***																			
	295 DAYS			295 DAYS			295 DAYS				295 DAYS			295 DAYS			295 DAYS		
1	50.1	2.1	196	9.3	.8	301	19.2	1.8	7	1	3.69	2.26	10	1.54	.88	50	2.81	1.99	179
2	1.3	1.7	125	14.9	.6	248	29.2	1.1	358	2	3.52	1.84	348	2.26	.63	321	1.65	1.23	106
3	4.6	1.0	18	2.8	.5	246	8.5	.6	299	3	2.40	1.06	252	.50	.54	260	.63	.67	112
4	5.1	.6	266	3.7	.4	252	1.4	.9	37	4	.94	.72	182	.76	.44	282	1.28	.94	339
*** MARCH ***																			
	337 DAYS			337 DAYS			332 DAYS				337 DAYS			337 DAYS			332 DAYS		
1	60.5	2.2	199	18.1	1.0	306	35.5	2.8	23	1	6.83	2.38	340	2.20	1.07	349	6.15	3.04	137
2	7.8	1.6	356	15.8	.6	259	31.1	1.2	4	2	4.09	1.74	314	2.37	.66	314	3.59	1.30	113
3	2.4	1.4	1	.8	.4	288	5.8	1.1	280	3	1.77	1.45	265	1.47	.48	327	2.42	1.16	70
4	4.0	1.0	238	4.3	.5	292	3.5	1.3	49	4	1.04	1.07	142	.39	.53	2	1.87	1.37	84
*** APRIL ***																			
	321 DAYS			321 DAYS			320 DAYS				321 DAYS			321 DAYS			320 DAYS		
1	65.6	1.6	201	26.2	1.7	308	42.6	2.2	26	1	3.97	1.71	292	1.42	1.88	12	2.07	2.37	91
2	18.3	1.4	351	18.1	.6	280	31.1	1.7	19	2	1.95	1.53	297	2.99	.69	261	1.39	1.84	44
3	5.9	1.6	360	3.5	.7	70	3.6	1.3	256	3	1.73	1.65	141	1.03	.77	117	1.16	1.40	73
4	4.0	.9	223	4.8	.5	322	6.0	.9	68	4	.80	.93	248	.70	.60	247	.26	.98	298

FCC TABLE-E---CONT'D

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	338 DAYS			337 DAYS			337 DAYS				338 DAYS			337 DAYS			337 DAYS		
1	75.7	1.6	201	27.1	.6	308	40.5	2.4	31	1	2.87	1.78	226	1.23	.61	84	2.55	2.63	91
2	18.8	1.8	342	21.4	1.0	276	33.3	1.6	22	2	2.99	1.93	44	2.21	1.03	225	.68	1.73	231
3	9.2	1.4	360	6.6	.7	84	4.7	.9	210	3	1.77	1.43	28	.41	.69	115	2.70	1.00	242
4	6.0	1.4	251	4.9	.6	354	5.6	1.1	103	4	1.32	1.47	334	.75	.62	332	.61	1.18	165
	321 DAYS			320 DAYS			321 DAYS				321 DAYS			320 DAYS			321 DAYS		
1	79.7	1.6	196	28.0	1.2	305	39.7	1.8	32	1	1.97	1.79	11	1.33	1.28	119	2.41	1.98	273
2	14.0	1.4	327	24.1	.7	261	35.7	1.8	14	2	3.10	1.53	266	1.48	.74	246	1.81	1.89	82
3	9.2	1.0	358	4.7	.5	83	3.5	1.1	229	3	.89	1.06	193	.29	.58	101	1.18	1.14	318
4	5.4	1.5	257	4.2	.6	355	6.3	.7	102	4	.59	1.55	194	.41	.62	339	1.68	.75	311
	337 DAYS			337 DAYS			323 DAYS				337 DAYS			337 DAYS			323 DAYS		
1	68.9	1.8	197	25.0	1.0	310	30.8	1.9	34	1	1.20	1.94	352	1.58	1.08	67	1.40	2.09	171
2	15.1	1.4	302	25.1	.8	259	34.8	.9	15	2	2.46	1.50	258	2.85	.88	228	1.05	1.03	86
3	9.9	1.2	0	5.2	.7	56	.5	1.3	250	3	2.57	1.23	243	.70	.74	247	.68	1.40	66
4	4.4	.8	275	3.4	.6	12	4.1	1.0	127	4	.47	.83	191	.70	.59	201	1.24	1.03	160
	334 DAYS			334 DAYS			334 DAYS				334 DAYS			334 DAYS			334 DAYS		
1	66.6	2.6	197	21.9	.7	316	32.0	2.1	32	1	3.04	2.79	185	1.86	.80	207	.58	2.26	244
2	14.8	1.2	332	26.9	.5	264	36.1	.9	11	2	3.21	1.27	337	2.04	.53	235	1.06	1.00	277
3	9.5	1.4	348	5.7	.6	59	.7	1.5	214	3	2.90	1.47	256	.76	.62	192	.46	1.53	232
4	4.3	1.0	267	5.1	.6	352	5.6	1.0	109	4	1.81	1.13	239	.59	.59	217	1.68	1.12	94

FCC TABLE-E---CONT'D

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
						*** SEPTEMBER***												
	323 DAYS			323 DAYS			322 DAYS			323 DAYS			323 DAYS			322 DAYS		
1	61.2	1.7	201	18.7	.7	320	28.9	1.6	20	1 4.62	1.80	142	2.39	.78	149	2.38	1.74	216
2	14.1	2.1	359	23.5	.5	279	31.9	1.1	11	2 1.09	2.21	39	2.05	.52	249	1.59	1.22	252
3	5.0	1.5	17	2.5	.6	50	3.6	1.2	309	3 2.38	1.53	288	1.28	.62	131	.72	1.29	178
4	2.0	1.2	295	5.0	.4	327	2.6	.9	71	4 .42	1.26	156	.32	.38	128	.83	.93	77
						*** OCTOBER ***												
	330 DAYS			333 DAYS			332 DAYS			330 DAYS			333 DAYS			332 DAYS		
1	49.5	1.7	203	13.5	.7	323	22.3	1.4	24	1 3.39	1.85	5	.52	.75	158	3.22	1.50	232
2	3.1	1.1	358	16.1	.6	269	29.1	1.3	15	2 1.79	1.16	352	.71	.59	310	1.24	1.35	220
3	3.0	1.1	58	2.0	.6	321	6.8	1.0	338	3 1.59	1.15	140	.62	.59	99	1.10	1.04	321
4	1.9	1.2	241	2.8	.6	283	2.8	.6	4	4 1.18	1.22	71	.68	.61	48	.20	.65	160
						*** NOVEMBER ***												
	317 DAYS			315 DAYS			315 DAYS			317 DAYS			315 DAYS			315 DAYS		
1	43.3	1.8	196	7.9	.7	321	13.6	1.3	22	1 1.26	1.90	97	.53	.79	84	1.57	1.42	23
2	2.2	1.0	172	14.5	.7	255	23.7	1.1	9	2 1.73	1.05	52	1.03	.77	281	1.48	1.18	34
3	1.0	.9	62	2.4	.5	277	7.4	.7	327	3 .33	.99	130	.39	.51	186	.47	.78	322
4	1.5	.7	329	2.1	.3	262	1.2	.8	335	4 1.04	.74	243	.62	.37	241	.47	.84	351
						*** DECEMBER ***												
	334 DAYS			334 DAYS			332 DAYS			334 DAYS			334 DAYS			332 DAYS		
1	40.9	2.1	196	3.7	.6	330	9.9	1.4	15	1 1.00	2.31	342	.74	.60	25	2.12	1.57	91
2	6.8	1.6	166	12.8	.5	249	23.2	1.1	1	2 .90	1.70	76	.69	.54	322	1.02	1.15	23
3	4.7	1.0	58	2.7	.5	272	7.2	.6	311	3 .43	1.03	310	.27	.47	84	.98	.61	289
4	1.7	.8	322	2.3	.4	276	2.4	.8	337	4 .77	.85	285	.07	.39	216	.77	.80	201

FCC TABLE-F-a-1

*** 0≤ R ≤ 30 ***

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	309 DAYS			309 DAYS			309 DAYS		
1	68.7	1.4	204	21.1	.9	296	35.5	2.3	40
2	10.6	1.5	297	26.3	1.0	269	39.4	1.7	16
3	9.0	1.2	360	3.3	1.1	32	3.3	1.2	357
4	5.8	1.3	278	4.7	.7	343	4.4	.8	112
				*** SEASON E ***					
	302 DAYS			303 DAYS			301 DAYS		
1	58.2	2.5	205	13.7	.9	299	27.9	1.1	28
2	5.4	1.9	330	21.5	.8	271	35.9	1.0	11
3	6.6	1.1	25	1.6	.6	337	7.6	1.0	337
4	2.6	1.0	250	3.9	.5	304	3.3	.8	76
				*** SEASON O ***					
	301 DAYS			303 DAYS			301 DAYS		
1	47.8	2.5	200	4.2	.6	256	13.8	1.3	21
2	4.5	1.0	159	16.6	.7	254	26.5	1.4	4
3	5.0	1.3	22	2.9	.6	260	8.0	.9	314
4	3.4	1.1	287	2.8	.5	277	2.3	.8	8
				*** ANNUAL Y ***					
	912 DAYS			915 DAYS			911 DAYS		
1	58.3	1.3	203	12.7	.4	293	25.6	1.0	32
2	4.0	.8	297	21.4	.4	266	33.9	.8	11
3	6.7	.7	13	1.4	.4	336	6.0	.7	331
4	3.9	.6	275	3.4	.2	314	2.6	.6	80

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	309 DAYS			309 DAYS			309 DAYS		
1	1.18	1.47	131	1.80	.95	144	3.31	2.47	267
2	1.91	1.59	324	1.60	1.05	229	.60	1.76	309
3	1.55	1.26	254	1.28	1.10	151	.27	1.28	105
4	1.43	1.37	201	.81	.77	173	.15	.90	125
	302 DAYS			303 DAYS			301 DAYS		
1	.80	2.74	319	2.00	.95	325	1.24	1.18	342
2	4.80	1.99	4	3.95	.84	310	1.18	1.10	63
3	4.27	1.17	303	1.31	.64	342	2.96	1.02	136
4	2.65	1.12	261	1.30	.52	312	2.28	.85	109
	301 DAYS			303 DAYS			301 DAYS		
1	4.68	2.75	9	2.28	.68	43	2.33	1.43	165
2	1.90	1.15	153	1.03	.74	26	.67	1.46	139
3	1.68	1.38	106	.60	.61	128	.54	.97	311
4	1.19	1.20	35	.44	.52	155	1.05	.89	251
	912 DAYS			915 DAYS			911 DAYS		
1	1.43	1.39	23	.59	.40	42	1.32	1.09	207
2	1.44	.90	356	1.47	.46	297	.26	.89	67
3	1.27	.76	291	.21	.44	104	.85	.75	131
4	.86	.65	250	.29	.25	248	.58	.61	127

FCC TABLE-F-a-2

*** 30< R ≤ 70 ***

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	407 DAYS			405 DAYS			392 DAYS		
1	71.2	1.6	201	29.7	.5	317	40.9	2.5	33
2	17.3	1.3	332	23.3	.6	269	35.9	1.1	19
3	10.9	1.2	353	5.1	.7	69	2.5	1.0	218
4	4.6	1.0	250	4.7	.3	8	6.2	1.1	104
*** SEASON E ***									
	391 DAYS			391 DAYS			390 DAYS		
1	64.3	1.7	204	21.1	1.2	315	37.5	1.8	24
2	11.5	1.6	357	20.0	1.0	273	33.4	1.5	11
3	6.2	1.2	9	1.0	.4	268	4.3	.9	268
4	5.0	.9	274	4.4	.5	310	2.9	.7	76
*** SEASON D ***									
	401 DAYS			401 DAYS			403 DAYS		
1	45.9	1.1	199	7.1	.4	327	14.4	1.2	20
2	5.1	1.1	171	14.8	.5	250	27.7	.8	2
3	4.3	.9	47	3.0	.4	262	8.1	.7	315
4	2.4	.9	297	2.6	.3	268	1.5	.6	355
*** ANNUAL Y ***									
	1199 DAYS			1197 DAYS			1185 DAYS		
1	60.4	1.1	201	19.3	.4	317	30.7	1.3	27
2	7.7	.8	340	19.1	.4	266	32.1	.9	12
3	6.7	.7	8	.5	.2	32	4.1	.4	288
4	3.8	.4	269	3.0	.2	325	2.9	.4	85

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	407 DAYS			405 DAYS			392 DAYS		
1	1.34	1.75	195	1.25	.59	110	.59	2.74	331
2	1.28	1.38	289	2.51	.65	218	1.40	1.23	102
3	.79	1.25	145	.74	.71	154	1.50	1.11	238
4	.38	1.04	162	.44	.36	126	1.31	1.18	251
*** SEASON E ***									
	391 DAYS			391 DAYS			390 DAYS		
1	3.65	1.89	322	1.52	1.34	14	2.72	1.92	132
2	2.57	1.67	3	1.70	1.04	290	2.70	1.58	139
3	.92	1.26	2	.38	.48	337	1.08	1.01	156
4	.97	.97	80	.92	.52	25	.61	.80	176
*** SEASON D ***									
	401 DAYS			401 DAYS			403 DAYS		
1	3.75	1.21	332	.77	.48	118	2.64	1.27	144
2	.92	1.15	187	1.97	.54	328	1.09	.82	118
3	1.08	.97	172	.50	.39	270	1.05	.74	299
4	.93	.95	55	.14	.29	218	1.08	.63	272
*** ANNUAL Y ***									
	1199 DAYS			1197 DAYS			1185 DAYS		
1	2.16	1.19	321	.84	.49	78	1.61	1.42	144
2	.73	.83	325	1.37	.46	272	1.62	.97	127
3	.38	.73	142	.17	.26	219	.70	.48	238
4	.63	.45	80	.26	.18	63	.85	.41	248

FCC TABLE-F-a-3

*** 70< R ***

STATION - CHURCHILL (CANADA)
LATITUDE= 58.80N LONGITUDE= 94.10W

M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
(INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	604 DAYS			604 DAYS			603 DAYS		
1	77.0	1.5	194	26.5	.6	306	35.7	1.9	28
2	17.8	1.4	335	22.6	.6	261	30.9	1.2	16
3	8.2	.7	357	7.1	.5	83	5.3	.7	213
4	4.6	.9	252	4.3	.5	356	4.9	.6	104
				*** SEASON E ***					
	610 DAYS			610 DAYS			606 DAYS		
1	56.2	1.2	194	18.9	.7	319	28.4	1.4	18
2	12.2	1.0	354	16.2	.4	266	27.2	.9	8
3	1.7	1.3	21	3.2	.4	58	3.2	1.0	288
4	2.7	.9	233	3.9	.4	307	3.5	.8	51
				*** SEASON D ***					
	599 DAYS			595 DAYS			593 DAYS		
1	42.7	1.2	190	8.0	.6	323	13.8	.9	10
2	3.1	.9	131	12.5	.3	247	22.7	.6	1
3	1.7	.6	91	1.9	.3	265	6.8	.4	302
4	1.1	.6	299	2.5	.2	257	1.5	.3	328
				*** ANNUAL Y ***					
	1813 DAYS			1809 DAYS			1802 DAYS		
1	58.6	.7	193	17.7	.3	313	25.8	.8	21
2	9.0	.6	346	17.0	.2	259	26.8	.7	9
3	3.6	.6	8	2.8	.2	73	3.9	.3	270
4	2.7	.5	251	2.8	.2	316	2.4	.3	72

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	604 DAYS			604 DAYS			603 DAYS		
1	1.93	1.63	308	1.19	.68	42	1.91	2.10	111
2	.94	1.44	345	1.70	.59	233	.72	1.29	215
3	1.08	.73	250	.22	.48	295	1.30	.78	294
4	.47	.93	302	.59	.52	306	.64	.64	65
				*** SEASON E ***					
	610 DAYS			610 DAYS			606 DAYS		
1	1.66	1.35	355	1.15	.71	147	2.74	1.57	169
2	2.37	1.08	261	1.39	.41	258	1.08	.98	54
3	1.92	1.38	181	.84	.43	135	1.46	1.02	18
4	.49	.98	132	.49	.43	196	.77	.83	71
				*** SEASON D ***					
	599 DAYS			595 DAYS			593 DAYS		
1	.52	1.34	60	.43	.62	220	.66	.96	120
2	2.74	.98	356	1.48	.33	291	.99	.60	53
3	1.08	.69	263	.28	.37	222	.61	.42	6
4	1.19	.66	283	.70	.23	266	.88	.30	35
				*** ANNUAL Y ***					
	1813 DAYS			1809 DAYS			1802 DAYS		
1	1.11	.81	338	.40	.37	111	1.51	.88	143
2	1.48	.60	319	1.40	.24	259	.45	.70	62
3	1.08	.58	220	.23	.19	164	.89	.31	346
4	.39	.51	278	.46	.25	262	.74	.36	54

FCC TABLE-G-1

*** 0.0≤ CP ≤ .5 ***

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	815 DAYS			815 DAYS			808 DAYS		
1	57.8	1.2	195	18.6	.5	322	18.4	.5	36
2	11.3	.9	293	23.9	.4	253	30.0	.6	7
3	7.8	.6	2	3.9	.2	53	2.4	.7	350
4	4.1	.6	288	3.4	.2	357	3.1	.4	120
				*** SEASON E ***					
	716 DAYS			717 DAYS			714 DAYS		
1	39.7	1.2	195	12.7	.5	338	10.4	.6	22
2	5.6	.7	279	16.4	.4	254	24.7	.5	6
3	2.5	.7	49	2.5	.3	9	6.0	.5	347
4	2.3	.5	302	3.3	.2	301	1.4	.4	356
				*** SEASON D ***					
	812 DAYS			810 DAYS			809 DAYS		
1	29.8	.9	193	4.7	.3	346	2.9	.6	1
2	7.7	.5	201	12.3	.2	241	18.2	.6	2
3	2.4	.3	86	1.7	.2	273	6.1	.4	331
4	1.7	.3	312	2.7	.2	257	2.3	.2	336
				*** ANNUAL Y ***					
	2343 DAYS			2342 DAYS			2331 DAYS		
1	42.5	.6	194	11.8	.3	331	10.4	.3	29
2	6.3	.3	264	17.5	.2	251	24.2	.4	6
3	3.6	.4	25	1.7	.2	21	4.8	.3	340
4	2.7	.3	297	2.4	.1	309	.8	.2	42

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	815 DAYS			815 DAYS			808 DAYS		
1	.28	1.32	111	.61	.52	171	1.42	.55	245
2	1.52	1.00	320	2.15	.43	245	.63	.64	338
3	.95	.64	225	.05	.26	315	.57	.73	254
4	.57	.60	277	.45	.23	269	.68	.44	184
				*** SEASON E ***					
	716 DAYS			717 DAYS			714 DAYS		
1	.92	1.29	50	1.10	.59	112	1.48	.62	216
2	1.48	.74	48	1.12	.44	310	.38	.50	156
3	.30	.71	315	.63	.36	94	.29	.50	108
4	.68	.54	50	.36	.23	101	.38	.37	162
				*** SEASON D ***					
	812 DAYS			810 DAYS			809 DAYS		
1	.59	.98	98	.51	.38	138	.79	.62	289
2	1.44	.56	25	.96	.26	304	.73	.62	223
3	.87	.36	276	.30	.22	175	.28	.47	229
4	.45	.35	267	.28	.20	238	.34	.21	44
				*** ANNUAL Y ***					
	2343 DAYS			2342 DAYS			2331 DAYS		
1	.74	.63	76	.75	.35	140	1.19	.29	245
2	1.07	.36	10	1.15	.23	271	.33	.37	244
3	.65	.42	255	.19	.18	120	.22	.35	233
4	.22	.30	305	.17	.13	241	.25	.21	154

FCC TABLE-G-2

*** .5< CP ≤1.2 ***

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	617 DAYS			614 DAYS			608 DAYS		
1	102.2	1.3	201	40.6	.9	297	72.9	2.0	30
2	28.6	1.3	354	24.9	.7	285	41.8	2.0	27
3	10.8	1.1	347	8.8	.7	88	9.8	1.8	206
4	6.4	1.1	231	6.3	.6	356	9.6	.7	98
	649 DAYS			649 DAYS			645 DAYS		
1	83.9	1.8	203	26.8	.9	302	56.4	1.1	23
2	22.8	1.9	10	22.9	.6	285	40.8	1.2	15
3	7.0	1.7	359	1.9	.4	82	5.3	1.0	240
4	6.0	1.5	225	5.1	.5	321	7.0	1.2	83
	601 DAYS			601 DAYS			600 DAYS		
1	71.8	1.5	198	11.1	.7	295	35.9	1.3	18
2	10.4	1.2	76	18.0	.5	261	37.0	.8	2
3	7.3	1.0	7	4.2	.6	252	10.9	.6	292
4	3.9	1.2	286	2.8	.4	286	.5	.4	75
	1867 DAYS			1864 DAYS			1853 DAYS		
1	86.0	.9	201	26.2	.4	298	55.0	.9	25
2	18.3	1.2	11	21.6	.5	279	39.3	1.0	15
3	8.2	1.0	356	2.3	.4	96	6.8	.7	248
4	5.0	.6	241	4.3	.4	330	5.7	.6	91

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	617 DAYS			614 DAYS			608 DAYS		
1	3.77	1.42	103	3.37	1.00	124	.92	2.14	308
2	2.86	1.39	306	2.83	.75	222	1.95	2.10	175
3	1.48	1.19	188	.87	.74	122	.81	1.89	242
4	.73	1.11	74	.20	.65	145	1.41	.76	322
	649 DAYS			649 DAYS			645 DAYS		
1	2.89	2.00	1	.96	.94	339	2.46	1.21	168
2	4.09	2.02	305	2.17	.62	282	2.39	1.31	110
3	1.29	1.76	253	.47	.45	56	1.91	1.09	117
4	1.20	1.53	269	.81	.52	305	1.73	1.28	97
	601 DAYS			601 DAYS			600 DAYS		
1	2.78	1.64	344	.34	.73	277	1.82	1.37	141
2	1.08	1.30	360	1.88	.57	314	1.88	.87	77
3	.71	1.09	170	.50	.64	265	1.20	.66	314
4	.49	1.21	14	.01	.42	71	.78	.42	259
	1867 DAYS			1864 DAYS			1853 DAYS		
1	1.54	1.02	26	.62	.45	101	1.19	1.01	158
2	2.76	1.26	314	1.85	.48	268	1.67	1.03	119
3	.93	1.00	208	.28	.44	116	.19	.69	157
4	.23	.64	325	.20	.38	300	.25	.60	18

*** SEASON J ***

*** SEASON E ***

*** SEASON O ***

*** ANNUAL Y ***

FCC TABLE-G-3

*** 1.2< CP ***

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
						*** SEASON J ***													
	131 DAYS			130 DAYS			128 DAYS				131 DAYS			130 DAYS			128 DAYS		
1	135.2	5.7	201	87.4	4.0	297	174.6	8.9	24	1	6.75	6.16	305	6.94	4.39	303	8.46	9.63	67
2	52.4	6.2	17	19.7	4.3	340	14.8	5.2	73	2	8.25	6.53	193	2.55	4.54	252	6.53	5.64	47
3	16.7	4.8	271	10.9	2.7	119	14.8	4.4	195	3	9.30	5.00	18	3.15	2.86	9	3.41	4.75	110
4	1.9	6.0	166	9.8	2.2	332	8.8	4.6	65	4	2.22	6.28	269	3.85	2.37	106	2.17	4.87	151
						*** SEASON E ***													
	226 DAYS			224 DAYS			225 DAYS				226 DAYS			224 DAYS			225 DAYS		
1	109.4	3.0	205	57.2	2.3	299	133.4	3.9	23	1	4.47	3.29	287	4.17	2.53	293	5.02	4.27	27
2	46.3	3.1	29	23.3	1.8	311	26.3	2.3	4	2	5.24	3.28	327	3.18	1.93	195	2.53	2.45	167
3	7.6	2.6	323	4.1	1.9	212	10.8	2.4	230	3	.83	2.76	304	.99	2.02	226	2.22	2.57	336
4	1.5	3.5	143	6.4	1.4	332	6.5	2.0	79	4	1.44	3.65	99	1.69	1.48	244	1.31	2.12	293
						*** SEASON D ***													
	131 DAYS			131 DAYS			131 DAYS				131 DAYS			131 DAYS			131 DAYS		
1	115.5	4.9	207	37.5	2.9	289	106.1	4.1	18	1	3.20	5.28	324	5.81	3.16	256	5.36	4.51	342
2	31.5	5.3	60	20.1	2.0	273	38.1	4.0	347	2	6.21	5.63	30	2.53	2.15	340	3.98	4.20	168
3	9.2	3.8	349	12.5	2.2	237	13.2	2.3	291	3	3.10	4.01	302	1.87	2.35	190	4.41	2.49	288
4	2.3	3.9	217	.8	1.9	121	5.8	3.3	83	4	3.58	4.14	245	1.57	2.04	347	1.43	3.47	98
						*** ANNUAL Y ***													
	488 DAYS			485 DAYS			484 DAYS				488 DAYS			485 DAYS			484 DAYS		
1	117.9	3.1	204	59.9	2.2	297	136.8	2.8	22	1	3.83	3.41	292	6.47	2.34	293	7.20	2.99	37
2	42.5	2.9	31	19.7	1.3	309	23.5	2.3	6	2	2.48	3.07	343	.65	1.37	231	3.13	2.46	133
3	8.9	2.3	307	5.0	1.3	195	10.0	1.7	235	3	2.76	2.44	344	.37	1.33	92	.80	1.80	303
4	1.6	3.0	173	5.4	1.0	333	6.9	1.7	75	4	.90	3.08	230	.25	1.04	40	.31	1.76	142

FCC TABLE-H-1 and H-2

*** LUNAR HARMONICS ***

STATION - CHURCHILL (CANADA)
LATITUDE= 58.80N LONGITUDE= 94.10W

M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
(INTERNATIONAL DISTURBED DAYS EXCLUDED)

PERIGEE ± 3 DAYS

*** SEASON J ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	341 DAYS			341 DAYS			336 DAYS		
1	5.16	1.32	304	2.51	1.04	34	2.80	2.25	143
2	1.92	1.76	9	2.27	.96	192	4.67	1.60	160
3	2.20	.89	161	1.42	.43	183	2.26	1.00	232
4	.58	1.30	292	1.06	.61	224	.61	.75	261

*** SEASON E ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	329 DAYS			329 DAYS			328 DAYS		
1	4.85	1.58	23	1.46	1.03	204	5.60	1.55	236
2	7.81	1.88	319	3.79	.95	305	2.41	1.41	113
3	1.44	2.13	130	2.05	.60	37	2.60	1.18	101
4	2.75	1.48	124	.06	.58	122	1.60	1.15	325

*** SEASON D ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	330 DAYS			330 DAYS			327 DAYS		
1	1.51	2.54	97	1.04	.66	123	.12	1.54	97
2	1.36	1.61	83	1.62	.91	290	1.33	1.30	335
3	.89	1.18	172	.35	.58	153	1.15	.68	255
4	.82	1.21	317	.60	.50	296	.38	.80	50

*** ANNUAL Y ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1000 DAYS			1000 DAYS			991 DAYS		
1	2.26	.90	356	.46	.45	93	2.12	1.03	211
2	2.96	1.02	333	1.77	.50	272	1.73	.87	144
3	1.46	.88	154	.44	.34	93	.74	.61	190
4	.48	.59	122	.47	.32	247	.69	.36	321

APOGEE ± 3 DAYS

*** SEASON J ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	322 DAYS			322 DAYS			321 DAYS		
1	2.76	2.50	157	1.30	1.61	48	1.56	2.52	53
2	.55	1.56	117	1.62	.84	248	1.70	1.88	328
3	1.47	1.84	334	.89	.62	135	2.47	1.28	283
4	1.27	1.51	344	.69	.61	52	2.12	1.41	135

*** SEASON E ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	327 DAYS			328 DAYS			324 DAYS		
1	.93	1.80	21	.37	.77	66	3.01	1.77	156
2	.77	1.49	122	1.32	.63	224	.54	1.47	243
3	.95	1.90	270	.41	.42	215	.59	1.08	169
4	1.32	1.03	58	.24	.60	76	1.77	1.18	154

*** SEASON D ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	326 DAYS			327 DAYS			325 DAYS		
1	6.10	2.19	339	.81	.80	1	4.21	.87	158
2	1.42	.71	238	1.99	.57	332	2.83	.93	133
3	1.24	.85	145	.51	.67	251	1.51	.60	44
4	.59	.80	346	.34	.38	188	.63	.58	290

*** ANNUAL Y ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	975 DAYS			977 DAYS			970 DAYS		
1	1.36	1.15	352	.71	.63	33	2.21	1.00	143
2	.43	.86	183	1.12	.41	274	.27	.76	124
3	.34	1.14	280	.35	.26	187	.52	.75	313
4	.84	.62	13	.22	.34	65	1.12	.62	147

FCC TABLE-H-3 and H-4

*** LUNAR HARMONICS ***

STATION - CHURCHILL (CANADA) M2 - TIDE PERIOD JAN 1 1967 - DEC 31 1979
LATITUDE= 58.80N LONGITUDE= 94.10W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

*** SEASON J ***

	MOON RECEDING										MOON APPROACHING								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	326 DAYS			324 DAYS			325 DAYS				331 DAYS			331 DAYS			322 DAYS		
1	4.30	2.50	58	3.67	1.06	131	4.67	2.09	244	1	3.67	2.21	231	.91	.76	230	2.91	1.29	94
2	3.10	1.58	283	3.18	.86	214	2.15	1.17	269	2	1.11	1.62	17	1.41	.92	278	1.86	1.52	36
3	1.91	1.37	274	.79	.68	349	1.06	.94	117	3	1.37	1.32	210	.64	.77	145	1.12	1.34	327
4	1.98	1.23	207	1.25	.56	233	1.18	1.17	322	4	1.52	1.36	131	1.08	.66	74	.58	.81	304

*** SEASON E ***

	327 DAYS			327 DAYS			325 DAYS				320 DAYS			320 DAYS			320 DAYS		
1	4.58	2.22	277	2.50	.79	8	4.05	1.55	63	1	2.33	2.36	327	.61	1.00	92	3.84	1.68	134
2	1.31	2.26	327	1.99	.67	273	1.64	1.03	76	2	.59	1.44	83	1.41	.67	308	1.90	.97	126
3	1.10	1.48	295	1.08	.74	130	.65	1.04	57	3	1.70	1.05	271	.93	.66	265	.17	.78	190
4	2.79	.84	249	.66	.53	264	1.72	.72	71	4	1.42	1.05	326	.61	.65	344	1.79	1.05	133

*** SEASON D ***

	323 DAYS			323 DAYS			323 DAYS				322 DAYS			319 DAYS			322 DAYS		
1	1.07	2.13	286	.51	1.03	301	1.41	.93	137	1	3.41	1.31	17	1.53	.63	96	1.20	1.54	135
2	1.34	1.54	36	1.42	.73	309	1.45	1.05	42	2	1.82	1.28	344	.74	.52	25	.70	.82	131
3	1.43	1.06	346	.46	.60	305	1.25	.87	323	3	1.62	1.06	191	.55	.43	149	.90	.83	300
4	.40	.82	90	.29	.42	273	.27	.51	331	4	.99	1.05	8	.46	.53	196	1.08	.57	284

*** ANNUAL Y ***

	976 DAYS			974 DAYS			973 DAYS				973 DAYS			970 DAYS			964 DAYS		
1	1.13	.88	339	.92	.52	90	.46	.95	188	1	1.59	1.05	312	.58	.50	115	2.36	.79	122
2	1.35	1.00	308	1.72	.32	249	.47	.58	8	2	1.03	1.00	7	.94	.42	310	1.03	.66	93
3	1.27	.76	301	.15	.39	34	.41	.56	40	3	1.21	.68	223	.40	.38	199	.66	.56	312
4	1.38	.52	228	.70	.34	245	.63	.49	23	4	.46	.59	25	.27	.28	65	.23	.49	213

FCC TABLE - I

The O_1 and N_2 Tides Derived From Hourly Magnetic Data of FORT CHURCHILL (1967-1979). The International Disturbed Days have been Excluded From the Computations.

	X		Y		Z	
	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase
			SEASON-J			
	1320 days		1318 days		1304 days	
O_1	0.42 ± 1.03	360°	1.16 ± 0.65	177°	0.82 ± 0.84	268°
N_2	1.24 ± 0.76	359°	0.50 ± 0.45	272°	0.53 ± 0.64	122°
			SEASON-E			
	1303 days		1304 days		1297 days	
O_1	3.27 ± 0.91	332°	1.57 ± 0.65	344°	2.22 ± 1.25	94°
N_2	2.71 ± 0.94	345°	1.40 ± 0.51	324°	1.19 ± 0.77	101°
			SEASON-D			
	1301 days		1299 days		1297 days	
O_1	2.27 ± 1.01	281°	0.68 ± 0.25	354°	1.44 ± 0.94	87°
N_2	0.64 ± 0.60	87°	0.13 ± 0.27	300°	0.51 ± 0.47	338°
			SEASON-Y			
	3924 days		3921 days		3898 days	
O_1	1.79 ± 0.69	315°	0.36 ± 0.40	344°	0.99 ± 0.75	99°
N_2	1.28 ± 0.34	353°	0.65 ± 0.16	304°	0.46 ± 0.37	93°

BAKER LAKE

January 1, 1966 December 31, 1979

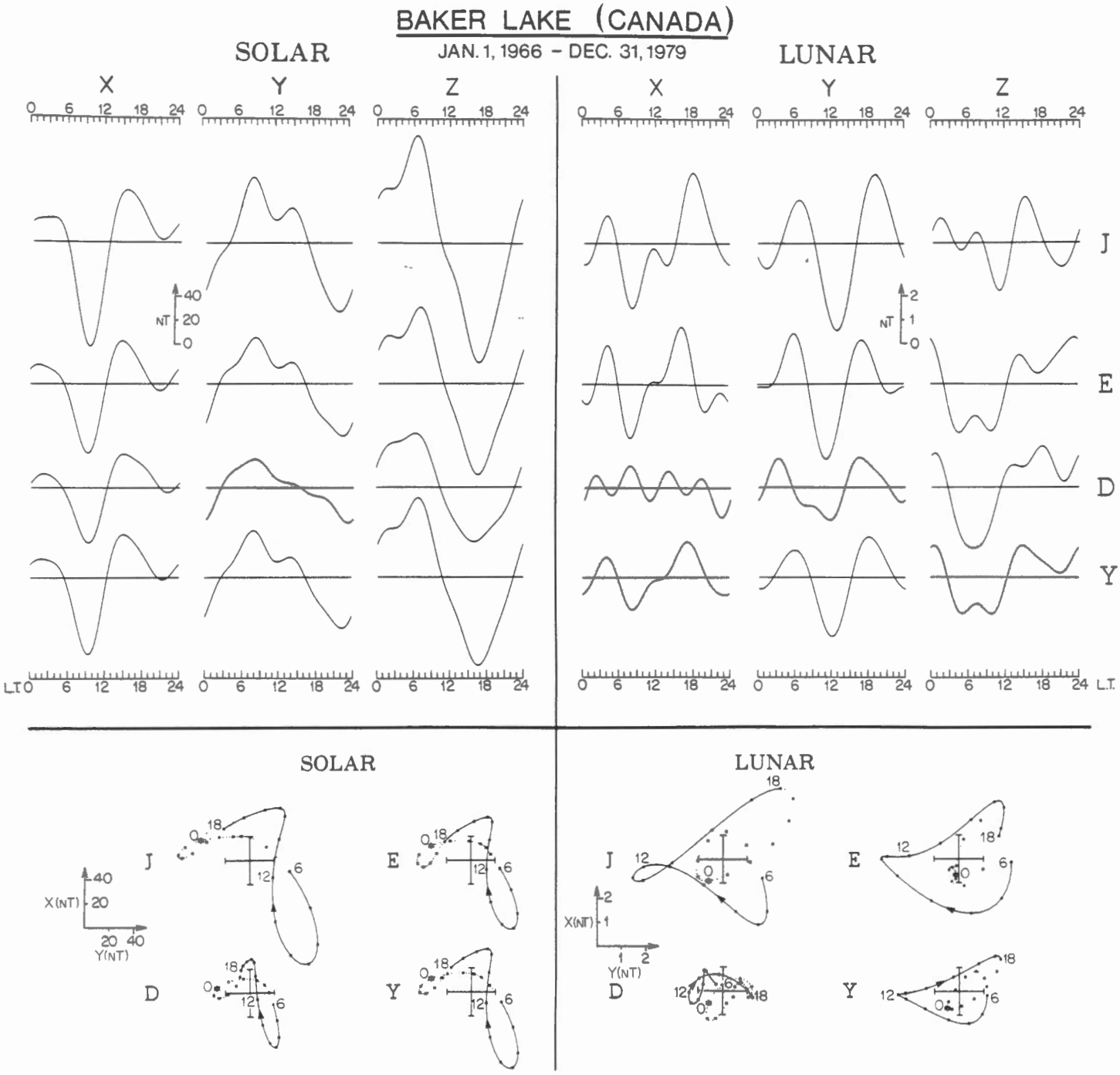
BAKER LAKE (CANADA)
JAN. 1, 1966 - DEC. 31, 1979
SOLAR
LUNAR
X
Y
Z
0 6 12 18 24
NT
40
20
0
2
1
J
E
D
Y
LT
L.T.
SOLAR
LUNAR
X(NT)
Y(NT)
18
12
6
0

FIGURE 1 BLC

BLC TABLE-A

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	1687 DAYS			1683 DAYS			1687 DAYS		
1	33.6	.9	138	55.4	.8	304	94.4	1.3	17
2	35.1	.6	355	8.8	.5	327	16.2	.8	162
3	11.8	.4	200	8.5	.4	94	10.3	.7	152
4	5.5	.4	78	5.8	.4	337	6.1	.5	37
*** SEASON E ***									
	1709 DAYS			1718 DAYS			1720 DAYS		
1	19.2	.6	143	43.9	.6	313	74.1	.7	19
2	26.6	.5	360	8.1	.3	330	15.3	.5	168
3	6.4	.3	180	2.2	.2	58	3.5	.4	108
4	4.3	.4	56	5.3	.3	312	5.4	.5	20
*** SEASON O ***									
	1688 DAYS			1690 DAYS			1688 DAYS		
1	18.7	.7	157	25.7	.4	314	54.8	.6	21
2	21.0	.3	354	9.0	.3	270	4.5	.6	231
3	3.4	.3	222	3.0	.3	289	3.4	.4	60
4	2.9	.2	35	2.7	.3	301	2.4	.4	20
*** ANNUAL Y ***									
	5084 DAYS			5091 DAYS			5095 DAYS		
1	23.6	.3	144	41.5	.4	309	74.4	.6	18
2	27.5	.3	356	7.7	.2	309	11.2	.3	172
3	7.0	.3	198	2.5	.2	78	4.6	.3	127
4	4.1	.2	61	4.5	.2	320	4.6	.3	27

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	1687 DAYS			1683 DAYS			1687 DAYS		
1	.87	.95	91	.11	.83	115	1.03	1.42	337
2	.80	.64	264	2.01	.57	235	.80	.84	21
3	.74	.48	314	.56	.46	353	.59	.71	94
4	.41	.42	200	.41	.38	162	.36	.57	207
*** SEASON E ***									
	1709 DAYS			1718 DAYS			1720 DAYS		
1	.92	.68	119	.93	.64	36	1.32	.90	141
2	1.48	.55	319	1.10	.37	271	.26	.51	116
3	.21	.29	339	.48	.25	84	.74	.43	120
4	.32	.38	176	.19	.27	129	.23	.57	337
*** SEASON O ***									
	1688 DAYS			1690 DAYS			1688 DAYS		
1	.75	.73	337	.82	.45	215	.78	.63	245
2	.50	.31	7	.94	.35	312	.42	.59	136
3	.51	.36	290	.28	.29	288	.36	.42	46
4	.48	.26	22	.21	.29	303	.43	.39	42
*** ANNUAL Y ***									
	5084 DAYS			5091 DAYS			5095 DAYS		
1	.48	.36	81	.07	.41	21	.11	.63	211
2	.77	.28	313	1.15	.23	262	.29	.37	74
3	.46	.27	308	.23	.17	15	.50	.36	98
4	.09	.21	164	.13	.18	165	.08	.29	12

BLC TABLE-B

STATION - BAKER LAKE (CANADA)
LATITUDE= 64.33N LONGITUDE= 96.00W

M2 - TICE PERIOD JAN 1 1966 - DEC 31 1979
(INTERNATIONAL DISTURBED DAYS EXCLUDED)

*** SEASON J ***

SOLAR HARMONICS									LUNAR HARMONICS								
N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE	N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1424 DAYS			1420 DAYS			1424 DAYS				1424 DAYS			1420 DAYS			1424 DAYS		
1	34.9	.5	146	46.4	.4	304	82.7	.9	17	1	1.38	.58	158	1.21	.48	99	.27	.93	151
2	37.4	.7	354	10.4	.4	310	12.1	.7	154	2	1.01	.70	303	2.36	.44	236	1.03	.75	345
3	11.6	.5	199	9.2	.3	95	11.6	.5	156	3	1.01	.55	307	.23	.32	37	.82	.52	104
4	5.1	.3	81	5.7	.3	334	7.0	.4	33	4	.53	.31	154	.04	.30	127	.40	.40	338

*** SEASON E ***

	1398 DAYS			1407 DAYS			1407 DAYS				1398 DAYS			1407 DAYS			1407 DAYS		
1	21.2	.6	151	34.9	.4	313	62.6	.6	18	1	.59	.68	199	.79	.40	95	1.69	.67	152
2	28.2	.4	358	8.5	.3	319	12.0	.6	162	2	1.34	.45	345	1.78	.29	287	.65	.63	78
3	7.6	.4	181	2.8	.3	74	4.0	.5	121	3	.19	.37	265	.69	.28	118	.60	.50	133
4	3.9	.4	57	5.6	.3	308	6.1	.6	18	4	.85	.41	176	.19	.30	71	.35	.58	9

*** SEASON O ***

	1425 DAYS			1427 DAYS			1425 DAYS				1425 DAYS			1427 DAYS			1425 DAYS		
1	19.6	.5	159	20.2	.3	315	46.0	.5	19	1	.32	.56	302	.61	.34	131	1.73	.53	168
2	21.5	.4	353	8.2	.3	274	2.8	.4	225	2	.30	.38	309	.91	.27	313	.85	.44	52
3	4.5	.3	211	2.3	.2	299	3.2	.4	64	3	.08	.30	37	.25	.21	347	.43	.40	1
4	3.4	.2	35	2.8	.2	302	2.8	.3	14	4	.61	.26	354	.32	.20	251	.35	.30	55

*** ANNUAL Y ***

	4247 DAYS			4254 DAYS			4256 DAYS				4247 DAYS			4254 DAYS			4256 DAYS		
1	25.1	.3	151	33.7	.2	309	63.7	.3	18	1	.54	.31	179	.81	.23	107	1.17	.31	161
2	29.0	.2	355	8.6	.2	302	9.4	.3	164	2	.84	.22	324	1.45	.20	269	.68	.34	35
3	7.7	.3	196	3.3	.2	94	5.2	.4	136	3	.37	.26	307	.23	.17	80	.43	.37	98
4	3.9	.2	61	4.6	.1	317	5.2	.2	24	4	.24	.20	161	.05	.13	237	.32	.20	10

BLC TABLE-C

STATION - BAKER LAKE (CANADA) M2 - TICE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL QUIET DAYS ONLY)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	µP.E.	PHASE	AMP.	µP.E.	PHASE	AMP.	µP.E.	PHASE	N AMP.	µP.E.	PHASE	AMP.	µP.E.	PHASE	AMP.	µP.E.	PHASE
*** SEASON J ***																		
	277 DAYS			277 DAYS			277 DAYS			277 DAYS			277 DAYS			277 DAYS		
1	33.8	1.1	156	23.9	.6	309	40.7	1.5	13	1 .57	1.21	29	.74	.62	79	1.85	1.67	227
2	31.1	.7	347	15.0	.5	273	6.5	.8	5	2 1.78	.70	271	2.35	.50	246	.70	.89	91
3	4.2	.4	208	8.4	.6	81	13.9	1.0	162	3 .60	.44	48	1.32	.58	4	1.94	1.01	77
4	3.5	.3	136	2.8	.4	327	4.4	.7	45	4 .54	.38	47	.51	.42	92	.68	.72	254
*** SEASON E ***																		
	275 DAYS			277 DAYS			277 DAYS			275 DAYS			277 DAYS			277 DAYS		
1	21.3	.7	160	16.2	.8	323	27.8	1.0	16	1 1.01	.73	275	1.67	.87	96	.99	1.12	202
2	21.7	.7	352	7.3	.5	280	2.2	.7	61	2 1.25	.74	57	.97	.52	304	.78	.80	337
3	4.8	.5	172	3.3	.4	57	4.7	.3	143	3 .42	.57	120	.67	.47	138	.72	.35	215
4	1.0	.5	102	4.2	.3	291	5.9	.6	25	4 .16	.48	272	.10	.32	101	.43	.66	289
*** SEASON D ***																		
	281 DAYS			281 DAYS			280 DAYS			281 DAYS			281 DAYS			280 DAYS		
1	16.6	.6	162	7.8	.4	325	19.0	1.3	18	1 .51	.63	42	.46	.39	2	.67	1.44	9
2	13.9	.4	347	6.6	.3	261	5.2	.4	1	2 .94	.39	51	.37	.32	325	.75	.47	241
3	2.9	.4	207	1.6	.2	351	3.4	.3	120	3 .39	.41	259	.28	.22	64	.52	.35	295
4	1.6	.3	41	2.4	.2	284	3.0	.3	6	4 .52	.37	79	.34	.24	139	.42	.36	260
*** ANNUAL Y ***																		
	833 DAYS			835 DAYS			834 DAYS			833 DAYS			835 DAYS			834 DAYS		
1	23.8	.5	159	15.8	.3	316	29.1	.7	15	1 .52	.54	329	.97	.36	82	.84	.71	212
2	22.2	.2	349	9.6	.3	272	4.3	.4	11	2 .31	.26	21	.97	.31	270	.13	.46	328
3	3.8	.3	193	3.9	.2	66	7.0	.4	151	3 .16	.35	67	.33	.24	33	.27	.42	67
4	1.6	.2	108	3.0	.2	299	4.3	.4	27	4 .29	.24	50	.31	.18	115	.54	.47	264

BLC TABLE-E

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	363 DAYS			363 DAYS			363 DAYS			363 DAYS			363 DAYS			363 DAYS		
1	20.3	.8	155	17.9	.6	310	45.5	1.2	15	1 .93	.90	354	.67	.65	112	3.65	1.30	133
2	21.4	.6	346	8.4	.5	258	3.6	1.1	241	2 1.21	.66	186	1.89	.51	1	2.29	1.14	37
3	4.6	.5	211	2.3	.4	274	3.4	.6	53	3 1.35	.50	67	.29	.41	339	.93	.68	282
4	3.0	.7	29	3.0	.4	287	2.3	.5	7	4 1.05	.72	6	.15	.45	137	1.38	.52	183
	320 DAYS			325 DAYS			325 DAYS			320 DAYS			325 DAYS			325 DAYS		
1	19.2	1.4	152	24.6	.9	309	52.1	1.7	17	1 1.65	1.47	43	.99	.95	75	2.16	1.87	177
2	23.4	.5	350	7.1	.6	279	5.8	1.1	183	2 .54	.60	302	.78	.64	285	1.95	1.21	141
3	5.9	.6	202	2.6	.6	264	4.2	.8	52	3 1.15	.62	198	.54	.64	320	2.69	.84	61
4	4.1	.7	18	3.6	.5	285	5.1	.9	15	4 1.11	.76	337	.93	.54	308	.69	.92	301
	362 DAYS			363 DAYS			363 DAYS			362 DAYS			363 DAYS			363 DAYS		
1	22.4	1.5	137	34.6	1.1	313	64.6	1.9	17	1 .80	1.58	220	1.73	1.23	62	6.19	2.03	160
2	24.5	.6	353	4.6	.6	310	11.5	1.1	171	2 2.62	.66	322	2.61	.63	292	1.89	1.22	90
3	7.6	.7	186	.8	.5	349	4.4	1.2	63	3 .70	.76	321	.46	.54	13	1.33	1.23	102
4	5.0	1.1	51	5.2	.5	295	6.3	.9	7	4 1.40	1.17	208	.45	.59	17	1.30	1.00	0
	349 DAYS			348 DAYS			349 DAYS			349 DAYS			348 DAYS			349 DAYS		
1	25.3	1.5	138	44.3	1.9	312	75.7	2.1	20	1 2.19	1.68	209	1.48	2.05	12	4.09	2.33	98
2	29.8	.7	359	8.6	.9	345	17.5	1.3	166	2 1.37	.75	339	2.03	.94	274	.28	1.43	43
3	9.6	.7	199	6.0	.5	83	6.4	1.4	133	3 .89	.73	28	1.75	.55	98	.75	1.47	226
4	6.9	.9	75	6.2	.5	315	7.5	.7	17	4 1.03	.93	191	.75	.56	242	1.43	.77	339

BLC TABLE-E---CONT'D

STATION - BAKER LAKE (CANADA) M2 - TICE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** MAY ***																			
	360 DAYS			359 DAYS			360 DAYS				360 DAYS			359 DAYS			360 DAYS		
1	33.3	1.9	143	47.6	.6	305	85.4	1.7	20	1	1.13	2.09	118	1.14	.65	89	2.62	1.88	65
2	36.4	1.5	356	9.2	1.0	337	15.9	1.6	166	2	.18	1.64	75	2.58	1.05	208	3.19	1.66	237
3	13.0	.9	205	9.4	.9	105	9.9	1.3	158	3	2.40	1.00	280	.11	.94	173	.55	1.34	139
4	5.8	.9	81	6.6	.6	335	6.8	1.1	41	4	1.08	.99	58	1.43	.59	6	1.89	1.12	144
*** JUNE ***																			
	350 DAYS			349 DAYS			350 DAYS				350 DAYS			349 DAYS			350 DAYS		
1	39.0	.9	146	50.5	.8	300	90.3	1.1	15	1	1.04	1.01	329	1.05	.92	90	2.62	1.24	244
2	38.9	1.1	354	9.4	.6	298	10.1	1.6	165	2	.17	1.14	279	1.89	.69	300	4.10	1.66	53
3	11.7	1.0	199	8.6	.7	100	11.8	.9	160	3	.87	1.02	323	.31	.73	23	.87	.98	213
4	5.1	.8	74	5.5	.6	335	9.1	1.2	34	4	.70	.80	182	.51	.66	75	.76	1.23	27
*** JULY ***																			
	364 DAYS			363 DAYS			364 DAYS				364 DAYS			363 DAYS			364 DAYS		
1	35.7	1.3	150	45.1	1.5	302	78.3	2.5	15	1	1.42	1.42	134	1.16	1.64	111	1.52	2.66	185
2	38.2	1.1	353	12.3	.8	300	10.4	1.6	121	2	2.36	1.14	300	3.02	.85	238	2.38	1.69	7
3	10.3	1.4	190	9.9	.7	93	13.2	.9	162	3	.60	1.47	100	.27	.79	51	1.89	1.02	103
4	3.7	.8	102	4.3	.5	334	5.8	.8	34	4	.46	.83	149	1.27	.56	199	1.88	.88	299
*** AUGUST ***																			
	361 DAYS			361 DAYS			361 DAYS				361 DAYS			361 DAYS			361 DAYS		
1	30.3	1.1	151	39.9	1.0	308	71.9	2.0	14	1	3.28	1.23	174	1.18	1.12	184	1.82	2.15	3
2	37.7	.9	352	14.2	.9	301	12.6	1.0	146	2	1.08	.97	334	2.95	.91	231	1.18	1.04	291
3	11.1	1.0	186	9.8	.6	82	12.8	1.2	155	3	2.15	1.04	288	.69	.66	295	2.75	1.25	57
4	4.4	.4	75	6.4	.5	331	7.0	.9	28	4	1.71	.48	167	.47	.53	194	1.04	.93	77

BLC TABLE-E---CONT'D

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS										LUNAR HARMONICS									
X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEPTEMBER***																			
345 DAYS			347 DAYS			347 DAYS				345 DAYS			347 DAYS			347 DAYS			
21.7	.9	166	35.9	1.0	311	63.3	1.3	19	1	2.35	.94	157	2.80	1.04	164	4.31	1.43	308	
32.1	.5	1	13.5	.7	322	13.8	1.2	156	2	1.82	.51	316	2.80	.73	266	1.61	1.26	29	
7.5	.7	174	4.8	.4	81	5.5	1.0	139	3	.38	.76	115	1.85	.42	117	1.93	1.03	151	
3.2	.6	55	7.3	.6	317	5.1	.9	28	4	1.02	.60	164	.65	.67	123	.76	.98	329	
*** OCTOBER ***																			
363 DAYS			364 DAYS			363 DAYS				363 DAYS			364 DAYS			363 DAYS			
18.0	.9	159	27.9	.8	320	51.8	1.2	25	1	.92	.99	232	1.23	.91	185	2.65	1.34	192	
25.3	.8	5	7.7	.5	310	6.1	.9	169	2	1.46	.83	320	.80	.53	324	.37	.98	140	
5.4	.8	179	1.9	.5	3	3.1	.9	88	3	.53	.82	236	.23	.50	111	.74	.99	293	
3.5	.7	44	4.2	.3	317	5.3	.7	13	4	1.10	.73	59	.44	.35	69	.56	.78	234	
*** NOVEMBER ***																			
348 DAYS			349 DAYS			348 DAYS				348 DAYS			349 DAYS			348 DAYS			
20.1	.8	161	21.1	.7	319	45.0	1.3	20	1	.50	.87	340	1.17	.76	89	.95	1.42	218	
21.7	.6	360	8.0	.7	279	2.4	.5	214	2	.88	.68	53	.72	.73	272	.68	.55	312	
4.3	.6	214	2.6	.5	321	3.3	.8	69	3	.22	.62	2	.11	.50	151	.79	.81	272	
2.5	.5	48	2.2	.6	310	1.9	.5	27	4	.54	.51	280	.47	.60	244	1.43	.59	53	
*** DECEMBER ***																			
362 DAYS			363 DAYS			363 DAYS				362 DAYS			363 DAYS			363 DAYS			
19.3	.8	165	17.0	.8	315	41.7	1.5	21	1	.35	.91	276	.38	.83	3	.42	1.66	194	
19.7	.7	349	9.3	.5	273	2.7	.8	281	2	.98	.75	34	1.11	.55	326	.66	.83	29	
3.8	.6	220	2.5	.3	302	1.9	.8	80	3	.17	.66	235	.21	.31	63	.42	.84	244	
3.7	.9	38	2.9	.5	309	2.1	.6	15	4	.09	.94	100	.33	.52	196	1.24	.66	46	

BLC TABLE-F-a-1

*** 0≤ R ≤ 30 ***

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	307 DAYS			307 DAYS			307 DAYS			307 DAYS			307 DAYS			307 DAYS		
1	31.0	1.2	153	38.9	1.5	307	75.4	1.6	21	1 2.40	1.27	181	2.31	1.66	201	1.77	1.75	307
2	37.6	1.2	357	15.7	1.2	313	7.9	1.6	125	2 2.50	1.23	315	1.70	1.27	250	.79	1.64	317
3	9.7	.8	189	8.5	.8	95	12.3	.9	155	3 .09	.80	359	.87	.90	148	1.25	.96	90
4	4.4	.7	88	5.9	.6	334	7.9	1.1	39	4 .94	.76	227	.14	.70	176	1.38	1.17	19
	294 DAYS			301 DAYS			301 DAYS			294 DAYS			301 DAYS			301 DAYS		
1	20.6	1.5	164	30.4	.9	316	59.0	2.1	22	1 2.10	1.59	229	1.77	.95	318	1.35	2.32	183
2	29.8	.6	0	12.6	.7	313	7.9	1.2	147	2 3.38	.64	358	3.75	.78	304	1.68	1.27	159
3	6.3	1.0	179	3.6	.5	72	5.3	.8	146	3 1.44	1.00	280	.93	.50	96	3.35	.86	114
4	3.1	.8	69	5.0	.3	307	7.1	.6	19	4 1.10	.85	213	1.18	.35	340	1.40	.71	62
	301 DAYS			302 DAYS			301 DAYS			301 DAYS			302 DAYS			301 DAYS		
1	21.1	1.0	167	18.5	1.0	316	47.7	1.6	22	1 1.00	1.09	17	2.98	1.06	70	4.35	1.74	181
2	24.6	1.1	357	11.1	.8	286	2.2	.9	242	2 .44	1.12	170	1.20	.83	350	2.00	.93	344
3	5.3	.8	235	1.9	.5	285	3.6	1.0	111	3 1.77	.80	70	.47	.58	54	.61	1.01	272
4	3.8	.9	45	3.5	.4	318	4.6	1.1	31	4 .29	.96	120	.15	.43	229	.57	1.16	268
	902 DAYS			910 DAYS			909 DAYS			902 DAYS			910 DAYS			909 DAYS		
1	24.2	.8	160	29.3	.4	312	60.8	1.0	22	1 .97	.89	206	.23	.42	127	1.68	1.04	207
2	30.7	.6	358	12.8	.5	305	5.0	.6	144	2 1.69	.62	335	1.92	.57	297	.41	.68	341
3	6.6	.5	197	3.4	.4	85	6.8	.5	148	3 .38	.57	23	.59	.42	101	1.36	.55	108
4	3.6	.5	68	4.7	.2	321	6.5	.4	30	4 .64	.51	211	.33	.25	324	.75	.40	27

*** SEASON J ***

*** SEASON E ***

*** SEASON D ***

*** ANNUAL Y ***

BLC TABLE-F-a-2

*** 30< R ≤ 70 ***

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	512 DAYS			508 DAYS			512 DAYS		
1	33.4	.7	147	46.2	.7	306	79.5	1.3	18
2	37.1	.8	356	11.2	.7	311	11.8	1.3	148
3	11.7	1.0	200	8.8	.7	92	12.1	1.1	156
4	5.4	.7	80	5.8	.3	335	7.5	.7	27
	495 DAYS			495 DAYS			494 DAYS		
1	21.4	1.3	152	36.2	1.0	313	67.3	1.6	22
2	28.6	.8	359	8.6	.4	319	12.7	1.0	163
3	7.9	.5	185	1.5	.4	97	4.6	.9	130
4	3.5	.6	51	6.3	.5	309	6.1	1.0	25
	513 DAYS			513 DAYS			512 DAYS		
1	19.8	.8	161	19.2	.4	313	48.0	.7	21
2	22.3	.5	349	8.7	.6	271	2.5	.8	224
3	4.6	.6	199	2.4	.3	296	3.1	.5	61
4	3.1	.4	36	3.0	.2	297	2.5	.6	11
	1520 DAYS			1516 DAYS			1518 DAYS		
1	24.8	.6	152	33.8	.4	310	64.9	.8	20
2	29.3	.5	355	8.9	.4	301	8.4	.7	161
3	8.0	.5	195	2.7	.3	86	5.6	.5	138
4	3.8	.3	60	4.9	.2	316	5.4	.4	24

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	512 DAYS			508 DAYS			512 DAYS		
1	2.73	.76	125	.44	.75	137	2.44	1.43	349
2	.76	.84	313	2.80	.73	243	1.26	1.32	27
3	1.23	1.02	275	.71	.75	61	.24	1.15	228
4	.46	.72	155	.42	.38	163	1.07	.73	295
	495 DAYS			495 DAYS			494 DAYS		
1	.66	1.42	30	1.87	1.10	63	2.59	1.77	141
2	.66	.83	7	1.03	.41	274	.98	1.03	188
3	.45	.56	308	.29	.42	121	.60	.92	218
4	.83	.60	168	.65	.51	34	.59	1.02	347
	513 DAYS			513 DAYS			512 DAYS		
1	.68	.91	254	.96	.41	135	1.81	.78	136
2	.70	.58	194	1.05	.67	318	1.00	.87	45
3	.47	.68	230	.27	.34	92	.62	.52	303
4	.85	.45	334	.26	.25	285	.36	.65	355
	1520 DAYS			1516 DAYS			1518 DAYS		
1	.78	.65	127	.86	.40	84	.95	.82	104
2	.25	.55	319	1.40	.45	265	.47	.79	56
3	.68	.48	272	.40	.31	88	.46	.54	258
4	.16	.34	180	.12	.18	57	.58	.47	322

BLC TABLE-F-a-3

*** 70< R ***

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
SEASON J									
	605 DAYS			605 DAYS			605 DAYS		
1	38.2	.9	142	50.5	1.0	301	89.3	1.7	14
2	37.5	1.0	352	7.2	.9	306	15.3	1.3	165
3	12.6	.6	203	9.9	.7	97	10.8	.7	158
4	5.3	.4	79	5.6	.5	334	6.1	.8	36
SEASON E									
	609 DAYS			611 DAYS			612 DAYS		
1	21.6	.8	145	36.0	.6	311	60.8	1.2	13
2	27.1	.6	355	6.5	.4	325	13.6	.7	166
3	7.9	.4	178	3.7	.3	68	3.6	.8	93
4	4.6	.6	57	5.4	.4	308	5.6	.7	11
SEASON D									
	611 DAYS			612 DAYS			612 DAYS		
1	18.9	.6	152	21.9	.5	316	43.7	.8	16
2	19.4	.5	354	6.6	.3	268	3.4	.7	221
3	4.4	.4	208	2.5	.3	304	3.8	.5	46
4	3.5	.3	29	2.4	.2	297	2.4	.5	1
ANNUAL Y									
	1825 DAYS			1828 DAYS			1829 DAYS		
1	26.1	.5	146	35.9	.5	307	64.5	.7	14
2	28.0	.4	353	6.2	.2	300	10.3	.3	171
3	8.1	.3	196	3.7	.3	82	4.3	.4	126
4	4.2	.3	58	4.3	.2	317	4.6	.5	20

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
SEASON J									
	605 DAYS			605 DAYS			605 DAYS		
1	.62	.95	232	2.86	1.10	75	3.15	1.83	160
2	.68	1.08	263	2.29	.91	221	1.19	1.36	323
3	1.49	.64	324	.66	.69	322	1.41	.75	103
4	.84	.47	120	.36	.51	355	.34	.83	132
SEASON E									
	609 DAYS			611 DAYS			612 DAYS		
1	1.01	.86	175	1.86	.69	147	1.30	1.33	156
2	1.11	.69	314	1.51	.46	277	2.28	.75	36
3	.67	.46	127	.92	.35	130	.26	.83	299
4	.86	.65	161	.89	.42	160	.35	.77	266
SEASON D									
	611 DAYS			612 DAYS			612 DAYS		
1	.28	.69	313	1.27	.56	228	.84	.90	192
2	1.26	.52	341	.84	.32	285	1.29	.76	106
3	.39	.39	284	.72	.34	309	1.09	.54	53
4	.84	.36	1	.50	.25	240	.97	.52	81
ANNUAL Y									
	1825 DAYS			1828 DAYS			1829 DAYS		
1	.41	.51	212	1.09	.56	124	1.72	.78	167
2	.90	.44	313	1.34	.21	253	1.06	.37	41
3	.37	.35	327	.18	.28	330	.70	.46	75
4	.36	.28	109	.27	.24	196	.27	.48	94

BLC TABLE-G-1

*** 0.015 CP ≤ .5 ***

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	896 DAYS			894 DAYS			896 DAYS		
1	35.4	.5	155	34.8	.6	303	64.2	1.3	15
2	36.0	.6	351	12.8	.5	290	4.6	.8	115
3	8.4	.6	195	9.2	.3	91	13.7	.6	164
4	3.6	.4	94	5.1	.2	332	6.6	.5	35
*** SEASON E ***									
	774 DAYS			780 DAYS			781 DAYS		
1	23.5	.5	159	22.6	.6	317	41.6	1.0	17
2	27.0	.6	355	8.9	.4	299	4.3	.5	132
3	6.3	.4	171	4.1	.3	61	5.6	.5	144
4	2.1	.3	63	5.0	.2	302	6.0	.3	17
*** SEASON O ***									
	903 DAYS			903 DAYS			902 DAYS		
1	19.1	.5	164	13.0	.2	318	32.1	.8	21
2	19.2	.4	351	8.1	.3	276	2.5	.3	359
3	4.2	.2	200	1.5	.2	326	2.6	.3	104
4	3.2	.3	32	2.9	.1	295	3.3	.2	19
*** ANNUAL Y ***									
	2573 DAYS			2577 DAYS			2579 DAYS		
1	26.0	.3	158	23.3	.3	310	46.1	.7	17
2	27.4	.3	352	9.9	.2	288	2.5	.3	106
3	6.2	.3	189	4.1	.2	76	6.9	.3	153
4	2.7	.2	64	4.1	.1	313	5.2	.2	25

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	896 DAYS			894 DAYS			896 DAYS		
1	.61	.55	147	1.05	.61	200	1.44	1.39	339
2	.96	.62	334	2.01	.51	254	.45	.81	48
3	.61	.62	347	.24	.35	17	.79	.66	113
4	.31	.44	313	.23	.21	355	.30	.51	98
*** SEASON E ***									
	774 DAYS			780 DAYS			781 DAYS		
1	.28	.58	224	1.36	.70	93	.91	1.08	217
2	1.04	.68	6	1.00	.38	290	.86	.59	292
3	.32	.46	99	.78	.29	101	.79	.54	164
4	.35	.33	148	.49	.19	132	.60	.37	255
*** SEASON O ***									
	903 DAYS			903 DAYS			902 DAYS		
1	.62	.52	234	.37	.26	185	.04	.86	200
2	.64	.37	3	.85	.34	279	.13	.38	37
3	.71	.26	273	.02	.21	119	.15	.35	347
4	.22	.28	25	.21	.15	243	.45	.28	28
*** ANNUAL Y ***									
	2573 DAYS			2577 DAYS			2579 DAYS		
1	.31	.35	196	.68	.31	152	.51	.73	288
2	.78	.30	349	1.25	.26	267	.29	.36	338
3	.28	.30	317	.25	.21	77	.42	.37	126
4	.07	.19	11	.07	.11	152	.08	.22	352

BLC TABLE-G-2

*** .5< CP ≤1.2 ***

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

*** SEASON J ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	652 DAYS			650 DAYS			652 DAYS		
1	36.1	1.4	130	68.4	1.3	303	117.7	1.7	18
2	38.4	1.5	359	10.4	1.0	1	27.0	1.2	167
3	16.4	1.1	202	9.0	.7	99	8.4	.9	133
4	8.3	.7	74	6.3	.7	343	6.5	.7	36

*** SEASON E ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	696 DAYS			698 DAYS			699 DAYS		
1	19.0	1.2	142	50.5	1.0	310	89.3	1.5	19
2	30.5	1.1	3	10.2	.5	345	23.2	.9	168
3	9.2	.4	186	2.1	.6	97	3.7	.9	81
4	6.2	.6	55	6.3	.5	315	6.5	1.2	22

*** SEASON D ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	644 DAYS			646 DAYS			645 DAYS		
1	20.2	1.4	152	33.5	.9	313	72.5	1.0	19
2	24.1	.7	356	9.2	.6	271	10.7	.9	214
3	4.2	.6	235	4.4	.6	279	5.3	.8	39
4	3.2	.5	21	3.1	.5	313	1.7	.7	41

*** ANNUAL Y ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1992 DAYS			1994 DAYS			1996 DAYS		
1	24.7	.6	139	50.7	.6	308	93.2	.8	18
2	31.0	.5	360	7.9	.4	331	19.5	.7	175
3	9.6	.5	201	2.2	.4	98	4.4	.6	94
4	5.6	.3	58	5.1	.3	326	4.9	.5	30

LUNAR HARMONICS

*** SEASON J ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	652 DAYS			650 DAYS			652 DAYS		
1	1.06	1.54	148	3.09	1.41	128	4.57	1.85	253
2	1.57	1.60	277	2.94	1.01	225	1.58	1.31	40
3	1.20	1.16	255	.60	.71	326	.79	.98	334
4	.52	.80	187	.82	.72	216	.62	.81	323

*** SEASON E ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	696 DAYS			698 DAYS			699 DAYS		
1	.22	1.29	220	1.24	1.12	140	2.80	1.64	186
2	.69	1.17	314	1.94	.59	296	2.35	.99	70
3	.54	.50	302	.88	.64	139	.86	.97	148
4	1.06	.69	207	.37	.56	13	1.42	1.26	68

*** SEASON D ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	644 DAYS			646 DAYS			645 DAYS		
1	1.23	1.55	1	.86	.99	196	1.21	1.13	211
2	.23	.75	345	1.32	.62	329	1.32	.96	102
3	.37	.61	91	.39	.61	300	.86	.81	19
4	.54	.56	3	.07	.53	308	.43	.73	33

*** ANNUAL Y ***

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1992 DAYS			1994 DAYS			1996 DAYS		
1	.10	.69	149	1.34	.62	138	2.20	.90	221
2	.73	.56	301	1.49	.47	272	1.69	.78	71
3	.44	.48	271	.06	.41	159	.21	.63	26
4	.37	.31	206	.17	.28	238	.62	.50	40

BLC TABLE-G-3

*** 1.2< CP ***

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	139 DAYS			139 DAYS			139 DAYS				139 DAYS			139 DAYS			139 DAYS		
1	43.8	7.1	77	126.5	3.7	305	179.1	6.2	18	1	4.69	7.67	32	6.37	4.06	346	8.58	6.77	88
2	14.7	3.1	10	21.7	3.4	54	51.1	5.5	175	2	4.98	3.44	202	1.57	3.57	270	6.39	5.81	359
3	12.4	2.7	213	2.2	2.7	87	5.5	4.1	81	3	3.74	2.96	24	3.25	2.86	24	3.86	4.35	138
4	6.8	2.8	46	8.5	2.2	333	1.7	4.3	107	4	3.25	2.99	188	4.95	2.30	129	5.62	4.52	202
*** SEASON E ***																			
	239 DAYS			240 DAYS			240 DAYS				239 DAYS			240 DAYS			240 DAYS		
1	23.9	3.7	77	94.7	2.8	313	136.2	2.7	23	1	5.04	3.97	116	4.63	3.01	320	2.72	2.98	70
2	14.9	1.9	12	8.6	1.6	29	31.9	2.4	182	2	6.18	2.08	305	3.27	1.75	179	3.48	2.55	197
3	.8	2.2	333	5.0	1.6	301	6.0	2.4	24	3	1.14	2.32	306	2.38	1.69	344	2.52	2.50	56
4	6.0	2.0	51	4.4	1.4	336	.6	2.2	79	4	1.41	2.15	32	.87	1.45	211	2.19	2.28	285
*** SEASON O ***																			
	141 DAYS			141 DAYS			141 DAYS				141 DAYS			141 DAYS			141 DAYS		
1	11.3	3.3	136	71.6	1.8	312	120.1	3.5	25	1	5.61	3.56	6	4.40	1.99	283	3.58	3.81	309
2	18.6	2.0	1	15.3	1.9	248	17.2	3.4	239	2	1.17	2.19	12	1.91	2.02	342	4.46	3.59	222
3	6.4	2.1	337	8.7	2.2	273	6.9	2.3	33	3	3.03	2.20	307	2.19	2.31	280	2.43	2.41	123
4	4.7	2.1	119	.9	1.7	216	2.7	2.9	279	4	1.64	2.24	35	1.94	1.77	331	.99	3.05	98
*** ANNUAL Y ***																			
	519 DAYS			520 DAYS			520 DAYS				519 DAYS			520 DAYS			520 DAYS		
1	24.4	3.3	83	96.7	2.3	310	143.1	2.9	22	1	4.18	3.55	65	5.30	2.45	318	3.43	3.13	52
2	15.8	1.1	8	6.0	1.2	27	30.9	1.8	186	2	2.84	1.26	281	1.00	1.26	169	2.10	1.97	218
3	2.8	1.5	252	4.0	1.1	290	5.6	1.8	40	3	1.51	1.56	332	1.97	1.13	351	2.36	1.91	101
4	5.1	1.6	62	4.2	1.0	331	.0	2.1	327	4	.65	1.66	76	.81	1.11	134	1.71	2.19	224

BLC TABLE-H-1 and H-2

*** L U N A R H A R M O N I C S ***

STATION - BAKER LAKE (CANADA)
LATITUDE= 64.33N LONGITUDE= 96.00W

M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
(INTERNATIONAL DISTURBED DAYS EXCLUDED)

PERIGEE ± 3 DAYS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	366 DAYS			365 DAYS			366 DAYS		
1	.49	1.18	117	3.46	.82	38	4.58	1.76	116
2	.75	1.29	194	3.77	.79	189	1.92	1.48	240
3	1.99	1.27	263	1.44	.60	272	2.05	.75	3
4	.68	.86	75	.62	.51	118	1.17	.97	120
*** SEASON E ***									
	359 DAYS			359 DAYS			358 DAYS		
1	3.49	1.48	279	1.79	1.10	185	4.87	1.24	215
2	2.91	.92	32	2.59	.96	326	4.00	1.42	118
3	.57	.91	235	1.21	.42	86	2.53	1.58	231
4	.49	.83	179	.41	.51	57	.48	1.34	14
*** SEASON O ***									
	359 DAYS			359 DAYS			359 DAYS		
1	1.10	1.76	141	.77	.76	154	.56	1.97	275
2	1.47	.89	338	1.56	.89	284	.30	1.27	325
3	.84	.74	167	.28	.42	334	.71	.73	307
4	1.09	.73	1	.24	.52	277	.23	1.03	283
*** ANNUAL Y ***									
	1084 DAYS			1083 DAYS			1083 DAYS		
1	.87	.86	254	.74	.51	82	2.05	.69	171
2	1.07	.48	15	1.29	.48	253	1.04	.51	144
3	.87	.64	243	.17	.32	311	.90	.56	291
4	.34	.49	40	.23	.21	103	.28	.50	98

APOGEE ± 3 DAYS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	349 DAYS			349 DAYS			349 DAYS		
1	4.25	1.09	125	.79	1.73	66	3.46	2.59	345
2	2.73	1.10	325	2.51	.87	252	.88	1.20	297
3	2.21	1.02	292	.97	.73	51	1.55	1.68	118
4	1.42	.80	131	.20	.68	93	.56	1.24	303
*** SEASON E ***									
	344 DAYS			350 DAYS			350 DAYS		
1	2.26	1.39	138	1.43	.93	84	2.32	1.82	121
2	1.95	.81	293	1.77	.62	247	.80	1.23	297
3	.18	.71	109	.58	.50	60	1.55	1.21	81
4	1.75	.82	148	.58	.61	128	1.30	1.01	270
*** SEASON O ***									
	358 DAYS			359 DAYS			359 DAYS		
1	2.49	1.48	304	1.90	.88	100	4.86	1.84	162
2	.91	.79	194	1.57	.62	329	2.71	.85	32
3	.91	1.09	52	.54	.47	310	.43	.64	321
4	.76	.71	288	.36	.36	293	1.18	.66	59
*** ANNUAL Y ***									
	1051 DAYS			1058 DAYS			1057 DAYS		
1	1.14	1.00	128	1.46	.77	83	1.41	1.29	135
2	1.29	.53	301	1.51	.43	270	.89	.79	356
3	.56	.43	322	.48	.32	29	.86	.89	88
4	.83	.44	150	.09	.34	122	.40	.60	325

BLC TABLE-H-3 and H-4

*** L U N A R H A R M O N I C S ***

STATION - BAKER LAKE (CANADA) M2 - TIDE PERIOD JAN 1 1966 - DEC 31 1979
LATITUDE= 64.33N LONGITUDE= 96.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

MOON RECEDING

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	352 DAYS			349 DAYS			352 DAYS		
1	1.95	2.06	286	4.07	1.38	137	6.75	2.29	226
2	2.94	1.16	281	3.80	.57	254	3.81	2.02	24
3	1.27	1.08	49	.99	.99	32	2.21	.93	126
4	.26	.72	168	.93	.58	226	1.64	.90	348
*** SEASON E ***									
	355 DAYS			359 DAYS			355 DAYS		
1	1.48	.82	78	2.37	.72	10	4.80	2.00	59
2	1.77	.81	316	2.21	.70	280	.87	1.88	26
3	.79	.83	226	1.46	.59	126	.26	.87	157
4	.10	.80	239	.42	.71	223	1.44	.83	38
*** SEASON O ***									
	351 DAYS			352 DAYS			352 DAYS		
1	1.66	1.31	201	.31	1.03	189	1.49	1.34	132
2	.39	.80	31	.71	.56	269	.46	1.17	254
3	1.43	.82	269	.34	.40	294	.46	1.03	118
4	.77	.55	45	.31	.39	260	.86	.47	334
*** ANNUAL Y ***									
	1058 DAYS			1056 DAYS			1059 DAYS		
1	.27	.80	215	1.07	.62	129	.89	.78	200
2	1.73	.44	294	2.29	.25	264	1.60	.88	21
3	.37	.54	311	.54	.42	80	1.10	.59	127
4	.23	.47	67	.54	.33	232	1.22	.34	2

MOON APPROACHING

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	357 DAYS			357 DAYS			357 DAYS		
1	3.34	1.44	184	1.28	.74	230	2.77	2.15	48
2	1.18	.90	66	1.07	.86	285	1.00	1.01	325
3	.75	.77	350	1.28	.64	126	1.14	1.03	186
4	1.35	.84	219	.58	.61	4	1.29	1.02	290
*** SEASON E ***									
	340 DAYS			343 DAYS			344 DAYS		
1	1.57	1.10	187	1.79	1.37	120	3.86	1.77	182
2	.69	1.05	15	1.53	.76	272	1.47	1.34	339
3	.74	.79	351	.85	.75	207	1.79	.79	105
4	1.74	.49	208	.56	.62	35	.64	.88	140
*** SEASON O ***									
	357 DAYS			357 DAYS			356 DAYS		
1	2.08	1.12	35	.43	.74	195	1.66	1.47	201
2	.54	.74	263	.85	.56	28	1.65	1.08	107
3	.51	.70	73	.59	.38	58	1.31	1.01	18
4	.84	.60	12	.51	.52	213	1.06	.73	150
*** ANNUAL Y ***									
	1054 DAYS			1057 DAYS			1057 DAYS		
1	1.08	.61	170	.69	.52	170	1.29	.86	157
2	.45	.39	36	.83	.48	299	.62	.77	22
3	.57	.52	9	.55	.40	137	.64	.62	101
4	.76	.32	221	.18	.22	7	.35	.38	200

BLC TABLE - I

The O_1 and N_2 Tides Derived From Hourly Magnetic Data of BAKER LAKE (1966-1979). The International Disturbed Days have been Excluded From the computations.

	X		Y		Z	
	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase
			SEASON-J			
	1424 days		1420 days		1424 days	
O_1	1.02 ± 0.75	269°	1.25 ± 0.76	197°	0.53 ± 1.06	326°
N_2	0.30 ± 0.53	59°	0.33 ± 0.54	62°	1.05 ± 0.63	147°
			SEASON-E			
	1398 days		1407 days		1407 days	
O_1	1.05 ± 0.63	343°	1.71 ± 0.68	356°	2.75 ± 0.94	142°
N_2	1.06 ± 0.54	52°	0.75 ± 0.34	6°	1.67 ± 0.54	151°
			SEASON-D			
	1425 days		1427 days		1425 days	
O_1	0.23 ± 0.55	226°	0.68 ± 0.35	45°	1.86 ± 0.80	89°
N_2	0.27 ± 0.53	46°	0.30 ± 0.36	280°	0.32 ± 0.69	288°
			SEASON-Y			
	4247 days		4254 days		4256 days	
O_1	0.58 ± 0.44	292°	0.36 ± 0.43	10°	1.31 ± 0.65	118°
N_2	0.57 ± 0.25	45°	0.33 ± 0.20	352°	0.79 ± 0.30	147°

CAMBRIDGE BAY

January 1, 1973 - December 31, 1979

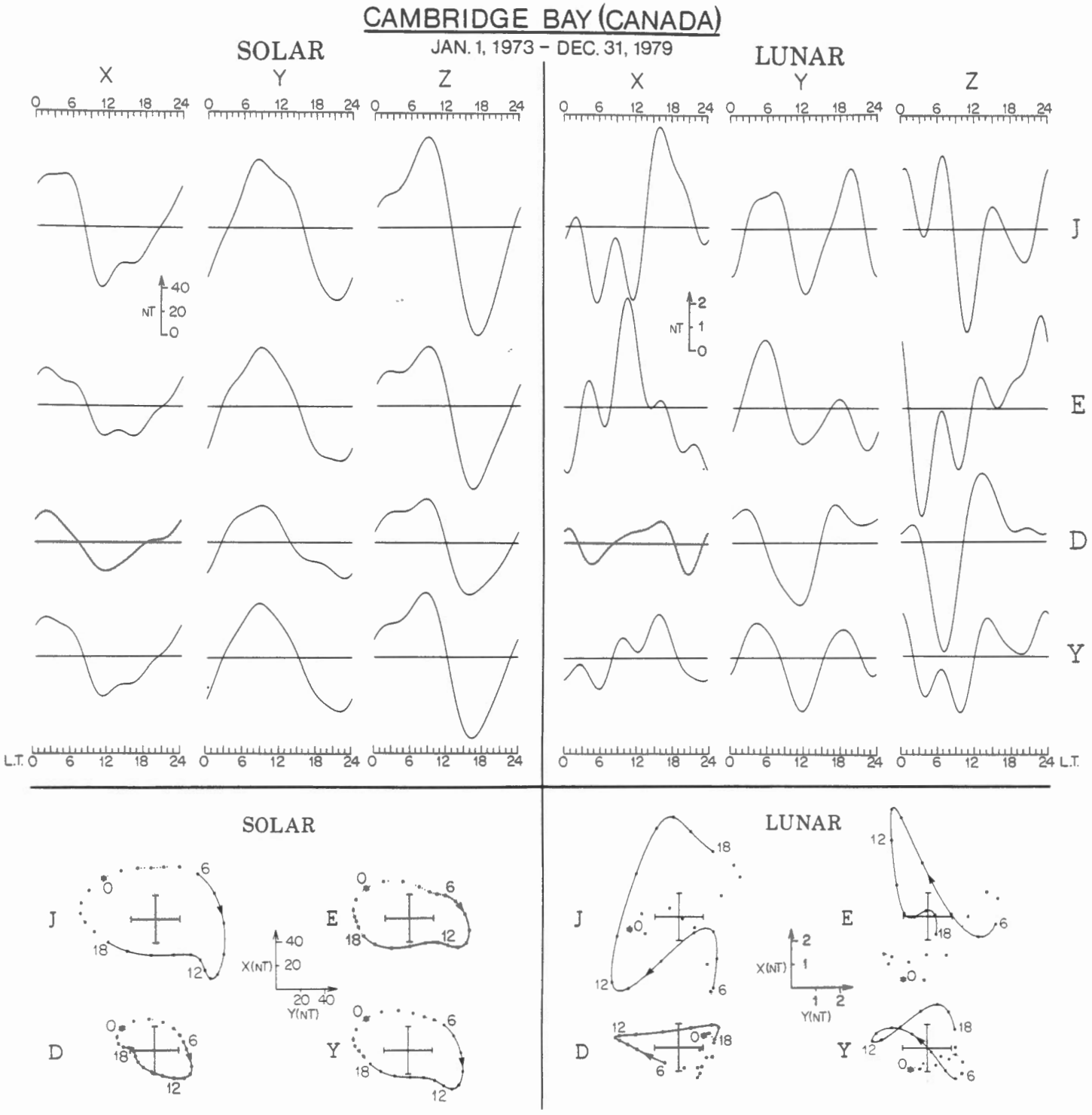
CAMBRIDGE BAY (CANADA)
JAN. 1, 1973 - DEC. 31, 1979
SOLAR
LUNAR
X
Y
Z
0 6 12 18 24
NT
40
20
0
2
1
J
E
D
Y
L.T.
SOLAR
LUNAR
X(NT)
Y(NT)

FIGURE 1 CBB

CBB TABLE-A

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	810 DAYS			805 DAYS			807 DAYS		
1	50.1	1.1	59	66.5	1.0	309	78.5	1.0	2
2	9.8	1.1	321	4.9	.7	32	27.4	.4	148
3	7.3	.6	178	3.0	.7	87	4.3	.8	21
4	4.2	.6	36	2.9	.6	338	.2	.5	106
*** SEASON E ***									
	844 DAYS			836 DAYS			846 DAYS		
1	35.9	.9	55	58.5	.9	318	59.3	.8	13
2	1.9	.7	4	2.0	.5	58	19.0	.8	149
3	1.6	.4	148	2.9	.5	323	5.5	.8	4
4	4.7	.3	25	3.0	.4	294	.9	.6	7
*** SEASON D ***									
	816 DAYS			815 DAYS			820 DAYS		
1	24.1	.7	74	34.1	.4	323	43.2	.8	10
2	6.4	.4	332	6.3	.5	246	8.1	.6	161
3	2.2	.3	16	5.0	.4	306	5.2	.5	12
4	1.4	.3	5	1.1	.3	261	.5	.4	228
*** ANNUAL Y ***									
	2470 DAYS			2456 DAYS			2473 DAYS		
1	36.1	.5	61	52.8	.5	315	60.0	.4	8
2	5.8	.5	329	1.0	.3	331	18.1	.4	150
3	2.2	.3	165	2.0	.3	332	4.9	.4	12
4	3.4	.3	27	2.0	.3	307	.2	.3	349

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	810 CAYS			805 DAYS			807 DAYS		
1	1.03	1.22	132	.88	1.07	346	.91	1.12	59
2	.45	1.14	288	1.19	.77	253	1.11	.43	1
3	1.05	.66	105	.53	.70	315	1.26	.80	149
4	.95	.67	294	.41	.68	256	1.06	.58	84
	844 DAYS			836 DAYS			946 DAYS		
1	1.88	.98	306	1.69	.97	1	1.14	.82	149
2	.22	.77	337	1.08	.54	293	1.53	.82	171
3	.87	.43	279	.52	.50	26	1.51	.87	145
4	.15	.31	140	.51	.45	54	1.07	.68	142
	816 DAYS			815 DAYS			820 DAYS		
1	1.29	.72	332	1.12	.47	143	1.69	.89	193
2	.25	.39	147	.88	.55	336	1.64	.69	59
3	.59	.37	39	.19	.38	75	.72	.49	294
4	.41	.35	137	.27	.30	147	.76	.48	301
	2470 DAYS			2456 CAYS			2473 DAYS		
1	.67	.56	323	.66	.50	13	.76	.42	155
2	.15	.49	290	.85	.33	290	.57	.41	79
3	.18	.35	57	.29	.33	5	.74	.40	157
4	.15	.27	264	.07	.35	88	.38	.34	109

CBB TABLE-B

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	692 DAYS			687 DAYS			690 DAYS		
1	44.3	1.3	62	57.6	1.0	309	72.5	.9	1
2	11.6	1.1	324	4.2	.6	8	27.1	.6	146
3	7.5	.6	177	3.5	.6	107	3.5	.8	16
4	4.7	.6	35	3.2	.4	333	.8	.4	70
				*** SEASON E ***					
	681 DAYS			673 DAYS			685 DAYS		
1	27.7	.9	57	48.0	1.0	317	52.5	.7	8
2	2.9	.6	151	1.6	.5	44	19.7	.5	146
3	2.1	.3	146	2.0	.5	309	5.7	.7	352
4	4.3	.3	22	3.3	.4	290	1.4	.6	47
				*** SEASON D ***					
	696 DAYS			695 DAYS			697 DAYS		
1	31.1	.4	75	29.1	.5	323	18.7	.6	8
2	5.7	.4	332	4.8	.5	247	9.3	.6	156
3	2.1	.4	28	4.6	.3	306	5.8	.5	6
4	1.5	.3	14	.8	.2	256	.6	.4	218
				*** ANNUAL Y ***					
	2069 DAYS			2055 DAYS			2072 DAYS		
1	33.8	.6	63	44.6	.5	315	54.4	.3	5
2	6.7	.4	330	1.5	.4	321	18.6	.3	148
3	2.6	.3	162	1.2	.3	327	4.9	.4	3
4	3.5	.2	27	2.2	.2	305	.6	.2	61

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
				*** SEASON J ***					
	692 DAYS			687 DAYS			690 DAYS		
1	2.47	1.41	178	.66	1.10	82	1.36	.93	66
2	1.09	1.11	315	2.02	.65	251	1.11	.64	327
3	1.11	.63	68	.31	.64	285	1.83	.80	130
4	.98	.69	296	.55	.43	292	.87	.46	37
				*** SEASON E ***					
	681 DAYS			673 DAYS			685 DAYS		
1	2.33	.95	291	1.25	1.07	14	2.10	.81	165
2	.42	.69	109	1.57	.51	297	1.27	.50	145
3	.98	.32	308	.04	.53	269	1.45	.70	160
4	1.05	.38	187	.17	.43	62	1.12	.66	85
				*** SEASON D ***					
	696 DAYS			695 DAYS			697 DAYS		
1	.52	.44	246	1.77	.59	120	2.07	.65	188
2	.51	.41	40	1.00	.53	324	1.93	.62	52
3	.54	.42	59	.26	.30	54	.72	.54	209
4	.18	.28	85	.17	.23	231	.23	.38	242
				*** ANNUAL Y ***					
	2069 DAYS			2055 DAYS			2072 DAYS		
1	1.06	.61	234	.82	.50	84	1.26	.33	163
2	.36	.44	355	1.34	.39	283	.71	.33	55
3	.50	.33	31	.09	.33	338	.87	.43	152
4	.34	.25	236	.17	.20	290	.52	.20	64

CBB TABLE-C

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL QUIET DAYS ONLY)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	138 DAYS			137 DAYS			138 DAYS		
1	23.2	2.5	82	30.7	1.2	308	50.3	2.4	352
2	19.2	1.4	322	7.6	.8	286	18.7	1.5	141
3	7.0	1.1	158	5.2	.9	95	.6	1.4	84
4	1.5	1.1	25	2.7	1.0	293	1.6	1.1	317
	135 DAYS			132 DAYS			135 DAYS		
1	11.4	1.9	78	23.0	1.2	315	32.6	1.4	0
2	7.1	1.1	335	2.1	.6	329	17.6	.6	147
3	3.9	.8	137	.3	.8	299	5.8	.8	328
4	3.6	.7	10	4.0	.4	288	2.3	.3	52
	138 DAYS			138 DAYS			137 DAYS		
1	11.3	.8	90	13.0	.8	324	23.5	.9	359
2	5.5	.7	337	3.2	.5	263	8.7	.4	139
3	2.1	.4	87	2.2	.3	300	5.4	.4	349
4	2.2	.2	354	1.4	.4	268	.5	.4	107
	411 DAYS			407 DAYS			410 DAYS		
1	15.3	1.1	83	22.1	.7	314	35.4	.7	356
2	10.5	.9	328	4.1	.5	287	15.0	.5	143
3	3.9	.6	142	1.1	.4	74	3.6	.5	341
4	2.4	.4	9	2.6	.4	286	.9	.3	26

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	138 DAYS			137 DAYS			138 DAYS		
1	3.89	2.76	233	1.43	1.31	99	1.81	2.57	157
2	.98	1.46	79	2.79	.86	288	2.45	1.56	48
3	.59	1.20	32	1.81	.98	40	1.97	1.44	214
4	.62	1.16	118	.36	1.04	34	1.39	1.18	91
	135 DAYS			132 DAYS			135 DAYS		
1	1.26	2.04	293	1.98	1.34	41	1.68	1.52	176
2	1.08	1.20	98	.86	.70	342	.96	.71	234
3	1.06	.84	249	1.04	.83	129	.70	.80	216
4	.54	.79	73	.20	.48	70	.91	.35	163
	138 DAYS			138 DAYS			137 DAYS		
1	1.68	.87	58	1.23	.86	49	1.50	.95	281
2	.41	.71	170	.96	.54	225	.63	.46	335
3	.58	.42	338	.33	.30	61	.21	.41	73
4	.66	.25	165	.55	.38	145	.47	.40	309
	411 DAYS			407 DAYS			410 DAYS		
1	1.31	1.17	250	1.88	.72	80	1.94	.79	183
2	1.04	.94	114	1.15	.50	283	.91	.49	5
3	.54	.60	327	.65	.43	57	.75	.51	218
4	.45	.48	126	.31	.42	110	.50	.34	120

*** SEASON J ***

*** SEASON S ***

*** SEASON O ***

*** ANNUAL Y ***

CBB TABLE-E

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** JANUARY ***									
	168 DAYS			168 DAYS			174 DAYS				168 DAYS			168 DAYS			174 DAYS		
1	21.5	1.3	77	25.9	1.0	319	38.7	1.3	3	1	2.29	1.45	217	2.12	1.11	141	2.80	1.39	137
2	7.1	1.2	320	5.7	.8	236	8.3	1.0	147	2	.90	1.30	103	1.96	.84	334	4.14	1.04	46
3	1.4	.8	51	4.6	.8	284	5.6	1.0	4	3	1.23	.88	30	.61	.84	301	1.60	1.08	299
4	1.6	.9	332	1.1	.7	221	1.4	1.2	189	4	.62	.93	147	.32	.72	195	.33	1.24	63
										*** FEBRUARY ***									
	159 DAYS			158 DAYS			158 DAYS				159 DAYS			158 DAYS			158 DAYS		
1	25.8	2.0	61	36.9	2.2	316	45.7	1.8	2	1	2.90	2.13	64	2.81	2.35	67	5.88	1.95	218
2	3.4	1.0	295	3.8	1.0	206	14.9	1.5	152	2	1.51	1.04	345	1.24	1.05	298	3.50	1.55	104
3	3.1	.6	4	6.9	.9	283	9.5	1.0	353	3	1.42	.72	97	1.35	.98	52	.84	1.04	37
4	1.8	.9	2	1.7	.8	230	1.9	1.0	188	4	.92	.92	21	1.32	.88	339	.22	1.07	57
										*** MARCH ***									
	180 DAYS			180 DAYS			180 DAYS				180 DAYS			180 DAYS			180 DAYS		
1	33.5	1.9	59	47.3	1.6	319	53.8	2.1	3	1	2.86	2.02	301	4.61	1.76	8	6.17	2.29	163
2	1.9	1.2	271	3.0	.8	155	18.8	1.1	144	2	1.30	1.30	221	3.15	.87	290	4.09	1.16	128
3	1.2	.9	41	5.3	.9	303	8.1	1.0	11	3	1.96	.93	17	1.40	1.00	39	2.23	1.10	156
4	4.1	.6	27	2.7	.9	263	.8	1.2	319	4	1.63	.70	238	.97	.93	13	2.85	1.25	62
										*** APRIL ***									
	170 DAYS			166 DAYS			174 DAYS				170 DAYS			166 DAYS			174 DAYS		
1	41.4	2.6	57	58.7	2.9	317	62.1	2.5	7	1	1.41	2.84	272	1.94	3.16	21	5.47	2.72	108
2	.7	1.6	256	6.1	1.4	66	24.6	1.4	148	2	.62	1.70	8	.68	1.52	238	1.64	1.52	8
3	2.8	1.6	158	2.1	1.0	72	6.1	1.6	15	3	1.34	1.74	183	1.31	1.14	209	2.71	1.70	160
4	5.5	1.0	34	3.6	.6	287	1.4	1.2	320	4	2.50	1.08	350	2.47	.72	292	1.46	1.33	85

CBB TABLE-E---CONT'D

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
							*** MAY ***												
	164 DAYS			166 DAYS			165 DAYS				164 DAYS			166 DAYS			165 DAYS		
1	50.5	3.2	64	54.9	1.3	314	69.2	2.4	1	1	4.76	3.45	273	1.63	1.37	20	5.33	2.57	136
2	13.8	1.7	309	4.3	.9	36	27.1	2.2	153	2	3.85	1.81	177	1.86	.99	227	1.85	2.37	345
3	7.7	1.5	165	3.7	1.4	101	5.3	1.5	32	3	1.96	1.64	321	1.49	1.46	318	1.05	1.60	94
4	3.6	1.3	18	3.3	1.1	301	.9	1.2	270	4	.58	1.43	14	1.27	1.12	26	.87	1.29	284
							*** JUNE ***												
	174 DAYS			174 DAYS			173 DAYS				174 DAYS			174 DAYS			173 DAYS		
1	46.5	2.8	62	62.3	1.5	305	79.8	2.8	358	1	3.18	3.04	104	1.68	1.66	306	4.87	3.08	26
2	13.0	1.8	324	2.3	1.1	355	28.6	2.0	146	2	2.79	1.88	49	1.75	1.18	304	2.98	2.10	316
3	8.9	1.2	184	3.5	1.6	128	5.1	1.4	343	3	1.57	1.34	10	.72	1.66	323	3.18	1.50	130
4	6.8	1.4	30	3.9	.9	349	3.5	1.5	121	4	2.16	1.48	198	.93	1.01	151	1.63	1.60	33
							*** JULY ***												
	178 DAYS			178 DAYS			176 DAYS				178 DAYS			178 DAYS			176 DAYS		
1	39.4	2.7	57	58.9	2.5	306	73.8	3.0	2	1	3.59	2.89	212	1.50	2.72	86	1.26	3.23	264
2	11.2	2.0	341	5.9	1.3	7	25.9	1.7	140	2	2.50	2.15	315	2.50	1.39	244	1.04	1.83	47
3	8.1	1.4	184	4.5	1.5	116	.9	1.8	19	3	3.56	1.51	107	.68	1.59	154	1.88	1.88	157
4	3.7	1.1	56	2.5	1.1	328	1.9	1.6	22	4	2.82	1.23	307	2.23	1.16	274	.23	1.73	57
							*** AUGUST ***												
	175 DAYS			168 DAYS			175 DAYS				175 DAYS			168 DAYS			175 DAYS		
1	31.9	2.9	60	51.8	1.3	311	62.4	2.5	2	1	3.51	3.18	142	2.68	1.40	198	2.08	2.69	14
2	11.0	1.8	331	5.7	1.3	327	25.7	1.4	137	2	3.13	1.94	305	2.41	1.40	244	2.49	1.52	224
3	6.5	1.1	177	3.2	.9	73	.8	1.0	301	3	2.15	1.20	8	1.14	.90	284	2.58	1.11	111
4	4.5	1.1	36	3.2	.6	339	2.8	.7	59	4	2.03	1.18	174	.42	.64	148	2.18	.78	87

CBB TABLE-E---CONT'D

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.03W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** SEPTEMBER***									
	173 DAYS			169 DAYS			173 DAYS				173 DAYS			169 DAYS			173 DAYS		
1	21.2	1.5	51	50.0	1.9	313	52.8	2.1	13	1	3.15	1.60	249	3.53	2.06	177	5.45	2.23	300
2	6.9	.9	15	5.9	1.2	8	19.6	1.1	150	2	1.27	1.00	27	2.68	1.27	288	1.66	1.14	94
3	4.9	.6	167	.2	.7	118	4.9	1.0	326	3	1.69	.70	202	1.28	.81	130	1.38	1.04	199
4	4.7	.8	17	4.9	1.0	311	2.3	1.2	54	4	1.72	.83	197	1.11	1.06	173	1.45	1.23	44
										*** OCTOBER ***									
	177 DAYS			177 DAYS			177 DAYS				177 DAYS			177 DAYS			177 DAYS		
1	24.9	1.5	69	39.2	1.1	326	44.1	.9	16	1	.77	1.62	297	1.50	1.17	136	3.01	.94	211
2	4.5	.7	6	1.7	.8	301	16.7	1.4	160	2	.51	.73	193	1.52	.85	26	1.89	1.42	179
3	2.5	.9	70	3.7	.6	319	7.3	.9	356	3	.88	.91	265	.57	.66	145	1.55	.93	329
4	4.0	.8	27	2.5	.7	324	2.0	.9	52	4	.77	.82	125	1.43	.76	89	2.60	.99	234
										*** NOVEMBER ***									
	173 DAYS			173 DAYS			171 DAYS				173 DAYS			173 DAYS			171 DAYS		
1	19.6	1.2	78	29.2	1.5	325	37.9	1.4	11	1	.20	1.26	356	2.73	1.63	93	2.92	1.54	172
2	5.9	.7	339	4.8	1.0	251	8.4	1.1	167	2	.64	.76	101	.63	1.10	312	1.24	1.18	324
3	2.0	.5	31	4.3	.8	319	5.7	.8	22	3	1.20	.52	357	.13	.81	126	1.52	.83	217
4	1.0	.6	10	1.1	.6	274	.6	.5	52	4	.80	.62	129	.80	.67	162	.68	.59	34
										*** DECEMBER ***									
	178 DAYS			178 DAYS			176 DAYS				176 DAYS			176 DAYS			176 DAYS		
1	18.4	1.0	84	24.2	1.0	326	35.3	1.5	10	1	1.64	1.04	268	1.31	1.13	3	1.55	1.68	71
2	7.2	.6	332	6.1	.9	260	7.0	1.2	153	2	1.24	.61	68	.64	.97	346	1.07	1.23	353
3	1.9	.7	37	4.2	.5	320	3.6	1.1	13	3	.36	.75	257	.18	.58	5	.22	1.11	236
4	1.5	.5	23	.7	.5	287	1.5	.5	276	4	.10	.50	302	.44	.57	222	.82	.58	216

CBB TABLE-F-a-1

*** 0≤ R ≤ 30 ***

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
	302 DAYS			297 DAYS			304 DAYS				302 DAYS			297 DAYS			304 DAYS			
1	35.4	1.3	64	50.3	1.7	310	65.2	1.1	2	1	.86	1.43	231	1.62	1.90	197	.83	1.16	314	
2	11.8	1.4	333	6.5	1.4	340	24.4	1.1	141	2	1.88	1.52	307	1.92	1.44	290	.58	1.19	145	
3	7.2	1.0	157	3.5	.9	118	3.5	.5	353	3	1.14	1.09	121	.57	.92	131	1.17	.57	162	
4	3.9	.9	15	4.1	.7	324	1.0	.6	70	4	.49	.99	314	.44	.75	54	.89	.61	48	
	301 DAYS			293 DAYS			301 DAYS				301 DAYS			293 DAYS			301 DAYS			
1	24.0	.8	68	40.2	.9	319	49.4	1.5	9	1	4.01	.92	248	1.82	.99	296	.89	1.67	130	
2	6.3	.8	354	3.3	.7	336	18.5	.9	145	2	2.23	.84	52	2.69	.74	317	1.04	.96	164	
3	2.8	.6	142	.7	.4	296	5.9	.7	346	3	1.31	.61	283	.21	.47	170	3.12	.77	149	
4	4.1	.7	21	3.3	.4	285	2.1	.7	42	4	.80	.69	151	.25	.39	47	1.80	.79	75	
	297 DAYS			296 DAYS			295 DAYS				297 DAYS			296 DAYS			295 DAYS			
1	20.4	1.0	81	25.9	1.0	325	38.8	.9	7	1	1.76	1.13	198	3.55	1.06	90	4.00	.97	186	
2	6.8	.8	337	6.0	.8	266	9.8	.8	153	2	1.08	.84	56	1.47	.87	353	1.68	.80	29	
3	1.4	.7	41	4.3	.6	302	5.2	.7	12	3	.80	.70	24	.84	.61	62	1.49	.70	236	
4	2.0	.5	22	1.1	.4	299	.6	.8	220	4	.16	.57	131	.30	.43	163	.48	.84	321	
	900 DAYS			886 DAYS			900 DAYS				900 DAYS			886 DAYS			900 DAYS			
1	26.4	.5	70	38.6	.6	317	51.2	.8	5	1	2.10	.57	237	.59	.64	144	1.44	.82	199	
2	8.2	.5	339	4.3	.6	313	17.6	.6	145	2	1.07	.58	18	1.93	.60	317	.59	.68	78	
3	3.2	.4	145	.5	.4	308	4.8	.3	357	3	.18	.46	28	.44	.39	92	1.59	.35	170	
4	3.3	.4	19	2.7	.3	306	.8	.4	54	4	.15	.41	169	.19	.30	77	.85	.40	55	

CBB TABLE-F-a-2

*** 30< R ≤ 70 ***

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	187 DAYS			187 DAYS			185 DAYS				187 DAYS			187 DAYS			185 DAYS		
1	48.9	3.0	57	65.1	2.7	311	79.0	2.0	5	1	1.94	3.23	97	3.12	2.98	143	1.19	2.19	229
2	10.5	2.2	340	5.6	1.4	14	30.6	2.3	146	2	1.44	2.29	204	3.73	1.51	246	3.90	2.47	2
3	8.7	1.1	186	2.9	1.2	94	5.8	1.7	10	3	1.66	1.25	61	.74	1.30	261	2.01	1.79	113
4	6.1	.8	40	2.7	.9	351	.8	1.3	129	4	4.27	.95	307	1.65	1.03	266	1.50	1.42	63
	181 DAYS			181 DAYS			185 DAYS				181 DAYS			181 DAYS			185 DAYS		
1	34.0	2.2	56	53.8	2.4	319	59.4	2.2	13	1	3.97	2.37	27	3.68	2.66	14	3.53	2.42	181
2	1.7	1.7	306	2.2	1.2	180	19.9	1.5	146	2	2.66	1.84	255	1.47	1.28	249	1.76	1.56	148
3	.8	1.1	160	4.7	.8	303	4.9	1.5	25	3	1.19	1.22	341	1.24	.91	13	1.95	1.54	178
4	3.7	.9	13	3.6	.8	281	1.7	1.4	63	4	1.27	.97	199	1.18	.86	137	.52	1.47	209
	192 DAYS			192 DAYS			196 DAYS				192 DAYS			192 DAYS			196 DAYS		
1	22.2	1.5	72	30.0	.9	321	41.3	1.6	10	1	1.68	1.63	302	2.54	.96	161	1.98	1.75	186
2	7.0	.7	313	5.9	.9	239	10.0	1.2	149	2	1.58	.78	164	.85	.99	316	3.17	1.32	66
3	2.5	.9	35	4.6	.6	304	6.8	1.1	1	3	1.06	.99	286	.72	.62	206	.42	1.16	316
4	1.5	.4	359	1.1	.5	239	.5	.8	249	4	.41	.49	88	.26	.57	359	.50	.83	319
	560 DAYS			560 DAYS			566 DAYS				560 DAYS			560 DAYS			566 DAYS		
1	34.7	1.6	60	49.3	.8	316	59.4	.8	9	1	1.40	1.72	35	1.59	.86	111	2.32	.89	190
2	6.3	1.1	327	1.3	.5	272	19.9	1.0	147	2	1.44	1.14	220	1.87	.53	255	1.80	1.07	45
3	2.4	.6	173	2.3	.7	315	5.8	.7	11	3	.73	.63	358	.26	.71	293	.91	.73	147
4	3.6	.4	26	1.9	.5	300	.5	.5	88	4	1.19	.48	292	.32	.56	226	.29	.54	49

CBB TABLE-F-a-3

*** 70< R ***

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	203 DAYS			203 DAYS			201 DAYS				203 DAYS			203 DAYS			201 DAYS		
1	53.4	2.1	63	61.7	2.0	305	78.1	1.9	356	1	6.15	2.24	186	4.39	2.14	8	5.26	2.07	72
2	14.0	2.1	301	4.0	1.0	88	28.5	1.7	152	2	1.72	2.17	8	1.62	1.12	186	2.25	1.84	271
3	8.0	.8	195	4.1	.9	101	3.2	1.4	68	3	1.45	.93	28	1.45	1.01	316	3.08	1.43	118
4	5.1	1.1	54	2.6	.9	335	1.1	.9	36	4	1.47	1.21	148	.79	.94	306	.97	1.00	331
*** SEASON E ***																			
	199 DAYS			199 DAYS			199 DAYS				199 DAYS			199 DAYS			199 DAYS		
1	29.2	1.6	43	54.3	1.7	314	51.3	1.2	2	1	3.87	1.71	302	2.29	1.83	94	2.81	1.34	156
2	.8	1.3	128	5.8	1.3	77	21.3	1.1	148	2	2.26	1.33	151	.91	1.40	257	1.42	1.20	116
3	2.1	1.2	150	1.7	.9	335	7.3	.8	339	3	.78	1.22	325	.98	.97	222	1.27	.83	330
4	5.3	1.3	27	3.1	.8	307	.3	.6	17	4	1.64	1.34	207	.94	.85	324	1.51	.62	89
*** SEASON O ***																			
	207 DAYS			207 DAYS			206 DAYS				207 DAYS			207 DAYS			206 DAYS		
1	21.5	1.1	69	32.9	1.2	322	36.0	1.4	5	1	1.13	1.18	27	1.05	1.30	239	.50	1.48	327
2	3.6	1.0	354	3.1	.7	209	8.2	1.1	169	2	1.94	1.10	346	1.03	.73	275	1.29	1.19	60
3	2.7	.6	13	5.0	.6	312	5.6	1.0	4	3	2.03	.64	100	.61	.61	355	1.73	1.10	351
4	.9	.4	11	.9	.6	206	.7	.7	193	4	.18	.41	12	.59	.64	249	1.27	.74	177
*** ANNUAL Y ***																			
	609 DAYS			609 DAYS			606 DAYS				609 DAYS			609 DAYS			606 DAYS		
1	34.2	1.1	59	49.1	.8	312	54.9	.9	360	1	1.58	1.15	224	1.55	.90	19	2.23	.97	89
2	5.2	.8	311	2.7	.7	100	19.1	.6	153	2	.71	.88	31	.84	.70	230	.10	.65	162
3	2.3	.6	184	1.4	.4	354	4.5	.8	3	3	.88	.62	54	.64	.46	295	.70	.83	52
4	3.6	.5	38	1.7	.4	310	.3	.4	48	4	.82	.50	177	.68	.43	301	.40	.43	111

CBB TABLE-G-1

*** 0.0≤ CP ≤ .5 ***

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	407 DAYS			401 DAYS			408 DAYS		
1	30.7	1.3	69	42.1	.8	307	60.2	1.3	357
2	15.1	.8	325	5.2	.6	310	22.7	.9	142
3	6.9	.8	178	4.6	.7	113	1.4	.9	324
4	3.3	.6	40	4.1	.5	330	1.1	.5	56
*** SEASON E ***									
	330 DAYS			324 DAYS			330 DAYS		
1	16.1	.9	69	29.9	.7	318	39.9	1.2	1
2	6.9	.8	342	2.3	.7	326	10.4	.7	145
3	3.9	.7	135	.4	.5	20	5.9	.5	328
4	4.6	.4	7	3.6	.4	291	2.0	.5	38
*** SEASON D ***									
	408 DAYS			408 DAYS			406 DAYS		
1	14.8	.5	82	19.4	.4	323	29.9	.8	4
2	5.5	.4	345	3.9	.4	269	9.5	.5	141
3	1.8	.2	59	3.2	.3	302	6.3	.3	0
4	1.7	.2	20	1.3	.3	284	.9	.5	136
*** ANNUAL Y ***									
	1145 DAYS			1133 DAYS			1144 DAYS		
1	20.7	.6	72	30.2	.4	314	43.6	.6	360
2	9.2	.4	333	3.6	.4	299	16.8	.4	143
3	3.3	.4	154	.6	.3	80	4.2	.4	344
4	3.0	.2	22	2.8	.3	309	1.0	.2	63

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	407 DAYS			401 DAYS			408 DAYS		
1	2.88	1.43	234	.60	.88	243	1.98	1.45	110
2	1.26	.82	33	1.98	.62	294	1.49	.99	326
3	.71	.86	77	.25	.69	28	1.51	.91	181
4	.25	.69	212	1.00	.5A	336	.56	.51	56
*** SEASON E ***									
	330 DAYS			324 DAYS			330 DAYS		
1	1.94	.98	298	1.50	.75	40	1.58	1.28	244
2	.79	.87	69	1.06	.73	330	1.10	.78	183
3	.95	.73	254	.85	.57	100	.85	.57	231
4	.51	.41	156	.24	.41	141	.92	.50	172
*** SEASON D ***									
	408 DAYS			408 DAYS			406 DAYS		
1	.47	.55	224	1.24	.44	131	1.24	.92	262
2	.89	.45	341	1.14	.43	280	.51	.57	22
3	.22	.25	66	.27	.31	100	.46	.29	140
4	.15	.26	207	.20	.31	182	.17	.50	316
*** ANNUAL Y ***									
	1145 DAYS			1133 DAYS			1144 DAYS		
1	1.70	.67	254	.80	.41	115	1.09	.62	202
2	.70	.46	31	1.35	.42	294	.61	.42	328
3	.15	.40	43	.32	.34	74	.74	.38	182
4	.28	.25	183	.19	.30	329	.20	.21	131

CBB TABLE-G-2

*** .5< CP ≤1.2 ***

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																		
	330 DAYS			331 DAYS			326 DAYS			330 DAYS			331 DAYS			326 DAYS		
1	62.8	1.7	56	82.2	1.5	309	92.7	2.1	5	1 1.65	1.82	187	2.97	1.63	165	4.01	2.23	296
2	7.2	1.7	320	9.5	1.2	53	33.0	1.1	151	2 1.20	1.81	274	2.64	1.23	214	.54	1.23	67
3	8.2	1.1	173	2.9	1.2	75	8.2	1.5	28	3 .52	1.19	331	1.65	1.24	270	.71	1.54	81
4	5.3	.9	33	1.6	1.0	349	1.1	.7	165	4 2.25	.87	339	1.06	1.02	238	1.60	.93	92
*** SEASON E ***																		
	362 DAYS			360 DAYS			363 DAYS			362 DAYS			360 DAYS			363 DAYS		
1	37.5	1.0	53	64.0	1.5	317	64.0	1.8	13	1 2.93	1.08	300	1.02	1.62	17	4.16	1.93	171
2	1.8	1.1	82	4.4	.8	63	20.7	1.2	146	2 1.43	1.16	140	1.19	.84	290	1.17	1.24	139
3	1.6	.7	191	3.1	1.1	305	6.5	1.1	11	3 1.33	.76	321	.62	1.15	277	2.73	1.13	154
4	4.7	.6	36	2.7	.8	298	.7	.9	40	4 1.63	.60	191	.67	.85	60	2.17	.95	72
*** SEASON O ***																		
	338 DAYS			337 DAYS			341 DAYS			338 DAYS			337 DAYS			341 DAYS		
1	30.3	1.4	70	42.5	1.2	323	51.3	1.3	11	1 2.40	1.48	3	.62	1.34	322	2.59	1.38	160
2	5.8	.9	320	7.6	1.0	234	8.5	1.1	174	2 1.20	.92	107	1.36	1.10	358	3.16	1.19	61
3	3.2	.7	354	6.4	.8	307	4.4	1.1	11	3 .75	.72	64	.60	.89	327	1.73	1.10	298
4	1.5	.5	2	.7	.6	224	1.2	.8	237	4 .41	.57	142	.22	.64	171	.62	.85	280
*** ANNUAL Y ***																		
	1030 DAYS			1028 DAYS			1030 DAYS			1030 DAYS			1028 DAYS			1030 DAYS		
1	43.0	.7	58	62.6	.8	315	68.7	1.0	9	1 1.08	.78	330	.37	.88	278	1.14	1.08	197
2	3.9	.7	328	2.1	.6	59	20.3	.6	152	2 .56	.78	133	.66	.69	273	1.45	.64	88
3	2.1	.7	177	2.7	.6	322	6.3	.8	18	3 .49	.69	337	.77	.68	279	.57	.80	162
4	3.8	.3	30	1.3	.4	306	.4	.5	191	4 .23	.34	284	.14	.46	211	1.08	.56	76

CBB TABLE-G-3

*** 1.2< CP ***

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***	73 DAYS			73 DAYS			73 DAYS		
1	105.2	7.2	48	129.7	6.2	311	120.0	6.5	9
2	10.4	5.4	179	16.3	4.4	86	29.7	4.8	156
3	6.4	4.4	211	8.5	3.8	339	6.9	4.1	44
4	4.4	3.8	38	3.1	4.0	12	4.4	4.9	279
*** SEASON E ***	152 DAYS			152 DAYS			153 DAYS		
1	71.6	3.3	52	106.4	3.1	319	93.1	3.8	22
2	4.8	1.9	166	4.2	1.9	134	17.0	2.3	163
3	2.4	1.7	348	8.7	1.6	332	7.3	2.8	53
4	5.8	1.9	35	2.2	2.0	294	3.2	2.2	273
*** SEASON O ***	70 DAYS			70 DAYS			73 DAYS		
1	49.6	3.2	74	79.7	3.4	321	81.6	5.4	22
2	16.1	2.3	329	17.1	2.9	243	9.3	2.7	234
3	4.3	2.5	355	8.8	2.5	309	7.8	2.4	79
4	2.4	2.6	255	3.1	2.1	245	4.1	2.6	309
*** ANNUAL Y ***	295 DAYS			295 DAYS			299 DAYS		
1	73.8	2.6	54	105.5	2.6	317	96.3	2.9	18
2	2.1	1.5	218	3.6	1.4	148	16.7	1.8	167
3	1.4	1.5	306	8.5	1.0	328	7.2	2.0	58
4	3.7	1.4	30	1.8	1.9	300	3.6	2.0	284

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***	73 DAYS			73 DAYS			73 DAYS		
1	8.62	7.87	48	6.92	6.72	8	6.12	7.07	167
2	2.76	5.78	258	4.70	4.65	14	8.60	5.15	43
3	10.83	4.68	123	3.10	4.04	72	3.88	4.29	160
4	7.24	4.02	236	3.56	4.23	146	3.26	5.13	97
*** SEASON E ***	152 DAYS			152 DAYS			153 DAYS		
1	2.39	3.60	226	.26	3.32	19	3.22	4.09	43
2	5.79	2.09	310	1.69	2.01	259	4.15	2.47	180
3	1.60	1.81	205	2.44	1.73	26	2.76	2.97	87
4	4.20	2.04	8	1.40	2.06	21	4.46	2.33	196
*** SEASON O ***	70 DAYS			70 DAYS			73 DAYS		
1	5.06	3.48	358	2.62	3.64	40	5.01	5.85	91
2	5.44	2.41	199	1.45	3.10	35	.87	2.91	13
3	4.07	2.57	350	1.61	2.68	113	1.54	2.57	257
4	2.14	2.67	118	1.75	2.22	105	5.48	2.79	314
*** ANNUAL Y ***	295 DAYS			295 DAYS			299 DAYS		
1	3.63	2.77	47	3.75	2.78	4	3.23	3.14	76
2	3.80	1.64	267	.85	1.50	30	2.07	1.90	132
3	2.13	1.55	132	2.17	1.09	55	1.61	2.07	116
4	.94	1.53	331	1.32	2.01	95	1.71	2.12	212

CBB TABLE-H-1 and H-2

*** L U N A R H A R M O N I C S ***

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	PERIGEE ± 3 DAYS										APOGEE ± 3 DAYS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	176 DAYS			175 DAYS			177 DAYS				174 DAYS			174 DAYS			174 DAYS		
1	7.19	2.84	169	6.35	2.22	67	7.94	2.43	111	1	1.80	1.94	17	4.45	2.13	347	5.51	2.83	340
2	1.86	1.71	261	5.43	1.67	222	2.34	1.98	334	2	1.26	1.92	96	.22	1.34	267	1.28	2.18	201
3	1.94	1.46	4	2.78	.90	319	1.61	1.38	132	3	1.33	1.92	346	1.17	.80	55	2.08	2.52	179
4	1.16	1.28	214	1.92	.97	120	.81	1.27	22	4	1.54	1.61	239	.74	.95	270	2.26	1.36	87
*** SEASON E ***																			
	172 DAYS			172 DAYS			173 DAYS				175 DAYS			167 DAYS			176 DAYS		
1	7.47	2.52	291	4.37	1.54	247	3.01	3.24	209	1	1.49	1.76	84	5.00	1.37	59	1.98	1.75	202
2	3.74	1.67	87	3.83	1.59	10	2.64	1.86	163	2	1.70	.95	254	2.66	1.16	237	1.68	1.18	126
3	2.50	.82	265	.46	.82	181	1.04	1.71	163	3	.62	1.00	356	1.03	.92	79	1.34	.99	195
4	1.91	.84	119	1.18	.97	77	.96	1.36	85	4	2.16	.83	205	.87	.70	151	.79	1.05	69
*** SEASON O ***																			
	174 DAYS			174 DAYS			174 DAYS				173 DAYS			172 DAYS			173 DAYS		
1	.29	.99	317	.77	.94	96	2.31	1.49	202	1	2.24	1.66	212	2.94	1.49	114	5.13	1.59	153
2	.99	.93	3	1.46	.84	298	2.67	1.09	26	2	.83	.83	38	.86	.76	307	3.30	1.02	53
3	.45	.85	1	.50	.73	36	1.26	1.25	233	3	1.18	.78	135	.83	.68	211	.92	.95	319
4	.51	.82	248	.59	.44	203	.61	.87	3	4	.48	.71	300	.98	.55	234	.75	1.08	62
*** ANNUAL Y ***																			
	522 DAYS			521 DAYS			524 DAYS				522 DAYS			513 DAYS			523 DAYS		
1	2.42	1.24	223	.44	.76	86	2.76	1.26	141	1	.37	1.00	115	2.80	.79	43	.31	1.11	154
2	.89	1.00	45	1.51	.76	280	.63	.76	23	2	.16	.61	52	1.05	.54	253	1.10	.91	94
3	1.08	.70	306	.79	.59	327	1.01	.91	169	3	.35	.77	9	.48	.45	93	.98	1.01	197
4	.78	.59	169	1.03	.55	118	.58	.68	38	4	1.20	.54	226	.57	.45	219	1.23	.71	78

CBB TABLE-H-3 and H-4

*** L U N A R H A R M O N I C S ***

STATION - CAMBRIDGE BAY (CANADA) M2 - TIDE PERIOD JAN 1 1973 - DEC 31 1979
LATITUDE= 69.10N LONGITUDE=105.00W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	MOON RECEDING										MOON APPROACHING									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
	176 DAYS			172 DAYS			173 DAYS				166 DAYS			166 DAYS			166 DAYS			
1	5.24	3.84	246	7.60	2.24	169	5.95	2.75	227	1	3.45	3.53	135	3.29	2.15	273	5.13	2.75	46	
2	4.55	2.53	301	4.29	1.30	287	3.57	2.26	8	2	2.42	1.51	42	.96	1.28	35	1.79	1.94	228	
3	4.26	1.64	106	1.28	1.31	114	3.44	2.43	159	3	.92	1.86	199	2.95	1.28	207	3.22	1.33	60	
4	2.25	1.76	342	2.79	1.37	270	1.63	1.32	339	4	1.63	1.64	326	1.57	1.07	357	.70	1.35	10	
	164 DAYS			164 DAYS			166 DAYS				170 DAYS			170 DAYS			170 DAYS			
1	1.02	2.46	281	3.85	2.45	30	2.81	2.39	86	1	1.62	1.97	244	.62	1.73	341	3.70	2.24	163	
2	1.89	1.26	323	3.10	1.70	258	1.11	1.34	31	2	1.71	1.20	172	1.37	1.07	314	1.74	1.66	177	
3	.92	.97	301	.84	.77	273	2.14	1.79	158	3	1.45	1.14	16	.69	.85	318	1.99	1.08	147	
4	.42	1.04	342	.89	1.02	266	1.84	1.03	82	4	2.10	.84	216	.69	.92	20	.93	1.18	125	
	171 DAYS			171 DAYS			168 DAYS				178 DAYS			178 DAYS			182 DAYS			
1	.93	1.35	232	1.25	1.68	138	2.13	2.16	354	1	1.56	.93	23	2.21	1.38	122	3.90	1.30	219	
2	.57	.87	341	1.36	.80	288	.43	1.32	320	2	.78	1.15	125	1.71	.83	25	2.21	1.05	89	
3	1.38	.77	349	.88	.75	345	1.12	1.56	237	3	1.14	.82	71	1.23	.75	79	1.54	.84	353	
4	.51	.80	19	.77	.65	79	1.83	.96	236	4	1.28	.69	102	.75	.65	352	.63	.76	232	
	511 DAYS			507 DAYS			507 DAYS				514 DAYS			514 DAYS			518 DAYS			
1	2.43	1.85	256	2.55	1.39	140	1.34	1.30	227	1	.49	.97	139	.43	1.16	245	1.44	1.20	167	
2	2.33	.84	304	2.92	.71	275	1.77	.91	10	2	.87	.70	114	1.02	.59	7	.93	1.15	150	
3	1.18	.64	80	.21	.49	17	1.99	1.00	166	3	.60	.82	54	.54	.58	200	1.31	.46	62	
4	1.07	.66	349	1.01	.73	273	.30	.61	341	4	.30	.58	233	.99	.52	356	.13	.59	121	

*** SEASON J ***

*** SEASON E ***

*** SEASON D ***

*** ANNUAL Y ***

CBB TABLE - I

The O_1 and N_2 Tides Derived From Hourly Magnetic Data of CAMBRIDGE BAY (1973-1979). The International Disturbed Days have been Excluded From the Computations.

	X		Y		Z	
	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase
			SEASON-J			
	692 days		687 days		690 days	
O_1	3.40 ± 1.65	287°	0.22 ± 1.30	191°	2.08 ± 1.30	169°
N_2	0.84 ± 0.63	319°	0.16 ± 0.83	303°	1.68 ± 1.12	82°
			SEASON-E			
	681 days		673 days		685 days	
O_1	2.01 ± 1.01	347°	3.39 ± 1.09	353°	3.70 ± 0.90	132°
N_2	1.97 ± 0.73	84°	1.34 ± 0.65	8°	0.88 ± 0.79	113°
			SEASON-D			
	696 days		695 days		697 days	
O_1	0.76 ± 0.62	170°	1.36 ± 0.73	40°	1.67 ± 0.59	116°
N_2	0.59 ± 0.58	62°	0.60 ± 0.43	355°	0.61 ± 0.49	314°
			SEASON-Y			
	2069 days		2055 days		2072 days	
O_1	1.15 ± 0.84	296°	1.62 ± 0.87	9°	2.56 ± 0.53	132°
N_2	0.82 ± 0.34	55°	0.71 ± 0.31	356°	0.67 ± 0.40	74°

MOULD BAY

August 1, 1962 December 31, 1979

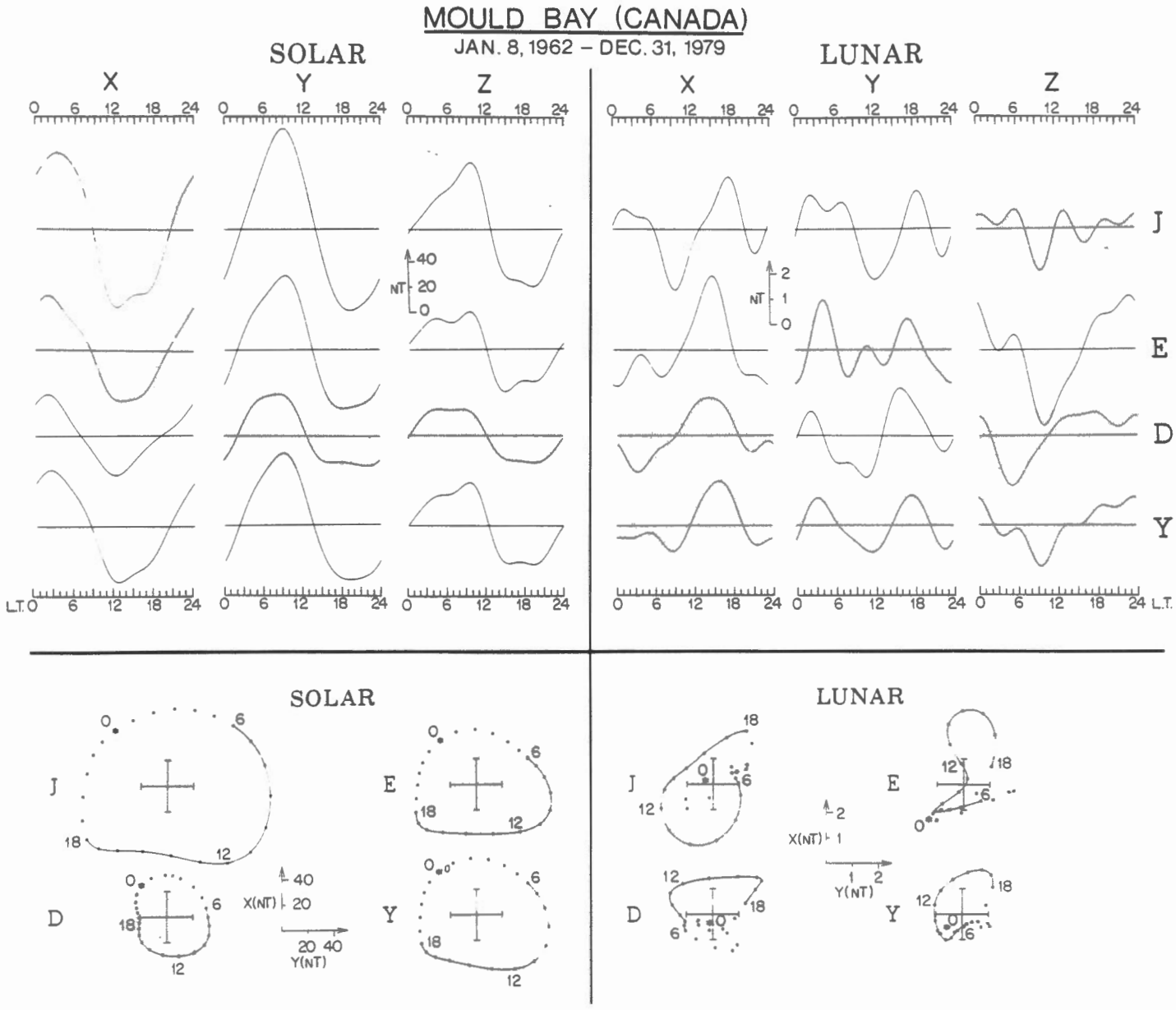
MOULD BAY (CANADA)
JAN. 8, 1962 – DEC. 31, 1979
SOLAR
LUNAR
X
Y
Z
J
E
D
Y
LT.
NT
X(NT)
Y(NT)

FIGURE 1 MBC

MBC Table - A

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	1831 DAYS			1828 DAYS			1829 DAYS				1831 DAYS			1828 DAYS			1829 DAYS		
1	71.4	1.1	51	79.4	.9	322	49.5	.9	345	1	.97	1.17	67	.45	1.00	356	.63	.93	258
2	6.8	.7	276	9.5	.5	145	12.0	.6	136	2	.76	.75	324	1.10	.52	285	.61	.61	32
3	6.2	.6	140	2.4	.4	333	6.7	.5	360	3	.18	.66	321	.69	.43	22	.30	.51	220
4	3.0	.5	295	.6	.5	237	4.1	.3	155	4	.27	.53	12	.53	.49	340	.39	.37	352
*** SEASON E ***																			
	1900 DAYS			1905 DAYS			1905 DAYS				1900 DAYS			1905 DAYS			1905 DAYS		
1	49.1	.7	60	62.5	.4	331	35.8	.5	6	1	1.10	.76	178	.69	.47	58	1.42	.55	105
2	.9	.4	275	7.5	.4	158	5.6	.3	159	2	1.29	.47	319	.96	.41	276	.26	.31	211
3	2.2	.3	83	5.5	.3	314	7.2	.3	2	3	.30	.35	129	.38	.34	330	.43	.36	149
4	2.4	.2	332	.7	.3	210	3.7	.3	176	4	.40	.21	210	.56	.30	168	.18	.29	88
*** SEASON D ***																			
	1881 DAYS			1881 DAYS			1870 DAYS				1881 DAYS			1881 DAYS			1870 DAYS		
1	33.4	.4	74	36.2	.3	337	28.6	.3	360	1	.95	.44	299	.92	.28	197	1.36	.35	204
2	6.4	.3	334	8.0	.4	233	.4	.2	283	2	.11	.35	266	.95	.45	347	.44	.26	80
3	2.6	.2	38	3.7	.2	313	3.5	.2	356	3	.35	.24	90	.31	.25	21	.23	.22	84
4	1.3	.2	303	1.2	.3	198	.7	.2	185	4	.22	.21	114	.08	.35	281	.33	.22	60
*** ANNUAL Y ***																			
	5612 DAYS			5614 DAYS			5604 DAYS				5612 DAYS			5614 DAYS			5604 DAYS		
1	50.5	.5	59	58.9	.3	328	37.4	.3	356	1	.12	.52	115	.09	.35	34	.55	.37	171
2	4.1	.3	302	6.5	.2	175	5.6	.2	145	2	.71	.34	317	.83	.23	300	.23	.24	65
3	2.7	.2	107	3.9	.2	318	5.8	.2	360	3	.16	.21	102	.42	.17	8	.21	.23	153
4	2.1	.2	310	.8	.2	211	2.7	.2	167	4	.06	.20	165	.05	.26	248	.22	.17	39

MBC Table - B

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS										LUNAR HARMONICS									
X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			N	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE		AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																		
1547 DAYS			1544 DAYS			1545 DAYS				1547 DAYS			1544 DAYS			1545 DAYS		
62.2	.8	51	70.6	.7	323	45.0	.7	344	1	.95	.89	143	.86	.81	66	.45	.80	94
6.0	.4	287	9.0	.4	151	11.2	.4	138	2	1.27	.43	322	1.11	.44	273	.35	.46	359
6.3	.3	151	1.6	.5	322	6.4	.3	1	3	.16	.32	353	.56	.53	7	.51	.28	206
3.3	.4	298	1.1	.5	272	4.0	.3	156	4	.46	.46	56	.42	.53	354	.45	.31	45
*** SEASON E ***																		
1562 DAYS			1566 DAYS			1566 DAYS				1562 DAYS			1566 DAYS			1566 DAYS		
40.6	.7	58	53.5	.4	331	30.2	.7	4	1	1.51	.80	233	.08	.47	320	1.99	.74	114
.5	.5	265	7.4	.4	154	5.7	.3	159	2	1.02	.53	351	.99	.47	308	.48	.31	282
1.6	.4	79	5.4	.3	307	6.7	.4	359	3	.26	.40	155	.62	.31	295	.48	.38	162
2.5	.2	335	.6	.3	202	3.7	.3	173	4	.31	.22	204	.51	.36	172	.40	.29	88
*** SEASON O ***																		
1584 DAYS			1584 DAYS			1576 DAYS				1584 DAYS			1584 DAYS			1576 DAYS		
27.7	.4	74	30.0	.4	337	23.6	.4	356	1	1.20	.40	236	.98	.45	163	1.14	.40	186
4.9	.3	334	6.5	.3	227	.4	.2	169	2	.32	.28	58	1.02	.36	339	.53	.20	94
2.6	.2	30	3.4	.2	311	3.3	.2	352	3	.27	.22	121	.31	.20	47	.31	.24	56
1.1	.1	309	1.3	.2	189	.8	.1	185	4	.18	.14	115	.33	.24	306	.17	.16	43
*** ANNUAL Y ***																		
4693 DAYS			4694 DAYS			4687 DAYS				4693 DAYS			4694 DAYS			4687 DAYS		
42.9	.3	58	51.0	.3	329	32.4	.2	353	1	.96	.34	214	.36	.36	116	.98	.25	131
3.4	.2	306	6.4	.3	172	5.6	.2	146	2	.75	.19	344	.92	.27	306	.13	.18	8
2.2	.2	116	3.5	.1	310	5.5	.2	358	3	.12	.17	125	.35	.13	344	.25	.17	166
2.2	.2	313	.8	.3	220	2.8	.2	166	4	.14	.19	103	.09	.29	294	.31	.17	62

MBC Table - C

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL QUIET DAYS ONLY)

SOLAR HARMONICS										LUNAR HARMONICS									
X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			N	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE		AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																		
305 DAYS			305 DAYS			304 DAYS				305 DAYS			305 DAYS			304 DAYS		
33.4	1.3	48	50.7	1.3	322	29.9	2.0	342	1	2.04	1.44	176	1.52	1.44	48	2.27	2.17	90
6.1	1.0	344	7.5	.8	151	5.4	.9	124	2	1.45	1.06	338	1.39	.90	283	.67	1.02	328
6.9	.8	178	1.5	.6	209	2.9	.8	23	3	.78	.82	199	.88	.63	96	.13	.89	296
5.1	.6	310	1.8	.6	272	2.8	.7	171	4	.97	.65	44	.55	.60	51	.11	.73	332
*** SEASON E ***																		
305 DAYS			305 DAYS			305 DAYS				305 DAYS			305 DAYS			305 DAYS		
20.1	.6	54	34.1	.9	329	16.5	1.0	6	1	1.88	.63	202	1.47	.96	136	.57	1.09	98
1.0	.6	101	8.4	.7	142	4.4	.7	171	2	.74	.60	348	1.19	.74	337	.34	.71	358
.6	.5	135	5.3	.7	301	5.3	.5	5	3	.46	.51	330	.88	.72	189	.98	.54	146
2.5	.4	326	.3	.3	152	3.8	.4	178	4	.50	.45	114	.49	.37	19	.80	.40	291
*** SEASON D ***																		
312 DAYS			312 DAYS			311 DAYS				312 DAYS			312 DAYS			311 DAYS		
12.6	.5	73	15.3	.3	337	11.8	.5	348	1	.34	.50	165	.51	.31	73	.26	.50	43
2.6	.3	348	3.3	.3	214	.5	.3	130	2	.39	.31	0	.73	.31	328	.44	.29	261
1.3	.2	6	2.8	.2	298	2.2	.2	343	3	.29	.19	152	.35	.22	97	.21	.24	23
.9	.1	311	.8	.2	199	1.1	.1	183	4	.25	.13	111	.17	.21	174	.16	.16	229
*** ANNUAL Y ***																		
922 DAYS			922 DAYS			920 DAYS				922 DAYS			922 DAYS			920 DAYS		
21.7	.5	55	33.1	.4	326	19.0	.8	350	1	1.57	.55	191	1.15	.44	103	1.10	.83	100
2.8	.4	352	5.8	.4	157	3.2	.5	144	2	.78	.39	343	1.03	.44	313	.43	.50	314
2.0	.3	173	2.7	.4	290	3.3	.3	6	3	.14	.34	221	.44	.42	130	.24	.34	137
2.8	.3	314	.7	.2	241	2.5	.2	176	4	.50	.28	78	.29	.25	47	.33	.23	287

MBC Table - E

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** JANUARY ***																				
	390 DAYS			390 DAYS			390 DAYS				390 DAYS			390 DAYS			390 DAYS			
1	26.4	.8	72	28.3	.6	333	24.2	.6	349	1	1.39	.88	199	1.02	.63	154	2.74	.63	155	
2	5.4	.4	323	7.0	.5	221	.8	.6	133	2	1.03	.42	65	1.43	.50	15	1.30	.59	75	
3	2.1	.6	21	2.9	.5	304	3.3	.4	344	3	.38	.60	144	.42	.53	332	.59	.47	336	
4	1.6	.4	294	1.2	.5	200	.7	.4	192	4	.15	.46	344	.21	.57	275	.39	.45	303	
*** FEBRUARY ***																				
	347 DAYS			347 DAYS			347 DAYS				347 DAYS			347 DAYS			347 DAYS			
1	29.8	1.1	64	35.6	1.2	330	24.2	.9	354	1	2.01	1.16	259	1.00	1.27	110	3.38	.96	184	
2	1.9	.6	304	6.3	.6	190	1.7	.5	173	2	1.23	.64	80	1.41	.66	313	.38	.57	215	
3	3.5	.4	9	6.3	.7	297	4.1	.3	341	3	.48	.45	271	1.09	.69	82	1.21	.38	98	
4	.6	.3	317	1.5	.3	166	1.6	.4	163	4	.86	.37	68	.29	.38	11	.07	.43	11	
*** MARCH ***																				
	389 DAYS			390 DAYS			390 DAYS				389 DAYS			390 DAYS			390 DAYS			
1	38.2	1.5	57	51.1	1.3	329	29.1	1.7	359	1	3.64	1.59	200	1.35	1.38	15	4.40	1.82	114	
2	1.7	.6	211	9.2	.7	156	4.9	.5	164	2	.90	.69	14	1.50	.73	329	.76	.58	235	
3	2.6	.6	50	6.4	.7	301	6.6	.5	353	3	1.26	.68	122	1.28	.78	334	.93	.52	131	
4	2.7	.4	332	1.0	.5	186	3.4	.5	182	4	.10	.41	275	.78	.53	162	1.35	.59	104	
*** APRIL ***																				
	372 DAYS			375 DAYS			375 DAYS				372 DAYS			375 DAYS			375 DAYS			
1	51.7	2.0	53	64.0	1.7	328	33.8	2.0	355	1	3.60	2.15	131	.55	1.84	79	3.10	2.16	53	
2	2.7	1.1	175	9.7	1.0	135	7.3	1.1	144	2	2.01	1.20	316	1.20	1.05	260	.77	1.16	157	
3	3.3	.8	130	4.5	.7	298	7.5	.7	11	3	.81	.83	338	.67	.73	253	1.37	.80	282	
4	2.3	.5	330	.5	.6	311	3.6	.6	163	4	1.44	.59	132	.72	.68	59	.72	.67	53	

MBC Table - E...(Cont'd)

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS										LUNAR HARMONICS									
X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			N	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE		AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
									*** MAY ***									
387 DAYS			387 DAYS			385 DAYS				387 DAYS			387 DAYS			385 DAYS		
60.5	1.4	53	69.6	1.2	325	41.8	1.1	343	1	2.82	1.57	156	1.21	1.30	145	2.91	1.15	43
4.4	.9	294	10.5	1.2	145	12.1	1.3	139	2	4.09	.96	316	.63	1.22	262	.82	1.41	219
6.5	.7	150	1.5	1.1	332	7.2	.9	2	3	.17	.71	6	.73	1.20	34	1.09	.96	146
4.8	.9	297	1.5	.9	290	5.1	.5	156	4	.77	.99	46	.47	.91	89	.49	.53	235
									*** JUNE ***									
375 DAYS			375 DAYS			375 DAYS				375 DAYS			375 DAYS			375 DAYS		
69.1	1.8	49	75.4	1.4	320	52.0	1.4	340	1	2.75	1.97	342	2.67	1.48	42	1.55	1.48	185
10.0	1.7	291	9.0	1.5	158	13.0	1.0	146	2	2.03	1.76	102	.13	1.58	83	1.62	1.08	14
7.9	1.1	147	.7	1.4	322	7.7	1.0	357	3	1.17	1.15	286	.66	1.46	318	1.25	1.04	181
3.7	.7	287	2.0	1.1	256	4.6	.7	165	4	.82	.74	103	.04	1.17	127	.95	.71	40
									*** JULY ***									
390 DAYS			389 DAYS			390 DAYS				390 DAYS			389 DAYS			390 DAYS		
62.3	2.0	51	70.5	2.4	323	47.2	2.6	345	1	3.21	2.13	215	2.55	2.55	314	2.39	2.85	119
5.6	.7	280	9.5	1.0	149	11.6	.9	132	2	2.22	.77	4	2.17	1.07	298	.26	1.04	194
6.2	1.0	158	2.1	1.0	315	5.8	.8	353	3	1.57	1.09	134	.87	1.05	70	.83	.88	350
3.5	.6	304	1.4	.8	262	3.6	.7	150	4	1.77	.66	351	1.57	.88	328	.45	.83	10
									*** AUGUST ***									
416 DAYS			414 DAYS			416 DAYS				416 DAYS			414 DAYS			416 DAYS		
54.7	1.8	53	65.5	1.6	327	39.3	1.2	354	1	1.74	1.93	101	.75	1.78	218	1.25	1.25	296
5.3	1.0	298	6.5	1.0	160	8.5	.8	140	2	2.52	1.09	290	2.08	1.04	255	.37	.87	44
5.2	.8	163	2.0	.9	328	5.8	.7	12	3	1.23	.89	88	1.36	.95	354	1.45	.74	246
2.0	.5	327	.3	.8	42	3.4	.7	152	4	1.41	.61	229	.59	.82	305	1.49	.71	66

MBC Table - E...(Cont'd)

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

SOLAR HARMONICS											LUNAR HARMONICS									
X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEPTEMBER***																				
397 DAYS			397 DAYS			397 DAYS				397 DAYS			397 DAYS			397 DAYS			
42.2	1.1	58	59.0	1.0	331	32.3	1.1	10	1	2.84	1.15	319	.88	1.12	248	1.04	1.21	284	
1.4	.8	2	6.6	.8	152	7.0	.8	161	2	.43	.82	26	1.31	.83	303	1.35	.81	327	
1.6	.6	117	4.8	.5	322	7.8	.7	2	3	.97	.68	227	.77	.50	254	.96	.74	148	
3.0	.4	334	.7	1.2	229	5.2	.5	173	4	.21	.41	174	1.31	1.21	176	.02	.56	202	
*** OCTOBER ***																				
415 DAYS			415 DAYS			415 DAYS				415 DAYS			415 DAYS			415 DAYS			
34.3	.7	70	41.7	.9	339	25.3	.9	10	1	2.04	.81	269	1.52	.92	183	1.56	.99	192	
1.5	.6	351	5.1	.6	196	2.9	.7	174	2	.31	.65	242	1.06	.60	40	.29	.72	94	
3.8	.3	34	5.8	.5	310	4.0	.5	357	3	.28	.37	141	.28	.48	258	.64	.57	67	
1.0	.3	347	1.3	.5	144	1.6	.3	172	4	.25	.34	268	.20	.52	303	.58	.29	256	
*** NOVEMBER ***																				
400 DAYS			400 DAYS			399 DAYS				400 DAYS			400 DAYS			399 DAYS			
28.3	.8	77	30.3	.6	341	23.7	.6	359	1	1.49	.84	282	1.56	.69	154	.93	.63	289	
6.5	.5	343	7.0	.5	235	.4	.4	210	2	.17	.53	240	1.02	.56	294	.32	.38	44	
2.5	.3	44	3.4	.3	324	3.6	.3	1	3	.43	.36	334	.36	.31	280	.13	.33	273	
1.0	.3	323	1.7	.3	221	1.1	.3	199	4	.57	.36	146	.48	.37	290	.47	.34	82	
*** DECEMBER ***																				
415 DAYS			415 DAYS			408 DAYS				415 DAYS			415 DAYS			408 DAYS			
25.2	.6	78	25.9	.8	339	22.5	1.1	356	1	.31	.68	114	.44	.91	51	.68	1.22	135	
5.3	.6	335	6.8	.8	239	.8	.5	28	2	.14	.66	198	.70	.84	352	.13	.54	357	
2.4	.4	27	2.2	.4	318	3.0	.4	348	3	.21	.43	42	.08	.40	41	.46	.39	131	
1.2	.3	311	1.1	.5	187	.5	.3	235	4	.31	.33	183	.30	.52	258	.31	.35	95	

MBC Table - F-a-1

*** 0≤ R ≤ 30 ***

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** SEASON J ***									
	413 DAYS			413 DAYS			413 DAYS				413 DAYS			413 DAYS			413 DAYS		
1	50.4	1.6	53	68.7	1.4	323	38.3	1.2	356	1	2.39	1.76	106	1.91	1.50	94	.79	1.27	248
2	5.3	.7	351	6.7	.9	141	7.8	1.0	134	2	1.53	.79	252	1.26	.92	293	.71	1.02	55
3	5.4	.5	152	1.4	.7	258	4.4	.8	346	3	.97	.57	349	.44	.73	360	1.08	.80	213
4	2.7	.7	291	1.4	.8	283	2.1	.7	144	4	1.06	.75	137	.57	.81	68	.68	.78	57
										*** SEASON E ***									
	407 DAYS			408 DAYS			408 DAYS				407 DAYS			408 DAYS			408 DAYS		
1	35.0	1.0	62	49.3	.9	332	29.9	1.2	9	1	2.39	1.07	253	2.16	.95	253	3.76	1.34	46
2	2.9	.7	31	5.7	.7	156	4.7	.6	169	2	1.44	.71	355	2.06	.71	335	1.31	.68	236
3	.7	.5	80	5.8	.4	299	6.0	.6	2	3	.87	.54	198	.67	.44	266	.83	.68	170
4	2.5	.5	353	.9	.5	252	3.0	.5	186	4	.29	.53	290	.61	.50	208	.87	.55	116
										*** SEASON D ***									
	399 DAYS			399 DAYS			399 DAYS				399 DAYS			399 DAYS			399 DAYS		
1	26.5	.6	77	28.3	.9	340	24.1	.9	357	1	3.17	.68	226	2.92	.95	127	1.98	1.00	188
2	5.3	.7	339	6.5	.7	240	.2	.5	287	2	1.20	.70	46	1.73	.69	7	.62	.56	78
3	2.4	.4	23	3.3	.5	315	2.8	.5	347	3	.18	.48	224	.84	.53	123	.53	.57	204
4	.9	.4	314	1.1	.5	186	.6	.4	225	4	.30	.38	347	.39	.54	272	.30	.46	27
										*** ANNUAL Y ***									
	1219 DAYS			1220 DAYS			1220 DAYS				1219 DAYS			1220 DAYS			1220 DAYS		
1	36.9	.7	61	48.7	.6	329	30.7	.6	1	1	1.33	.80	214	1.05	.70	143	.54	.65	76
2	4.3	.4	354	4.6	.5	176	4.0	.4	147	2	.64	.38	335	1.48	.49	335	.07	.44	143
3	1.6	.3	121	3.4	.3	299	4.3	.3	354	3	.17	.30	269	.03	.36	104	.77	.29	196
4	1.8	.3	320	.9	.4	248	1.7	.3	174	4	.20	.34	136	.11	.40	206	.50	.35	79

MBC Table - F-a-2

*** 30< R ≤ 70 ***

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	529 DAYS			528 DAYS			527 DAYS				529 DAYS			528 DAYS			527 DAYS		
1	61.3	1.5	52	69.4	1.6	326	44.2	1.4	346	1	2.74	1.65	341	1.34	1.78	327	3.08	1.55	247
2	5.4	1.0	283	8.5	1.4	153	11.4	.4	142	2	.58	1.08	97	1.07	1.47	251	1.98	.52	24
3	5.7	.6	155	2.7	.9	317	6.9	.7	2	3	.83	.62	278	.44	.97	29	.72	.71	208
4	2.1	.7	296	.3	.8	68	4.1	.5	151	4	.95	.80	41	.26	.84	316	.52	.58	80
*** SEASON E ***																			
	542 DAYS			545 DAYS			545 DAYS				542 DAYS			545 DAYS			545 DAYS		
1	43.7	1.3	61	54.4	1.2	333	32.3	1.0	5	1	.58	1.39	163	2.08	1.32	47	3.26	1.12	148
2	1.0	.7	279	7.4	.5	167	6.1	.7	160	2	.88	.75	292	1.25	.60	291	1.04	.79	358
3	1.8	.7	67	5.5	.7	312	7.4	.6	359	3	.40	.72	323	.74	.69	316	.99	.68	183
4	2.7	.3	334	.5	.5	124	3.8	.4	173	4	.42	.40	146	.95	.50	136	.54	.47	77
*** SEASON D ***																			
	573 DAYS			573 DAYS			565 DAYS				573 DAYS			573 DAYS			565 DAYS		
1	27.7	.6	74	29.4	.5	337	24.2	.8	358	1	1.29	.64	252	1.05	.55	162	1.58	.84	151
2	5.4	.3	331	6.9	.5	228	1.2	.5	93	2	.43	.35	114	1.15	.55	341	.98	.51	31
3	2.7	.3	35	3.5	.3	308	3.7	.4	348	3	.18	.30	187	.27	.31	226	.36	.43	126
4	1.6	.3	309	1.5	.3	204	.8	.2	166	4	.46	.28	105	.05	.29	335	.47	.28	40
*** ANNUAL Y ***																			
	1644 DAYS			1646 DAYS			1637 DAYS				1644 DAYS			1646 DAYS			1637 DAYS		
1	43.3	.6	60	50.4	.8	331	33.0	.8	355	1	.68	.66	307	.76	.82	42	1.72	.83	180
2	3.6	.5	305	6.4	.5	180	5.9	.3	145	2	.08	.51	45	.95	.57	295	1.26	.34	18
3	2.0	.3	110	3.9	.3	312	5.9	.3	358	3	.40	.30	281	.28	.31	322	.62	.31	182
4	2.0	.3	315	.5	.3	178	2.8	.3	163	4	.43	.32	80	.22	.32	134	.48	.31	67

MBC Table - F-a-3

*** 70< R ***

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

*** SEASON J ***

N	SOLAR HARMONICS X - (UNIT=1 NT) AMP.	±P.E.	PHASE	SOLAR HARMONICS Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	SOLAR HARMONICS Z - (UNIT=1 NT) AMP.	±P.E.	PHASE	N	LUNAR HARMONICS X - (UNIT=1 NT) AMP.	±P.E.	PHASE	LUNAR HARMONICS Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	LUNAR HARMONICS Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	605 DAYS			603 DAYS			605 DAYS				605 DAYS			603 DAYS			605 DAYS		
1	71.0	1.8	50	73.2	1.1	321	51.2	1.3	336	1	3.22	1.99	168	1.18	1.15	87	3.73	1.37	75
2	9.4	.7	268	11.0	.8	153	13.4	.9	137	2	3.11	.81	330	1.06	.89	272	1.40	.97	224
3	7.5	.6	148	1.7	.6	3	7.5	.6	6	3	.93	.68	112	.83	.68	358	.16	.67	35
4	4.8	.6	301	2.0	.8	264	5.4	.5	162	4	.59	.69	348	.83	.82	337	.44	.53	7

*** SEASON E ***

N	SOLAR HARMONICS X - (UNIT=1 NT) AMP.	±P.E.	PHASE	SOLAR HARMONICS Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	SOLAR HARMONICS Z - (UNIT=1 NT) AMP.	±P.E.	PHASE	N	LUNAR HARMONICS X - (UNIT=1 NT) AMP.	±P.E.	PHASE	LUNAR HARMONICS Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	LUNAR HARMONICS Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	613 DAYS			613 DAYS			613 DAYS				613 DAYS			613 DAYS			613 DAYS		
1	41.8	.8	54	55.5	.7	327	28.6	1.2	0	1	2.17	.84	231	.69	.72	188	1.91	1.25	135
2	2.3	.9	215	8.8	.6	144	6.1	.5	154	2	1.37	.93	17	.40	.60	260	.47	.54	245
3	2.0	.6	88	5.1	.5	307	6.7	.6	359	3	.75	.62	115	.58	.53	294	.42	.60	52
4	2.4	.4	323	1.0	.5	202	4.0	.5	167	4	.60	.39	215	.38	.53	213	.19	.49	9

*** SEASON D ***

N	SOLAR HARMONICS X - (UNIT=1 NT) AMP.	±P.E.	PHASE	SOLAR HARMONICS Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	SOLAR HARMONICS Z - (UNIT=1 NT) AMP.	±P.E.	PHASE	N	LUNAR HARMONICS X - (UNIT=1 NT) AMP.	±P.E.	PHASE	LUNAR HARMONICS Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	LUNAR HARMONICS Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	612 DAYS			612 DAYS			612 DAYS				612 DAYS			612 DAYS			612 DAYS		
1	28.5	.5	71	31.8	.6	335	22.7	.6	352	1	.13	.58	357	1.27	.70	252	.94	.61	240
2	4.2	.4	333	6.3	.3	218	1.2	.4	222	2	.21	.39	281	.75	.35	299	1.13	.44	153
3	2.6	.3	28	3.4	.3	311	3.3	.3	357	3	.71	.32	98	1.07	.36	17	1.11	.34	28
4	.7	.2	304	1.3	.4	175	1.0	.2	185	4	.28	.18	168	.61	.47	319	.20	.21	199

*** ANNUAL Y ***

N	SOLAR HARMONICS X - (UNIT=1 NT) AMP.	±P.E.	PHASE	SOLAR HARMONICS Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	SOLAR HARMONICS Z - (UNIT=1 NT) AMP.	±P.E.	PHASE	N	LUNAR HARMONICS X - (UNIT=1 NT) AMP.	±P.E.	PHASE	LUNAR HARMONICS Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	LUNAR HARMONICS Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	1830 DAYS			1828 DAYS			1830 DAYS				1830 DAYS			1828 DAYS			1830 DAYS		
1	46.6	.6	56	53.2	.4	326	33.5	.5	347	1	1.52	.61	197	.43	.46	201	1.46	.54	102
2	4.2	.4	278	7.6	.4	164	6.5	.3	146	2	1.38	.43	343	.68	.40	283	.77	.30	201
3	2.7	.3	119	3.2	.3	317	5.8	.3	2	3	.79	.29	108	.71	.28	351	.55	.35	33
4	2.6	.3	308	1.1	.4	223	3.4	.2	166	4	.15	.28	244	.43	.46	314	.14	.25	7

MBC Table - G-1

*** 0.0≤ CP ≤ .5 ***

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	962 DAYS			959 DAYS			960 DAYS		
1	49.7	.6	51	60.2	.9	324	38.6	1.3	343
2	5.4	.6	301	9.3	.6	157	8.9	.7	136
3	5.5	.5	163	1.3	.7	311	4.9	.4	5
4	3.8	.5	303	.9	.6	249	3.9	.3	165
	843 DAYS			846 DAYS			846 DAYS		
1	27.3	.7	58	40.5	.8	330	22.4	.8	4
2	.7	.6	69	7.2	.5	148	4.9	.3	163
3	.6	.4	83	4.9	.4	303	5.5	.3	2
4	2.5	.2	339	.3	.4	187	3.6	.2	177
	1006 DAYS			1006 DAYS			1003 DAYS		
1	19.8	.3	74	22.1	.4	337	17.2	.4	352
2	3.6	.2	348	4.5	.2	228	.7	.2	88
3	2.2	.2	17	3.0	.2	306	2.7	.2	344
4	.8	.2	297	.8	.2	207	.9	.2	195
	2811 DAYS			2811 DAYS			2809 DAYS		
1	31.9	.3	58	40.5	.4	328	25.8	.4	351
2	2.8	.3	324	5.9	.3	169	4.6	.2	142
3	1.4	.2	138	3.0	.3	305	4.3	.2	359
4	2.2	.2	314	.6	.3	223	2.7	.1	173

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	962 DAYS			959 DAYS			960 DAYS		
1	.48	.69	297	1.04	.97	320	1.01	1.37	187
2	1.70	.65	313	1.15	.67	289	.37	.78	18
3	.28	.51	105	.84	.78	65	.72	.47	273
4	.40	.55	13	.69	.63	13	.63	.37	81
	843 DAYS			846 DAYS			846 DAYS		
1	2.27	.76	255	.67	.92	145	1.63	.87	124
2	1.26	.68	17	.78	.54	323	.73	.38	284
3	.24	.42	238	.43	.38	198	.43	.36	162
4	.24	.28	183	.26	.41	147	.36	.27	297
	1006 DAYS			1006 DAYS			1003 DAYS		
1	.35	.30	248	.41	.41	147	.21	.45	290
2	.31	.21	343	1.14	.27	320	.29	.26	143
3	.37	.18	150	.15	.19	64	.18	.23	41
4	.09	.20	80	.24	.20	5	.23	.18	85
	2811 DAYS			2811 DAYS			2809 DAYS		
1	1.08	.35	258	.20	.49	164	.79	.43	159
2	.91	.30	338	1.02	.28	309	.19	.25	316
3	.18	.23	142	.28	.30	83	.18	.20	245
4	.09	.19	54	.27	.30	23	.22	.16	61

*** SEASON J ***

*** SEASON E ***

*** SEASON D ***

*** ANNUAL Y ***

MBC Table - G-2

*** .5< CP ≤1.2 ***

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	722 DAYS			722 DAYS			722 DAYS				722 DAYS			722 DAYS			722 DAYS			
1	85.2	1.2	52	90.6	1.2	322	58.1	1.7	344	1	.29	1.33	292	1.77	1.28	173	.74	1.83	266	
2	8.9	1.4	267	9.7	1.0	140	15.5	1.0	137	2	.50	1.49	179	1.23	1.10	250	.92	1.05	343	
3	8.3	.9	128	2.5	1.0	347	8.4	.7	358	3	1.62	.94	344	1.28	1.00	339	1.00	.80	118	
4	3.0	.6	274	1.8	.6	255	4.5	.6	151	4	.51	.61	94	.78	.63	297	1.10	.64	288	
*** SEASON E ***																				
	788 DAYS			790 DAYS			790 DAYS				788 DAYS			790 DAYS			790 DAYS			
1	56.7	1.2	59	69.6	1.0	331	40.3	.8	5	1	1.34	1.35	184	.71	1.07	165	2.80	.91	147	
2	1.9	.8	260	7.8	.8	158	6.7	.5	155	2	.62	.87	287	.75	.87	291	.78	.50	357	
3	2.9	.8	89	5.8	.7	311	7.7	.5	360	3	.13	.84	356	1.37	.69	328	.90	.53	163	
4	2.2	.4	331	1.0	.4	224	3.7	.4	173	4	.75	.47	202	1.00	.44	166	.76	.41	127	
*** SEASON D ***																				
	708 DAYS			708 DAYS			700 DAYS				708 DAYS			708 DAYS			700 DAYS			
1	42.7	.9	74	45.0	.5	337	36.1	.6	1	1	1.47	1.00	295	1.26	.57	227	1.94	.64	204	
2	7.9	.5	325	10.5	.6	231	1.0	.6	264	2	.45	.57	79	.94	.65	0	.56	.63	54	
3	3.4	.4	44	4.4	.5	316	4.4	.5	358	3	.40	.40	69	.68	.54	11	.30	.56	86	
4	1.4	.3	310	2.0	.5	178	.7	.3	177	4	.23	.37	77	.56	.52	232	.38	.35	18	
*** ANNUAL Y ***																				
	2218 DAYS			2220 DAYS			2212 DAYS				2218 DAYS			2220 DAYS			2212 DAYS			
1	60.8	.4	59	68.2	.6	328	44.1	.4	355	1	.29	.41	249	.86	.66	208	1.12	.46	174	
2	5.3	.6	290	7.1	.5	176	7.2	.3	145	2	.05	.66	241	.61	.52	297	.55	.30	7	
3	4.0	.3	103	4.2	.4	319	6.9	.3	359	3	.52	.33	356	1.04	.47	340	.54	.31	132	
4	2.0	.2	302	1.3	.3	217	2.9	.3	163	4	.26	.26	155	.43	.33	221	.07	.27	293	

MBC Table - G-3

*** 1.2< CP ***

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	147 DAYS			147 DAYS			147 DAYS				147 DAYS			147 DAYS			147 DAYS		
1	146.0	6.7	51	149.3	5.8	321	80.1	5.0	356	1	5.31	7.29	66	4.34	6.27	96	7.02	5.44	268
2	13.3	6.1	238	15.4	3.6	105	15.1	3.3	135	2	4.13	6.49	59	3.36	3.84	340	5.42	3.55	78
3	6.8	4.5	89	10.6	2.5	334	10.9	3.6	353	3	5.08	4.79	199	.98	2.72	153	3.03	3.75	241
4	1.5	3.5	43	7.1	2.7	90	4.5	1.7	119	4	2.55	3.80	295	.42	2.88	230	2.60	1.87	6
*** SEASON E ***																			
	269 DAYS			269 DAYS			269 DAYS				269 DAYS			269 DAYS			269 DAYS		
1	95.6	2.6	63	110.7	2.7	333	65.0	3.1	12	1	5.01	2.88	95	3.60	2.97	14	6.63	3.42	352
2	3.0	1.9	284	9.0	1.5	186	4.8	1.5	165	2	6.00	1.99	293	3.78	1.62	231	4.82	1.67	163
3	5.7	1.3	73	7.6	1.2	345	10.8	.7	7	3	2.41	1.43	119	.93	1.32	75	1.17	.80	5
4	2.6	.8	312	1.4	1.1	196	3.9	1.2	180	4	.60	.89	300	.47	1.24	225	1.01	1.35	32
*** SEASON D ***																			
	167 DAYS			167 DAYS			167 DAYS				167 DAYS			167 DAYS			167 DAYS		
1	75.5	2.5	75	83.6	1.5	335	67.5	2.6	8	1	5.78	2.68	23	3.12	1.59	269	3.65	2.80	206
2	17.7	1.0	334	19.3	2.4	243	5.2	2.0	286	2	3.45	1.15	245	1.30	2.55	62	1.82	2.12	56
3	4.2	1.6	86	5.9	2.1	329	5.6	1.9	29	3	1.94	1.68	47	.36	2.19	317	.80	2.04	128
4	3.9	1.4	301	2.3	2.4	269	.7	1.7	52	4	1.28	1.47	151	1.08	2.44	74	1.42	1.80	80
*** ANNUAL Y ***																			
	583 DAYS			583 DAYS			583 DAYS				583 DAYS			583 DAYS			583 DAYS		
1	101.4	2.9	61	112.0	2.3	329	69.0	2.3	6	1	5.92	3.13	58	2.29	2.52	356	3.62	2.45	304
2	7.1	1.7	296	7.8	1.4	192	4.8	1.4	158	2	2.87	1.87	284	.84	1.52	253	3.17	1.51	125
3	5.5	1.3	81	7.8	.8	338	9.2	1.0	6	3	1.75	1.38	142	.48	.87	83	.42	1.11	293
4	2.3	1.0	316	1.1	1.1	123	2.5	1.0	153	4	.58	1.08	276	.23	1.21	126	1.27	1.05	32

MBC Table - H-1 and H-2

L U N A R H A R M O N I C S

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

PERIGEE ± 3 DAYS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	408 DAYS			408 DAYS			408 DAYS		
1	6.32	2.11	146	3.20	1.31	85	3.24	1.34	74
2	3.72	1.19	297	2.09	.97	262	1.09	1.09	165
3	.83	.89	68	1.26	1.01	37	.47	.87	292
4	.32	.61	278	.33	.91	175	.60	.66	100
*** SEASON E ***									
	402 DAYS			402 DAYS			402 DAYS		
1	4.01	1.22	282	2.74	1.34	223	2.30	1.11	125
2	.81	1.20	26	1.87	1.19	9	1.11	.88	222
3	.54	.62	359	.46	.84	167	.35	.78	104
4	.86	.49	170	.83	.99	150	.43	.65	34
*** SEASON D ***									
	404 DAYS			404 DAYS			399 DAYS		
1	.80	.80	220	.74	.64	195	1.05	1.52	254
2	1.06	.59	12	1.44	.90	302	.55	.85	107
3	.53	.31	224	.29	.33	78	.80	.55	72
4	.43	.27	78	.47	.41	293	.02	.38	164
*** ANNUAL Y ***									
	1214 DAYS			1214 DAYS			1209 DAYS		
1	1.82	.88	187	.93	.50	144	1.50	.53	98
2	1.48	.55	322	1.27	.46	307	.71	.57	182
3	.19	.35	34	.43	.42	61	.25	.34	65
4	.24	.25	160	.31	.46	181	.28	.33	76

APOGEE ± 3 DAYS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
*** SEASON J ***									
	379 DAYS			379 DAYS			379 DAYS		
1	1.06	1.85	328	3.22	1.45	341	3.07	1.87	201
2	1.10	.77	73	.46	1.16	58	3.29	1.19	354
3	.97	.94	325	1.39	.75	356	1.96	1.05	151
4	.73	.78	67	.59	.75	301	.23	.99	267
*** SEASON E ***									
	387 DAYS			387 DAYS			387 DAYS		
1	1.88	1.44	160	3.14	1.00	79	1.27	1.44	46
2	1.44	.70	332	2.96	.60	260	.57	.78	297
3	.26	.56	96	.53	.56	36	1.31	.69	148
4	.20	.42	240	1.22	.79	159	.25	.47	32
*** SEASON D ***									
	396 DAYS			396 DAYS			396 DAYS		
1	3.20	.95	226	1.69	.85	152	3.06	.84	127
2	.83	.43	41	1.42	.82	342	.31	.43	74
3	.31	.50	162	.36	.59	34	.56	.54	59
4	.01	.39	52	.74	.48	302	.23	.30	101
*** ANNUAL Y ***									
	1162 DAYS			1162 DAYS			1162 DAYS		
1	1.40	.74	208	1.62	.67	55	1.79	.71	147
2	.67	.36	28	.98	.48	286	1.19	.42	348
3	.24	.43	334	.79	.43	9	1.10	.50	137
4	.23	.29	71	.25	.42	232	.03	.38	353

MBC Table - H-3 and H-4

L U N A R H A R M O N I C S

STATION - MOULD BAY (CANADA) M2 - TIDE PERIOD AUG 1 1962 - DEC 31 1979
LATITUDE= 76.20N LONGITUDE=119.40W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	*** MOON RECEDING ***										*** MOON APPROACHING ***								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	370 DAYS			369 DAYS			370 DAYS				390 DAYS			388 DAYS			388 DAYS		
1	5.00	2.76	306	2.13	2.40	152	1.85	2.22	181	1	2.62	.98	106	.78	1.36	310	3.60	1.75	357
2	1.02	1.24	25	2.16	1.00	306	.70	1.25	56	2	1.54	.86	320	.90	1.24	208	1.62	.94	207
3	1.41	1.03	237	.71	1.24	104	1.15	.89	233	3	.61	1.08	87	1.24	.93	249	.68	.87	311
4	1.80	1.04	42	1.55	1.17	359	.94	.72	6	4	.29	.75	179	.60	.86	19	1.02	.79	59
	399 DAYS			400 DAYS			400 DAYS				374 DAYS			377 DAYS			377 DAYS		
1	2.47	1.29	26	4.15	1.36	341	2.93	1.46	112	1	5.22	1.66	210	2.30	1.11	185	2.25	1.04	135
2	.31	1.25	66	.51	1.08	335	.41	.86	51	2	1.77	1.12	340	.57	1.07	344	1.04	1.05	305
3	.42	.57	224	1.79	.71	269	.10	.80	3	3	1.17	1.02	178	1.21	.74	321	.68	1.02	205
4	.63	.53	120	.45	.66	264	.81	.65	99	4	.84	.49	285	.23	.65	232	.45	.61	143
	381 DAYS			381 DAYS			381 DAYS				403 DAYS			403 DAYS			400 DAYS		
1	.61	.83	256	1.03	1.05	155	1.08	1.38	237	1	.56	1.06	288	.58	.85	189	2.05	.66	208
2	.39	.67	192	.68	.68	327	.73	.66	73	2	.69	.56	163	1.13	.61	30	.87	.54	115
3	.73	.42	82	.64	.36	357	.53	.56	265	3	.60	.36	83	.41	.47	107	.31	.34	52
4	.13	.38	330	.13	.47	155	.15	.40	36	4	.50	.24	158	.34	.34	6	.43	.36	27
	1150 DAYS			1150 DAYS			1151 DAYS				1167 DAYS			1168 DAYS			1165 DAYS		
1	2.25	.84	325	.36	1.10	297	1.09	.77	166	1	1.66	.81	187	.98	.57	210	.27	.59	19
2	.35	.54	33	1.16	.59	319	.69	.46	63	2	.86	.53	336	.35	.65	2	.47	.47	201
3	.45	.39	208	.37	.46	291	.57	.44	245	3	.54	.49	132	.52	.43	279	.25	.43	279
4	.64	.44	56	.50	.48	343	.50	.37	48	4	.28	.34	236	.26	.42	3	.52	.38	70

MBC TABLE - I

The O_1 and N_2 Tides Derived From Hourly Magnetic Data of Mould Bay (1962-1979). The International Disturbed Days have been Excluded From the computations.

	X		Y		Z	
	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase
			SEASON-J			
		1547 days		1544 days		1545 days
O_1	0.67 ± 1.24	278°	1.17 ± 0.99	149°	0.51 ± 1.00	193°
N_2	0.92 ± 0.68	222°	0.42 ± 0.60	192°	1.19 ± 0.59	145°
			SEASON-E			
		1562 days		1566 days		1566 days
O_1	1.46 ± 0.49	157°	1.22 ± 0.90	5°	1.81 ± 0.95	90°
N_2	0.67 ± 0.29	220°	0.39 ± 0.32	59°	0.37 ± 0.54	177°
			SEASON-D			
		1584 days		1584 days		1576 days
O_1	1.21 ± 0.50	155°	1.10 ± 0.46	63°	1.58 ± 0.48	111°
N_2	0.11 ± 0.25	283°	0.14 ± 0.33	262°	0.33 ± 0.34	180°
			SEASON-Y			
		4693days		4694 days		4687 days
O_1	0.90 ± 0.59	160°	0.76 ± 0.60	60°	1.11 ± 0.34	103°
N_2	0.48 ± 0.23	231°	0.02 ± 0.24	115°	0.63 ± 0.28	154°

ALERT

January 1, 1963 - September 30, 1972

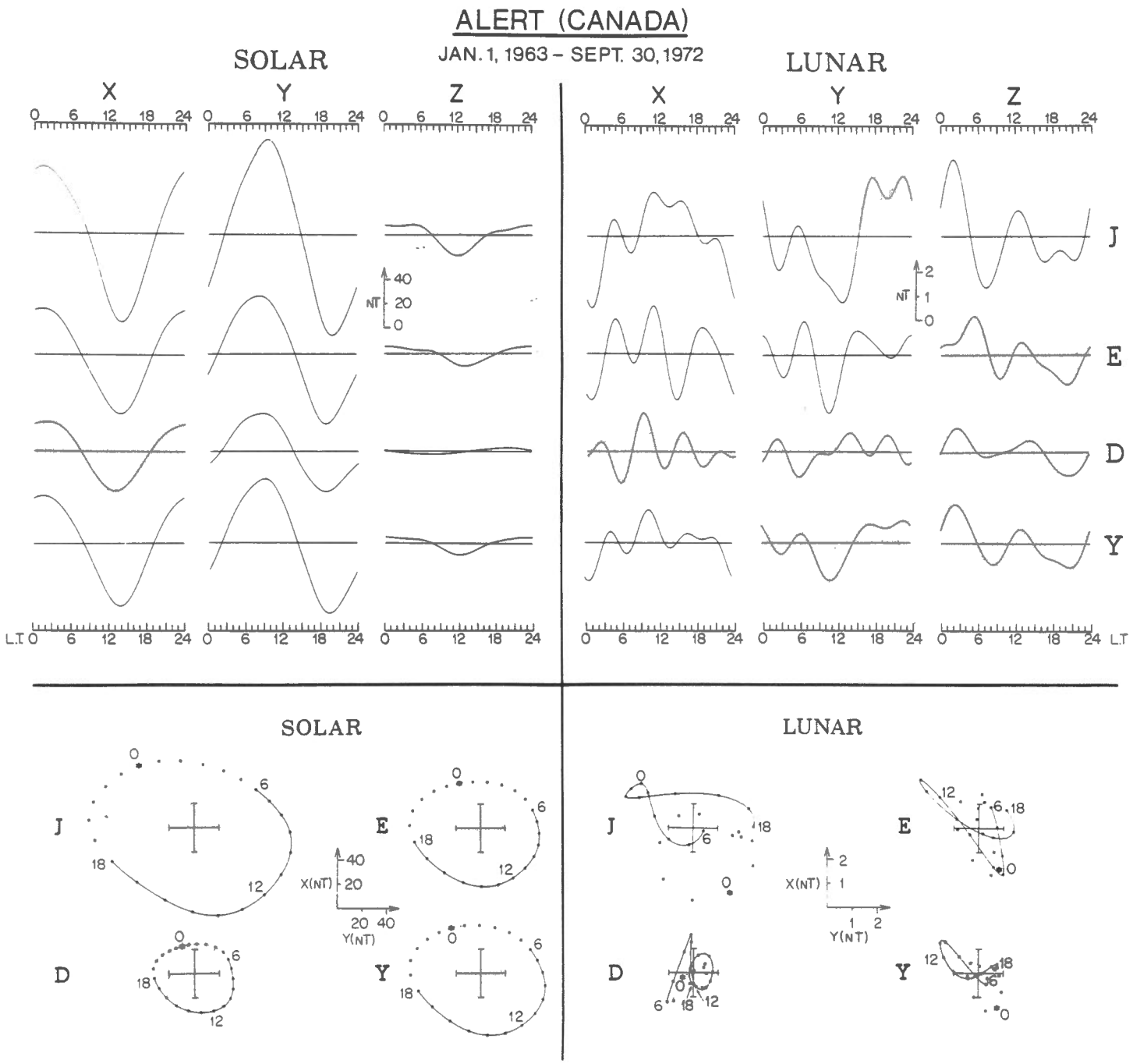
ALERT (CANADA)
JAN. 1, 1963 – SEPT. 30, 1972
SOLAR
LUNAR
X
Y
Z
J
E
D
Y
NT
L.T
X(NT)
Y(NT)

FIGURE 1 ALE

ALE Table - A

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	960 DAYS			962 DAYS			963 DAYS				960 DAYS			962 DAYS			963 DAYS		
1	71.1	1.5	58	88.6	1.8	319	11.4	1.0	87	1	.33	1.58	255	1.48	1.92	160	.68	1.12	137
2	10.2	.8	192	8.0	.7	77	5.2	.6	278	2	.53	.81	283	.65	.79	247	1.48	.69	41
3	2.2	.5	13	1.9	.5	78	1.5	.4	117	3	.56	.53	243	.27	.55	131	.90	.43	327
4	.2	.7	223	2.0	.9	218	.5	.4	109	4	.63	.79	207	.61	.93	126	.33	.39	5
*** SEASON E ***																			
	938 DAYS			936 DAYS			916 DAYS				938 DAYS			936 DAYS			916 DAYS		
1	51.6	1.0	72	61.3	1.0	335	8.1	.4	74	1	.19	1.06	213	.60	1.06	182	.28	.42	350
2	6.2	.6	210	5.7	.6	90	2.1	.2	221	2	1.12	.60	231	.23	.65	345	.76	.22	348
3	1.5	.5	315	1.5	.6	171	.8	.2	58	3	.93	.49	284	.75	.67	141	.32	.20	223
4	.5	.3	189	.5	.6	250	.3	.2	300	4	.57	.34	160	.33	.61	32	.41	.17	90
*** SEASON D ***																			
	887 DAYS			888 DAYS			888 DAYS				887 DAYS			888 DAYS			888 DAYS		
1	36.0	.6	75	41.0	.6	339	3.2	.2	166	1	.31	.70	35	.63	.64	217	.43	.21	337
2	5.1	.5	257	4.8	.6	146	.4	.2	205	2	.34	.58	107	.18	.61	178	.75	.17	13
3	.7	.3	301	.8	.2	236	.2	.1	184	3	.71	.37	25	.26	.25	290	.20	.15	348
4	.2	.5	72	.8	.3	195	.2	.1	214	4	.27	.49	269	.76	.36	283	.08	.10	242
*** ANNUAL Y ***																			
	2785 DAYS			2786 DAYS			2767 DAYS				2785 DAYS			2786 DAYS			2767 DAYS		
1	52.9	.7	66	63.5	.8	328	6.8	.4	91	1	.02	.78	321	.74	.85	179	.13	.47	69
2	6.5	.4	211	5.5	.5	97	2.3	.3	260	2	.45	.45	237	.22	.50	252	.93	.28	21
3	1.3	.2	343	.7	.3	134	.7	.2	103	3	.43	.25	298	.27	.32	147	.35	.20	315
4	.2	.3	183	1.1	.3	218	.1	.1	131	4	.40	.35	198	.03	.36	340	.16	.16	50

ALE Table - B

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	804 DAYS			806 DAYS			807 DAYS				804 DAYS			806 DAYS			807 DAYS			
1	61.7	1.0	59	77.9	.9	319	11.2	.8	84	1	1.56	1.05	259	1.95	1.03	128	.72	.92	67	
2	9.0	.8	193	7.5	.5	73	4.7	.6	278	2	.29	.80	293	1.13	.54	238	1.63	.67	44	
3	2.4	.5	17	1.2	.4	65	1.6	.4	119	3	.63	.56	251	.55	.48	111	.87	.42	319	
4	.2	.6	207	1.9	.7	203	.3	.5	145	4	.70	.61	203	.71	.70	139	.28	.49	353	
*** SEASON E ***																				
	782 DAYS			780 DAYS			765 DAYS				782 DAYS			780 DAYS			765 DAYS			
1	43.1	.7	71	51.7	1.0	335	7.4	.4	71	1	.51	.81	305	.52	1.06	127	.74	.38	7	
2	5.1	.7	202	5.3	.7	79	2.3	.3	217	2	.85	.69	218	.65	.72	296	.66	.27	356	
3	1.7	.4	304	1.7	.5	170	.9	.2	60	3	1.12	.47	288	1.01	.56	128	.39	.26	190	
4	.3	.3	211	1.0	.4	220	.3	.1	298	4	.62	.33	150	.44	.47	29	.35	.15	84	
*** SEASON D ***																				
	740 DAYS			741 DAYS			741 DAYS				740 DAYS			741 DAYS			741 DAYS			
1	28.4	.6	75	31.7	.5	337	2.8	.2	158	1	.27	.68	273	.41	.57	199	.40	.20	342	
2	4.3	.4	253	3.8	.5	135	.3	.1	201	2	.27	.45	125	.25	.55	51	.65	.16	12	
3	.5	.3	276	.8	.3	220	.2	.1	203	3	.61	.35	49	.24	.27	295	.13	.13	357	
4	.1	.3	288	.9	.3	177	.0	.1	262	4	.62	.35	262	.43	.28	303	.10	.09	275	
*** ANNUAL Y ***																				
	2326 DAYS			2327 DAYS			2313 DAYS				2326 DAYS			2327 DAYS			2313 DAYS			
1	44.6	.4	66	53.8	.5	327	6.5	.3	87	1	.62	.42	266	.84	.57	124	.53	.38	30	
2	5.7	.4	208	5.1	.3	87	2.2	.3	258	2	.33	.45	218	.45	.35	263	.94	.31	26	
3	1.2	.3	341	.7	.3	150	.7	.2	104	3	.45	.30	293	.46	.31	124	.26	.19	302	
4	.2	.3	218	1.2	.3	202	.1	.2	212	4	.47	.27	203	.11	.31	80	.13	.19	32	

ALE Table - C

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL QUIET DAYS ONLY)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	162 DAYS			162 DAYS			162 DAYS				162 DAYS			162 DAYS			162 DAYS			
1	40.9	1.5	70	49.9	2.3	332	7.8	1.7	80	1	1.66	1.64	201	.91	2.51	38	1.94	1.82	159	
2	6.1	1.0	196	4.5	.9	69	1.7	1.5	261	2	1.90	1.09	333	.76	.98	194	2.53	1.62	47	
3	3.5	.7	354	.7	.9	114	1.0	.9	85	3	1.29	.77	44	1.66	.93	235	.20	.95	174	
4	1.6	.6	164	2.0	.8	182	.1	.9	234	4	1.39	.65	170	.32	.90	77	1.02	.93	273	
*** SEASON E ***																				
	148 DAYS			148 DAYS			145 DAYS				148 DAYS			148 DAYS			145 DAYS			
1	23.7	1.2	76	27.9	1.7	342	6.3	.8	63	1	1.73	1.31	287	1.48	1.89	85	1.42	.85	343	
2	3.0	.9	207	1.9	.9	50	2.1	.7	202	2	.74	.97	224	.73	.98	224	.98	.70	50	
3	2.3	.6	315	1.3	.6	184	1.3	.5	51	3	1.35	.69	249	.90	.67	162	.39	.48	205	
4	.7	.5	237	.5	.7	165	.6	.3	321	4	.51	.58	106	.45	.78	318	.01	.37	170	
*** SEASON D ***																				
	147 DAYS			147 DAYS			147 DAYS				147 DAYS			147 DAYS			147 DAYS			
1	11.9	.7	77	13.2	.7	335	1.1	.3	153	1	.63	.71	255	1.14	.77	219	.54	.34	332	
2	2.1	.4	237	1.1	.4	142	.4	.2	180	2	.59	.40	145	.62	.47	330	.56	.25	29	
3	.4	.3	252	.5	.3	98	.3	.2	233	3	.51	.28	79	.55	.32	309	.25	.18	157	
4	.2	.2	88	.6	.3	107	.1	.1	277	4	.60	.24	227	.50	.28	29	.16	.16	321	
*** ANNUAL Y ***																				
	457 DAYS			457 DAYS			454 DAYS				457 DAYS			457 DAYS			454 DAYS			
1	25.9	.9	73	30.9	1.4	335	4.8	.7	77	1	.80	1.02	243	.45	1.50	53	.17	.76	91	
2	3.7	.5	206	2.3	.3	73	1.2	.6	225	2	.43	.56	305	.38	.39	236	1.34	.61	45	
3	1.9	.3	336	.6	.3	147	.6	.3	69	3	.26	.31	9	.77	.34	227	.24	.32	174	
4	.6	.2	176	.9	.4	168	.2	.4	307	4	.67	.27	172	.29	.49	19	.40	.38	280	

ALE Table - E

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS									LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
										*** JANUARY ***								
	202 DAYS			203 DAYS			203 DAYS				202 DAYS			203 DAYS			203 DAYS		
1	28.4	.5	71	30.0	1.2	333	2.8	.5	162	1	.14	.52	161	.56	1.33	77	.48	.50	83
2	4.6	.5	250	3.8	.9	129	.2	.3	282	2	1.38	.50	141	1.37	.99	0	.42	.33	6
3	.3	.5	279	.6	.4	300	.3	.2	216	3	.39	.57	10	.69	.47	125	.13	.21	17
4	.9	.8	315	1.4	.4	159	.2	.1	154	4	.19	.83	163	.54	.48	5	.12	.16	318
										*** FEBRUARY ***								
	181 DAYS			181 DAYS			181 DAYS				181 DAYS			181 DAYS			181 DAYS		
1	27.9	1.3	73	32.1	1.8	337	3.0	.4	121	1	2.17	1.39	269	1.44	1.91	152	.17	.49	56
2	2.5	.9	265	3.5	.5	124	1.1	.2	204	2	.64	.91	64	.45	.60	271	.37	.24	20
3	.5	.6	192	.8	.5	140	.4	.2	307	3	.39	.62	188	.64	.58	133	.10	.24	93
4	.9	.6	237	1.5	.6	209	.0	.2	42	4	.63	.68	4	.68	.63	244	.43	.18	326
										*** MARCH ***								
	188 DAYS			186 DAYS			188 DAYS				188 DAYS			186 DAYS			188 DAYS		
1	39.5	2.5	71	46.6	3.2	336	8.1	.6	79	1	.59	2.76	10	2.69	3.51	80	.76	.66	291
2	4.2	1.3	217	4.6	1.1	78	2.7	.6	216	2	.99	1.45	206	1.71	1.28	297	.56	.62	56
3	2.3	.7	254	2.6	.8	154	.6	.4	54	3	2.54	.81	324	1.49	.90	164	.43	.42	305
4	.5	.9	139	1.2	.9	209	.7	.2	322	4	1.86	.97	155	.73	.97	8	.28	.26	148
										*** APRIL ***								
	200 DAYS			200 DAYS			200 DAYS				200 DAYS			200 DAYS			200 DAYS		
1	48.6	2.0	66	59.7	2.4	329	7.9	1.6	78	1	2.13	2.13	39	1.84	2.61	7	3.46	1.79	337
2	5.4	1.3	180	6.1	1.3	53	2.3	.7	238	2	2.64	1.34	206	.88	1.45	120	.66	.74	205
3	2.2	1.2	310	2.8	1.2	140	1.1	.4	70	3	.84	1.27	221	1.25	1.28	138	.46	.49	182
4	.3	.9	289	1.4	1.2	198	.2	.5	92	4	.22	.95	218	.85	1.23	44	.74	.53	56

ALE Table - E...(Cont'd)

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
										*** MAY ***										
	207 DAYS			208 DAYS			208 DAYS				207 DAYS			208 DAYS			208 DAYS			
1	63.7	1.5	62	76.2	2.0	321	11.1	1.6	94	1	3.53	1.64	322	2.89	2.21	327	3.75	1.70	356	
2	10.4	2.0	190	10.0	1.9	47	5.0	.9	271	2	3.34	2.06	231	3.61	1.96	191	.48	.95	49	
3	2.0	.8	24	1.5	1.0	86	1.5	.7	70	3	1.82	.85	220	4.38	1.04	75	1.54	.77	329	
4	.2	.9	269	1.4	.9	244	.5	.8	177	4	.64	.93	70	.87	1.01	357	.67	.89	182	
										*** JUNE ***										
	198 DAYS			200 DAYS			200 DAYS				198 DAYS			200 DAYS			200 DAYS			
1	69.4	1.7	55	90.0	1.8	315	12.6	2.1	86	1	5.66	1.82	209	7.34	1.96	129	4.87	2.30	126	
2	11.9	1.9	208	10.8	1.5	103	5.2	1.9	299	2	1.86	2.03	67	2.52	1.62	312	3.47	1.98	59	
3	4.2	1.4	19	2.2	1.6	110	3.1	1.2	136	3	.47	1.47	354	1.87	1.65	295	1.90	1.28	288	
4	.7	1.2	305	2.5	1.4	169	1.7	1.0	91	4	1.94	1.29	193	.66	1.47	120	1.00	1.11	343	
										*** JULY ***										
	207 DAYS			207 DAYS			207 DAYS				207 DAYS			207 DAYS			207 DAYS			
1	61.7	2.1	58	79.1	3.0	316	11.9	2.5	70	1	2.58	2.32	147	3.17	3.22	79	2.61	2.67	246	
2	8.3	1.3	182	5.6	1.3	58	5.3	1.5	265	2	2.30	1.36	344	1.99	1.39	174	3.24	1.60	39	
3	3.2	1.4	23	.4	1.2	23	1.0	1.0	132	3	.60	1.43	13	2.37	1.25	203	.76	1.05	26	
4	1.6	1.2	162	2.6	1.3	222	1.0	.8	214	4	1.12	1.23	234	2.37	1.39	158	.76	.86	309	
										*** AUGUST ***										
	206 DAYS			205 DAYS			206 DAYS				206 DAYS			205 DAYS			206 DAYS			
1	52.5	2.7	64	68.3	2.4	322	9.3	1.8	79	1	2.79	2.96	354	3.00	2.65	222	3.60	2.00	75	
2	6.8	1.0	191	7.5	1.4	92	2.4	.9	273	2	1.20	1.15	291	1.91	1.54	306	1.85	.95	308	
3	.9	1.2	2	3.3	1.1	354	1.5	.6	107	3	1.64	1.29	318	1.37	1.21	147	.59	.62	154	
4	.9	.7	262	2.3	.9	182	.7	.8	307	4	.33	.78	176	1.22	1.00	189	.98	.87	77	

ALE Table - E...(Cont'd)

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE		N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEPTEMBER***																				
	199 DAYS			199 DAYS			182 DAYS					199 DAYS			199 DAYS			182 DAYS		
1	48.3	1.8	72	57.3	1.8	335	9.5	1.1	56		1	1.17	1.97	242	1.63	1.98	227	1.33	1.19	131
2	6.9	1.0	191	5.9	1.5	74	3.6	.7	228		2	1.08	1.08	38	1.58	1.55	287	1.36	.75	357
3	2.4	.8	339	2.4	1.3	177	1.4	.6	66		3	1.18	.84	237	1.51	1.32	63	.72	.60	214
4	.6	.9	83	1.7	1.0	272	.6	.3	251		4	.81	.92	225	.73	1.07	47	.39	.36	90
*** OCTOBER ***																				
	182 DAYS			182 DAYS			182 DAYS					182 DAYS			182 DAYS			182 DAYS		
1	35.0	1.2	79	40.4	1.7	345	3.8	.5	103		1	1.45	1.33	321	1.74	1.83	231	1.33	.50	356
2	5.0	1.3	232	3.6	1.6	104	1.1	.3	224		2	1.32	1.35	177	.61	1.72	2	1.04	.34	13
3	2.7	.6	282	1.3	.7	203	.3	.3	60		3	.16	.63	316	1.54	.76	301	.53	.31	122
4	.6	.6	99	.5	.6	258	.1	.1	273		4	.24	.69	330	.90	.69	38	.08	.15	216
*** NOVEMBER ***																				
	175 DAYS			175 DAYS			175 DAYS					175 DAYS			175 DAYS			175 DAYS		
1	30.4	.9	79	34.2	1.0	341	2.3	.4	165		1	1.45	.96	317	1.79	1.13	262	.51	.48	278
2	5.2	.9	250	4.2	1.0	147	.2	.2	52		2	.42	.98	291	1.08	1.05	125	.67	.22	7
3	.9	.7	354	2.0	.6	244	.5	.3	132		3	.78	.70	337	.31	.61	187	.35	.31	310
4	.5	.5	111	.5	.5	96	.2	.2	326		4	.88	.53	234	.79	.49	271	.20	.17	242
*** DECEMBER ***																				
	181 DAYS			181 DAYS			181 DAYS					181 DAYS			181 DAYS			181 DAYS		
1	26.9	1.4	75	30.7	1.7	339	3.3	.4	161		1	.61	1.57	205	.75	1.85	158	.69	.39	333
2	4.3	1.0	260	3.9	1.1	137	.7	.3	173		2	.55	1.10	81	.37	1.19	74	.67	.28	26
3	.9	.7	218	1.2	.6	199	.5	.1	224		3	.94	.76	115	.69	.69	342	.27	.13	314
4	.3	.9	264	1.2	.7	166	.1	.2	343		4	1.12	.94	261	.57	.71	292	.27	.26	124

ALE Table - F-a-1

*** 0≤ R ≤ 30 ***

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE		N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																				
	99 DAYS			98 DAYS			99 DAYS					99 DAYS			98 DAYS			99 DAYS		
1	60.2	2.6	65	70.4	3.5	326	6.8	2.9	76		1	5.87	2.78	349	4.28	3.81	284	3.33	3.13	27
2	7.5	1.9	180	6.6	1.6	82	1.6	1.8	318		2	3.40	1.98	110	1.49	1.74	259	1.28	1.94	182
3	3.3	1.6	20	1.4	1.7	144	2.7	1.1	116		3	2.35	1.67	229	1.61	1.80	48	1.29	1.23	333
4	3.1	1.0	342	1.9	1.2	226	1.3	.7	102		4	1.94	1.05	245	2.04	1.32	109	1.69	.84	320
*** SEASON E ***																				
	105 DAYS			105 DAYS			105 DAYS					105 DAYS			105 DAYS			105 DAYS		
1	41.7	1.1	74	51.8	2.0	339	4.0	1.3	76		1	1.64	1.20	5	.93	2.16	125	1.53	1.45	82
2	5.5	1.1	224	6.0	.9	107	1.4	.5	161		2	1.34	1.19	298	2.23	.98	281	.39	.56	358
3	2.8	1.3	342	2.7	1.0	186	.7	.4	11		3	1.75	1.37	242	2.78	1.07	58	.42	.45	256
4	.7	.9	77	1.0	1.0	208	.7	.4	291		4	1.44	.97	206	1.54	1.04	119	.34	.47	275
*** SEASON D ***																				
	97 DAYS			97 DAYS			97 DAYS					97 DAYS			97 DAYS			97 DAYS		
1	24.4	2.2	79	26.7	2.3	340	3.4	.6	187		1	2.15	2.41	264	3.68	2.47	212	.98	.63	317
2	4.6	1.0	276	4.5	1.1	150	.7	.4	43		2	.92	1.12	109	.55	1.23	63	.78	.41	38
3	.3	1.2	340	1.3	1.1	261	.0	.3	248		3	.37	1.27	40	1.34	1.15	41	.41	.30	336
4	.7	.7	18	1.3	.6	202	.2	.4	76		4	.92	.82	163	.72	.68	333	.27	.38	259
*** ANNUAL Y ***																				
	301 DAYS			300 DAYS			301 DAYS					301 DAYS			300 DAYS			301 DAYS		
1	42.0	.9	71	49.4	1.5	333	3.4	1.0	94		1	1.83	.97	346	.84	1.63	256	1.51	1.13	43
2	4.6	.9	217	5.1	.7	108	.1	.7	336		2	.82	.90	113	1.01	.72	271	.09	.77	132
3	2.1	.6	0	1.4	.7	190	.8	.4	99		3	1.15	.66	234	1.83	.73	50	.55	.45	321
4	1.3	.4	360	1.3	.8	214	.2	.3	84		4	1.23	.47	217	1.05	.86	105	.73	.36	310

ALE Table - F-a-2

*** 30< R ≤ 70 ***

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	306 DAYS			306 DAYS			306 DAYS				306 DAYS			306 DAYS			306 DAYS			
1	57.8	1.0	62	72.3	1.4	319	9.7	1.4	81	1	1.65	1.05	260	2.34	1.56	203	1.83	1.56	19	
2	8.8	1.2	185	6.7	1.1	82	4.7	1.3	268	2	.99	1.21	306	1.36	1.21	213	1.17	1.40	55	
3	1.7	.6	1	.9	.7	352	1.0	.9	162	3	.54	.63	220	.29	.80	301	1.04	.93	26	
4	.8	.8	14	1.5	.7	187	.3	.7	330	4	1.00	.83	171	.65	.73	114	1.03	.72	328	
*** SEASON E ***																				
	285 DAYS			285 DAYS			268 DAYS				285 DAYS			285 DAYS			268 DAYS			
1	42.2	1.3	72	50.8	1.5	334	7.0	1.0	73	1	1.06	1.44	178	3.31	1.62	72	.51	1.10	70	
2	4.6	1.1	204	5.6	1.2	69	2.5	.5	217	2	.74	1.14	174	1.29	1.27	265	1.39	.59	349	
3	1.4	.8	263	2.0	.8	170	1.2	.3	96	3	1.54	.89	262	1.89	.89	120	.52	.38	228	
4	.1	.7	271	.7	.7	209	.7	.3	336	4	1.05	.75	106	.93	.76	294	.68	.31	73	
*** SEASON D ***																				
	245 DAYS			246 DAYS			246 DAYS				245 DAYS			246 DAYS			246 DAYS			
1	27.2	.8	75	30.9	1.2	339	2.8	.3	155	1	2.16	.90	199	2.40	1.29	111	.50	.32	355	
2	4.7	.6	248	3.7	1.0	127	.3	.2	186	2	.64	.63	20	2.11	1.09	273	.60	.22	6	
3	1.0	.5	290	.9	.2	218	.2	.1	232	3	.12	.56	68	.38	.31	85	.11	.15	44	
4	.3	.5	178	.8	.4	160	.2	.1	233	4	.86	.54	281	.31	.47	353	.16	.09	292	
*** ANNUAL Y ***																				
	836 DAYS			837 DAYS			820 DAYS				836 DAYS			837 DAYS			820 DAYS			
1	43.3	.7	68	52.2	.8	328	6.1	.6	86	1	1.17	.73	198	1.31	.91	93	.97	.65	30	
2	5.6	.7	203	5.1	.7	86	2.4	.6	250	2	.24	.77	286	1.34	.72	252	.95	.61	15	
3	1.0	.4	312	.5	.4	189	.6	.4	135	3	.63	.40	251	.64	.46	114	.26	.39	15	
4	.2	.4	11	1.0	.4	186	.3	.3	325	4	.44	.41	158	.16	.45	323	.41	.28	355	

ALE Table - F-a-3

*** 70< R ***

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	*** SEASON J ***																		
	399 DAYS			402 DAYS			402 DAYS				399 DAYS			402 DAYS			402 DAYS		
1	65.3	1.9	57	84.3	1.6	317	13.6	1.8	86	1	2.17	2.05	224	4.46	1.75	102	1.61	1.90	156
2	9.7	1.3	202	8.4	1.1	65	5.7	.8	282	2	.80	1.43	273	1.00	1.21	260	2.64	.89	35
3	2.8	.9	24	2.2	1.0	74	2.1	.7	105	3	.54	.96	301	1.24	1.04	129	1.36	.72	284
4	1.7	1.0	183	2.3	1.1	207	.7	.9	165	4	.49	1.04	206	.73	1.11	181	.76	.93	127
	*** SEASON E ***																		
	392 DAYS			390 DAYS			392 DAYS				392 DAYS			390 DAYS			392 DAYS		
1	44.1	1.0	69	52.3	1.4	333	8.5	.5	70	1	1.25	1.10	317	2.06	1.48	236	1.33	.50	336
2	5.6	.8	195	5.1	.8	79	2.5	.4	224	2	1.29	.90	218	.67	.82	37	.28	.40	17
3	2.0	.6	310	1.3	.9	161	1.0	.5	41	3	1.27	.67	330	.99	.97	194	.55	.47	156
4	.6	.6	218	1.3	.6	227	.3	.2	219	4	.50	.59	175	.96	.68	45	.35	.26	102
	*** SEASON D ***																		
	398 DAYS			398 DAYS			398 DAYS				398 DAYS			398 DAYS			398 DAYS		
1	30.2	1.0	74	33.5	.7	336	2.7	.2	151	1	1.62	1.08	10	1.33	.74	294	.30	.25	348
2	4.1	.5	250	3.7	.5	136	.5	.2	214	2	.60	.50	167	1.54	.53	83	.65	.23	12
3	.4	.4	240	.7	.4	205	.2	.2	183	3	.99	.42	49	.82	.41	267	.11	.19	353
4	.2	.4	284	1.0	.4	177	.0	.1	328	4	.67	.47	263	.58	.42	280	.04	.13	244
	*** ANNUAL Y ***																		
	1189 DAYS			1190 DAYS			1192 DAYS				1189 DAYS			1190 DAYS			1192 DAYS		
1	46.2	.6	64	56.1	.6	326	7.6	.6	86	1	.98	.63	290	1.05	.70	149	.11	.63	327
2	6.1	.6	209	5.1	.3	83	2.6	.3	262	2	.64	.63	221	.33	.33	53	1.15	.30	32
3	1.2	.4	349	.9	.5	118	.9	.3	91	3	.68	.45	347	.59	.54	133	.39	.30	270
4	.7	.4	198	1.5	.5	206	.3	.3	180	4	.43	.41	219	.03	.47	76	.35	.28	121

ALE Table - G-1

*** 0.0≤ CP ≤ .5 ***

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS									
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)			
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	
*** SEASON J ***																				
	534 DAYS			535 DAYS			535 DAYS				534 DAYS			535 DAYS			535 DAYS			
1	52.9	1.0	62	66.2	.9	321	11.1	.6	79	1	1.13	1.04	246	2.05	1.00	193	.59	.62	104	
2	8.1	.8	193	5.6	.8	66	4.5	1.0	267	2	.88	.87	312	.15	.82	206	1.50	1.01	22	
3	2.8	.7	15	1.5	.7	43	1.3	.5	117	3	.63	.74	342	.68	.75	163	.49	.58	10	
4	1.3	.4	172	1.2	.6	211	.2	.5	253	4	.57	.46	187	.93	.65	138	.40	.49	329	
*** SEASON E ***																				
	477 DAYS			475 DAYS			467 DAYS				477 DAYS			475 DAYS			467 DAYS			
1	33.3	.9	73	38.8	1.2	338	6.6	.6	64	1	1.78	.95	233	2.10	1.31	149	.98	.64	322	
2	3.3	.4	206	2.6	.5	65	2.1	.3	210	2	.84	.40	222	.62	.58	270	.67	.33	34	
3	1.4	.4	314	1.0	.5	199	.9	.2	61	3	.79	.47	293	.70	.59	116	.33	.22	192	
4	.7	.3	205	.5	.4	181	.5	.2	318	4	.26	.29	100	.37	.48	348	.35	.25	78	
*** SEASON D ***																				
	511 DAYS			512 DAYS			512 DAYS				511 DAYS			512 DAYS			512 DAYS			
1	21.3	.4	75	23.4	.5	337	2.2	.2	156	1	.51	.48	325	.49	.57	289	.16	.19	167	
2	2.9	.3	246	2.0	.5	136	.3	.2	198	2	.05	.36	266	.48	.53	80	.60	.19	358	
3	.2	.3	212	.7	.2	178	.1	.1	201	3	.52	.31	48	.28	.25	251	.15	.10	320	
4	.3	.3	256	.4	.2	118	.1	.1	320	4	.29	.28	272	.15	.20	227	.16	.09	297	
*** ANNUAL Y ***																				
	1522 DAYS			1522 DAYS			1514 DAYS				1522 DAYS			1522 DAYS			1514 DAYS			
1	35.9	.3	68	42.8	.5	328	6.1	.3	81	1	.89	.34	243	1.07	.54	178	.15	.35	44	
2	4.5	.3	206	3.1	.3	78	2.1	.4	249	2	.43	.34	268	.03	.35	250	.92	.44	17	
3	1.2	.3	355	.3	.4	124	.7	.2	98	3	.47	.36	340	.38	.38	154	.10	.20	353	
4	.7	.2	189	.6	.3	190	.2	.2	304	4	.22	.17	192	.23	.31	137	.17	.21	356	

ALE Table - G-2

*** .5< CP ≤1.2 ***

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS INCLUDED)

SOLAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	360 DAYS			361 DAYS			362 DAYS		
1	84.6	2.3	56	105.5	2.3	317	11.0	1.9	89
2	12.4	1.0	198	11.5	1.0	83	6.4	1.1	287
3	2.0	1.2	6	2.6	.7	126	2.2	.6	123
4	1.8	1.1	326	2.0	1.2	216	1.5	.6	110
	369 DAYS			369 DAYS			361 DAYS		
1	61.3	1.4	69	74.3	1.7	332	9.5	.8	80
2	8.4	1.3	201	8.9	1.3	91	2.6	.5	226
3	1.8	.8	304	2.4	.8	137	.7	.4	70
4	.2	.7	294	1.7	.8	254	.2	.3	182
	306 DAYS			306 DAYS			306 DAYS		
1	48.0	.9	75	54.5	1.4	340	4.2	.4	168
2	7.7	.9	256	7.5	.9	144	.2	.3	227
3	1.6	.7	310	1.7	.5	249	.4	.3	173
4	.9	.8	71	2.0	.5	201	.2	.2	206
	1035 DAYS			1036 DAYS			1029 DAYS		
1	64.8	1.0	64	78.3	.8	327	7.4	.7	94
2	8.8	.8	212	8.6	.7	99	2.9	.5	270
3	1.6	.5	329	1.6	.4	147	1.0	.3	116
4	.7	.6	343	1.8	.6	223	.6	.2	122

LUNAR HARMONICS

N	X - (UNIT=1 NT) AMP.	±P.E.	PHASE	Y - (UNIT=1 NT) AMP.	±P.E.	PHASE	Z - (UNIT=1 NT) AMP.	±P.E.	PHASE
	360 DAYS			361 DAYS			362 DAYS		
1	1.73	2.46	311	3.74	2.51	126	1.44	2.04	91
2	.48	1.09	216	1.33	1.10	207	2.21	1.21	81
3	1.57	1.24	210	.92	.77	275	1.51	.65	327
4	1.23	1.20	219	1.25	1.26	118	.26	.65	51
	369 DAYS			369 DAYS			361 DAYS		
1	1.54	1.47	335	1.14	1.89	86	.91	.81	54
2	.48	1.38	204	1.34	1.41	349	1.11	.52	331
3	.70	.89	261	1.86	.91	153	.63	.44	232
4	.48	.70	155	1.16	.91	55	.29	.32	118
	306 DAYS			306 DAYS			306 DAYS		
1	1.25	.97	304	2.71	1.57	229	1.51	.44	341
2	.90	.94	120	.85	.93	205	.74	.29	42
3	.48	.73	32	.81	.60	28	.27	.28	345
4	.90	.84	229	1.31	.56	307	.15	.26	208
	1035 DAYS			1036 DAYS			1029 DAYS		
1	1.33	1.11	322	1.40	.89	138	.85	.72	41
2	.39	.81	171	.48	.77	248	1.01	.56	50
3	.60	.57	227	.35	.46	163	.63	.32	307
4	.76	.68	210	.47	.60	57	.14	.25	107

*** SEASON J ***

*** SEASON E ***

*** SEASON D ***

*** ANNUAL Y ***

ALE Table - G-3

*** 1.2< CP ***

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN. 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS INCLUDED)

	SOLAR HARMONICS										LUNAR HARMONICS								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	66 DAYS			66 DAYS			66 DAYS				66 DAYS			66 DAYS			66 DAYS		
1	146.1	5.9	55	178.1	9.5	320	19.7	3.4	121	1	5.68	6.41	97	9.62	10.27	280	7.88	3.73	223
2	16.4	4.1	164	9.7	7.0	87	5.2	3.4	294	2	1.17	4.39	180	6.77	7.44	316	3.67	3.55	317
3	1.8	4.5	175	9.5	6.5	55	1.5	2.3	341	3	1.70	4.75	225	7.07	6.82	69	3.26	2.45	274
4	2.2	5.0	76	8.8	3.8	229	1.0	2.1	53	4	1.39	5.19	8	5.14	4.21	311	1.68	2.23	36
*** SEASON E ***																			
	92 DAYS			92 DAYS			88 DAYS				92 DAYS			92 DAYS			88 DAYS		
1	107.7	5.4	75	126.1	5.2	338	11.1	2.6	87	1	11.07	5.88	83	14.48	5.68	292	3.60	2.80	186
2	14.7	4.1	236	11.8	2.7	120	1.3	.7	269	2	6.74	4.33	244	5.73	2.90	133	1.78	.85	303
3	2.0	2.9	3	4.2	3.6	214	1.2	.9	5	3	3.04	3.10	297	2.66	3.78	309	.85	1.00	2
4	2.9	1.9	146	3.0	2.8	30	.8	.9	282	4	3.44	2.07	176	2.12	2.94	241	1.38	1.03	86
*** SEASON D ***																			
	70 DAYS			70 DAYS			70 DAYS				70 DAYS			70 DAYS			70 DAYS		
1	91.2	4.4	74	110.4	4.4	338	7.0	2.3	187	1	10.13	4.79	11	12.53	4.76	217	.76	2.54	97
2	11.1	4.9	284	14.0	4.4	164	1.4	2.0	199	2	1.83	5.17	149	1.88	4.59	27	2.50	2.14	5
3	1.7	3.6	312	3.1	3.9	327	.5	1.2	203	3	3.58	3.79	353	3.84	4.07	239	.84	1.33	46
4	.7	4.5	87	2.3	3.9	251	1.3	1.5	203	4	3.16	4.66	27	3.80	4.08	255	.84	1.58	120
*** ANNUAL Y ***																			
	228 DAYS			228 DAYS			224 DAYS				228 DAYS			228 DAYS			224 DAYS		
1	112.2	3.1	67	134.7	2.3	331	10.3	1.5	118	1	6.80	3.36	50	11.70	2.48	260	3.15	1.67	206
2	9.9	2.8	224	10.3	2.7	128	2.1	1.1	275	2	2.40	2.99	226	.59	2.80	33	2.28	1.18	324
3	.7	2.0	335	1.2	3.0	39	.8	1.0	346	3	2.00	2.13	310	1.06	3.10	5	.98	1.06	305
4	1.7	2.2	118	2.1	1.8	246	.3	.8	238	4	.56	2.28	97	2.92	1.92	272	1.08	.85	72

ALE Table - H-1 and H-2

L U N A R H A R M O N I C S

STATION - ALERT (CANADA) M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972
LATITUDE= 82.50N LONGITUDE= 62.50W (INTERNATIONAL DISTURBED DAYS EXCLUDED)

	*** PERIGEE ± 3 DAYS ***										*** APOGEE ± 3 DAYS ***								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
*** SEASON J ***																			
	211 DAYS			211 DAYS			211 DAYS				196 DAYS			197 DAYS			197 DAYS		
1	2.54	2.66	5	2.80	2.89	251	2.51	2.22	70	1	2.37	2.11	319	3.35	3.63	147	.38	2.94	142
2	1.52	1.35	204	2.67	1.61	24	1.97	1.45	28	2	1.08	2.12	59	2.24	1.36	251	2.43	1.21	44
3	.29	1.05	43	1.08	1.18	218	.73	1.29	29	3	2.47	1.44	271	2.62	1.75	123	2.10	.99	334
4	1.71	1.07	180	1.01	.85	86	.30	.77	41	4	2.05	1.39	202	1.13	.99	278	.65	1.15	258
*** SEASON E ***																			
	207 DAYS			207 DAYS			200 DAYS				187 DAYS			187 DAYS			183 DAYS		
1	2.55	2.04	228	2.46	1.98	131	1.57	.97	358	1	2.37	1.83	90	3.11	1.93	18	1.22	.95	294
2	1.20	1.22	215	.67	1.45	163	1.14	.54	27	2	2.57	1.00	292	1.15	1.29	230	1.36	.49	312
3	1.01	.90	243	1.10	.78	127	.58	.46	159	3	.46	1.11	335	.69	1.03	123	.05	.37	256
4	.46	.81	70	.32	.68	43	.25	.38	61	4	1.61	.77	109	1.07	.85	220	.58	.31	56
*** SEASON D ***																			
	189 DAYS			189 DAYS			189 DAYS				187 DAYS			187 DAYS			187 DAYS		
1	.98	1.27	323	2.51	1.81	240	.86	.64	331	1	1.73	1.61	196	1.84	1.21	102	.36	.76	333
2	.29	1.21	336	.73	1.95	127	.85	.31	9	2	1.08	1.09	86	.76	.99	318	.32	.45	29
3	1.40	.72	91	.79	.55	313	.23	.19	267	3	.49	.96	116	.78	.82	16	.45	.24	4
4	1.15	.62	243	.51	.58	316	.25	.17	333	4	1.08	.83	352	.58	.66	239	.20	.31	196
*** ANNUAL Y ***																			
	607 DAYS			607 DAYS			600 DAYS				570 DAYS			571 DAYS			567 DAYS		
1	1.23	1.10	293	2.00	1.52	201	1.36	.83	34	1	.44	1.18	269	2.10	1.63	112	.36	.73	345
2	.88	.75	212	.78	1.11	47	1.21	.47	26	2	.54	.88	6	1.11	.80	258	.88	.49	21
3	.13	.44	96	.40	.56	204	.18	.53	65	3	.84	.83	277	.92	.82	115	.89	.36	340
4	.74	.48	194	.40	.41	51	.24	.33	24	4	.65	.54	154	.81	.50	256	.08	.37	279

L U N A R H A R M O N I C S

STATION - ALERT (CANADA) LATITUDE= 82.50N LONGITUDE= 62.50W

M2 - TIDE PERIOD JAN 1 1963 - SEP 30 1972 (INTERNATIONAL DISTURBED DAYS EXCLUDED)

*** SEASON J ***

	*** MOON RECEDING ***										*** MOON APPROACHING ***								
	X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)				X - (UNIT=1 NT)			Y - (UNIT=1 NT)			Z - (UNIT=1 NT)		
N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	N	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE	AMP.	±P.E.	PHASE
	186 DAYS			188 DAYS			188 DAYS				211 DAYS			210 DAYS			211 DAYS		
1	6.81	2.55	239	6.34	3.97	127	1.67	2.73	111	1	1.77	1.94	146	2.60	1.84	26	1.60	2.25	326
2	1.68	1.91	327	2.33	2.08	204	2.51	2.18	78	2	.71	1.43	199	2.69	1.28	215	.70	1.34	337
3	.16	.88	122	1.00	1.28	52	1.77	1.51	359	3	.90	1.62	207	1.16	1.21	359	1.90	.78	230
4	.76	1.43	242	2.23	1.55	162	1.94	.97	330	4	1.53	1.14	5	1.33	1.24	143	1.12	.80	115

*** SEASON E ***

	203 DAYS			201 DAYS			201 DAYS				185 DAYS			185 DAYS			181 DAYS		
1	3.31	1.47	360	2.90	2.43	261	.69	1.11	84	1	1.45	2.05	282	.66	2.20	114	1.09	.88	15
2	2.51	2.02	112	2.71	1.50	357	.25	.79	242	2	2.27	1.07	219	1.00	1.11	270	.94	.64	3
3	1.46	.99	274	1.55	1.32	129	.64	.81	191	3	2.13	1.33	310	1.39	1.25	127	.51	.38	204
4	1.95	.96	232	.77	1.17	5	.58	.32	89	4	.64	.54	163	2.27	.82	47	.34	.35	182

*** SEASON D ***

	183 DAYS			183 DAYS			183 DAYS				181 DAYS			182 DAYS			182 DAYS		
1	.23	1.38	185	.23	1.57	90	.32	.47	46	1	1.06	1.78	15	.21	1.71	104	.27	.45	351
2	.91	.72	201	.60	.73	59	.87	.23	13	2	.28	1.03	178	.30	1.11	42	.63	.28	6
3	1.46	.54	339	.51	.91	142	.20	.18	98	3	.78	.82	29	1.03	.64	232	.00	.32	208
4	.28	.56	225	.61	.66	310	.19	.14	238	4	1.31	.66	234	.53	.50	346	.12	.21	323

*** ANNUAL Y ***

	572 DAYS			572 DAYS			572 DAYS				577 DAYS			577 DAYS			574 DAYS		
1	1.79	.90	268	1.26	1.51	163	.89	.86	110	1	1.20	1.05	107	2.50	1.41	16	.75	.91	343
2	.32	.96	96	.27	.74	314	1.00	.78	55	2	1.25	.69	224	1.13	.87	225	.88	.57	1
3	.57	.53	308	.70	.75	99	.23	.55	360	3	.60	.72	311	.28	.76	121	.86	.31	225
4	.99	.55	233	.34	.52	170	.54	.31	339	4	.14	.48	288	.77	.62	64	.45	.32	129

The O_1 and N_2 Tides Derived From Hourly Magnetic Data of ALERT, CANADA (1963-1972). The International Disturbed Days have been Excluded From the computations.

	X		Y		Z	
	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase	Amp. ± p.e. (nt)	Phase
			SEASON-J			
		804 days		806 days		807 days
O_1	2.59 ± 1.11	329°	2.63 ± 1.36	226°	0.57 ± 1.29	354°
N_2	0.46 ± 0.73	190°	1.06 ± 0.79	15°	1.16 ± 0.74	221°
			SEASON-E			
		782 days		780 days		765 days
O_1	0.50 ± 1.15	94°	1.46 ± 1.04	45°	0.62 ± 0.29	297°
N_2	1.61 ± 0.57	156°	0.96 ± 0.56	103°	0.17 ± 0.27	37°
			SEASON-D			
		740 days		741 days		741 days
O_1	0.82 ± 0.47	181°	1.09 ± 0.77	61°	0.06 ± 0.32	264°
N_2	0.39 ± 0.55	281°	0.48 ± 0.49	140°	0.12 ± 0.17	16°
			SEASON-Y			
		2326 days		2327 days		2313 days
O_1	0.64 ± 0.53	356°	0.32 ± 0.59	304°	0.33 ± 0.47	331°
N_2	0.62 ± 0.37	174°	0.51 ± 0.33	72°	0.29 ± 0.23	228°