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CANADA  
DEPARTMENT OF ENERGY, MINES AND RESOURCES  
OBSERVATORIES BRANCH

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# PUBLICATIONS

OF THE

# Dominion Observatory

OTTAWA

Volume XXXVII



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# GREAT WHALE MAGNETIC OBSERVATORY 1967

Geographic Coordinates: 55.3°N; 77.75°W

Geomagnetic Coordinates: 66.8°N; 347.2°E\*

*Officers-in-Charge:* D. Bryant 1964.5 – 1965.5  
E. Cowan 1965.5 – 1966.5  
G. Green 1966.6 – 1967.5  
D. Stoltz 1967.5 – 1968.5

## Introduction

The Division of Geomagnetism of the Dominion Observatory established a magnetic observatory in January 1965 at Great Whale River, Quebec (now known as Poste-de-la-Baleine). The observatory was designed to assist in conjugate point studies: its location is geomagnetically conjugate to the observatory at Byrd in Antarctica, operated by the United States, and its instrumentation is similar, including both standard and rapid-run photographic variometers. It was not intended at the time to institute mean hourly value tabular publications for this observatory; however, owing to the frequent requests for Great Whale River data, yearly reports similar to those for the other Canadian observatories will be produced regularly beginning with 1967.

For two years before the installation of photographic recorders a three-component electrical recording magnetometer had been in operation in Great Whale River. A description of this instrument and the chart constants are given under Standby Variometer in the section on "Magnetic Instruments".

Following the installation of seismic equipment in September 1965 the Great Whale River magnetic-seismic observatory has been operated jointly by the divisions of Seismology and Geomagnetism.

## Site and Buildings

Poste-de-la-Baleine is located on a broad sandy spit at the mouth of Great Whale River on the east shore of Hudson Bay. The area consists of Archaean granites largely overlain with a thick layer of sand. The sand was tested for magnetic properties and found to contain significant quantities of magnetite.

A suitable site for two magnetic observatory buildings was selected in July 1964 by F.A. Andersen of this division. The site is a rock ridge 75 feet above sea level about 1 1/4 miles north of the east-west runway. The buildings were erected in September 1964. Both buildings are of wooden construction, nonmagnetic throughout, with concrete slab floors poured on bedrock. Because of its magnetic properties, the local sand was not used in the construction. The absolute building is 20 by 15 feet; the variometer building, 20 by 20 feet. The variometer building is divided into two light-tight recording rooms. Both

buildings are oriented magnetic north-south. Heating is by thermostatically controlled electric heaters, which maintain the temperature of the buildings constant to  $\pm 1$  or  $2^\circ\text{C}$ .

## Magnetic Instruments

### *Photographic Variometers*

A standard Ruska three-component variograph records declination (D), horizontal intensity (H) and vertical intensity (Z). Time scale is 20 mm/hr.

Scale values were checked twice a month on the average, using the Helmholtz coils provided. The adopted scale values are included in the list of baselines following the section on "Absolute Observations and Baseline Values".

To correct for parallax on the standard magnetograms, 0.3 minute must be subtracted from time read on the magnetograms for D, H and Z. This correction was determined in January 1967.

The sensitivity of the Ruska temperature trace is  $1.3^\circ\text{C}/\text{mm}$ . The temperature in the variometer room was kept constant to within a degree or so, and temperature corrections to the mean hourly values were not necessary.

Owing to difficulties in the operation of the observatory, standard and rapid-run photographic recording was discontinued on March 31, 1965, and was not resumed until August 24, 1965. Fluxgate charts are available for this period.

In October 1966 scale value checks showed a pronounced nonlinearity in the movement of the Z trace. The scale values continued to be highly erratic and a new Z variometer had to be installed on 1 January 1967.

The rapid-run Ruska variograph which records D, H and Z at a time scale of 240 mm/hr has been in operation at the observatory from 1 January to 31 March 1965, and from 24 August 1965 to the present time. The scale values of the rapid-run magnetogram are:

	( $^{\circ}/\text{mm}$ )
D:	1.74
H:	4.91
Z: Jan.-Mar.	5.85 – 5.95
Apr.-Aug. 26 (0149)	5.95 – 5.82
Aug. 26 (0149) – Oct. 26 (2315)	5.52
Oct. 26 (2315) – Oct. 31	4.95 – 5.78
Thereafter	5.78

\*Based on geomagnetic pole position 78.3N, 69.0W (Finch and Leaton, 1957).

Time marks accurate to within a second are supplied by a crystal-controlled clock to both the standard and rapid-run variographs.

#### Standby Variometer

A three-component (fluxgate) electrical recording magnetometer (Serson, 1957) with a chopper bar-type inked output chart has been in operation at Great Whale River since January 1963. This magnetometer was installed by the Division of Geomagnetism in November 1962 and operated by the Pacific Navy Laboratory - Stanford University technician until July 1965. D, H and Z were recorded except for about 4 weeks in October 1963 when X, Y and Z were recorded. Chart rate was 20 mm/hr except for the period November 1964 to December 16, 1966, when the paper speed was 75 mm/hr. Normal sensitivity is 1000 or 2000 gammas full scale, automatically switching to half sensitivity at times of heavy disturbance.

In addition to acting as a storm recorder, the charts provide a continuous visual indication of magnetic field conditions. Chart values are used to interpolate for missing intervals on the Ruska magnetograms.

#### Absolute Instruments

A proton precession magnetometer is the primary standard of total intensity (F). The value adopted for the gyromagnetic frequency is  $4257.60 \pm 0.03$  Hz/oersted. A portable electrical magnetometer of the saturable core type is used for the determination of declination (D) and inclination (I).

### Absolute Observations and Baseline Values

Absolute observations of D, I and F were made two or three times a month during magnetically quiet periods.

#### Determination of H and Z from I and F Measurements

Z is derived from the absolute measurement of F by the relation  $Z = F \sin I$  where F is reduced to the time of the I observation by the approximation  $\Delta F = \Delta Z$ . The horizontal intensity (H) is derived from the relation  $H = Z \cot I$ , Z being the value of the vertical intensity at the time of the I observation.

From earlier comparisons with the Agincourt observatory standards, the probable error of a single observation using the portable electrical magnetometer and including the error in reading the magnetogram, was  $0.3'$  in declination and  $0.2'$  in inclination, equivalent to 3 gammas at Agincourt (Serson and Hannaford, 1956). The corresponding probable errors at Great Whale River are  $1'$  in D and  $0.2'$  in I. If we assume that the values of total intensity (F) given by the proton precession magnetometer are accurate to 5 gammas, then the probable error in the calculated value of H, which can be attributed to uncertainty in the D, I and F measurements, should not exceed 3 gammas.

#### Baseline Values

Time marks were placed on the Ruska record at the time of the absolute observations. Baseline values were calculated from the measurement of the standard magnetogram ordinates at these points, and the values of D, H and Z obtained from the absolute observations. The final baseline values were adopted by fitting the best straight line to the observed values between known discontinuities. Following are the baselines and scale values adopted for D, H and Z for 1967.

### Magnetic Reductions

The mean hourly values of D, H and Z were scaled manually and punched on cards. The tables were calculated by a CDC 3100 computer. All values were rounded off to the nearest gamma. The computer was programmed so that the output was compatible with offset printing technique.

The mean hourly value for each hour of the day, and the mean daily value for each day of the month for the year 1967 for D, H and Z are given in Tables 1 to 36. Values which have been interpolated from the standby variometer charts have been underlined in the tables. A summary by month, season and year of the mean hourly values of D, H and Z for all days and for international quiet and disturbed days, is given in Tables 37 to 45.

The R indices of magnetic disturbance are given for each hour of 1967 in Tables 46 to 69, where the hourly ranges in D and H are expressed in 10-gamma units.

Microfilm copies of standard-run and rapid-run photographic magnetograms with provisional scale values and baselines (for standard magnetograms only) were supplied to the World Data Centre A, Washington, on a monthly basis beginning 1 January 1966.

The local quiet days for each month, selected on the basis of the R indices, are listed below. Local quiet days which do not appear also in the list of international quiet days are italicized. The five international quiet and disturbed days are labelled Q and D, respectively, in Tables 1 to 36.

#### 5 Local Quiet Days

#### 10 Local Quiet Days

January	4, 5, 24, 27, 31	4, 5, 10, 12, 18, 24, 25, 27, 30, 31
February	2, 10, 12, 13, 20	2, 3, 10, 12, 13, 19, 20, 21, 24, 28
March	8, 11, 12, 15, 16	7, 8, 11, 12, 15, 16, 17, 23, 24, 26
April	11, 13, 14, 27, 28	3, 11, 13, 14, 15, 26, 27, 28, 29, 30
May	8, 10, 21, 22, 24	6, 8, 9, 10, 15, 20, 21, 22, 23, 24
June	1, 19, 21, 23, 24	1, 13, 16, 18, 19, 20, 21, 22, 23, 24
July	9, 10, 17, 19, 31	3, 8, 9, 10, 16, 17, 19, 22, 27, 31
August	1, 2, 3, 4, 28	1, 2, 3, 4, 9, 13, 22, 23, 28, 29
September	7, 11, 12, 23, 27	5, 6, 7, 10, 11, 12, 23, 25, 26, 27
October	4, 20, 21, 22, 25	2, 4, 16, 19, 20, 21, 22, 25, 26, 31
November	1, 10, 17, 18, 20	1, 6, 7, 10, 17, 18, 19, 20, 21, 26
December	11, 14, 16, 25, 28	11, 12, 13, 14, 15, 16, 24, 25, 28, 29

#### References

- Finch, H.F., and B.R. Leaton, 1957. MN, RAS, *Geophys. Suppl.*, 6, 314.  
 Serson, P.H., 1957. *Can. J. Phys.*, 35, 1387.  
 Serson, P.H., and W.L.W. Hannaford, 1956. *Can. J. Technol.*, 34, 232.

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D 66

**AMENDMENT TO PUBLICATIONS OF THE DOMINION OBSERVATORY**

**Volume XXXVII, No. 9**

**RECORD OF OBSERVATIONS AT GREAT WHALE MAGNETIC OBSERVATORY  
1967**

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**NEW PAGES**

Insert new pages 340A and 340B





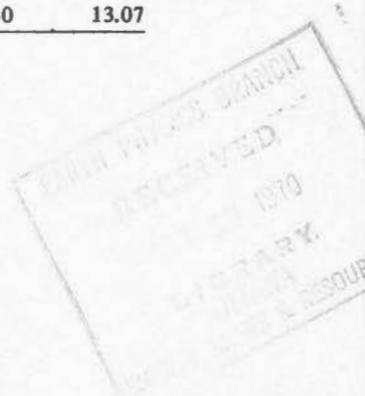


D West Baselines			D West Scale Values $\gamma$ /mm		
Adopted	Observed	Adopted	Observed	Adopted	Observed
Jan.	23 22 - 23 20	Jan.	4.80	Jan. 11	4.76
				19	4.79
Feb.	23 20 - 23 17.5	Feb.	4.80	Feb. 10	4.76
				19	4.79
Mar.	23 17.5 - 23 14.5	Mar.	4.80	Mar. 24	4.76
Apr.	23 14.5 - 23 09.5	Apr.	4.80		
May	23 09.5 - 23 03.5	May	4.80	May 9	4.79
				16	4.79
June	23 06.5	June	4.80	June 3	4.79
				11	4.80
				20	4.80
July	23 06.5	July	4.80	July 7	4.80
				16	4.80
				25	4.80
				30	4.86
Aug.	23 06.5	Aug.	4.80	Aug. 9	4.79
Sept.	23 06.5	Sept.	4.80		
Oct.	23 06.5	Oct.	4.80	Oct. 1	4.81
				16	4.82
Nov.	23 06.5	Nov.	4.80	Nov. 4	4.83
Dec. 1 (0000) - 8(2300)	23 06.5	Dec.	4.80	Dec. 24	4.79
Thereafter	23 04.0				

H Baselines $\gamma$			H Scale Values $\gamma$ /mm		
Adopted	Observed	Adopted	Observed	Adopted	Observed
Jan.	9298 - 9291	Jan.	13.71	Jan. 11	13.75
				19	13.74
Feb.	9291 - 9284	Feb.	13.72	Feb. 10	13.69
				19	13.76
Mar.	9284 - 9277	Mar.	13.74	Mar. 24	13.70
Apr.	9276 - 9269	Apr.	13.75	Apr.	
May	9265	May	13.77	May 9	13.69
				16	13.73
June	9265	June	13.78	June 3	13.77
				11	13.84
				20	13.74
July	9267 - 9271	July	13.80	July 7	13.81
Aug.	9271 - 9275	Aug.	13.81	Aug. 9	13.78
				17	13.83
Sept.	9275 - 9279	Sept.	13.83	Sept. 15	13.79
Oct.	9279 - 9283	Oct.	13.84	Oct. 1	13.88
				16	13.88
Nov.	9283 - 9287	Nov.	13.85	Nov. 4	13.82
Dec.	9287 - 9291	Dec.	13.86	Dec. 24	13.88

Z Baselines  $\gamma$ Z Scale Values  $\gamma/\text{mm}$ 

Z Baselines $\gamma$		Z Scale Values $\gamma/\text{mm}$	
Adopted	Observed	Adopted	Observed
Jan. 1 (0000) - (0240) no trace; new Z variometer being installed		Jan.	13.30
1 (0240) - 2(1310) 58900			Jan. 1 27.40
2 (1310) - 31(1200) 58880			3 12.98
			11 13.44
			19 13.31
			23 13.22
			26 13.23
Feb. 58880		Feb.	13.30
			Feb. 10 13.32
			19 13.39
			27 13.39
Mar. 58880		Mar.	13.30
			Mar. 8 13.37
			17 13.36
			24 13.34
Apr. 58880		Apr.	13.30
May 58882	May 7 58877	May	13.30
	16 58889		May 9 13.32
	24 58879		16 13.38
June 58882	June 3 58882	June	13.60
	13 58881		June 3 13.57
	23 58878		11 13.66
			20 13.58
July 58882	July 7 58880	July	13.60
	16 58889		July 7 13.66
			16 13.58
			30 13.60
Aug. 58882	Aug. 9 58884	Aug.	13.70
			Aug. 9 13.65
			17 13.73
			28 13.70
Sept. 58882 - 58865	Sept. 30 58868	Sept.	13.7 - 14.0
			Sept. 5 13.67
			15 13.75
			22 13.98
Oct. 1 (0000) - 26 (2315)	Oct. 5 58872	Oct. 1 - 26 (2315)	14.0
58865 - 58875	7 58859	26 (2315) - 31 (2400)	
	16 58869		13.5 - 13.7
26 (2315) - 31 (2400) 58935			Oct. 1 13.94
			7 14.07
			16 13.94
			27 13.50
			30 13.60
Nov. 1 (0000) - 30 (2300)	Nov. 6 58921	Nov. 1 (0000) - 29 (2300)	
58975 - 58635	10 58881		Nov. 5 14.09
	18 58771		17 14.78
	29 58638		29 14.28
30 (2335 - 2400) 59045			
Dec. 59045	Dec. 9 59048	Dec. 1 - 29	13.4 - 13.6
	24 59041	30 - 31	13.1
	30 59046		Dec. 4 13.43
			24 13.57
			30 13.07



HORIZONTAL INTENSITY

TABLE 1 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

JANUARY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TC 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1	D	340	340	340	278	175	278	257	305	305	326	271	168	257	223	305	257	285	333	326	319	346	381	388	367	299
2		394	401	394	394	285	388	346	326	319	326	319	326	326	319	305	305	319	326	326	333	346	353	353	346	341
3		333	333	319	319	305	292	312	319	312	278	196	244	264	292	326	292	298	298	305	305	312	312	319	319	300
4	C	319	319	319	312	312	312	312	312	312	312	312	312	312	312	305	298	298	298	305	305	312	319	326	333	312
5		318	318	318	318	318	318	318	318	311	297	304	318	311	311	304	297	297	297	304	311	318	318	318	325	312
6		325	332	359	359	325	318	318	277	201	236	318	332	325	318	311	304	304	311	311	311	318	325	325	325	312
7	D	325	325	325	318	304	263	236	215	-4	-100	85	270	222	119	208	325	345	325	366	366	318	325	373	352	259
8	D	249	284	236	147	195	119	160	71	78	57	-203	-100	-114	-25	112	155	359	400	400	414	380	332	325	311	183
9		296	303	269	248	180	84	317	324	317	310	310	310	303	296	283	303	296	296	296	303	310	310	310	317	289
10		331	317	303	310	303	303	303	303	303	303	296	296	296	296	296	296	296	303	303	317	310	317	310	331	306
11		296	317	317	303	283	303	255	166	70	242	317	310	310	290	283	296	310	310	331	331	338	358	365	344	294
12	Q	324	324	317	317	310	303	296	276	283	303	310	317	310	303	290	290	283	283	296	310	317	324	324	324	306
13	D	316	316	316	330	323	309	275	227	28	199	302	289	103	172	316	323	316	316	330	357	412	364	227	138	275
14	C	42	-88	172	83	241	42	-40	8	-157	-184	302	316	316	302	289	275	275	282	289	295	309	309	330	316	180
15		323	330	302	295	295	289	289	282	282	268	247	268	316	289	289	289	295	302	309	323	323	323	337	357	301
16		343	316	330	330	275	145	138	193	124	103	138	309	309	316	282	295	302	309	316	316	316	330	330	343	271
17		349	349	363	342	363	336	329	301	294	288	308	315	301	294	288	288	294	294	308	315	315	322	322	322	317
18		329	329	342	342	342	329	329	315	315	301	301	308	301	288	288	288	294	301	308	315	315	308	315	315	314
19		301	301	294	294	288	281	274	301	301	294	301	301	301	301	288	288	288	294	308	322	322	342	342	315	302
20		301	301	301	288	267	308	294	274	123	89	192	274	253	226	205	233	274	370	411	425	377	336	301	315	281
21		314	321	293	280	266	232	184	218	184	177	197	143	280	287	287	293	314	293	300	293	287	300	314	321	266
22		341	355	314	300	300	300	293	293	280	293	300	300	300	300	300	287	280	287	293	300	300	300	307	314	301
23		328	328	307	300	300	266	143	239	266	280	280	307	307	300	293	280	280	287	287	293	300	307	307	307	287
24	C	300	307	307	321	293	300	300	293	293	300	300	300	300	300	293	287	287	287	287	293	300	300	300	300	298
25		313	313	313	306	313	313	306	299	299	286	272	272	292	306	292	286	279	279	286	292	306	313	320	320	299
26		306	306	306	306	306	286	217	251	299	292	286	299	299	299	292	286	286	286	286	292	299	306	313	313	292
27		313	313	313	313	313	313	313	313	313	313	313	313	313	306	306	299	299	299	299	299	306	313	320	320	310
28		320	327	334	340	292	190	196	258	121	224	327	306	313	313	299	292	292	299	313	320	320	313	313	327	290
29		319	326	319	278	312	319	285	202	230	291	305	305	305	298	291	285	278	285	291	298	305	305	305	305	293
30	C	312	312	312	312	319	298	250	285	319	312	312	305	298	298	291	285	285	285	291	298	305	312	312	312	301
31	C	312	312	312	305	305	312	312	305	305	298	312	312	312	305	291	285	278	285	291	305	312	326	326	326	306
MEAN A		311	309	312	300	291	272	262	260	227	236	262	279	279	277	284	286	297	304	312	319	321	323	322	319	290
MEAN C		313	315	313	313	308	305	294	294	302	305	309	309	307	304	294	289	286	287	294	302	309	316	318	319	304
MEAN D		254	235	278	231	247	202	178	165	50	60	151	189	157	158	246	275	316	331	342	350	353	342	328	297	522

GREAT WHALE MAGNETIC OBSERVATORY 1967

## DECLINATION

TABLE 2 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

JANUARY 1967

DAY	HOUR UT																					MEAN				
		0 TO 1	1 TO 2	2 TO 3	3 TC 4	4 TC 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TC 12	12 TO 13	13 TO 14	14 TO 15	15 TC 16	16 TO 17	17 TO 18	18 TO 19	19 TC 20		20 TC 21	21 TO 22	22 TC 23	23 TO 24
1	C	22.0	17.2	17.2	29.2	34.0	26.8	24.4	19.6	17.2	17.2	19.6	26.8	36.4	34.0	22.0	24.4	41.2	46.0	38.8	34.0	29.2	22.0	17.2	17.2	26.4
2		7.6	10.0	14.8	14.8	4	26.8	17.2	17.2	14.8	17.2	14.8	14.8	14.8	14.8	19.6	19.6	22.0	22.0	22.0	19.6	19.6	17.2	14.8	16.3	
3		17.2	12.4	19.6	19.6	19.6	19.6	22.0	19.6	19.6	14.8	24.4	24.4	19.6	17.2	12.4	19.6	19.6	26.8	24.4	22.0	19.6	22.0	22.0	19.6	19.4
4	Q	19.6	19.6	19.6	19.6	19.6	19.6	22.0	22.0	22.0	22.0	22.0	22.0	22.0	19.6	19.6	19.6	22.0	24.4	26.8	26.8	29.2	31.6	29.2	26.8	22.8
5		22.0	22.0	22.0	19.6	19.6	22.0	22.0	22.0	22.0	22.0	22.0	19.6	17.2	14.8	19.6	22.0	24.4	24.4	24.4	26.8	26.8	24.4	22.0	22.0	21.9
6		22.0	19.6	14.8	17.2	22.0	22.0	22.0	17.2	17.2	26.8	22.0	19.6	17.2	14.8	14.8	17.2	17.2	19.6	19.6	22.0	22.0	19.6	19.6	17.2	19.3
7	D	19.6	19.6	17.2	19.6	22.0	26.8	26.8	17.2	17.2	26.8	17.2	17.2	24.4	43.6	41.2	14.8	50.8	31.6	26.8	22.0	26.8	24.4	7.6-18.8	22.6	
8	D	19.6	31.6	89.2	67.6	60.4	48.4	19.6	38.8	29.2	22.0	12.4	46.0	43.6	48.4	53.2	24.4	-2.0	5.2	2.8	10.0	17.2	19.6	17.2	31.0	
9		24.4	24.4	22.0	26.8	36.4	94.0	26.8	19.6	19.6	22.0	22.0	19.6	19.6	17.2	14.8	17.2	31.6	29.2	26.8	24.4	19.6	19.6	19.6	17.2	25.6
10		14.8	17.2	19.6	19.6	19.6	22.0	19.6	19.6	19.6	19.6	19.6	19.6	19.6	14.8	17.2	22.0	24.4	24.4	26.8	26.8	26.8	24.4	22.0	17.2	20.7
11		31.6	26.8	26.8	24.4	29.2	29.2	29.2	19.6	34.0	22.0	24.4	24.4	17.2	17.2	26.8	31.6	24.4	26.8	24.4	26.8	24.4	19.6	14.8	19.6	24.8
12	Q	19.6	19.6	19.6	24.4	26.8	24.4	24.4	24.4	24.4	24.4	24.4	24.4	19.6	17.2	17.2	17.2	19.6	22.0	26.8	24.4	24.4	22.0	22.0	19.6	22.2
13	C	19.6	19.6	19.6	17.2	26.8	26.8	26.8	29.2	31.6	19.6	26.8	22.0	34.0	19.6	31.6	19.6	22.0	29.2	34.0	31.6	19.6	19.6	41.2	48.4	26.5
14	D	71.9	103.1	91.1	45.5	43.1	57.5	59.9	26.3	31.1	16.7	21.5	19.1	19.1	21.5	21.5	26.3	23.9	31.1	31.1	28.7	26.3	26.3	23.9	23.9	37.1
15		21.5	16.7	26.3	28.7	28.7	28.7	26.3	26.3	23.9	28.7	28.7	28.7	19.1	14.3	26.3	28.7	28.7	28.7	33.5	35.9	31.1	26.3	23.9	19.1	26.2
16		19.1	23.9	19.1	21.5	33.5	57.5	76.7	28.7	31.1	19.1	19.1	19.1	14.3	11.9	23.9	33.5	33.5	35.9	35.9	33.5	31.1	33.5	31.1	23.9	29.6
17		19.1	19.1	16.7	21.5	23.9	23.9	26.3	23.9	23.9	26.3	23.9	21.5	21.5	19.1	23.9	26.3	28.7	33.5	33.5	31.1	28.7	26.3	23.9	23.9	24.6
18		21.5	19.1	21.5	21.5	26.3	28.7	26.3	26.3	23.9	23.9	23.9	21.5	21.5	21.5	23.9	33.5	38.3	38.3	33.5	31.1	31.1	23.9	23.9	23.9	26.2
19		21.0	18.6	18.6	18.6	16.2	25.8	30.6	25.8	25.8	23.4	23.4	21.0	18.6	18.6	23.4	25.8	28.2	30.6	33.0	33.0	33.0	33.0	30.6	28.2	25.2
20		25.8	25.8	28.2	33.0	33.0	25.8	28.2	25.8	30.6	21.0	16.2	21.0	28.2	28.2	40.2	35.4	42.6	25.8	18.6	21.0	28.2	33.0	30.6	25.8	28.0
21		23.4	23.4	28.2	25.8	35.4	30.6	30.6	25.8	30.6	23.4	21.0	18.6	16.2	18.6	28.2	28.2	28.2	40.2	33.0	33.0	30.6	30.6	28.2	25.8	27.4
22		21.0	11.4	23.4	23.4	25.8	28.2	28.2	25.8	25.8	21.0	23.4	23.4	23.4	18.6	21.0	25.8	28.2	30.6	33.0	33.0	33.0	30.6	28.2	28.2	25.6
23		25.8	21.0	16.2	13.8	16.2	23.4	33.0	23.4	23.4	25.8	25.8	23.4	21.0	18.6	18.6	21.0	23.4	25.8	28.2	28.2	28.2	28.2	28.2	28.2	23.7
24	Q	27.7	25.3	20.5	25.3	32.5	27.7	25.3	25.3	25.3	25.3	25.3	25.3	22.9	20.5	20.5	25.3	25.3	27.7	30.1	30.1	30.1	30.1	27.7	27.7	26.1
25		25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	20.5	22.9	20.5	20.5	27.7	30.1	30.1	30.1	30.1	30.1	27.7	27.7	25.3	25.9
26		27.7	27.7	27.7	27.7	27.7	30.1	39.7	27.7	22.9	20.5	22.9	27.7	22.9	22.9	22.9	27.7	27.7	27.7	30.1	30.1	30.1	30.1	27.7	27.7	27.4
27		27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	25.3	25.3	25.3	25.3	22.9	22.9	22.9	27.7	27.7	27.7	30.1	32.5	30.1	27.7	27.7	27.7	27.1
28		27.7	25.3	22.9	30.1	30.1	46.9	42.1	22.9	44.5	10.9	13.3	18.1	22.9	20.5	22.9	27.7	30.1	30.1	30.1	30.1	30.1	30.1	30.1	27.7	27.8
29		27.2	24.8	32.0	48.8	29.6	29.6	29.6	36.8	36.8	22.4	22.4	22.4	22.4	22.4	22.4	24.8	24.8	29.6	32.0	32.0	29.6	27.2	27.2	24.8	28.4
30	Q	27.2	27.2	27.2	24.8	24.8	24.8	27.2	27.2	27.2	22.4	22.4	22.4	22.4	22.4	20.0	24.8	27.2	29.6	29.6	32.0	29.6	29.6	27.2	27.2	26.1
31	Q	24.8	24.8	24.8	22.4	22.4	24.8	24.8	27.2	24.8	24.8	22.4	20.0	20.0	17.6	17.6	20.0	24.8	27.2	29.6	32.0	29.6	29.6	27.2	24.8	24.5
MEAN A		24.0	24.2	26.4	26.0	27.1	31.5	29.4	24.7	25.5	22.0	21.9	22.6	22.1	21.1	23.4	24.6	27.1	28.5	28.4	28.4	27.4	26.0	24.7	22.6	25.4
MEAN C		23.8	23.3	22.3	23.3	25.2	24.3	24.7	25.2	24.7	23.8	23.3	22.8	20.9	19.5	19.0	21.9	24.3	26.7	28.6	29.5	29.1	27.6	26.2	24.3	24.3
MEAN D		30.5	38.2	46.9	35.8	37.3	37.3	31.5	26.2	25.3	20.5	19.5	26.2	31.5	33.4	33.9	21.9	27.2	28.6	26.7	25.3	23.8	22.4	21.4	18.1	52.4

VERTICAL INTENSITY

TABLE 3 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

JANUARY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
		TO 1	TO 2	TC 3	TC 4	TC 5	TO 6	TO 7	TC 8	TO 9	TO 10	TO 11	TC 12	TO 13	TC 14	TC 15	TC 16	TO 17	TO 18	TO 19	TC 20	TC 21	TC 22	TC 23	TO 24		
1	D	299	299	299	319	312	299	299	299	299	299	286	259	239	266	259	299	319	326	312	312	312	319	319	319	299	
2		312	306	286	292	246	286	312	312	306	312	312	312	312	306	306	306	306	299	299	299	319	319	319	319	304	
3		279	286	279	279	279	279	239	286	286	252	239	226	252	259	266	286	286	286	286	286	279	279	279	279	270	
4	Q	279	279	272	272	272	272	272	272	272	266	266	266	266	266	266	266	266	266	266	272	272	279	286	286	272	
5		279	279	272	272	266	272	272	279	266	252	252	266	266	266	259	259	266	272	279	279	279	279	279	279	270	
6		279	279	279	292	279	266	266	252	286	246	259	272	266	252	252	252	259	259	259	266	266	266	266	266	266	
7	C	266	266	266	266	239	213	206	173	193	292	133	153	179	199	239	299	286	279	292	252	266	266	266	133	234	
8	D	206	272	286	199	213	239	425	552	612	631	485	419	246	246	239	272	252	332	292	286	279	292	292	286	327	
9		272	266	266	279	319	319	279	286	286	286	279	279	286	279	279	272	279	286	292	292	292	292	292	292	285	
10		259	279	279	279	279	279	279	279	272	279	279	279	279	279	272	279	279	279	286	292	292	292	286	286	280	
11		213	279	266	252	266	266	252	339	239	232	266	272	266	246	232	246	279	292	292	292	299	299	306	306	271	
12	C	286	286	279	272	266	266	266	259	266	272	272	279	279	279	272	272	272	272	279	279	279	279	272	279	273	
13	C	272	272	279	266	266	266	292	332	359	232	246	246	106	46	179	246	252	252	259	272	246	126	146	173	235	
14	C	239	332	252	226	299	518	479	492	598	465	319	279	292	286	286	306	252	292	299	286	286	286	292	299	333	
15		292	292	286	279	279	279	279	279	279	259	252	252	272	266	266	266	272	279	279	286	292	292	292	306	278	
16		306	292	299	286	279	352	312	279	292	252	199	252	266	252	239	239	266	272	279	286	286	292	306	319	279	
17		319	306	299	272	246	252	286	279	279	266	272	279	279	279	279	286	279	279	279	279	272	272	275	286	279	
18		292	286	279	286	286	286	286	292	286	279	279	272	266	266	266	266	266	272	286	292	292	286	279	279	280	
19		279	272	272	272	279	266	266	272	272	266	272	272	266	266	272	272	272	279	279	279	279	299	306	286	276	
20		279	279	279	279	226	266	266	279	346	252	193	213	193	193	186	246	319	332	292	259	306	312	306	306	267	
21		292	259	246	239	292	385	359	326	332	292	279	259	252	246	226	266	272	292	286	286	279	279	286	292	284	
22		292	266	279	272	279	279	279	279	259	259	272	272	279	279	279	279	286	292	292	299	299	292	279	279	280	
23		286	292	272	279	286	306	226	272	272	266	259	279	286	279	279	279	279	286	286	286	279	279	279	279	278	
24	C	279	279	272	252	259	279	279	279	266	272	272	279	279	279	279	279	279	279	279	279	286	286	286	279	276	
25		279	279	279	279	279	272	272	266	259	239	232	226	239	252	266	279	279	279	279	279	279	279	279	279	268	
26		279	279	279	272	266	259	259	239	279	272	252	259	272	272	272	272	272	279	279	279	279	279	279	279	271	
27		279	279	279	272	272	272	272	272	272	272	272	272	279	272	266	266	266	266	279	272	272	272	272	279	273	
28		286	272	199	246	239	252	392	306	346	272	266	266	266	272	272	272	279	279	286	292	286	279	279	286	279	
29		286	286	266	226	266	272	292	266	266	266	266	272	279	279	279	279	279	279	279	279	279	279	279	279	274	
30	Q	279	279	286	286	279	279	286	246	279	286	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	
31	C	279	279	279	279	272	272	272	266	266	259	266	272	279	279	279	279	279	279	279	279	279	279	279	279	292	276
MEAN A		278	282	274	269	270	286	290	295	303	285	267	267	259	257	261	272	278	284	284	282	284	281	282	280	278	
MEAN C		280	280	278	272	270	274	275	264	268	270	271	272	276	276	275	275	275	275	278	278	279	280	280	283	275	
MEAN D		256	288	276	255	266	307	340	369	412	384	294	271	213	209	240	284	280	296	291	282	278	258	263	242	557	

GREAT WHALE MAGNETIC OBSERVATORY 1967

## HORIZONTAL INTENSITY

TABLE 4 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

FEBRUARY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TC 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24		
1		339	366	387	359	284	270	222	202	270	243	270	318	311	305	298	291	291	291	298	305	311	311	318	318	299	
2	C	311	311	311	311	311	311	305	291	311	311	311	305	298	291	284	277	284	298	298	311	305	305	311	311	304	
3	Q	311	311	311	311	311	311	298	277	291	215	174	305	318	311	305	298	298	291	298	305	311	318	318	318	296	
4		318	318	318	311	305	208	215	250	270	277	311	311	305	305	291	270	305	305	318	311	318	339	435	449	307	
5		345	304	406	372	345	276	276	276	276	276	297	297	310	290	290	255	276	310	297	297	290	304	304	304	303	
6		304	304	304	324	310	297	283	269	201	290	297	304	304	304	304	297	297	297	297	304	310	317	324	324	298	
7	C	324	317	317	310	310	310	310	310	310	310	310	310	310	304	297	276	235	242	386	454	386	255	214	235	306	
8	C	386	338	139	57	146	331	297	214	15	-88	-122	-94	2	214	249	269	304	290	331	338	317	338	413	358	210	
9		426	364	378	344	337	234	165	179	303	303	296	289	289	289	282	268	268	282	289	296	303	296	303	309	295	
10	C	303	303	303	303	289	296	309	296	256	296	296	289	296	296	296	282	282	282	289	296	303	303	309	309	296	
11		309	309	309	303	296	104	35	131	158	254	282	303	289	296	303	296	289	289	296	309	316	309	309	309	267	
12	Q	309	309	309	309	309	309	309	303	303	303	303	303	303	296	289	289	289	289	296	296	303	309	309	309	302	
13	C	315	315	315	308	308	322	308	308	308	302	302	302	302	295	288	288	288	288	295	315	343	350	356	377	418	318
14		452	384	343	322	322	308	295	260	274	295	274	281	295	295	295	295	288	288	295	308	315	322	329	350	312	
15		398	411	404	350	343	322	308	267	302	308	308	308	308	302	288	281	281	281	288	302	315	322	329	336	319	
16	D	418	384	425	343	329	308	288	281	75	-69	-83	48	13	-35	288	329	302	295	343	391	363	295	302	295	247	
17	C	287	301	239	204	280	294	266	239	163	211	225	232	246	280	259	307	287	294	280	280	307	314	335	314	268	
18		321	321	321	259	239	184	184	177	211	280	287	280	280	307	307	254	287	280	294	294	294	294	301	314	275	
19		301	301	301	294	294	287	287	273	259	280	287	294	307	307	314	287	287	280	287	301	307	314	321	321	295	
20		314	314	321	342	328	314	321	307	254	287	280	301	314	307	294	287	287	280	287	307	314	307	307	314	305	
21		313	313	306	306	306	300	306	306	306	300	293	286	313	300	293	279	293	313	327	341	348	361	348	396	315	
22		368	396	327	334	327	306	272	183	197	217	197	231	279	286	286	300	300	306	320	341	354	334	313	306	295	
23		348	354	320	320	313	306	306	300	265	121	121	258	279	265	183	176	300	382	444	396	341	313	286	286	291	
24		286	286	293	300	293	293	265	203	197	286	320	320	306	293	286	272	279	286	306	327	313	306	300	306	288	
25	D	299	299	299	292	223	10	209	230	237	278	299	264	305	292	278	271	278	319	333	347	305	305	312	360	277	
26		326	326	374	347	292	285	285	264	250	271	285	285	312	252	278	264	292	299	299	299	319	312	333	305	300	
27		312	299	299	299	299	292	244	202	252	305	285	278	292	292	278	264	264	264	299	312	292	292	305	312	286	
28		305	305	312	285	264	285	278	305	299	305	292	292	299	299	285	271	264	278	292	299	305	305	312	319	294	
MEAN A		334	327	321	304	297	274	266	254	248	249	250	268	278	281	285	280	285	292	311	322	318	313	321	325	292	
MEAN C		310	310	310	309	306	310	306	295	302	285	277	302	304	299	293	288	287	288	299	310	314	318	325	333	303	
MEAN D		343	328	284	241	258	251	274	255	160	129	126	152	175	211	274	291	281	288	334	362	336	302	315	312	523	

## DECLINATION

TABLE 5 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

FEBRUARY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TC 14	TC 15	TC 16	TO 17	TO 18	TO 19	TO 20	TC 21	TO 22	TC 23	TO 24	
1		22.4	17.6	17.6	27.2	32.0	34.4	34.4	34.4	24.8	24.8	27.2	22.4	20.0	17.6	17.6	22.4	27.2	29.6	32.0	32.0	29.6	29.6	29.6	27.2	26.4
2	Q	24.8	24.8	24.8	24.8	24.8	24.8	24.8	27.2	22.4	22.4	22.4	20.0	17.6	17.6	20.0	20.0	24.8	27.2	29.6	32.0	34.4	32.0	27.2	24.8	24.8
3	Q	24.8	22.4	22.4	24.8	24.8	22.4	24.8	27.2	24.8	27.2	17.6	17.6	17.6	12.8	12.8	17.6	22.4	27.2	27.2	29.6	29.6	27.2	27.2	24.8	23.2
4		24.8	24.8	22.4	24.8	27.2	51.2	29.6	22.4	22.4	20.0	20.0	20.0	17.6	20.0	15.2	29.6	39.2	27.2	27.2	29.6	29.6	29.6	12.8	22.4	25.4
5		26.7	43.5	26.7	17.1	33.9	41.1	24.3	26.7	17.1	19.5	19.5	17.1	17.1	17.1	17.1	12.3	43.5	29.1	26.7	26.7	26.7	24.3	24.3	24.3	25.1
6		24.3	24.3	24.3	26.7	21.9	24.3	24.3	26.7	36.3	21.9	21.9	21.9	21.9	21.9	19.5	19.5	24.3	29.1	29.1	26.7	26.7	26.7	24.3	21.9	24.6
7	D	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	19.5	19.5	17.1	17.1	14.7	12.3	-2.1	26.7	21.9	2.7	31.5	38.7	55.5	50.7	22.7
8	D	17.1	31.5	36.3	9.9	65.1	60.3	31.5	33.9	38.7	17.1	-2.1	12.3	24.3	26.7	29.1	26.7	24.3	29.1	26.7	29.1	26.7	24.3	14.7	17.1	27.1
9		9.9	12.3	9.9	7.5	17.1	14.7	31.5	36.3	21.9	19.5	19.5	21.9	19.5	17.1	17.1	19.5	21.9	24.3	24.3	26.7	26.7	24.3	24.3	24.3	20.5
10	Q	21.4	21.4	21.4	31.0	40.6	26.2	21.4	21.4	21.4	21.4	21.4	21.4	19.0	16.6	19.0	23.8	26.2	28.6	28.6	28.6	28.6	26.2	23.8	23.8	24.3
11		21.4	21.4	19.0	21.4	21.4	11.8	35.8	38.2	28.6	16.6	16.6	16.6	14.2	14.2	14.2	16.6	21.4	26.2	26.2	26.2	26.2	23.8	23.8	21.4	21.8
12	C	21.4	21.4	21.4	19.0	19.0	19.0	21.4	21.4	21.4	21.4	19.0	19.0	16.6	16.6	16.6	19.0	23.8	26.2	28.6	28.6	28.6	26.2	26.2	26.2	22.0
13	C	23.8	21.4	21.4	21.4	21.4	19.0	21.4	19.0	19.0	21.4	21.4	19.0	19.0	16.6	14.2	16.6	16.6	26.2	31.0	28.6	28.6	23.8	23.8	16.6	21.3
14		11.8	11.8	11.8	21.4	23.8	21.4	16.6	19.0	16.6	21.4	19.0	19.0	16.6	16.6	16.6	19.0	21.4	23.8	26.2	31.0	31.0	31.0	28.6	26.2	20.9
15		18.5	11.3	8.9	16.1	18.5	20.9	28.1	35.3	20.9	20.9	20.9	18.5	16.1	13.7	13.7	16.1	18.5	23.3	28.1	30.5	30.5	28.1	25.7	23.3	21.1
16	D	13.7	18.5	6.5	23.3	20.9	28.1	13.7	13.7	32.9	102.5	20.9	-15.1	16.1	30.5	18.5	20.9	18.5	16.1	8.9	16.1	16.1	25.7	25.7	25.7	21.6
17	D	23.3	23.3	18.5	102.5	42.5	20.9	20.9	23.3	28.1	25.7	20.9	13.7	16.1	18.5	16.1	16.1	20.9	23.3	28.1	30.5	28.1	25.7	23.3	23.3	26.4
18		23.3	18.5	16.1	18.5	16.1	35.3	28.1	28.1	23.3	18.5	18.5	16.1	18.5	16.1	13.7	16.1	18.5	20.9	23.3	25.7	25.7	25.7	23.3	23.3	21.3
19		23.3	23.3	23.3	23.3	23.3	20.9	20.9	25.7	23.3	20.9	20.9	20.9	16.1	11.3	11.3	13.7	23.3	25.7	28.1	28.1	30.5	28.1	25.7	25.7	22.4
20		22.8	20.4	20.4	18.0	20.4	20.4	20.4	22.8	20.4	20.4	22.8	18.0	15.6	13.2	10.8	15.6	18.0	25.2	27.6	27.6	25.2	25.2	25.2	22.8	20.8
21		20.4	20.4	20.4	20.4	20.4	22.8	20.4	20.4	20.4	20.4	20.4	15.6	18.0	20.4	20.4	20.4	22.8	27.6	30.0	27.6	30.0	27.6	25.2	20.4	21.6
22		15.6	15.6	18.0	15.6	18.0	22.8	27.6	30.0	22.8	15.6	15.6	8.4	6.0	8.4	15.6	20.4	22.8	30.0	30.0	32.4	30.0	30.0	27.6	25.2	21.0
23		20.4	13.2	18.0	20.4	20.4	22.8	20.4	20.4	20.4	25.2	13.2	18.0	6.0	15.6	30.0	34.8	20.4	6.0	3.6	13.2	22.8	25.2	25.2	22.8	19.1
24		22.8	22.8	22.8	22.8	22.8	22.8	25.2	25.2	22.8	20.4	15.6	13.2	13.2	13.2	18.0	22.8	25.2	27.6	25.2	22.8	22.8	20.4	20.4	20.4	21.3
25	C	19.9	19.9	19.9	22.3	22.3	67.9	27.1	17.5	12.7	15.1	12.7	7.9	7.9	7.9	10.3	15.1	17.5	10.3	29.5	27.1	27.1	24.7	19.9	15.1	19.9
26		34.3	53.5	12.7	19.9	29.5	29.5	24.7	22.3	19.9	17.5	17.5	17.5	12.7	12.7	10.3	17.5	19.9	29.5	29.5	29.5	22.3	22.3	22.3	22.3	22.9
27		19.9	22.3	19.9	22.3	22.3	24.7	29.5	29.5	22.3	17.5	15.1	19.9	12.7	12.7	15.1	19.9	24.7	29.5	29.5	29.5	29.5	27.1	24.7	22.3	22.6
28		19.9	19.9	19.9	24.7	24.7	24.7	22.3	22.3	19.9	19.9	19.9	15.1	15.1	10.3	10.3	15.1	19.9	24.7	27.1	27.1	27.1	27.1	24.7	22.3	21.0
MEAN A		21.2	22.3	19.5	23.9	25.6	27.7	24.8	25.4	23.1	23.5	18.5	16.4	15.9	16.1	16.3	19.2	22.3	24.8	26.1	26.7	27.5	26.7	25.2	23.8	22.6
MEAN C		23.2	22.3	22.3	24.2	26.1	22.3	22.8	23.2	21.8	22.8	20.4	19.4	18.0	16.0	16.5	19.4	22.8	27.1	29.0	29.5	30.0	27.1	25.6	23.2	23.1
MEAN D		19.2	23.0	20.6	36.0	34.5	39.8	23.0	22.1	26.9	36.5	14.4	7.7	16.3	20.1	17.7	18.2	15.8	21.1	23.0	21.1	25.9	27.8	27.8	26.4	48.3



## VERTICAL INTENSITY

TABLE 6 GREAT WHALE RIVER			Z = 59000 PLUS TABULAR VALUES IN GAMMAS																				FEBRUARY 1967			
HOUR UT DAY	0 TO 1	1 TO 2	2 TO 3	3 TC 4	4 TC 5	5 TC 6	6 TO 7	7 TC 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 13	13 TO 14	14 TO 15	15 TO 16	16 TO 17	17 TO 18	18 TO 19	19 TC 20	20 TC 21	21 TO 22	22 TC 23	23 TO 24	MEAN	
1		312	292	252	259	272	272	306	299	292	279	259	266	279	279	279	279	279	279	279	279	279	279	279	280	
2	Q	279	279	279	279	279	279	272	259	279	279	279	279	272	272	272	279	286	292	292	299	286	279	279	280	
3	C	279	279	279	279	279	279	272	259	259	213	199	232	272	279	272	279	279	279	279	279	279	279	279	268	
4		279	272	272	272	279	286	213	239	259	252	259	259	252	259	252	259	272	272	279	279	292	186	133	255	
5		139	80	153	246	199	306	292	286	266	266	252	259	272	259	272	279	306	306	279	279	286	286	279	255	
6		279	279	279	239	239	259	266	259	219	259	266	259	259	259	272	272	279	286	286	286	292	299	306	270	
7	D	292	286	279	279	279	279	279	279	279	279	279	279	279	279	272	272	266	286	239	93	6	113	133	26	235
8	C	153	153	239	66	133	306	319	332	432	485	425	465	326	239	266	292	319	286	286	299	312	319	266	299	292
9		246	173	186	193	226	239	352	339	306	292	299	299	299	299	299	299	299	299	299	299	299	299	306	281	
10	Q	306	306	292	252	292	299	299	292	292	286	286	279	286	292	292	292	292	292	292	292	292	292	292	291	
11		292	292	292	292	292	213	173	346	299	312	312	292	286	299	306	299	292	292	292	306	299	299	299	290	
12	Q	299	299	299	299	292	292	292	286	292	292	292	292	292	292	292	286	286	292	292	299	306	299	292	294	
13	Q	299	292	292	292	292	292	292	292	292	292	292	292	292	292	286	286	279	286	299	306	319	326	319	296	
14		299	299	279	246	266	279	306	292	286	286	279	279	286	286	286	299	306	292	292	306	306	312	319	292	
15		346	312	286	292	266	279	279	279	292	292	292	292	292	292	292	292	292	292	292	299	306	312	306	295	
16	D	326	299	246	252	292	346	266	339	332	412	631	572	492	479	286	306	299	326	312	292	292	332	306	319	348
17	D	319	312	306	166	246	292	312	326	332	319	279	286	272	279	272	299	292	299	306	306	312	319	312	326	295
18		326	319	312	279	266	319	292	292	266	279	292	286	292	299	299	299	299	299	299	306	306	306	306	306	297
19		306	306	299	299	299	292	286	286	286	286	279	286	286	306	292	292	292	306	306	306	312	306	312	297	
20		306	306	306	292	299	292	306	299	286	279	266	279	292	292	292	292	292	299	306	306	306	306	306	299	296
21		292	292	299	299	299	292	292	292	292	286	279	266	266	279	279	286	299	319	312	319	332	332	326	332	298
22		299	306	306	299	299	292	292	292	286	279	266	246	266	266	272	272	279	286	292	312	332	326	312	312	291
23		319	286	306	292	292	292	292	292	306	259	259	226	239	252	252	226	259	232	259	299	299	292	299	306	277
24		299	299	299	306	299	299	312	306	299	292	286	299	299	299	299	306	306	312	326	319	312	299	299	303	
25	D	299	299	299	306	339	239	306	346	346	306	286	266	292	292	292	292	299	306	346	346	326	306	306	306	306
26		226	226	186	239	292	312	312	319	286	286	299	292	286	286	292	306	319	312	319	326	312	306	312	319	290
27		306	306	306	299	299	292	292	312	292	299	286	286	299	306	306	312	312	326	326	319	306	306	306	306	304
28		306	306	306	306	272	286	286	292	299	299	292	299	312	312	306	306	306	306	306	306	306	299	299	299	301
MEAN A		287	277	276	265	274	286	288	298	295	294	295	293	291	290	284	287	292	294	295	294	293	298	291	288	289
MEAN Q		292	291	288	280	287	288	286	278	283	272	270	275	284	287	283	283	283	286	291	292	298	298	294	291	286
MEAN D		278	270	274	214	258	292	296	324	344	360	380	373	332	314	279	292	295	300	298	267	250	278	264	255	562

HORIZONTAL INTENSITY

TABLE 7 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

MARCH 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TC 7	TC 8	TC 9	TC 10	TC 11	TC 12	TC 13	TC 14	TC 15	TC 16	TC 17	TC 18	TC 19	TC 20	TC 21	TC 22	TC 23	TC 24	
1		313	320	320	306	327	334	306	279	313	299	299	292	286	286	286	320	299	286	286	299	306	306	306	313	304
2		313	313	313	313	299	299	306	313	306	292	272	251	272	292	292	279	272	286	286	306	299	306	320	320	297
3		313	313	313	299	196	272	306	313	313	292	237	231	292	272	286	299	292	292	292	299	320	320	320	320	292
4		334	347	334	320	340	313	272	196	279	306	320	313	306	299	292	286	286	292	299	299	299	313	320	320	304
5		333	305	312	271	236	223	291	230	236	285	298	312	305	305	264	236	312	312	305	264	298	353	367	326	291
6		333	326	209	374	319	223	181	278	305	312	312	305	291	291	298	298	291	291	305	312	326	305	319	312	297
7		312	312	305	305	298	305	305	291	250	291	298	291	285	298	305	285	271	271	278	298	298	312	312	319	296
8	C	312	312	312	305	312	312	312	312	312	312	312	312	312	305	298	285	278	278	285	291	298	305	312	319	304
9	C	318	325	345	345	318	290	263	311	270	256	297	290	249	270	277	290	297	318	359	435	483	496	469	400	332
10		352	421	338	290	338	304	256	180	277	311	297	290	290	304	297	277	277	290	304	311	311	304	311	311	302
11	C	311	311	311	304	304	304	304	304	304	304	311	304	297	290	284	277	270	277	290	304	304	304	304	311	300
12	C	311	311	311	311	311	304	297	297	297	270	297	311	304	290	284	277	277	284	290	297	304	304	311	311	298
13		317	310	310	310	310	303	255	248	228	241	186	248	289	289	289	276	283	289	303	310	324	317	324	344	288
14		358	317	317	289	255	283	289	276	248	193	269	310	310	303	289	276	276	289	296	317	344	344	331	331	296
15	C	317	303	303	310	324	324	310	303	303	303	310	310	303	296	289	283	283	296	303	317	317	317	317	317	307
16	C	317	310	310	310	310	310	317	317	310	310	310	310	303	296	283	283	276	289	303	317	324	324	317	317	307
17		316	323	323	323	316	316	316	316	316	316	316	316	309	295	288	288	288	295	309	309	316	309	309	323	310
18	D	330	323	323	220	254	199	185	206	220	220	261	178	41	144	254	254	288	323	350	378	426	433	453	440	279
19	C	330	330	206	220	261	247	220	233	268	295	309	302	261	227	220	233	288	412	481	446	446	440	494	371	314
20	C	405	378	302	178	240	275	240	158	27	144	254	295	247	316	295	282	288	336	371	426	378	453	460	453	300
21		452	356	267	370	329	294	294	294	301	287	226	239	260	267	281	274	274	301	329	397	411	439	466	466	321
22		466	425	411	370	308	239	260	308	308	301	301	301	301	287	274	274	274	274	287	294	315	308	308	308	313
23		308	315	308	308	308	308	308	308	308	315	315	308	301	294	287	267	281	287	308	322	377	418	335	308	313
24		301	308	308	308	315	308	301	301	308	308	315	315	301	287	287	274	281	287	294	308	315	308	315	315	303
25		314	321	328	321	286	280	293	204	238	293	314	307	300	286	280	273	273	280	293	300	314	314	321	321	294
26		328	321	321	321	314	307	314	314	314	314	314	314	300	300	293	280	273	286	300	314	321	328	348	355	312
27	C	389	403	410	328	197	231	314	293	231	87	280	293	273	231	245	266	280	300	314	321	328	348	328	314	292
28		314	314	328	300	245	53	176	218	122	5	67	204	211	293	286	286	300	314	328	321	314	328	328	321	249
29		313	313	320	244	196	189	189	299	306	285	279	299	272	258	285	292	285	313	340	340	327	327	313	320	288
30		313	313	237	210	299	320	313	285	279	285	272	285	292	285	285	259	292	306	340	340	368	388	430	430	311
31		416	347	333	327	333	306	285	306	306	313	313	306	299	285	279	279	279	285	313	313	327	320	313	327	313
MEAN A		337	330	312	300	290	277	277	274	271	270	285	288	279	282	282	279	283	297	313	324	336	344	347	341	301
MEAN C		314	309	309	308	312	311	308	307	305	300	308	309	304	296	287	281	276	285	294	305	309	311	312	315	303
MEAN D		354	352	317	258	254	249	244	240	203	200	280	272	214	238	258	265	288	338	375	401	412	434	441	396	619

GREAT WHALE MAGNETIC OBSERVATORY 1967

## DECLINATION

TABLE 8 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

MARCH 1967

DAY	0 UT TO	1 TO	2 TO	3 TC	4 TC	5 TO	6 TO	7 TC	8 TO	9 TO	10 TO	11 TC	12 TO	13 TO	14 TO	15 TC	16 TO	17 TO	18 TO	19 TC	20 TC	21 TO	22 TC	23 TO	MEAN
1	22.3	22.3	10.3	5.5	22.3	19.9	19.9	22.3	19.9	19.9	17.5	17.5	15.1	12.7	12.7	22.3	22.3	29.5	29.5	29.5	31.9	29.5	27.1	24.7	21.1
2	19.9	19.9	19.9	17.5	22.3	22.3	19.9	19.9	19.9	19.9	17.5	19.9	19.9	15.1	12.7	19.9	24.7	31.9	29.5	29.5	29.5	29.5	24.7	24.7	22.1
3	22.3	22.3	22.3	22.3	39.1	22.3	19.9	19.9	19.9	17.5	17.5	19.9	10.3	17.5	27.1	24.7	24.7	29.5	31.9	29.5	27.1	27.1	27.1	24.7	23.6
4	19.9	17.5	19.9	34.3	22.3	22.3	22.3	22.3	17.5	17.5	17.5	15.1	15.1	10.3	10.3	22.3	24.7	27.1	29.5	29.5	29.5	27.1	24.7	19.9	21.6
5	21.8	17.0	24.2	24.2	24.2	26.6	19.4	21.8	24.2	19.4	19.4	14.6	12.2	12.2	7.4	19.4	31.4	31.4	29.0	36.2	29.0	24.2	19.4	19.4	22.0
6	17.0	17.0	53.0	17.0	19.4	33.8	31.4	19.4	19.4	19.4	19.4	14.6	14.6	17.0	17.0	17.0	24.2	24.2	24.2	21.8	21.8	21.8	24.2	22.0	
7	21.8	21.8	21.8	21.8	21.8	17.0	17.0	19.4	19.4	17.0	12.2	9.8	12.2	14.6	9.8	14.6	19.4	24.2	29.0	29.0	29.0	24.2	21.8	21.8	19.6
8	C 19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	17.0	17.0	17.0	14.6	12.2	12.2	14.6	19.4	24.2	26.6	29.0	29.0	26.6	24.2	21.8	20.0
9	D 21.3	18.9	16.5	18.9	21.3	21.3	23.7	21.3	18.9	21.3	14.1	11.7	16.5	9.3	18.9	16.5	16.5	26.1	26.1	21.3	14.1	9.3	21.3	11.7	18.2
10	40.5	18.9	18.9	21.3	16.5	16.5	28.5	38.1	14.1	16.5	16.5	16.5	11.7	6.9	6.9	14.1	21.3	26.1	26.1	26.1	26.1	23.7	23.7	21.3	20.7
11	C 21.3	21.3	18.9	18.9	18.9	18.9	18.9	18.9	18.9	16.5	16.5	14.1	9.3	9.3	11.7	14.1	21.3	28.5	28.5	28.5	26.1	23.7	21.3	21.3	19.4
12	Q 18.9	18.9	18.9	18.9	18.9	18.9	18.9	16.5	16.5	14.1	11.7	14.1	11.7	11.7	14.1	16.5	23.7	26.1	28.5	28.5	26.1	26.1	23.7	21.3	19.3
13	21.3	21.3	21.3	21.3	21.3	18.9	21.3	21.3	18.9	18.9	16.5	16.5	11.7	6.9	9.3	16.5	23.7	28.5	30.9	33.3	28.5	23.7	21.3	18.9	20.5
14	11.2	16.0	18.4	20.8	23.2	18.4	18.4	18.4	18.4	20.8	16.0	13.6	11.2	8.8	11.2	16.0	20.8	25.6	30.4	30.4	25.6	25.6	25.6	20.8	19.4
15	C 18.4	18.4	18.4	18.4	16.0	16.0	18.4	18.4	16.0	16.0	16.0	13.6	11.2	11.2	13.6	18.4	25.6	28.0	28.0	28.0	25.6	23.2	23.2	20.8	19.2
16	C 20.8	18.4	18.4	18.4	18.4	18.4	16.0	16.0	18.4	16.0	13.6	13.6	8.8	8.8	8.8	13.6	18.4	23.2	28.0	28.0	25.6	23.2	20.8	20.8	18.1
17	20.8	20.8	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	16.0	13.6	11.2	8.8	11.2	18.4	20.8	25.6	25.6	25.6	23.2	23.2	20.8	20.8	18.9
18	C 20.8	20.8	18.4	-3.2	16.0	30.4	18.4	18.4	8.8	6.4	8.8	6.4	30.4	23.2	20.8	32.8	40.0	25.6	20.8	20.8	13.6	13.6	8.8	1.6	17.6
19	D 27.5	27.5	39.5	20.3	20.3	22.7	22.7	15.5	15.5	15.5	15.5	13.1	8.3	20.3	32.3	37.1	25.1-15.7	1.1	8.3	15.5	22.7	8.3	20.3	18.3	
20	C 10.7	10.7	27.5	27.5	20.3	25.1	25.1	32.3	29.9	8.3	10.7	10.7	13.1	8.3	8.3	13.1	17.9	15.5	17.9	15.5	17.9	13.1	10.7	10.7	16.7
21	3.5	20.3	29.9	15.5	17.9	20.3	20.3	20.3	17.9	17.9	17.9	20.3	13.1	10.7	15.5	20.3	22.7	25.1	25.1	22.7	20.3	15.5	13.1	8.3	18.1
22	5.9	10.7	13.1	22.7	22.7	17.9	22.7	20.3	20.3	20.3	20.3	17.9	13.1	10.7	10.7	17.9	20.3	25.1	27.5	27.5	25.1	22.7	22.7	22.7	19.2
23	22.7	22.7	22.7	22.7	20.3	20.3	20.3	20.3	17.9	17.9	17.9	15.5	13.1	13.1	15.5	13.1	25.1	27.5	22.7	27.5	17.9	10.7	17.9	22.7	19.5
24	22.2	22.2	22.2	22.2	22.2	19.8	19.8	19.8	19.8	19.8	17.4	15.0	12.6	12.6	19.8	22.2	27.0	29.4	29.4	27.0	27.0	24.6	22.2	22.2	21.6
25	22.2	22.2	19.8	19.8	24.6	22.2	17.4	22.2	17.4	15.0	15.0	12.6	7.8	7.8	10.2	17.4	19.8	27.0	27.0	27.0	24.6	22.2	19.8	17.4	19.1
26	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	15.0	15.0	12.6	7.8	7.8	12.6	17.4	22.2	34.2	34.2	34.2	29.4	27.0	24.6	22.2	19.7
27	D 17.4	15.0	10.2	24.6	41.4	24.6	17.4	17.4	17.4	19.8	12.6	10.2	15.0	19.8	29.4	24.6	31.8	34.2	31.8	24.6	22.2	17.4	17.4	19.8	21.5
28	19.3	19.3	19.3	16.9	26.5	60.1	24.1	16.9	16.9	26.5	21.7	12.1	14.5	7.3	9.7	14.5	26.5	31.3	28.9	31.3	26.5	21.7	19.3	19.3	22.1
29	21.7	21.7	21.7	38.5	36.1	36.1	24.1	16.9	14.5	16.9	19.3	12.1	4.9	7.3	12.1	19.3	26.5	28.9	31.3	26.5	26.5	26.5	21.7	19.3	22.1
30	19.3	19.3	14.5	31.3	24.1	16.9	16.9	16.9	16.9	16.9	14.5	9.7	4.9	4.9	12.1	16.9	21.7	19.3	16.9	21.7	19.3	14.5	.1	7.3	15.7
31	12.1	16.9	19.3	19.3	21.7	21.7	16.9	16.9	16.9	16.9	14.5	12.1	9.7	9.7	12.1	16.9	26.5	31.3	28.9	31.3	26.5	21.7	21.7	19.3	19.2
MEAN A	19.4	19.3	21.1	20.4	22.4	22.7	20.5	20.1	18.2	17.4	16.0	14.2	12.4	11.4	14.1	18.8	23.5	25.8	26.6	26.8	24.5	22.1	20.0	19.1	19.9
MEAN C	19.8	19.3	18.8	18.8	18.3	18.3	18.3	17.8	17.8	15.9	15.0	14.5	11.1	10.6	12.1	15.4	21.7	26.0	27.9	28.4	26.5	24.6	22.6	21.2	19.2
MEAN D	19.5	18.6	22.4	17.6	23.9	24.8	21.5	21.0	18.1	14.3	12.3	10.4	16.7	16.2	21.9	24.8	26.3	17.1	19.5	18.1	16.7	15.2	13.3	12.8	35.8

VERTICAL INTENSITY

TABLE 9 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

MARCH 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TC 14	TO 15	TC 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TC 23	TO 24	
1		299	299	266	219	193	266	292	292	292	292	279	279	279	279	292	292	292	292	299	306	299	292	292	292	282
2		299	299	306	292	279	292	279	292	292	286	266	232	259	279	286	259	306	306	299	299	306	306	306	292	290
3		299	299	299	299	266	279	292	292	292	279	252	199	252	266	246	259	272	286	292	299	306	299	299	306	280
4		306	286	286	239	292	292	332	319	292	286	286	292	292	292	286	292	292	292	292	292	292	292	299	312	293
5		286	226	266	319	252	299	306	332	286	272	279	292	292	292	306	286	319	319	319	306	299	326	319	312	296
6		232	226	219	266	286	306	279	279	292	292	299	292	292	286	292	292	299	306	306	306	319	312	299	292	286
7		292	292	286	286	286	272	266	279	266	272	279	279	272	266	279	286	292	299	306	306	306	306	306	299	286
8	Q	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	286	292	292	292	292	292	292	292	292	292
9	C	292	292	279	272	286	292	286	286	272	239	266	259	252	266	259	279	292	306	326	312	286	272	332	279	283
10		119	206	259	239	252	292	326	326	299	292	299	299	299	292	292	292	292	299	299	299	299	299	292	292	281
11	Q	292	292	292	292	292	292	292	292	292	286	292	299	299	299	292	292	292	292	292	292	292	292	299	299	293
12	C	292	292	292	292	292	292	272	286	266	259	286	292	299	299	292	292	292	292	292	292	292	292	292	292	290
13		286	286	286	292	292	279	272	272	246	246	232	226	252	279	279	286	292	299	306	306	312	306	312	312	281
14		299	306	306	252	252	272	266	266	252	252	252	279	292	299	292	292	292	299	306	306	319	319	312	319	288
15	C	312	299	292	292	292	292	299	292	252	292	292	292	299	259	306	299	299	299	299	299	299	292	292	292	296
16	C	292	292	292	292	292	292	292	286	286	286	286	292	292	286	286	286	292	292	292	292	292	292	292	286	290
17		292	292	299	299	292	286	292	286	286	286	286	292	292	292	286	279	279	279	279	286	292	292	292	292	289
18	D	292	292	292	272	219	326	332	359	339	339	279	266	219	186	252	292	299	306	332	332	339	339	319	292	296
19	C	252	279	173	346	319	352	432	385	346	286	279	286	286	272	266	286	332	306	246	266	299	119	246	290	
20	D	239	173	232	73	226	332	385	379	306	266	252	292	272	292	299	259	312	306	306	312	306	279	286	326	281
21		299	232	139	232	292	306	299	292	286	286	279	252	252	272	286	259	299	299	306	312	312	292	299	326	281
22		266	213	232	226	292	332	286	292	292	292	292	299	306	306	299	292	292	292	292	299	259	306	299	292	287
23		292	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	299	306	312	319	346	365	326	306	298
24		292	286	286	286	279	279	279	272	279	279	286	286	286	279	286	292	299	299	306	306	299	292	292	292	288
25		292	292	292	286	279	279	272	266	279	279	279	286	292	292	286	286	292	292	292	292	299	306	299	292	288
26		299	292	292	286	286	279	279	286	286	279	286	292	292	279	279	279	292	292	299	299	306	299	292	306	290
27	D	226	179	219	246	259	292	286	312	359	286	266	272	259	252	252	292	306	326	319	319	319	319	306	292	282
28		286	286	292	226	292	272	272	272	279	266	266	286	286	279	279	292	299	312	306	306	312	312	306	299	287
29		292	292	292	272	332	279	226	279	359	319	166	226	279	292	299	306	312	306	312	312	312	312	306	299	291
30		292	292	226	126	239	279	279	292	286	266	252	272	286	286	292	292	292	299	319	346	352	352	306	292	284
31		279	259	239	239	259	306	299	292	286	286	292	299	299	299	299	299	306	306	312	312	312	312	299	299	291
MEAN A		280	272	268	262	276	293	295	298	253	281	274	277	281	282	284	290	297	300	302	304	307	300	300	299	288
MEAN Q		296	294	292	292	292	292	290	290	290	283	290	294	296	295	294	291	294	294	294	294	294	292	294	292	292
MEAN C		260	243	239	242	262	319	344	344	324	283	268	275	258	254	266	290	308	310	306	308	310	266	298	299	576

GREAT WHALE MAGNETIC OBSERVATORY 1967

## HORIZONTAL INTENSITY

TABLE 10 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

APRIL 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TC 12	TO 13	TO 14	TO 15	TC 16	TO 17	TO 18	TO 19	TC 20	TC 21	TC 22	TC 23	TO 24	
1	D	319	312	312	312	319	319	319	312	257	24	-107	-4	85	264	299	312	312	312	340	422	464	587	505	395	291
2		333	319	319	312	271	271	299	299	237	202	230	65	72	292	285	278	278	333	340	422	409	422	381	326	291
3	Q	326	257	244	34C	319	305	305	312	305	305	299	292	285	278	271	278	285	299	312	326	319	312	319	300	
4		326	326	319	340	340	292	202	271	264	257	292	312	312	230	223	250	285	299	319	326	333	340	347	340	298
5		332	332	332	325	188	126	112	146	208	181	181	208	284	298	284	263	304	325	318	339	318	332	353	359	264
6		359	380	284	78	153	91	50	71	126	188	284	291	270	256	270	298	318	318	332	332	339	325	339	339	254
7		359	311	153	284	304	222	174	284	270	298	311	311	298	291	284	277	284	298	332	346	359	339	311	311	292
8		325	346	332	304	304	298	298	311	311	311	311	304	304	298	291	284	291	304	325	339	346	346	359	366	317
9		372	365	297	310	310	310	317	310	310	228	193	242	290	297	290	283	283	297	310	338	352	365	393	338	308
10		324	331	324	338	324	317	290	276	310	324	317	310	303	283	276	283	290	310	338	372	420	331	303	324	317
11		310	310	303	310	310	310	310	310	317	317	317	317	303	297	310	297	297	310	331	352	379	400	434	455	329
12		468	427	345	187	310	303	283	269	269	324	324	310	303	303	297	290	297	310	324	338	338	338	331	338	318
13		344	378	364	337	316	323	309	316	316	309	302	302	296	289	282	282	289	296	316	330	330	330	337	337	318
14	Q	330	344	357	351	330	323	316	323	316	316	316	316	309	309	302	296	302	309	316	323	330	337	330	330	322
15		323	330	323	323	316	309	275	247	261	289	309	309	296	289	282	282	289	309	330	351	330	364	385	364	312
16		336	350	350	350	363	253	164	233	322	301	301	281	240	274	295	295	301	308	363	453	549	377	356	384	325
17		398	384	240	68	288	281	281	288	267	164	109	226	288	295	295	295	308	336	350	350	350	343	363	398	290
18		391	405	377	322	315	322	322	260	240	233	267	240	233	246	267	288	295	315	329	336	356	363	473	501	321
19	D	438	335	266	259	294	328	314	294	-50	-112	-50	142	239	259	294	342	321	314	383	472	596	582	500	349	296
20		314	335	266	294	307	294	259	225	197	184	273	266	259	280	294	287	294	321	349	424	424	383	335	376	302
21		417	404	383	307	259	245	218	211	218	163	156	211	239	252	259	273	294	328	349	355	335	369	397	424	294
22	D	438	438	349	321	190	211	156	197	211	46	149	184	280	307	300	280	294	321	383	431	500	493	459	410	306
23	D	409	389	437	306	299	313	320	320	320	313	313	313	299	306	258	238	203	279	444	478	403	361	368	389	337
24	D	368	334	258	258	66	148	265	272	251	155	100	86	196	251	299	272	327	368	416	409	423	471	389	396	282
25		272	313	251	-17	141	299	299	272	265	272	299	306	299	293	286	286	286	299	313	320	334	334	334	334	279
26	Q	327	313	306	306	244	238	293	299	299	306	306	306	299	293	279	279	293	299	313	313	313	313	320	320	299
27	Q	319	326	319	319	312	278	298	298	305	312	305	305	305	298	292	285	278	292	298	305	319	326	333	333	307
28	Q	326	319	326	326	264	292	319	312	312	305	305	305	298	298	292	292	285	298	305	319	340	347	333	340	311
29		340	347	347	333	326	326	312	298	216	243	271	285	292	285	292	278	278	319	326	333	326	340	326	333	307
30		360	360	374	360	333	319	312	257	216	285	312	312	305	305	305	292	298	305	326	326	326	319	319	319	314
MEAN A		353	347	315	285	281	276	266	270	256	235	243	255	270	284	285	284	292	311	337	362	375	373	367	361	304
MEAN Q		326	312	310	328	294	287	306	309	308	309	308	306	301	297	288	284	287	297	306	315	326	328	326	328	308
MEAN D		394	361	324	291	234	264	275	279	198	85	81	144	220	278	290	289	291	319	393	443	477	499	444	388	600

## DECLINATION

TABLE 11 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

APRIL 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TC 9	TO 10	TO 11	TC 12	TO 13	TO 14	TC 15	TO 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1	C	19.3	21.7	21.7	19.3	19.3	19.3	16.9	16.9	14.5	4.9	21.7	12.1	7.3	9.7	12.1	24.1	28.9	28.9	31.3	14.5	.1	28.9	.1	16.9	17.1
2		19.3	21.7	21.7	24.1	31.3	24.1	16.9	16.9	14.5	19.3	16.9	16.9	26.5	9.7	12.1	21.7	14.5	24.1	24.1	12.1	12.1	14.5	16.9	21.7	18.9
3	Q	21.2	18.8	33.2	18.8	21.2	21.2	18.8	16.4	16.4	16.4	14.0	14.0	11.6	11.6	14.0	18.8	26.0	30.8	30.8	28.4	26.0	23.6	23.6	21.2	20.7
4		21.2	18.8	18.8	16.4	16.4	23.6	28.4	11.6	6.8	11.6	11.6	9.2	2.0	-0.4	11.6	26.0	21.2	26.0	23.6	28.4	26.0	21.2	21.2	18.8	17.5
5		18.3	20.7	20.7	23.1	61.5	54.3	27.9	20.7	13.5	11.1	13.5	15.9	6.3	6.3	8.7	20.7	23.1	25.5	30.3	25.5	25.5	20.7	15.9	11.1	21.7
6		13.5	11.1	20.7	59.1	44.7	35.1	32.7	18.3	18.3	8.7	8.7	8.7	3.9	13.5	18.3	18.3	27.9	23.1	25.5	25.5	20.7	20.7	15.9	13.5	21.1
7		11.1	23.1	49.5	37.5	27.9	27.9	25.5	13.5	13.5	15.9	11.1	8.7	6.3	6.3	11.1	18.3	25.5	30.3	27.9	25.5	23.1	23.1	23.1	20.7	21.1
8		22.6	15.4	22.6	25.0	29.4	20.2	17.8	17.8	17.8	17.8	15.4	13.0	8.2	8.2	10.6	20.2	25.0	29.8	29.8	29.8	27.4	25.0	22.6	17.8	20.8
9		15.4	20.2	17.8	22.6	22.6	22.6	20.2	17.8	17.8	22.6	20.2	10.6	5.8	10.6	13.0	17.8	25.0	29.8	29.8	27.4	25.0	22.6	17.8	20.2	19.8
10		20.2	20.2	17.8	20.2	20.2	17.8	22.6	15.4	13.0	13.0	13.0	10.6	8.2	5.8	10.6	17.8	22.6	27.4	29.8	22.6	15.4	20.2	25.0	20.2	17.9
11		19.7	19.7	19.7	19.7	19.7	19.7	17.3	14.9	14.9	14.9	14.9	10.1	7.7	7.7	14.9	14.9	19.7	26.9	31.7	29.3	24.5	19.7	12.5	5.3	17.5
12		10.1	19.7	26.9	22.1	17.3	19.7	19.7	14.9	14.9	14.9	12.5	10.1	7.7	7.7	12.5	19.7	24.5	29.3	29.3	26.9	24.5	22.1	19.7	17.3	18.5
13		14.9	10.1	14.9	19.7	19.7	17.3	14.9	14.9	14.9	14.9	12.5	7.7	5.3	7.7	12.5	17.3	22.1	26.9	29.3	29.3	24.5	22.1	19.7	12.5	16.9
14	Q	16.8	16.8	16.8	16.8	19.2	19.2	16.8	16.8	14.4	16.8	14.4	12.0	9.6	12.0	14.4	16.8	21.6	26.4	26.4	28.8	24.0	21.6	21.6	21.6	18.4
15		19.2	16.8	16.8	16.8	19.2	16.8	19.2	14.4	12.0	14.4	12.0	9.6	9.6	9.6	12.0	19.2	21.6	26.4	26.4	26.4	26.4	24.0	14.4	16.8	17.5
16		19.2	16.8	16.8	21.6	31.2	26.4	21.6	14.4	14.4	14.4	14.4	12.0	14.4	14.4	14.4	14.4	19.2	26.4	21.6	7.2-12.0	12.0	16.8	12.0	16.0	
17		13.9	47.5	57.1	76.3	23.5	18.7	16.3	13.9	9.1	18.7	13.9	1.9	-0.5	4.3	11.5	23.5	25.9	25.9	23.5	25.9	23.5	21.1	16.3	11.5	21.8
18		11.5	16.3	18.7	30.7	23.5	18.7	16.3	13.9	11.5	9.1	6.7	4.3	6.7	13.9	23.5	25.9	23.5	23.5	23.5	21.1	18.7	18.7	6.7	9.1	16.5
19	C	40.3	42.7	52.3	49.9	33.1	21.1	16.3	21.1	13.9	1.9-24.5	-7.7	4.3	4.3	13.9	13.9	21.1	23.5	9.1	4.3-12.5	-0.5	-2.9	11.5	14.6	14.6	
20		18.2	18.2	27.8	44.6	20.6	23.0	23.0	15.8	15.8	13.4	3.8	3.8	1.4	3.8	11.0	18.2	20.6	23.0	20.6	8.6	8.6	8.6	15.8	13.4	15.9
21		8.6	20.6	23.0	35.0	51.8	27.8	13.4	18.2	11.0	-1.0	6.2	-3.4	1.4	3.8	8.6	15.8	20.6	23.0	27.8	25.4	23.0	15.8	11.0	6.2	16.4
22	C	11.0	15.8	25.4	30.2	51.8	37.4	35.0	20.6	23.0	23.0	-5.8	-8.2	1.4	8.6	11.0	25.4	27.8	18.2	8.6	-1.0	3.8	1.4	6.2	15.1	
23	D	12.9	27.3	17.7	22.5	22.5	20.1	17.7	15.3	10.5	8.1	5.7	3.3	3.3	.9	3.3	8.1	24.9	44.1	3.3	-3.9	5.7	10.5	8.1	3.3	12.3
24	C	.9	41.7	63.3	39.3	22.5	24.9	20.1	8.1	12.9	12.9	.9	-6.3	.9	8.1	8.1	20.1	22.5	8.1	-1.5	10.5	8.1	-6.3	12.9	8.1	14.2
25		48.9	22.5	34.5	68.1	27.3	15.3	12.9	15.3	15.3	15.3	10.5	5.7	3.3	3.3	8.1	15.3	22.5	27.3	29.7	27.3	22.5	17.7	12.9	15.3	20.7
26	G	17.2	19.6	17.2	17.2	29.2	26.8	19.6	19.6	17.2	14.8	12.4	10.0	7.6	7.6	10.0	17.2	22.0	24.4	26.8	22.0	24.4	24.4	19.6	19.6	18.6
27	C	17.2	14.8	17.2	14.8	14.8	22.0	14.8	12.4	14.8	12.4	10.0	7.6	7.6	10.0	12.4	17.2	19.6	22.0	26.8	24.4	22.0	19.6	17.2	17.2	16.2
28	C	17.2	17.2	17.2	17.2	29.2	17.2	14.8	14.8	17.2	14.8	12.4	7.6	5.2	7.6	10.0	10.0	17.2	22.0	26.8	26.8	24.4	19.6	14.8	14.8	16.5
29		14.3	14.3	11.9	19.1	16.7	14.3	14.3	14.3	19.1	16.7	7.1	2.3	-0.1	7.1	14.3	19.1	19.1	31.1	28.7	26.3	21.5	21.5	16.7	16.7	16.1
30		9.5	9.5	9.5	14.3	14.3	16.7	16.7	16.7	16.7	11.9	9.5	7.1	2.3	7.1	11.9	14.3	21.5	21.5	23.9	21.5	21.5	19.1	16.7	14.3	14.5
MEAN A		17.5	20.7	25.0	28.7	27.1	23.0	19.6	15.9	14.7	13.5	9.9	7.0	5.9	7.5	11.9	17.9	22.5	26.2	24.5	21.2	17.5	17.9	15.1	14.5	17.7
MEAN C		17.9	17.4	20.3	17.0	22.7	21.3	17.0	16.0	16.0	15.0	12.6	10.2	8.3	9.8	12.2	16.0	21.3	25.1	27.5	26.1	24.2	21.8	19.4	18.9	18.1
MEAN D		16.9	29.8	36.1	32.2	29.8	24.6	21.2	16.4	15.0	10.2	-0.4	-1.4	1.5	4.9	9.2	15.4	24.6	26.5	12.1	6.8	.1	7.3	3.9	9.2	30.9

GREAT WHALE MAGNETIC OBSERVATORY 1967

## VERTICAL INTENSITY

TABLE 12 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

APRIL 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TO 7	TC 8	TO 9	TO 10	TC 11	TC 12	TO 13	TC 14	TC 15	TC 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24		
1	D	292	292	286	292	286	292	286	279	266	432	199	226	213	213	239	259	279	292	299	306	332	279	252	272	278	
2		292	292	286	292	326	279	286	299	326	279	246	299	219	259	279	286	292	319	326	326	359	326	299	306	296	
3	C	286	199	259	292	292	292	292	292	286	286	292	292	292	286	286	286	286	286	286	286	286	286	286	292	284	
4		292	299	292	292	299	372	432	346	319	306	286	286	292	272	272	266	286	292	306	319	319	299	299	306	306	
5		292	286	266	279	319	465	465	419	399	332	286	252	252	272	292	306	312	306	306	299	312	312	312	319	319	
6		312	286	272	432	425	485	465	425	385	365	292	286	279	266	259	292	312	306	286	286	306	306	312	306	331	
7		279	252	299	319	306	452	372	299	292	279	292	292	292	292	292	292	292	299	299	326	306	292	292	304		
8		292	259	232	206	266	292	292	286	286	286	292	292	306	299	292	292	292	292	299	306	319	312	306	319	288	
9		292	272	252	292	292	292	292	292	286	266	246	246	259	286	292	292	292	292	299	299	312	319	326	312	288	
10		299	299	246	266	292	292	279	279	286	299	299	299	299	292	292	292	292	292	306	332	332	319	306	299	295	
11		292	292	299	292	299	292	292	279	286	292	299	299	292	292	292	299	299	292	306	332	346	352	359	332	304	
12		259	232	279	246	292	299	279	279	272	286	306	306	292	292	299	306	306	306	306	306	312	312	319	312	292	
13		306	286	292	252	292	292	292	306	306	299	306	306	306	299	299	259	299	292	299	299	299	299	306	312	298	
14	C	306	299	279	266	279	292	292	292	286	286	286	292	292	292	292	286	292	292	299	299	292	299	299	299	291	
15		299	299	299	292	292	292	299	279	266	279	286	292	292	292	292	259	292	292	292	299	299	306	326	306	294	
16		306	299	272	199	266	286	319	292	279	286	272	272	232	239	272	259	299	312	359	359	279	279	306	319	288	
17		199	173	372	485	372	339	319	312	312	385	292	246	272	286	292	299	306	299	286	292	299	306	312	306	307	
18		306	279	219	272	246	292	306	312	286	279	272	246	213	219	252	286	312	319	312	306	306	326	326	159	277	
19	D	146	232	379	392	372	339	312	352	412	532	365	266	272	266	279	306	299	319	332	332	266	279	306	319	320	
20		319	292	179	259	299	319	279	332	326	299	286	299	292	292	299	306	312	326	352	359	346	346	332	326	307	
21		232	239	286	299	346	385	385	392	365	339	319	272	252	266	279	306	319	339	359	346	346	332	326	279	317	
22	D	226	279	279	246	306	405	439	399	445	518	326	279	279	279	292	306	306	319	319	332	352	346	315	299	329	
23	D	266	186	259	292	292	292	292	306	306	306	299	299	292	292	299	312	339	385	432	332	306	312	306	279	303	
24	D	239	239	385	412	558	359	372	359	379	432	432	326	239	266	286	306	326	346	319	299	332	319	299	279	338	
25		186	272	319	512	385	312	306	306	306	306	312	312	306	306	306	306	299	299	299	299	312	326	326	312	314	
26	C	306	299	299	299	232	266	279	292	252	299	306	306	306	299	292	292	299	299	299	292	292	292	292	299	293	
27	C	306	306	306	299	286	266	286	286	252	292	292	292	292	292	286	286	292	292	292	292	306	312	319	312	306	296
28	C	292	292	292	272	279	279	292	292	286	286	279	286	286	292	292	292	292	292	292	292	292	306	326	332	319	293
29		306	299	286	292	292	292	292	292	286	279	266	259	266	272	286	279	292	292	292	286	292	299	292	292	292	287
30		306	292	286	299	299	292	286	272	259	259	279	292	279	286	286	292	292	292	292	299	299	299	299	299	299	289
MEAN A		278	271	285	305	313	324	323	315	312	322	293	284	275	279	285	295	300	306	312	312	313	310	309	299	301	
MEAN C		299	279	287	286	274	279	288	291	288	290	291	294	294	294	290	288	292	292	294	295	298	304	304	303	291	
MEAN D		234	246	318	327	363	338	340	339	361	444	324	279	259	263	279	258	310	332	340	320	318	307	296	290	606	

HORIZONTAL INTENSITY

TABLE 13 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

MAY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TO 7	TO 8	TC 9	TO 10	TO 11	TC 12	TO 13	TO 14	TC 15	TO 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1		323	343	309	288	219	157	185	316	295	274	192	226	274	302	295	288	295	309	323	412	495	495	454	550	318
2		454	392	350	343	226	226	316	254	261	178	199	233	309	330	288	302	343	330	385	447	536	584	543	481	346
3	C	330	89	185	34	27	116	-63	130	-8	-145	-400	-256	-159	-180	-97	192	178	178	454	543	584	605	529	502	140
4		398	371	268	185	274	274	254	213	206	226	261	261	247	206	226	274	288	330	378	460	454	454	405	385	304
5		364	316	295	254	378	254	213	226	226	27	192	268	268	274	268	274	274	288	309	330	330	357	281	460	280
6		357	323	316	219	288	102	185	261	281	274	268	254	254	261	274	274	288	316	330	350	378	412	440	447	298
7		440	447	385	350	171	226	240	274	295	164	288	295	288	302	288	302	323	330	336	343	357	364	336	336	312
8	C	316	309	309	316	295	295	302	295	281	281	302	274	233	226	247	288	309	350	364	364	378	350	330	323	306
9	Q	336	350	309	295	288	171	109	123	206	274	274	302	302	302	288	302	309	316	323	330	330	330	323	336	285
10		316	330	336	316	302	247	316	330	316	316	309	268	274	288	274	274	323	336	343	357	343	364	336	357	316
11		385	398	385	123	247	116	233	316	261	302	309	288	295	281	281	274	281	295	316	336	364	419	529	419	311
12		316	336	281	144	206	178	302	323	247	116	192	309	295	288	274	281	295	302	336	433	419	447	460	419	300
13		371	371	316	192	281	261	144	240	309	309	302	288	261	295	288	288	309	330	350	398	433	474	481	433	322
14		405	343	336	302	288	281	268	288	268	323	323	316	288	274	268	274	288	336	426	584	577	550	619	557	366
15		564	454	378	316	302	295	295	302	302	309	295	274	254	247	268	274	295	302	336	398	405	378	433	433	338
16	C	392	385	343	302	274	151	261	295	261	219	295	295	281	295	281	288	288	302	343	364	364	426	447	433	316
17		398	323	330	274	288	54	247	309	295	295	274	192	199	274	281	302	295	316	350	378	440	419	460	495	312
18		440	357	350	309	316	123	171	233	137	75	130	302	309	288	288	302	302	330	343	336	330	330	343	336	283
19		385	392	336	206	219	137	116	233	185	240	316	281	240	199	274	295	302	309	330	330	364	330	323	336	278
20	C	378	343	288	323	254	254	233	206	185	261	274	295	288	274	268	281	309	316	343	357	364	357	378	343	299
21		343	350	378	371	323	302	302	281	274	281	288	288	288	281	281	274	295	316	343	385	385	371	350	398	323
22	Q	426	405	364	309	309	254	274	274	268	261	254	274	302	295	288	288	302	316	330	343	343	336	336	330	312
23		323	323	330	330	309	302	247	295	302	295	302	288	295	288	281	288	295	330	336	357	454	612	502	419	338
24		385	371	350	336	330	309	330	274	233	288	302	274	274	281	288	309	330	330	405	392	378	392	364	398	330
25	D	385	350	336	336	343	316	309	295	281	295	185	226	274	-276	-22	130	316	343	605	605	502	-22	75	364	273
26	C	213	254	419	20	164	295	27	-132	-145	61	75	206	247	157	206	309	323	316	309	330	378	433	405	488	223
27		419	343	164	213	247	261	240	123	109	116	116	151	254	254	274	274	295	330	378	398	502	522	502	447	289
28	C	343	302	302	240	206	240	281	47	-311	-111	-338	-145	199	302	316	199	281	405	626	495	564	392	412	378	234
29	C	412	213	247	144	109	151	137	13	123	-84	47	-104	-1	-42	240	323	288	323	350	392	405	385	405	378	202
30		357	330	336	274	226	213	171	226	261	254	295	309	309	288	157	164	350	481	619	722	694	626	550	433	360
31		433	350	68	137	206	-22	219	281	309	323	323	316	309	302	302	302	316	316	330	336	336	330	323	330	282
MEAN A		378	341	313	252	255	211	221	231	210	203	208	227	250	231	250	274	300	323	376	407	425	414	409	411	297
MEAN C		370	358	323	309	284	225	236	239	240	259	280	288	281	279	274	290	303	320	341	352	356	360	363	353	303
MEAN D		336	241	298	155	170	224	138	71	-12	3	-86	-15	112	-8	129	230	277	313	469	473	487	358	365	422	412

GREAT WHALE MAGNETIC OBSERVATORY 1967



## DECLINATION

TABLE 14 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

MAY 1967

DAY	UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO	TO	TO	TO	TC	TO	TO	TC	TC	TO	TO	TC	TO	TC	TO	TO	TO	TO	TO	TC	TC	TO	TC	TO	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1		16.7	14.3	14.3	16.7	23.9	23.9	19.1	11.9	11.9	16.7	16.7	7.1	4.7	9.5	14.3	21.5	21.5	23.9	21.5	16.7	11.9	-4.9	-2.5	-7.3	13.5
2		7.1	11.9	16.7	21.5	35.9	23.9	11.9	-0.1	-4.9	-4.9	-9.7	-4.9	7.1	11.9	19.1	14.3	23.9	2.3	-2.5	-12.1	7.1	21.5	11.5	28.7	9.9
3	D	64.2	57.0	57.0	45.0	30.6	28.2	21.0	28.2	-5.4	-12.6	35.4	59.4	-3.0	11.4	-10.2	-29.4	-60.6	-7.8	9.0	-0.6	-39.0	-17.4	16.2	37.8	13.1
4		23.4	28.2	37.8	35.4	23.4	21.0	18.6	21.0	13.8	6.6	6.6	6.6	6.6	13.8	18.6	18.6	16.2	13.8	6.6	-3.0	1.8	-0.6	1.8	9.0	14.4
5		34.9	27.7	30.1	39.7	30.1	25.3	25.3	20.5	18.1	39.7	10.9	3.7	1.3	1.3	8.5	15.7	18.1	20.5	22.9	20.5	22.9	13.3	3.7	-1.1	18.9
6		10.9	15.7	18.1	37.3	22.9	37.3	25.3	15.7	15.7	8.5	3.7	-1.1	-1.1	8.5	15.7	25.3	25.3	27.7	27.7	20.5	13.3	10.9	6.1	6.1	16.5
7		8.0	15.2	29.6	39.2	60.8	41.6	34.4	22.4	12.8	8.0	.8	-1.6	.8	5.6	12.8	22.4	27.2	27.2	24.8	22.4	17.6	12.8	15.2	15.2	19.8
8	Q	17.6	20.0	20.0	20.0	24.8	20.0	17.6	15.2	12.8	10.4	8.0	10.4	10.4	12.8	20.0	24.8	29.6	22.4	27.2	24.8	12.8	12.8	15.2	15.2	17.7
9	Q	14.7	14.7	19.5	19.5	24.3	26.7	24.3	24.3	21.9	14.7	9.9	2.7	5.1	7.5	14.7	19.5	26.7	29.1	29.1	26.7	24.3	21.9	19.5	14.7	19.0
10		19.5	19.5	19.5	21.9	24.3	26.7	19.5	14.7	12.3	9.9	9.9	9.9	7.5	12.3	12.3	26.7	33.9	33.9	29.1	26.7	24.3	17.1	14.7	12.3	19.1
11		5.1	14.7	24.3	55.5	36.3	50.7	19.5	17.1	12.3	9.9	5.1	2.7	5.1	5.1	9.9	17.1	26.7	26.7	33.9	31.5	26.7	21.9	.3	5.1	19.3
12		21.4	19.0	23.8	35.8	16.6	35.8	16.6	16.6	16.6	4.6	-2.6	-2.6	4.6	9.4	21.4	26.2	31.0	31.0	11.8	14.2	9.4	-0.2	14.2	16.3	16.3
13		9.4	14.2	16.6	43.0	33.4	9.4	26.2	14.2	7.0	7.0	4.6	4.6	4.6	4.6	9.4	21.4	23.8	23.8	19.0	14.2	11.8	7.0	-0.2	9.4	14.1
14		4.6	23.8	21.4	21.4	14.2	19.0	16.6	14.2	14.2	4.6	2.2	-0.2	-0.2	2.2	7.0	14.2	28.6	23.8	9.4	-26.6	-9.8	-2.6	-5.0	-0.2	8.2
15		32.9	25.7	23.3	18.5	16.1	16.1	16.1	16.1	16.1	13.7	11.3	8.9	8.9	4.1	6.5	13.7	18.5	23.3	18.5	13.7	8.9	11.3	1.7	4.1	14.5
16	Q	6.5	8.9	13.7	16.1	23.3	68.9	18.5	13.7	13.7	16.1	6.5	1.7	1.7	8.9	11.3	18.5	23.3	28.1	23.3	25.7	28.1	11.3	6.5	6.5	16.7
17		18.5	28.1	37.7	28.1	28.1	47.3	16.1	11.3	13.7	11.3	6.5	-0.7	-5.5	-0.7	6.5	13.7	20.9	20.9	16.1	20.9	1.7	4.1	1.7	4.1	14.6
18		3.6	8.4	15.6	20.4	20.4	37.2	32.4	15.6	27.6	25.2	-1.2	-6.0	-3.6	-1.2	1.2	8.4	15.6	22.8	20.4	22.8	22.8	18.0	15.6	15.6	14.9
19		10.8	13.2	30.0	56.4	51.6	44.4	42.0	15.6	18.0	8.4	-1.2	-1.2	-3.6	3.6	10.8	10.8	20.4	27.6	27.6	27.6	18.0	15.6	13.2	10.8	19.6
20	Q	3.6	-3.6	18.0	27.6	27.6	22.8	20.4	18.0	13.2	8.4	1.2	-3.6	-1.2	3.6	8.4	18.0	27.6	27.6	22.8	18.0	15.6	8.4	1.2	8.4	13.0
21		5.5	7.9	12.7	17.5	24.7	17.5	17.5	12.7	10.3	3.1	-1.7	-4.1	-1.7	.7	7.9	17.5	24.7	29.5	27.1	22.3	17.5	7.9	3.1	.7	11.7
22	Q	-4.1	7.9	10.3	17.5	15.1	22.3	15.1	12.7	10.3	5.5	.7	-4.1	.7	7.9	15.1	22.3	27.1	31.9	27.1	22.3	17.5	12.7	7.9	10.3	13.0
23		10.3	12.7	12.7	15.1	19.9	15.1	12.7	7.9	5.5	.7	-4.1	-6.5	-6.5	-1.7	3.1	10.3	19.9	19.9	27.1	34.3	12.7	-11.3	-4.1	3.1	8.7
24		7.4	7.4	12.2	14.6	12.2	12.2	9.8	7.4	5.0	.2	.2	-2.2	-4.6	2.6	19.4	21.8	21.8	19.4	5.0	17.0	26.6	17.0	17.0	12.2	10.9
25	D	9.8	14.6	14.6	14.6	12.2	9.8	12.2	9.8	5.0	5.0	2.6	-9.4	2.6	-23.8	10.3	*-9.4	31.4	-4.6	-91.0	2.6	50.6	213.8	206.6	158.6	22.3
26	D	220.5	131.7	71.7	138.9	90.9	30.9	83.7	50.1	42.9	16.5	-14.7	-36.3	2.1	2.1	14.1	14.1	16.5	23.7	21.3	18.9	18.9	11.7	11.7	6.9	41.2
27		-0.3	18.9	6.9	45.3	40.5	35.7	26.1	23.7	21.3	9.3	-14.7	-17.1	-9.9	-0.3	11.7	16.5	9.3	6.9	-0.3	-2.7	-9.9	-12.3	14.1	28.5	10.3
28	D	6.4	25.6	25.6	40.0	37.6	28.0	18.4	32.8	56.8	13.6	42.4	-5.6	32.8	-22.4	-0.8	6.4	25.6	1.6	-51.2	-34.4	25.6	16.0	25.6	59.2	16.9
29	D	59.2	85.6	59.2	49.6	88.0	40.0	35.2	28.0	13.6	23.2	-0.8	-0.8	-0.8	23.2	16.0	-0.8	11.2	20.8	13.6	8.8	4.0	8.8	-0.8	8.8	24.7
30		13.1	8.3	13.1	29.9	44.3	20.3	17.9	8.3	3.5	-1.3	-3.7	-0.8	-6.1	-1.3	-8.5	8.3	25.1	-18.1	-68.5	-54.1	-68.5	-30.1	10.7	37.1	-1.2
31		56.3	65.9	99.5	51.5	20.3	63.5	20.3	3.5	8.3	5.9	3.5	-6.1	-6.1	-1.3	3.5	8.3	13.1	17.9	17.9	20.3	20.3	17.9	15.5	10.7	22.1
MEAN A		23.1	24.6	26.6	34.0	31.4	29.7	22.9	16.9	14.3	9.7	4.6	-0.2	1.5	3.7	6.0	13.9	20.0	19.3	11.1	11.5	11.3	14.3	14.3	17.6	15.9
MEAN Q		7.7	9.6	16.3	20.1	23.0	32.1	19.2	16.8	14.4	11.0	5.3	1.4	3.3	8.1	13.9	20.6	26.9	27.8	25.9	23.5	19.7	13.4	10.1	11.0	15.9
MEAN D		72.0	62.9	45.6	57.6	51.9	27.4	34.1	29.8	22.6	9.1	13.0	1.5	6.7	-1.9	-16.8	-3.8	4.8	6.7	-19.7	-0.9	12.0	46.6	51.9	54.3	43.7

VERTICAL INTENSITY

TABLE 15 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

MAY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TC 8	TO 9	TO 10	TO 11	TC 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TC 22	TO 23	24	
1		301	294	254	241	387	414	374	294	288	274	241	234	241	288	294	294	308	314	321	308	301	261	241	108	287
2		248	274	281	314	281	341	381	374	367	434	461	321	268	281	274	308	308	334	361	401	354	268	161	248	318
3	D	334	481	534	633	554	614	700	540	627	620	627	786	727	427	414	361	208	-45	-91	-85	-25	2	-58	15	371
4		155	221	308	301	321	321	354	361	374	321	308	301	308	274	254	288	321	341	348	348	314	301	294	288	305
5		168	141	241	314	341	348	401	387	387	367	294	288	301	294	294	294	308	341	328	334	328	348	334	281	311
6		321	328	288	268	314	427	348	288	294	301	301	294	301	294	301	301	308	308	308	328	334	354	367	348	318
7		321	241	248	288	401	407	467	354	354	467	334	314	294	294	281	288	294	301	301	308	321	341	341	334	331
8	C	321	308	301	294	294	314	308	308	308	281	294	294	281	268	268	288	294	314	328	341	354	321	308	314	304
9	C	314	294	288	294	301	281	294	281	281	288	274	288	294	288	294	294	301	301	308	301	301	301	301	308	295
10		301	294	281	301	334	195	268	294	301	294	294	294	268	288	281	281	301	294	294	301	308	334	321	314	293
11		274	175	248	268	427	427	254	281	274	274	294	294	294	288	288	281	294	308	308	308	321	268	308	294	
12		308	308	354	361	427	421	301	301	321	374	288	288	288	288	288	294	294	301	314	334	328	308	288	314	320
13		328	301	294	195	354	381	301	328	294	301	301	301	281	288	294	294	301	328	341	328	334	308	248	274	304
14		221	254	294	301	374	334	314	294	301	294	308	308	294	281	281	288	288	308	328	241	261	281	201	108	282
15		181	248	281	301	301	294	301	294	294	301	301	301	281	268	281	281	288	301	334	361	361	334	308	288	295
16	C	281	294	261	248	334	407	314	301	281	281	288	301	281	281	281	281	281	281	294	308	321	354	328	308	300
17		208	181	281	281	381	328	314	308	294	288	294	261	261	288	288	294	301	328	334	348	314	268	294	290	
18		301	301	268	254	261	354	348	328	334	254	268	268	294	288	294	308	301	294	294	294	294	294	301	301	296
19		294	228	215	328	348	387	387	288	281	268	294	288	268	241	268	294	294	308	314	314	308	314	308	308	298
20	C	301	228	268	274	301	321	334	381	348	281	274	288	288	281	281	281	288	294	308	321	334	334	321	308	302
21		294	294	281	268	268	281	301	308	301	288	288	281	274	268	268	281	288	301	321	361	374	334	334	301	298
22	Q	228	228	274	314	314	321	314	294	288	288	274	274	281	288	288	294	301	301	301	308	301	301	308	301	291
23		294	294	294	288	308	321	314	288	294	294	288	281	274	274	274	281	294	288	314	341	367	341	321	321	302
24		321	308	294	288	281	301	308	328	314	294	288	261	254	261	268	281	288	294	301	321	308	308	308	301	295
25	D	288	268	288	288	294	301	314	288	254	268	281	254	268	574	713	294	248	321	401	148	-165	-111	-18	188	260
26	D	414	308	394	587	540	620	700	826	840	733	780	687	766	667	328	334	341	341	348	348	341	328	328	241	506
27		208	321	181	248	361	348	414	481	421	361	294	288	301	301	308	314	334	328	348	321	281	208	188	274	310
28	C	268	301	288	308	301	341	348	494	487	75	22	414	321	301	274	294	268	308	62	-224	-211	-12	-58	62	210
29	D	241	461	427	594	427	633	600	680	693	720	687	667	500	281	288	294	301	314	341	348	354	348	321	294	451
30		314	314	321	321	328	500	507	434	414	354	321	321	314	308	341	328	328	261	-45	42	141	188	101	261	292
31		201	195	454	500	461	740	454	334	321	328	328	334	321	314	314	314	314	301	314	314	321	334	341	341	354
MEAN A		276	280	299	325	352	388	375	366	364	341	329	335	321	310	305	297	296	296	289	279	274	276	255	266	312
MEAN C		289	270	278	285	309	329	313	313	301	284	281	289	285	281	282	288	293	298	308	316	322	322	313	308	298
MEAN D		309	363	386	482	423	502	532	566	580	483	479	562	516	450	403	316	273	248	212	107	59	111	103	160	697

GREAT WHALE MAGNETIC OBSERVATORY 1967

## HORIZONTAL INTENSITY

TABLE 16 GREAT WHALE RIVER			H = 9500 PLUS TABULAR VALUES IN GAMMAS																							JUNE 1967	
HOUR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN		
UT	TO	TO	TO	TC	TC	TO	TC	TO	TC	TO	TC	TO	TC	TO	TC	TO	TC	TO	TC	TC	TC	TC	TC	TC		TO	
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	Q	316	309	316	316	309	302	296	289	289	289	282	261	275	261	275	282	296	309	309	316	337	330	337	330	301	
2		344	337	316	323	323	337	296	302	261	137	144	206	254	240	261	261	289	323	358	433	440	406	413	392	308	
3		378	296	247	268	68	192	282	247	254	261	309	296	289	285	275	285	302	337	358	385	378	351	337	323	292	
4		344	371	364	358	316	309	302	302	282	282	296	247	172	199	234	268	378	550	633	592	502	509	454	357		
5	D	475	392	337	323	337	316	309	316	330	316	289	178	185	275	302	302	309	316	337	578	619	661	516	323	360	
6	D	337	296	344	323	302	275	213	275	289	302	309	302	302	289	289	289	309	406	420	475	661	523	502	348		
7		371	220	378	296	254	247	240	-118	34	20	144	247	268	268	275	275	282	289	302	309	309	309	316	323	244	
8		337	337	323	309	309	302	309	282	289	206	-139	20	220	206	254	296	309	358	358	378	495	530	475	475	302	
9		371	302	61	47	89	220	206	261	220	144	54	-28	254	296	289	296	316	316	337	351	399	426	488	447	257	
10		413	337	371	316	234	192	220	234	172	247	275	323	316	309	296	302	302	302	316	323	344	351	378	406	303	
11		378	371	330	261	261	282	309	316	316	309	302	302	296	275	282	282	302	309	351	426	426	385	330	323	322	
12		309	344	358	344	316	302	302	254	261	296	309	289	268	275	289	289	289	309	309	344	344	351	371	358	312	
13		371	392	351	309	323	289	302	316	309	316	309	309	296	296	302	296	302	309	316	330	351	371	371	371	323	
14		392	358	240	227	296	247	254	151	68	178	130	151	165	282	296	316	323	330	385	502	537	523	516	571	310	
15		454	309	371	275	220	227	275	220	206	316	316	316	302	302	296	309	316	316	330	323	337	330	344	337	306	
16		351	351	351	337	337	316	296	282	199	144	192	282	302	316	316	309	323	337	337	351	351	358	378	385	312	
17		385	358	337	351	316	316	309	309	282	103	82	137	296	323	309	296	296	371	413	392	385	399	468	454	320	
18	Q	447	371	337	275	289	282	275	302	296	309	309	302	302	302	302	296	302	323	323	330	358	351	344	344	320	
19		344	344	344	344	323	309	330	316	316	309	282	268	289	302	296	302	316	323	351	344	344	344	344	358	323	
20	C	364	378	358	351	323	296	261	144	220	316	323	323	323	316	309	309	309	316	330	337	337	344	344	344	316	
21		337	344	344	330	302	247	268	289	330	323	330	323	316	309	309	316	316	330	344	358	378	413	447	413	334	
22		337	323	330	337	302	296	192	206	337	337	330	309	302	289	282	296	309	316	323	337	344	337	344	337	310	
23	C	344	344	358	323	316	316	323	309	316	323	316	316	316	309	309	316	316	323	330	344	364	385	406	378	333	
24	C	371	378	371	337	330	296	165	234	309	330	330	323	316	316	316	302	302	316	337	344	344	344	385	371	324	
25	D	385	371	364	378	358	337	199	130	296	358	323	323	330	330	330	337	323	323	364	619	723	537	585	516	381	
26	D	447	392	309	296	296	192	254	254	261	289	316	309	330	309	302	282	275	316	330	358	461	550	537	482	339	
27	D	364	426	282	220	234	144	227	302	330	178	-35	220	309	309	309	316	302	337	364	358	337	351	351	433	290	
28		488	413	358	323	316	323	323	323	323	247	-1	-104	192	282	296	309	323	330	392	537	406	351	330	323	308	
29		316	316	316	316	337	199	6	172	268	316	330	316	302	289	289	289	323	330	323	358	371	426	364	454	305	
30		385	385	364	371	323	227	192	-104	116	192	130	234	323	282	289	296	316	351	378	420	385	378	433	482	298	
MEAN A		375	349	328	306	289	271	258	237	260	256	229	245	284	288	292	296	305	325	352	394	408	411	409	400	315	
MEAN C		369	356	348	320	313	298	264	256	286	313	312	307	307	301	302	301	305	318	326	334	348	351	363	353	319	
MEAN D		402	375	327	308	305	253	240	256	301	289	240	267	293	305	309	305	300	320	360	466	523	552	502	451	717	

## DECLINATION

TABLE 17 GREAT WHALE RIVER

D = 2C.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

JUNE 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TC 7	TO 8	TO 9	TO 10	TC 11	TC 12	TO 13	TC 14	TO 15	TO 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1	C	16.1	16.1	18.5	16.1	16.1	18.5	18.5	16.1	13.7	8.9	8.9	6.5	4.1	1.7	8.9	16.1	16.1	20.9	23.3	23.3	20.9	20.9	16.1	16.1	15.1
2		13.7	13.7	18.5	18.5	23.3	20.9	25.7	18.5	20.9	25.7	23.3	6.5	-0.7	4.1	6.5	23.3	32.9	25.7	18.5	6.5	6.5	8.9	6.5	6.5	15.6
3		11.3	47.3	25.7	28.1	64.1	30.5	23.3	23.3	18.5	13.7	4.1	1.7	-0.7	1.7	8.9	16.1	20.9	13.7	18.5	18.5	20.9	20.9	18.5	18.5	19.5
4		16.1	16.1	16.1	16.1	18.5	18.5	18.5	16.1	13.7	11.3	1.7	-5.5	1.7	6.5	6.5	11.3	11.3	-5.5	-34.3	-27.1	-15.1	-0.7	1.7	40.1	6.4
5	D	11.3	8.9	23.3	28.1	16.1	16.1	13.7	11.3	11.3	6.5	1.7	-3.1	-7.9	-0.7	6.5	16.1	16.1	20.9	23.3	-0.7	-3.1	20.9	66.5	97.7	16.7
6	D	107.3	116.9	71.3	28.1	6.5	11.3	11.3	8.9	6.5	4.1	-0.7	-0.7	-0.7	4.1	8.9	18.5	25.7	25.7	13.7	11.3	8.9	-3.1	-3.1	23.3	21.0
7		73.7	92.9	42.5	44.9	54.5	47.3	35.3	16.1	28.1	18.5	4.1	-10.3	-15.1	-7.9	11.3	16.1	25.7	28.1	28.1	28.1	25.7	20.9	18.5	16.1	26.8
8		16.1	13.7	20.9	20.9	18.5	16.1	13.7	13.7	11.3	16.1	32.9	6.5	1.7	-7.9	6.5	8.9	30.5	20.9	25.7	23.3	1.7	-3.1	11.3	-3.1	13.2
9		16.1	42.5	88.1	85.7	37.7	20.9	20.9	18.5	16.1	18.5	1.7	11.3	4.1	1.7	1.7	6.5	11.3	20.9	20.9	18.5	8.9	4.1	1.7	8.9	20.3
10		16.1	42.5	30.5	20.9	25.7	35.3	28.1	16.1	23.3	8.9	-0.7	-0.7	-3.1	-3.1	1.7	4.1	11.3	20.9	20.9	23.3	20.9	18.5	13.7	6.5	15.9
11		8.9	11.3	16.1	32.9	25.7	18.5	16.1	13.7	13.7	8.9	1.7	-0.7	-0.7	-5.5	-3.1	11.3	20.9	13.7	11.3	4.1	8.9	13.7	18.5	18.5	11.6
12		16.1	13.7	16.1	28.1	28.1	25.7	23.3	23.3	20.9	13.7	11.3	6.5	4.1	6.5	13.7	8.9	16.1	30.5	28.1	23.3	20.9	18.5	8.9	11.3	17.4
13		11.3	13.7	25.7	23.3	16.1	16.1	13.7	11.3	8.9	6.5	4.1	1.7	4.1	6.5	8.9	13.7	23.3	28.1	28.1	28.1	25.7	18.5	13.7	11.3	15.1
14		11.3	20.9	32.9	25.7	23.3	32.9	25.7	18.5	6.5	6.5	-0.7	-0.7	-3.1	8.9	8.9	13.7	23.3	20.9	16.1	-3.1	-3.1	1.7	-15.1	1.7	11.4
15		28.1	37.7	28.1	37.7	44.9	30.5	16.1	13.7	8.9	6.5	4.1	1.7	4.1	4.1	8.9	16.1	18.5	23.3	20.9	23.3	18.5	20.9	16.1	18.5	18.8
16		16.1	13.7	16.1	18.5	18.5	16.1	16.1	18.5	25.7	20.9	8.9	4.1	1.7	6.5	11.3	8.9	16.1	13.7	20.9	20.9	20.9	18.5	13.7	16.1	15.1
17		11.3	13.7	18.5	18.5	20.9	18.5	13.7	11.3	11.3	11.3	6.5	1.7	-3.1	4.1	1.7	8.9	13.7	16.1	11.3	18.5	16.1	8.9	1.7	6.5	10.9
18	C	11.3	13.7	18.5	11.3	23.3	16.1	16.1	13.7	13.7	8.9	4.1	1.7	4.1	6.5	6.5	11.3	16.1	20.9	28.1	25.7	20.9	16.1	16.1	13.7	14.1
19		13.7	13.7	13.7	16.1	16.1	16.1	13.7	13.7	11.3	6.5	4.1	-3.1	-5.5	-0.7	1.7	8.9	28.1	32.9	30.5	28.1	25.7	20.9	18.5	13.7	14.1
20	C	8.9	6.5	11.3	11.3	20.9	20.9	20.9	25.7	23.3	8.9	6.5	4.1	1.7	4.1	6.5	16.1	20.9	25.7	28.1	20.9	23.3	20.9	18.5	16.1	15.5
21		16.1	16.1	16.1	18.5	13.7	25.7	18.5	16.1	6.5	4.1	1.7	-3.1	-3.1	1.7	4.1	16.1	20.9	25.7	30.5	30.5	23.3	16.1	4.1	6.5	13.6
22		16.1	18.5	20.9	20.9	23.3	25.7	30.5	28.1	8.9	6.5	-0.7	-0.7	-0.7	4.1	8.9	20.9	28.1	30.5	28.1	25.7	23.3	20.9	18.5	16.1	17.6
23	C	16.1	16.1	13.7	20.9	20.9	16.1	16.1	16.1	11.3	6.5	4.1	-0.7	1.7	6.5	8.9	16.1	20.9	25.7	25.7	18.5	16.1	8.9	6.5	11.3	13.5
24	C	13.7	11.3	13.7	11.3	11.3	18.5	30.5	18.5	8.9	6.5	1.7	-0.7	1.7	1.7	6.5	16.1	20.9	23.3	28.1	28.1	28.1	23.3	13.7	8.9	14.4
25	D	6.5	6.5	11.3	11.3	13.7	11.3	16.1	35.3	13.7	1.7	-0.7	-15.1	-12.7	-7.9	1.7	4.1	11.3	-0.7	-10.3	-55.9	-55.9	6.5	56.9	76.1	5.2
26	D	52.1	49.7	42.5	20.9	8.9	16.1	13.7	13.7	8.9	4.1	-0.7	-3.1	-5.5	-0.7	1.7	-3.1	16.1	32.9	32.9	23.3	1.7	-15.1	1.7	18.5	13.8
27	D	85.7	35.3	56.9	59.3	49.7	54.5	28.1	13.7	1.7	8.9	16.1	6.5	-3.1	-5.5	1.7	11.3	16.1	16.1	11.3	18.5	20.9	20.9	20.9	16.1	23.4
28		13.7	6.5	13.7	16.1	16.1	13.7	13.7	11.3	8.9	13.7	23.3	16.1	-3.1	-5.5	-3.1	4.1	8.9	23.3	16.1	-7.9	4.1	20.9	20.9	20.9	11.1
29		20.9	20.9	20.9	18.5	13.7	44.9	47.3	16.1	6.5	6.5	4.1	1.7	4.1	6.5	13.7	18.5	16.1	28.1	32.9	25.7	23.3	11.3	20.9	8.9	18.0
30		23.3	25.7	20.9	16.1	20.9	25.7	30.5	49.7	23.3	1.7	4.1	-0.7	-5.5	-7.9	-0.7	4.1	13.7	18.5	18.5	16.1	23.3	23.3	13.7	1.7	15.0
MEAN A		23.3	25.9	26.1	24.8	23.7	23.3	21.0	18.0	13.5	9.7	6.0	1.0	-1.2	1.1	5.9	12.1	19.1	21.4	19.9	14.6	12.7	13.5	14.7	18.1	15.3
MEAN C		13.2	12.7	15.1	14.2	18.5	18.0	20.4	18.0	14.2	7.9	5.1	2.2	2.7	4.1	7.5	15.1	19.0	23.3	26.7	23.3	21.9	18.0	14.2	13.2	14.5
MEAN D		52.6	43.5	41.1	29.5	19.0	21.9	16.6	16.6	8.4	5.1	3.1	-3.1	-6.0	-2.1	4.1	9.4	17.1	19.0	14.2	-0.7	-5.5	6.0	28.6	46.3	30.8

## VERTICAL INTENSITY

TABLE 18 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

JUNE 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TO 7	TO 8	TO 9	TO 10	TO 11	TC 12	TO 13	TO 14	TC 15	TC 16	TO 17	TC 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24		
1	Q	344	338	331	304	331	331	331	331	331	331	338	324	317	324	317	324	331	331	331	331	344	338	344	344	331	
2		324	317	188	324	324	304	344	324	344	453	331	304	304	283	290	297	331	324	331	358	338	358	358	324	324	
3		270	290	331	378	446	351	331	358	338	310	324	324	317	310	310	310	317	331	358	331	317	317	324	331	330	
4		324	297	283	317	317	317	317	310	317	310	304	304	297	202	229	263	317	378	372	202	208	263	168	140	282	
5	D	229	297	290	276	283	310	324	324	331	331	331	317	270	276	276	283	304	324	338	276	283	79	18	134	271	
6	D	426	576	365	317	392	501	508	385	331	338	344	344	331	331	331	331	317	317	317	331	317	127	-2	106	333	
7		385	514	276	338	372	344	521	514	406	365	324	297	317	324	324	324	324	324	324	331	331	331	338	344	358	
8		331	324	310	317	331	344	358	358	344	385	372	263	263	270	283	297	324	331	331	331	283	236	270	242	312	
9		229	317	548	542	446	446	480	446	440	392	399	283	256	304	304	310	317	310	310	338	365	344	270	236	360	
10		297	229	324	310	446	399	412	412	406	317	290	310	304	297	304	304	310	317	324	338	344	344	344	351	335	
11		338	317	283	263	310	317	310	317	324	324	324	324	324	310	304	304	304	317	344	365	344	338	331	331	319	
12		324	317	249	249	290	297	310	324	310	310	317	310	304	297	304	317	324	317	310	324	331	331	344	338	310	
13		331	276	290	297	317	331	317	310	310	317	310	310	310	304	297	304	304	304	304	310	317	331	344	338	312	
14		324	290	324	256	317	310	385	378	283	276	310	256	215	276	297	297	297	310	351	351	256	229	106	161	286	
15		236	215	297	385	399	378	358	365	317	310	317	317	310	310	310	310	310	304	297	304	310	317	331	324	318	
16		317	317	317	310	310	310	304	304	331	317	290	283	290	297	310	310	310	317	317	324	317	324	324	317	311	
17		317	304	310	304	324	317	317	317	310	351	331	215	263	304	317	317	351	385	365	324	324	331	304	229	314	
18	Q	215	304	276	297	351	324	310	317	310	310	310	310	310	310	304	304	304	304	310	310	317	324	324	317	307	
19		317	317	317	304	310	310	310	310	310	310	304	283	270	276	283	297	297	304	317	324	304	310	317	317	324	306
20	Q	331	304	297	290	276	310	378	399	297	304	310	304	297	304	304	297	304	297	304	310	304	304	304	304	310	
21		304	304	304	297	283	263	283	290	304	304	304	304	297	304	297	290	290	297	304	317	331	351	351	338	304	
22		304	290	297	304	283	324	378	297	290	310	310	297	290	290	290	297	297	297	304	310	310	310	304	297	303	
23	Q	297	304	304	256	290	290	290	297	304	297	297	297	297	297	297	297	290	290	297	310	324	351	351	344	302	
24	Q	324	304	304	304	304	317	290	283	283	297	304	297	290	283	290	290	290	290	304	304	304	297	310	331	300	
25	D	324	324	297	283	297	344	372	331	304	310	317	297	297	304	297	297	283	290	344	215	-9	-84	25	100	257	
26	D	263	290	283	412	440	514	426	365	351	331	304	317	310	304	297	304	290	297	304	304	331	297	229	202	323	
27	D	338	270	290	351	344	385	467	358	412	399	297	276	317	310	304	304	304	304	324	331	331	283	304	310	330	
28		222	263	290	317	324	317	317	317	317	324	419	378	276	297	297	317	317	338	331	304	276	283	290	297	310	
29		304	310	310	317	317	419	698	446	344	304	317	304	297	290	290	290	317	324	317	297	297	331	324	331	337	
30		174	208	215	263	297	399	494	304	310	290	338	276	310	290	297	304	304	310	331	317	283	283	290	263	298	
MEAN A		302	311	303	316	336	348	375	346	330	328	322	300	295	296	299	303	309	317	324	313	301	286	275	278	313	
MEAN Q		302	310	302	290	310	314	320	324	304	309	312	306	302	304	302	302	304	302	309	313	319	323	327	328	310	
MEAN D		316	351	305	328	351	411	419	353	346	342	319	310	305	305	301	304	300	306	325	291	251	140	115	170	584	

HORIZONTAL INTENSITY

TABLE 19 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

JULY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TC 8	TO 9	TO 10	TO 11	TC 12	TO 13	TC 14	TO 15	TO 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1	C	485	450	402	381	222	105	98	147	-12	-61	-5	-61	-102	50	119	243	326	388	464	478	540	561	519	464	258
2		436	354	305	147	209	257	278	298	333	326	333	326	319	319	319	326	340	340	333	340	333	347	340	367	318
3	C	388	374	354	305	347	305	312	319	312	285	291	312	319	319	312	305	319	326	340	360	374	395	409	409	337
4		374	367	374	326	229	140	209	278	285	243	340	333	333	326	319	312	319	333	333	340	354	354	374	457	319
5	C	464	443	354	319	298	264	305	278	-40	-123	140	305	236	174	271	305	333	381	354	347	436	429	450	409	297
6		355	389	382	396	368	334	327	320	320	320	313	292	244	223	210	320	348	361	417	375	458	541	548	465	359
7		479	348	189	306	258	237	313	348	334	327	313	299	334	320	327	327	334	341	355	348	382	355	368	375	330
8		382	361	355	279	286	292	265	306	334	320	292	265	306	320	313	306	320	320	334	341	348	348	355	341	320
9	C	341	341	341	334	341	334	306	279	299	334	334	327	327	320	320	320	327	334	348	355	361	348	348	348	332
10	C	341	334	334	334	334	334	341	341	341	327	334	320	320	327	327	327	334	334	341	348	361	382	389	424	343
11	D	451	417	382	396	355	361	65	210	182	237	320	341	320	279	313	306	334	334	375	499	506	444	458	430	346
12		411	369	335	169	293	335	293	266	245	314	321	321	314	307	307	300	321	321	328	362	411	438	397	362	327
13		390	404	376	362	314	273	307	280	314	335	321	307	307	307	307	307	314	328	356	397	445	418	487	452	350
14		411	397	376	321	86	114	211	204	100	190	280	335	314	314	314	321	335	362	369	369	397	452	397	349	305
15		349	342	342	342	335	321	328	335	342	335	335	321	300	293	321	321	335	356	280	521	597	438	356	328	353
16		342	349	362	328	259	307	349	321	335	328	328	328	328	321	321	314	321	328	335	342	369	349	349	369	333
17		404	390	390	362	349	335	335	335	335	335	335	335	335	335	335	321	328	335	349	362	411	376	390	397	355
18		376	349	342	349	356	321	218	321	273	100	287	300	293	307	314	314	314	328	349	349	349	342	362	425	318
19		439	384	370	370	350	343	336	336	336	336	336	329	329	322	322	329	329	336	350	363	363	370	363	398	352
20		391	363	377	281	267	336	350	350	301	267	315	336	308	308	322	329	336	336	329	350	391	412	405	384	339
21		384	405	412	377	322	308	253	136	288	288	288	336	329	322	322	308	322	329	350	384	391	377	391	419	335
22	C	377	357	350	357	322	294	308	343	336	322	336	336	329	308	308	308	329	343	343	350	350	363	363	363	337
23	C	363	350	357	357	288	253	239	212	212	260	301	301	329	336	329	308	308	343	357	467	577	550	439	432	344
24		370	350	315	329	308	329	232	253	315	357	322	336	322	308	294	288	315	336	363	412	446	412	391	412	338
25		432	363	370	384	350	336	419	239	315	322	143	219	294	308	315	315	336	350	405	495	529	432	398	495	357
26		496	482	323	226	330	351	337	344	337	344	337	330	323	316	323	316	330	330	337	351	351	351	351	344	344
27		344	344	344	337	337	337	337	302	171	178	323	337	337	330	309	309	309	316	330	371	392	351	364	406	326
28		461	420	364	344	323	323	295	323	295	226	247	330	337	337	309	323	330	344	371	420	420	399	399	406	348
29		413	392	378	378	116	151	323	309	289	254	323	337	337	323	316	309	323	364	440	482	482	482	606	544	361
30	C	427	323	206	144	254	144	171	302	282	282	309	309	316	316	337	337	330	330	344	351	337	337	337	337	298
31	C	337	337	337	337	337	330	323	330	330	330	330	323	323	316	316	316	323	323	337	351	351	351	344	344	332
MEAN A		400	376	348	322	295	284	283	289	272	266	294	305	302	300	306	313	326	340	355	386	413	403	401	402	333
MEAN C		357	348	343	333	336	319	318	322	324	319	325	324	324	318	317	315	326	332	342	353	359	368	370	377	336
MEAN D		438	396	340	319	283	225	176	230	125	119	213	239	220	231	274	300	326	355	379	428	479	464	441	414	592

GREAT WHALE MAGNETIC OBSERVATORY 1967

## DECLINATION

TABLE 20 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

JULY 1967

DAY	HOUR UT	DECLINATION																							MEAN	
		0 TO 1	1 TO 2	2 TO 3	3 TC 4	4 TC 5	5 TO 6	6 TO 7	7 TC 8	8 TO 9	9 TO 10	10 TO 11	11 TC 12	12 TO 13	13 TO 14	14 TO 15	15 TO 16	16 TO 17	17 TO 18	18 TO 19	19 TC 20	20 TC 21	21 TO 22	22 TC 23		23 TO 24
1	D	4.1	8.9	16.1	28.1	64.1	52.1	37.7	23.3	56.9	13.7	28.1	16.1	20.9	25.7	23.3	18.5	13.7	4.1	-7.9	-0.7	-7.9	-7.9	-0.7	6.5	18.2
2		20.9	35.3	28.1	25.7	35.3	28.1	23.3	16.1	8.9	4.1	4.1	4.1	6.5	11.3	16.1	18.5	18.5	18.5	20.9	20.9	18.5	16.1	13.7	17.4	
3	Q	6.5	8.9	16.1	35.3	18.5	20.9	18.5	16.1	13.7	11.3	8.9	6.5	4.1	6.5	11.3	13.7	18.5	25.7	23.3	18.5	16.1	13.7	11.3	8.9	14.7
4		8.9	11.3	13.7	20.9	32.9	40.1	25.7	16.1	11.3	6.5	-3.1	-3.1	-0.7	4.1	4.1	6.5	13.7	23.3	30.5	25.7	18.5	13.7	8.9	1.7	13.8
5	C	1.7	28.1	35.3	35.3	37.7	18.5	13.7	18.5	40.1	8.9	-5.5	-12.7	-7.9	-3.1	-3.1	16.1	25.7	16.1	23.3	23.3	8.9	1.7	-3.1	8.9	13.6
6		8.9	6.5	8.9	8.9	11.3	13.7	13.7	13.7	11.3	8.9	6.5	4.1	-3.1	4.1	8.9	1.7	6.5	16.1	8.9	16.1	8.9	4.1	13.7	11.3	8.9
7		16.1	40.1	61.7	37.7	20.9	16.1	8.9	8.9	6.5	6.5	1.7	-0.7	-5.5	-0.7	4.1	11.3	16.1	20.9	18.5	20.9	13.7	16.1	11.3	8.9	15.0
8		6.5	4.1	13.7	25.7	16.1	18.5	23.3	16.1	13.7	11.3	4.1	4.1	-3.1	-3.1	4.1	8.9	13.7	20.9	23.3	25.7	23.3	18.5	11.3	8.9	12.9
9	Q	11.3	13.7	13.7	13.7	13.7	16.1	18.5	18.5	18.5	8.9	1.7	-3.1	-5.5	-0.7	4.1	8.9	16.1	23.3	23.3	23.3	18.5	18.5	13.7	13.7	12.6
10	Q	13.7	13.7	13.7	13.7	13.7	13.7	13.7	11.3	11.3	8.9	1.7	-0.7	-0.7	-0.7	4.1	8.9	13.7	20.9	25.7	25.7	23.3	18.5	11.3	4.1	11.8
11	C	4.1	32.9	13.7	8.9	16.1	18.5	44.9	8.9	18.5	4.1	-3.1	-12.7	-10.3	-10.3	4.1	16.1	13.7	30.5	28.1	4.1	1.7	8.9	8.9	8.9	10.8
12		11.3	11.3	28.1	66.5	23.3	16.1	18.5	18.5	16.1	8.9	4.1	-3.1	-3.1	-0.7	4.1	8.9	13.7	23.3	23.3	18.5	16.1	6.5	8.9	16.1	14.8
13		13.7	4.1	13.7	13.7	18.5	23.3	16.1	13.7	11.3	4.1	-0.7	-0.7	-0.7	-0.7	4.1	11.3	13.7	18.5	18.5	11.3	8.9	11.3	4.1	8.9	10.0
14		8.9	11.3	13.7	16.1	59.3	32.9	30.5	23.3	28.1	16.1	-5.5	-10.3	-10.3	-0.7	4.1	8.9	16.1	16.1	18.5	20.9	13.7	4.1	11.3	16.1	14.3
15		13.7	13.7	13.7	16.1	13.7	13.7	13.7	11.3	11.3	8.9	6.5	4.1	-0.7	4.1	1.7	6.5	20.9	20.9	13.7	-3.1	-5.5	4.1	13.7	18.5	9.8
16		18.5	13.7	16.1	30.5	28.1	16.1	11.3	13.7	8.9	6.5	4.1	1.7	1.7	1.7	6.5	11.3	13.7	18.5	23.3	25.7	20.9	20.9	20.9	16.1	14.6
17		11.3	13.7	11.3	13.7	13.7	13.7	13.7	11.3	8.9	6.5	6.5	1.7	-0.7	-0.7	4.1	8.9	13.7	20.9	23.3	23.3	18.5	20.9	16.1	16.1	12.1
18		16.1	13.7	16.1	13.7	16.1	20.9	28.1	13.7	16.1	25.7	-5.5	-7.9	-7.9	-5.5	4.1	8.9	18.5	20.9	23.3	25.7	25.7	23.3	16.1	8.9	13.7
19		1.7	4.1	8.9	8.9	16.1	13.7	13.7	11.3	11.3	8.9	4.1	4.1	4.1	6.5	8.9	13.7	18.5	23.3	28.1	25.7	25.7	20.9	16.1	8.9	12.8
20		6.5	11.3	13.7	20.9	18.5	13.7	13.7	13.7	13.7	8.9	-0.7	-3.1	-0.7	-0.7	4.1	8.9	20.9	25.7	30.5	30.5	20.9	13.7	6.5	6.5	12.4
21		8.9	6.5	6.5	16.1	18.5	18.5	20.9	32.9	13.7	8.9	-3.1	-15.1	-10.3	-5.5	4.1	13.7	18.5	23.3	25.7	23.3	20.9	18.5	13.7	4.1	11.8
22	Q	8.9	13.7	13.7	16.1	25.7	23.3	18.5	11.3	6.5	4.1	-0.7	-3.1	-5.5	-3.1	4.1	13.7	18.5	23.3	30.5	30.5	28.1	25.7	18.5	13.7	14.0
23	D	11.3	11.3	13.7	13.7	20.9	18.5	23.3	28.1	23.3	8.9	-0.7	-5.5	-10.3	-7.9	-0.7	4.1	13.7	23.3	28.1	16.1	-5.5	-5.5	30.5	18.5	11.3
24		18.5	23.3	23.3	18.5	8.9	16.1	13.7	16.1	11.3	4.1	-0.7	-3.1	-7.9	-3.1	4.1	11.3	16.1	20.9	18.5	13.7	8.9	18.5	13.7	11.3	11.5
25		8.9	23.3	23.3	13.7	20.9	18.5	18.5	23.3	13.7	11.3	18.5	8.9	-0.7	-3.1	6.5	8.9	16.1	8.9	-0.7	-0.7	1.7	11.3	16.1	1.7	11.2
26		1.7	8.9	25.7	49.7	16.1	13.7	13.7	13.7	11.3	8.9	4.1	-0.7	-0.7	-0.7	4.1	8.9	23.3	30.5	32.9	32.9	28.1	23.3	18.5	16.1	16.0
27		13.7	13.7	13.7	13.7	16.1	16.1	13.7	18.5	25.7	18.5	-0.7	-3.1	-3.1	-0.7	1.7	6.5	16.1	23.3	28.1	28.1	20.9	23.3	18.5	8.9	13.8
28		-3.1	4.1	11.3	16.1	20.9	16.1	18.5	11.3	11.3	6.5	-7.9	-10.3	-5.5	-3.1	1.7	4.1	13.7	11.3	32.9	18.5	13.7	16.1	16.1	11.3	9.4
29		8.9	13.7	23.3	28.1	78.5	42.5	18.5	8.9	8.9	4.1	1.7	-0.7	-0.7	4.1	6.5	8.9	20.9	16.1	6.5	4.1	-0.7	1.7	4.1	20.9	13.7
30	D	25.7	32.9	30.5	23.3	23.3	25.7	20.9	25.7	13.7	16.1	8.9	-0.7	-3.1	1.7	6.5	16.1	20.9	23.3	20.9	18.5	18.5	16.1	16.1	13.7	17.3
31	Q	13.7	11.3	11.3	13.7	13.7	13.7	13.7	13.7	13.7	8.9	8.9	6.5	6.5	8.9	8.9	13.7	20.9	23.3	23.3	18.5	16.1	13.7	13.7	13.7	13.5
MEAN A		10.4	14.9	18.3	21.8	24.2	20.7	19.2	16.2	15.8	9.3	2.8	-1.2	-2.2	.6	5.3	10.4	16.7	20.5	21.4	18.9	14.2	13.3	12.8	11.1	13.2
MEAN C		10.8	12.3	13.7	18.5	17.1	17.5	16.6	14.2	12.7	8.4	4.1	1.2	-0.2	2.2	6.5	11.8	17.5	23.3	25.2	23.3	20.4	18.0	13.7	10.8	13.3
MEAN D		9.4	22.8	21.9	21.9	32.4	26.7	28.1	20.9	30.5	10.3	5.5	-3.1	-2.1	1.2	6.0	14.2	17.5	19.5	18.5	12.3	3.1	2.7	10.3	11.3	29.3

VERTICAL INTENSITY

TABLE 21 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

JULY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TC 7	TC 8	TC 9	TC 10	TC 11	TC 12	TC 13	TC 14	TC 15	TC 16	TC 17	TC 18	TC 19	TC 20	TC 21	TC 22	TC 23	TC 24	
1	C	276	242	181	249	406	412	446	514	535	535	358	304	195	147	236	276	290	365	351	358	344	324	276	276	329
2		263	372	433	385	399	419	358	338	3C4	310	317	317	310	31C	304	304	290	297	297	304	304	304	310	317	328
3	C	324	304	290	310	276	290	297	304	3C4	290	297	304	304	3C4	304	304	3C4	297	304	317	338	351	358	338	309
4		324	317	283	290	378	412	338	331	317	310	297	304	297	297	297	3C4	310	304	310	310	310	310	317	317	315
5	C	276	147	202	331	324	372	324	385	480	412	276	276	283	229	290	29C	317	344	331	324	338	331	304	310	312
6		324	324	310	304	304	304	3C4	304	310	317	317	31C	276	222	2C2	270	297	297	338	304	297	249	134	276	287
7		276	202	521	399	548	508	365	290	3C4	310	310	29C	304	304	297	29C	297	304	331	324	331	324	331	331	337
8		304	297	297	304	310	276	270	283	3C4	317	304	263	283	297	297	297	3C4	304	304	310	317	310	31C	310	299
9	C	304	304	297	297	297	290	276	276	270	304	310	304	304	3C4	29C	29C	290	290	297	310	317	317	317	304	298
10	C	297	297	297	297	297	297	297	297	3C4	304	304	304	297	29C	290	25C	283	283	283	283	290	297	324	338	297
11	C	249	215	310	290	290	324	406	385	351	310	304	304	297	276	283	290	297	317	324	317	270	283	276	276	302
12		263	276	283	324	29C	304	324	331	3C4	304	297	304	297	290	290	283	290	290	290	310	338	331	283	304	300
13		304	263	317	317	29C	283	276	297	276	304	3C4	304	290	297	3C4	297	297	297	304	331	331	304	304	283	299
14		310	297	270	290	317	392	433	412	460	324	276	29C	290	283	276	283	297	297	304	304	31C	317	29C	297	317
15		297	304	304	297	297	290	297	297	297	304	304	29C	290	276	276	283	276	297	317	297	236	317	290	290	293
16		290	304	283	338	331	276	297	297	3C4	304	3C4	304	297	297	290	29C	283	290	290	297	297	304	297	304	299
17		304	263	310	304	304	297	290	290	297	297	290	29C	290	29C	290	290	290	290	297	310	338	331	317	297	299
18		290	283	290	290	290	324	283	297	338	331	263	276	249	276	29C	297	304	310	317	317	304	290	297	317	297
19		263	229	297	29C	276	290	297	297	297	304	304	297	290	276	276	276	276	276	276	283	290	304	317	331	288
20		304	297	283	249	276	276	283	290	27C	263	263	276	263	263	276	25C	290	283	290	297	310	324	331	324	286
21		304	283	249	242	276	297	338	331	290	283	249	276	276	283	283	276	270	276	290	304	317	310	310	310	289
22	C	304	297	290	290	263	263	270	290	250	283	283	29C	290	283	276	270	263	270	276	276	283	297	31C	304	284
23	C	290	283	290	290	29C	263	276	263	270	263	270	249	270	29C	276	276	276	283	290	297	242	-16	-36	168	246
24		215	242	270	283	297	283	385	324	250	304	3C4	297	304	3C4	297	25C	276	276	297	310	317	317	304	304	295
25		263	202	276	270	290	283	351	310	276	276	242	195	229	263	283	304	297	304	344	317	290	290	304	276	281
26		222	202	256	344	310	290	283	276	250	290	297	290	290	283	276	276	276	283	283	283	290	297	29C	290	282
27		283	290	290	29C	283	276	276	290	283	263	276	29C	290	283	283	290	290	290	290	290	317	304	297	317	289
28		290	297	310	29C	263	290	256	263	317	304	263	276	283	283	276	270	290	317	344	324	290	283	283	290	290
29		283	270	297	351	446	446	338	358	331	304	276	283	290	297	290	290	3C4	310	317	331	324	290	256	208	312
30	C	276	426	480	514	555	630	528	344	372	304	297	29C	290	290	276	283	276	270	276	290	304	304	304	304	353
31	C	304	304	304	29C	304	304	297	297	3C4	304	3C4	304	304	304	310	310	3C4	304	304	304	304	304	304	304	303
MEAN A		286	278	302	310	325	331	324	318	320	311	292	289	285	280	283	288	290	297	305	308	306	297	287	297	300
MEAN C		306	301	295	297	287	289	287	293	294	297	300	301	300	297	294	293	289	289	293	298	306	313	323	317	298
MEAN D		274	263	293	335	373	400	396	378	4C2	365	301	285	267	246	272	283	291	316	314	317	300	245	225	267	621

GREAT WHALE MAGNETIC OBSERVATORY 1967



## HORIZONTAL INTENSITY

TABLE 22 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

AUGUST 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TC 12	TC 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1	G	344	337	337	337	337	337	337	337	337	337	337	337	330	316	310	337	344	351	379	379	372	365	365	365	344
2	G	358	351	344	337	337	344	351	344	344	337	337	337	323	323	323	323	330	351	365	372	365	365	351	351	344
3	Q	344	344	344	344	344	344	344	344	337	337	330	323	316	316	330	344	358	365	358	365	365	351	365	337	344
4		344	351	351	351	344	351	337	296	310	330	330	310	275	268	310	296	323	330	399	427	434	413	386	372	343
5		434	420	365	351	330	303	206	165	241	254	275	323	310	316	316	330	344	379	372	379	399	386	358	358	330
6		352	359	352	366	345	235	311	331	250	235	276	345	324	331	331	324	338	345	352	393	407	393	380	428	339
7		442	407	380	366	366	352	352	283	117	103	200	269	338	324	324	317	331	345	387	428	338	456	463	469	340
8		449	380	352	352	262	297	221	152	179	131	311	352	324	304	311	304	324	338	373	387	373	393	428	421	322
9		352	352	366	373	352	352	324	297	352	311	235	297	324	317	297	304	311	324	331	352	352	387	373	400	335
10	D	442	435	269	276	283	97	338	338	352	338	317	152	7	262	297	297	317	324	352	366	463	538	642	504	334
11	D	400	407	304	366	393	352	304	317	110	248	262	324	324	317	297	311	317	352	504	656	628	614	552	456	380
12		463	290	242	359	338	331	317	297	214	283	304	311	317	317	311	311	317	345	366	380	428	442	407	393	337
13		360	367	367	388	353	339	339	339	332	325	312	298	291	312	305	312	353	394	360	381	394	381	422	429	352
14		394	388	263	284	243	98	160	98	125	215	104	263	298	318	346	339	339	360	360	367	394	388	422	422	291
15		367	360	381	443	346	360	353	339	332	277	256	229	298	325	332	332	339	353	374	381	367	374	408	401	347
16		374	394	401	388	360	312	312	284	332	346	318	284	263	298	325	325	325	332	353	367	367	415	533	519	355
17	D	512	388	332	167	201	277	298	346	312	284	153	256	243	339	325	325	339	367	374	367	381	374	353	381	321
18	D	457	415	374	367	332	277	236	118	98	222	305	277	332	291	298	298	346	367	388	401	519	539	470	388	338
19		422	374	401	381	374	243	132	318	332	305	339	318	312	305	298	312	312	325	339	388	422	381	367	381	337
20		416	375	382	333	174	154	188	161	292	354	333	375	313	326	299	299	306	326	340	375	402	423	409	368	322
21		361	347	382	326	257	257	333	326	250	319	333	319	313	299	292	292	306	333	354	368	368	361	368	395	328
22	Q	368	347	347	347	347	299	250	347	354	340	340	326	313	319	313	313	313	326	340	354	361	354	389	354	336
23	C	354	361	368	340	368	340	285	354	347	326	285	237	285	306	299	299	326	340	395	382	423	416	402	389	343
24		423	465	444	395	333	313	326	292	202	209	195	244	299	326	313	313	326	354	354	347	361	382	375	361	331
25	D	361	368	361	354	306	271	230	168	292	271	326	306	278	326	313	306	326	354	354	437	416	395	485	451	336
26		409	382	354	313	326	333	319	244	257	285	326	333	313	340	326	313	313	313	347	430	389	416	471	402	344
27		390	383	327	210	300	320	341	327	286	210	217	334	327	314	300	314	307	314	334	341	355	383	438	369	323
28		348	355	355	341	334	293	327	327	341	341	334	320	314	320	314	300	300	320	327	341	341	348	376	348	332
29		362	348	341	334	334	341	341	279	175	231	320	327	300	300	320	314	307	314	341	355	383	403	376	327	324
30		334	341	341	355	210	127	217	120	156	355	348	320	300	286	300	307	307	334	362	417	472	493	493	486	326
31		466	403	258	362	307	293	203	100	-66	72	210	293	286	272	314	314	341	355	369	383	362	376	452	459	299
MEAN A		394	374	348	342	317	288	288	271	257	275	286	301	296	311	312	314	325	343	365	389	400	410	422	403	335
MEAN Q		354	348	348	341	347	333	314	345	344	336	326	312	314	316	315	323	334	347	367	370	377	370	374	359	342
MEAN C		434	403	328	306	303	255	281	258	233	273	273	263	237	307	306	307	329	353	394	445	481	492	501	436	691

## DECLINATION

TABLE 23 GREAT WHALE RIVER		D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES																							AUGUST 1967	
DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TC 12	TO 13	TC 14	TO 15	TC 16	TO 17	TO 18	TO 19	TO 20	TC 21	TO 22	TC 23	TO 24	
1	C	13.7	13.7	13.7	13.7	13.7	13.7	13.7	11.3	8.9	8.9	4.1	4.1	-0.7	1.7	6.5	8.9	20.9	23.3	23.3	23.3	20.9	20.9	13.7	11.3	12.8
2	C	11.3	13.7	13.7	13.7	13.7	13.7	13.7	13.7	11.3	8.9	4.1	4.1	1.7	4.1	8.9	13.7	18.5	23.3	23.3	20.9	18.5	13.7	11.3	13.7	12.8
3	Q	13.7	13.7	13.7	13.7	13.7	13.7	13.7	11.3	8.9	8.9	6.5	4.1	4.1	6.5	11.3	16.1	20.9	23.3	25.7	23.3	18.5	18.5	13.7	13.7	13.8
4		16.1	16.1	13.7	13.7	13.7	11.3	13.7	16.1	13.7	4.1	4.1	1.7	6.5	8.9	18.5	13.7	28.1	28.1	11.3	8.9	8.9	6.5	4.1	8.9	12.1
5		8.9	6.5	11.3	13.7	13.7	13.7	25.7	25.7	8.9	4.1	-0.7	-10.3	-5.5	-0.7	8.9	23.3	23.3	20.9	23.3	20.9	16.1	11.3	13.7	13.7	12.1
6		13.7	13.7	13.7	13.7	16.1	18.5	16.1	13.7	16.1	13.7	6.5	-0.7	-0.7	1.7	6.5	13.7	23.3	28.1	20.9	18.5	13.7	11.3	11.3	4.1	12.8
7		1.7	1.7	13.7	16.1	18.5	13.7	13.7	18.5	30.5	28.1	11.3	-3.1	-5.5	-0.7	4.1	13.7	18.5	30.5	23.3	18.5	11.3	-0.7	4.1	-0.7	11.7
8		-0.7	8.9	23.3	25.7	32.9	18.5	18.5	18.5	23.3	20.9	-0.7	-5.5	-5.5	-3.1	4.1	8.9	13.7	23.3	23.3	23.3	20.9	13.7	6.5	4.1	13.2
9		13.7	13.7	13.7	13.7	16.1	16.1	16.1	16.1	8.9	11.3	8.9	-5.5	-12.7	-7.9	1.7	8.9	25.7	28.1	30.5	28.1	23.3	16.1	8.9	6.5	12.5
10	D	4.1	4.1	18.5	40.1	28.1	28.1	13.7	11.3	8.9	6.5	4.1	11.3	11.3	-0.7	-5.5	13.7	18.5	23.3	23.3	20.9	8.9	-3.1	-15.1	-5.5	11.2
11	D	11.3	13.7	16.1	18.5	11.3	13.7	23.3	18.5	23.3	1.7	-10.3	-15.1	-12.7	-5.5	-5.5	11.3	23.3	23.3	8.9	-7.9	-10.3	-3.1	-10.3	16.1	6.4
12		25.7	20.9	54.5	16.1	13.7	16.1	18.5	16.1	23.3	13.7	6.5	-0.7	-3.1	-0.7	1.7	11.3	18.5	18.5	23.3	23.3	13.7	8.9	8.9	8.9	14.9
13		13.7	8.9	13.7	13.7	20.9	13.7	13.7	13.7	11.3	8.9	6.5	4.1	4.1	4.1	6.5	13.7	8.9	13.7	37.7	30.5	23.3	18.5	11.3	6.5	13.4
14		11.3	13.7	35.3	23.3	28.1	32.9	30.5	35.3	20.9	6.5	23.3	-3.1	-3.1	6.5	13.7	16.1	18.5	23.3	23.3	18.5	16.1	13.7	8.9	1.7	17.3
15		13.7	16.1	13.7	16.1	20.9	11.3	11.3	11.3	11.3	8.9	6.5	-5.5	-0.7	1.7	6.5	8.9	16.1	20.9	20.9	20.9	20.9	18.5	11.3	6.5	12.0
16		8.9	11.3	8.9	16.1	13.7	13.7	13.7	13.7	13.7	8.9	4.1	1.7	1.7	6.5	11.3	8.9	16.1	18.5	25.7	23.3	20.9	13.7	1.7	-5.5	11.3
17	D	1.7	16.1	30.5	71.3	16.1	20.9	13.7	6.5	4.1	-0.7	-5.5	-12.7	-7.9	-12.7	-10.3	4.1	11.3	8.9	18.5	23.3	18.5	13.7	13.7	11.3	10.6
18	D	8.9	13.7	25.7	20.9	18.5	20.9	20.9	68.9	18.5	4.1	-7.9	-10.3	-10.3	-10.3	-0.7	8.9	13.7	23.3	23.3	18.5	8.9	4.1	-0.7	8.9	12.1
19		6.5	6.5	6.5	8.9	16.1	37.7	54.5	11.3	8.9	4.1	-0.7	-5.5	-7.9	-7.9	-0.7	4.1	16.1	18.5	28.1	23.3	13.7	13.7	13.7	11.3	11.7
20		4.1	8.9	11.3	20.9	40.1	20.9	23.3	28.1	11.3	4.1	-0.7	-5.5	-7.9	-5.5	-3.1	-0.7	11.3	23.3	23.3	20.9	18.5	11.3	4.1	11.3	11.4
21		13.7	6.5	6.5	13.7	23.3	23.3	16.1	16.1	20.9	13.7	1.7	-5.5	-7.9	-5.5	4.1	20.9	32.9	35.3	30.5	25.7	20.9	16.1	11.3	6.5	14.2
22	Q	4.1	13.7	13.7	13.7	16.1	18.5	25.7	13.7	11.3	8.9	4.1	1.7	-0.7	4.1	8.9	18.5	23.3	30.5	32.9	25.7	20.9	13.7	8.9	8.9	14.2
23	Q	13.7	13.7	16.1	6.5	16.1	16.1	23.3	11.3	8.9	6.5	8.9	4.1	-5.5	1.7	6.5	13.7	20.9	23.3	18.5	18.5	16.1	13.7	11.3	11.3	12.3
24		4.1	4.1	8.9	16.1	25.7	18.5	11.3	11.3	8.9	4.1	-5.5	-5.5	-10.3	-5.5	-3.1	8.9	16.1	23.3	28.1	28.1	20.9	18.5	16.1	16.1	10.8
25	D	13.7	13.7	13.7	13.7	13.7	20.9	13.7	23.3	6.5	8.9	-0.7	-7.9	-10.3	-7.9	-5.5	8.9	28.1	23.3	30.5	16.1	13.7	13.7	4.1	11.3	10.8
26		13.7	4.1	11.3	18.5	16.1	13.7	13.7	13.7	13.7	8.9	1.7	1.7	-0.7	1.7	6.5	11.3	13.7	23.3	23.3	13.7	16.1	18.5	1.7	8.9	11.2
27		16.1	11.3	20.9	28.1	18.5	13.7	13.7	11.3	13.7	13.7	11.3	-0.7	-0.7	-0.7	4.1	13.7	18.5	20.9	23.3	23.3	20.9	13.7	4.1	13.7	13.6
28		13.7	13.7	11.3	13.7	8.9	20.9	13.7	8.9	8.9	8.9	6.5	1.7	-0.7	1.7	6.5	8.9	18.5	28.1	30.5	25.7	23.3	18.5	13.7	13.7	13.3
29		11.3	16.1	16.1	16.1	13.7	13.7	11.3	13.7	18.5	16.1	1.7	-0.7	-0.7	4.1	8.9	13.7	23.3	23.3	23.3	23.3	18.5	13.7	8.9	13.7	13.4
30		16.1	16.1	16.1	16.1	20.9	18.5	35.3	42.5	11.3	4.1	-0.7	-3.1	-0.7	1.7	13.7	23.3	25.7	30.5	28.1	13.7	-0.7	1.7	-0.7	-3.1	13.6
31		-5.5	6.5	1.7	8.9	54.5	42.5	18.5	23.3	47.3	13.7	4.1	-5.5	-7.9	6.5	18.5	25.7	23.3	18.5	16.1	8.9	11.3	8.9	-5.5	-7.9	13.6
MEAN A		10.2	11.5	16.2	18.3	19.6	18.8	18.7	18.3	14.7	9.1	3.3	-2.3	-3.3	-0.4	5.0	12.5	19.7	23.4	24.1	20.1	15.7	12.0	6.7	7.7	12.5
MEAN C		11.3	13.7	14.2	12.3	14.7	15.1	18.0	12.3	9.9	8.4	5.5	3.6	-0.2	3.6	8.4	14.2	20.9	24.7	24.7	22.3	19.0	16.1	11.8	11.8	13.2
MEAN D		7.9	12.3	20.9	32.9	17.5	20.9	17.1	25.7	12.3	4.1	-4.1	-6.9	-6.0	-7.4	-5.5	9.4	19.0	20.4	20.9	14.2	7.9	5.1	-1.7	8.4	19.5

## VERTICAL INTENSITY

TABLE 24 GREAT WHALE RIVER		Z = 59000 PLUS TABULAR VALUES IN GAMMAS																							AUGUST 1967	
DAY	HOURLY UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
	TO	TO	TO	TC	TC	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TC	TO	TO	TO	TC	TC	TO	TC	TO	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	C	307	300	300	300	300	300	300	300	300	307	300	300	293	286	279	286	293	293	300	307	307	300	293	293	298
2	Q	293	293	286	286	293	293	293	293	293	300	300	300	300	300	300	293	293	293	300	300	293	293	293	286	294
3	C	286	286	293	293	293	293	293	293	293	293	293	293	293	293	286	272	266	266	266	279	279	286	293	300	288
4		293	293	293	293	293	286	272	245	252	286	286	279	245	211	211	266	286	307	320	362	375	348	320	293	288
5		245	259	286	286	293	314	382	300	286	286	245	259	266	266	272	266	286	300	293	307	320	327	314	300	290
6		293	293	293	293	293	327	272	272	314	355	279	300	293	286	279	279	279	279	286	307	341	341	320	314	300
7		266	259	293	279	293	286	293	334	314	286	279	252	293	293	286	279	286	293	300	327	320	327	334	286	294
8		279	245	190	300	327	368	519	505	478	355	293	307	286	279	279	286	293	307	320	314	300	307	320	300	323
9		300	293	300	286	293	293	307	279	293	293	259	245	272	279	279	279	279	286	286	300	307	314	334	327	291
10	C	272	238	272	327	444	389	300	293	307	307	307	286	204	259	293	293	293	300	314	307	334	300	115	245	292
11	C	307	266	170	183	279	293	320	362	389	307	286	286	293	293	293	293	307	320	314	197	211	163	88	115	264
12		245	307	314	307	314	307	307	320	334	300	300	300	293	300	293	307	314	314	300	300	320	293	314	300	304
13		300	286	293	272	293	293	293	293	293	293	279	266	266	279	286	293	300	279	279	293	320	307	307	252	288
14		252	231	334	252	478	403	423	464	423	341	355	259	252	238	266	279	286	293	300	307	320	307	314	300	320
15		279	293	266	197	293	293	300	293	293	272	238	218	252	279	293	293	293	300	293	293	300	307	314	300	281
16		293	293	238	252	307	307	279	279	279	293	293	266	245	252	259	279	293	300	307	307	307	293	252	170	277
17	C	156	218	341	307	327	355	362	300	314	327	341	238	190	279	272	286	314	320	307	300	307	307	307	307	295
18	C	225	156	204	218	225	300	409	355	355	238	272	293	307	279	272	279	320	320	300	307	300	252	245	293	280
19		300	293	307	252	259	382	396	327	307	314	300	300	293	293	307	307	307	314	320	334	334	314	307	311	
20		307	307	279	266	197	348	320	362	279	293	293	320	314	307	307	320	320	334	341	320	320	341	320	293	309
21		307	272	279	279	314	279	279	286	286	286	293	293	293	293	300	300	300	300	300	300	300	300	300	320	294
22	C	307	286	293	293	293	314	307	286	293	293	293	300	293	293	300	307	307	314	320	307	307	307	320	320	302
23	Q	300	293	286	238	286	293	259	293	300	293	272	238	266	279	293	300	307	307	307	334	327	327	314	307	292
24		300	266	238	238	286	307	293	341	389	327	307	259	286	279	279	279	286	279	293	293	293	300	307	307	293
25	C	300	293	293	293	286	341	389	403	334	300	293	286	259	272	266	279	307	293	314	320	341	320	314	183	303
26		211	320	307	293	300	300	307	348	272	266	286	300	286	286	279	279	279	286	293	327	320	327	300	300	295
27		266	266	252	245	293	300	307	293	286	266	293	293	307	300	293	300	300	307	314	320	320	320	327	320	295
28		300	300	293	286	266	314	307	286	293	293	300	300	300	300	293	300	307	320	307	300	300	300	307	307	299
29		307	293	286	293	293	293	293	307	293	225	266	286	279	272	293	293	307	307	307	307	307	314	320	307	294
30		293	293	293	286	266	341	314	382	231	259	300	307	293	293	300	307	314	327	334	362	320	334	314	320	308
31		293	266	197	156	218	307	430	485	430	320	231	252	245	231	259	293	307	327	327	334	320	320	334	307	300
MEAN A		280	276	276	269	297	317	327	328	316	296	289	280	276	279	282	290	298	303	305	308	311	307	296	286	296
MEAN C		298	292	292	282	293	298	290	293	296	297	292	286	289	290	293	294	294	294	298	305	303	303	303	301	295
MEAN D		252	234	256	266	312	335	356	342	340	296	300	278	251	277	279	286	308	311	309	286	298	268	214	229	566

HORIZONTAL INTENSITY

TABLE 25 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

SEPTEMBER 1967

HOUR UT DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
	TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TO 7	TC 8	TO 9	TO 10	TO 11	TC 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24		
1	397	307	100	218	273	211	197	52	245	273	294	280	280	245	238	335	356	370	377	522	439	549	425	453	310	
2	460	411	301	176	280	266	224	72	155	38	65	3	259	314	307	294	307	370	384	370	377	356	342	342	270	
3	335	342	335	349	356	273	245	314	314	273	301	287	301	321	314	328	342	349	356	349	356	363	377	370	327	
4	356	356	335	314	176	252	273	231	259	335	335	321	294	301	314	314	335	356	370	377	356	356	342	335	316	
5	Q	363	370	370	377	342	314	321	259	280	321	342	328	314	307	301	301	314	335	356	370	363	356	328	335	332
6		342	356	356	224	273	342	342	335	328	321	321	314	301	301	294	287	294	314	328	356	377	356	342	335	322
7		336	329	336	343	343	350	343	336	322	329	329	315	308	302	274	274	302	336	391	371	378	364	350	336	333
8		350	357	371	357	357	350	329	329	336	329	322	295	288	288	315	302	322	329	405	502	537	495	412	461	364
9		433	398	357	129	336	336	329	308	232	239	129	122	246	288	315	308	302	315	364	391	461	516	474	509	327
10	Q	509	447	343	357	378	357	357	329	322	329	329	322	315	308	302	302	308	322	336	350	343	343	336	336	345
11	Q	343	343	336	336	343	343	343	336	322	315	322	322	308	302	295	302	322	336	343	350	343	336	343	330	330
12	Q	336	336	336	343	343	336	329	343	343	336	322	315	315	329	322	322	336	350	371	371	336	350	350	338	338
13		358	365	365	344	150	226	386	330	262	102	88	206	330	316	309	275	282	420	261	240	275	220	213	448	283
14		427	386	344	316	275	275	213	282	213	226	199	192	102	137	254	316	337	351	365	379	455	448	351	406	302
15		330	420	303	289	344	213	33	116	282	351	337	330	330	316	309	316	323	344	358	379	399	358	351	392	313
16		372	344	199	261	316	247	337	337	344	330	323	309	303	289	323	309	316	351	351	351	351	351	358	358	322
17		358	351	358	344	372	351	309	303	303	316	330	330	316	316	303	296	303	323	337	358	358	358	351	344	333
18		351	351	358	358	351	344	344	344	344	344	309	289	289	296	296	303	323	337	379	565	579	593	565	379	375
19		345	269	373	359	366	193	172	276	207	290	331	304	283	283	324	317	317	345	387	449	518	421	407	414	331
20	D	442	456	393	352	283	352	352	131	34	62	-70	-70	55	124	221	297	359	366	373	428	573	532	428	352	284
21	D	373	193	89	-21	255	255	41	-153	6	89	-153	13	89	158	366	317	393	421	511	470	456	442	380	297	220
22		331	366	345	297	317	345	331	324	324	324	324	317	310	304	297	304	317	352	338	331	338	331	331	331	326
23	Q	331	324	324	331	331	324	317	304	276	310	317	324	317	324	310	304	310	317	331	331	331	338	338	331	321
24		338	345	359	352	324	338	338	331	304	179	214	262	283	297	310	310	310	345	338	338	366	421	400	400	325
25		353	346	332	332	332	332	305	298	332	339	332	332	318	318	305	298	305	311	332	374	367	374	401	388	336
26		339	332	332	339	353	325	311	284	270	332	332	325	318	305	305	305	311	318	339	374	381	360	388	436	334
27		436	374	332	332	318	346	325	339	339	332	332	325	305	291	298	305	311	305	318	339	339	332	346	346	332
28	D	353	360	332	242	249	173	311	284	270	235	35	-97	194	249	305	298	346	422	491	477	484	512	374	408	305
29	D	291	284	339	242	270	104	-249	0	187	159	159	173	263	270	222	201	305	408	422	498	457	450	388	222	253
30	D	242	263	228	208	249	256	21	277	90	83	-14	-83	56	152	256	318	346	381	360	339	325	332	353	374	226
MEAN A		364	349	319	293	309	291	261	255	263	262	238	234	267	278	297	302	321	349	365	390	402	397	371	371	314
MEAN Q		376	364	342	349	347	335	334	316	311	325	328	324	317	313	309	305	311	327	342	353	352	343	338	339	333
MEAN D		340	311	276	205	261	228	95	108	117	126	-8	-13	131	191	274	286	350	400	431	442	459	454	384	330	532

GREAT WHALE MAGNETIC OBSERVATORY 1967

## DECLINATION

TABLE 26 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

SEPTEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24	
1		6.5	30.5	68.9	47.3	23.3	18.5	23.3	23.3	1.7	-5.5	-0.7	-0.7	-0.7	11.3	28.1	20.9	25.7	8.9	18.5	-7.9	-5.5	-10.3	-3.1	23.3	14.4
2		11.3	13.7	30.5	18.5	18.5	16.1	13.7	28.1	20.9	11.3	23.3	-0.7	-7.9	-0.7	4.1	11.3	23.3	18.5	13.7	18.5	8.9	11.3	11.3	13.7	13.8
3		16.1	18.5	13.7	13.7	16.1	23.3	23.3	13.7	13.7	13.7	6.5	8.9	6.5	8.9	16.1	20.9	18.5	25.7	23.3	20.9	16.1	13.7	8.9	13.7	15.6
4		18.5	18.5	8.9	16.1	47.3	23.3	18.5	18.5	11.3	6.5	6.5	6.5	6.5	16.1	18.5	20.9	25.7	28.1	23.3	23.3	25.7	13.7	13.7	13.7	17.9
5	Q	13.7	13.7	13.7	13.7	23.3	18.5	16.1	18.5	16.1	13.7	8.9	4.1	4.1	8.9	13.7	18.5	23.3	28.1	28.1	23.3	18.5	13.7	16.1	13.7	16.0
6		11.3	8.9	8.9	30.5	16.1	11.3	13.7	11.3	8.9	8.9	6.5	4.1	1.7	4.1	8.9	13.7	23.3	28.1	23.3	20.9	16.1	13.7	13.7	13.7	13.4
7		13.7	13.7	13.7	13.7	16.1	13.7	13.7	13.7	11.3	8.9	6.5	4.1	4.1	4.1	-0.7	13.7	23.3	28.1	23.3	25.7	18.5	16.1	16.1	18.5	13.9
8		13.7	13.7	13.7	13.7	13.7	13.7	13.7	8.9	8.9	8.9	4.1	-5.5	-7.9	1.7	8.9	13.7	20.9	37.7	20.9	-5.5	-0.7	4.1	11.3	1.7	9.5
9		-5.5	8.9	18.5	42.5	20.9	13.7	11.3	11.3	16.1	13.7	11.3	11.3	4.1	11.3	11.3	13.7	20.9	23.3	16.1	16.1	6.5	-0.7	6.5	-0.7	12.6
10	Q	4.1	11.3	13.7	37.7	13.7	13.7	8.9	11.3	8.9	8.9	6.5	4.1	1.7	1.7	4.1	13.7	16.1	20.9	20.9	20.9	18.5	16.1	16.1	16.1	12.9
11	Q	16.1	16.1	16.1	13.7	13.7	13.7	13.7	11.3	11.3	8.9	4.1	-0.7	-0.7	1.7	6.5	11.3	18.5	23.3	23.3	20.9	16.1	13.7	16.1	16.1	12.7
12	Q	16.1	16.1	16.1	13.7	13.7	13.7	11.3	11.3	8.9	8.9	8.9	6.5	6.5	6.5	13.7	16.1	16.1	18.5	16.1	13.7	11.3	13.7	16.1	16.1	12.9
13		18.5	16.1	13.7	16.1	80.9	30.5	6.5	4.1	4.1	8.9	-24.7	-5.5	1.7	1.7	8.9	13.7	13.7	30.5	-5.5	-3.1	-3.1	-3.1	-7.9	-10.3	8.6
14		-3.1	11.3	13.7	18.5	18.5	18.5	20.9	13.7	8.9	1.7	-0.7	-7.9	4.1	28.1	32.9	23.3	11.3	16.1	13.7	13.7	1.7	-0.7	11.3	6.5	11.5
15		8.9	4.1	16.1	28.1	20.9	44.9	97.7	28.1	-3.1	-0.7	1.7	1.7	4.1	6.5	11.3	16.1	20.9	20.9	20.9	16.1	8.9	13.7	11.3	20.9	17.5
16		20.9	40.1	44.9	32.9	23.3	32.9	11.3	11.3	8.9	8.9	6.5	6.5	6.5	11.3	16.1	20.9	23.3	20.9	20.9	18.5	16.1	13.7	13.7	13.7	18.5
17		16.1	16.1	16.1	6.5	13.7	13.7	16.1	11.3	11.3	6.5	6.5	6.5	6.5	8.9	13.7	16.1	23.3	28.1	32.9	23.3	20.9	16.1	13.7	16.1	15.0
18		16.1	16.1	13.7	13.7	13.7	13.7	13.7	11.3	11.3	11.3	8.9	8.9	4.1	-0.7	4.1	16.1	23.3	23.3	23.3	-5.5	-5.5	-7.9	-3.1	18.5	10.1
19		47.3	52.1	16.1	16.1	16.1	40.1	25.7	11.3	23.3	6.5	1.7	-0.7	-0.7	8.9	13.7	13.7	23.3	18.5	16.1	11.3	4.1	4.1	8.9	8.9	16.1
20	D	-0.7	-0.7	11.3	30.5	30.5	18.5	13.7	16.1	23.3	8.9	35.3	-5.5	28.1	16.1	8.9	30.5	20.9	20.9	28.1	16.1	-7.9	-19.9	-7.9	44.9	15.0
21	C	42.5	66.5	61.7	78.5	42.5	13.7	42.5	23.3	-41.5	52.1	8.9	-7.9	13.7	18.5	11.3	4.1	-10.3	1.7	-5.5	4.1	37.7	13.7	8.9	44.9	21.9
22		25.7	11.3	13.7	18.5	40.1	13.7	11.3	11.3	8.9	8.9	8.9	8.9	6.5	6.5	8.9	18.5	16.1	13.7	23.3	23.3	18.5	18.5	16.1	16.1	15.4
23	Q	16.1	16.1	16.1	16.1	13.7	18.5	16.1	13.7	16.1	8.9	8.9	8.9	8.9	13.7	16.1	20.9	25.7	28.1	25.7	20.9	18.5	16.1	13.7	16.1	16.4
24		16.1	16.1	13.7	18.5	20.9	13.7	13.7	11.3	13.7	16.1	13.7	6.5	4.1	6.5	16.1	23.3	28.1	20.9	23.3	20.9	18.5	13.7	11.3	6.5	15.3
25		11.3	11.3	13.7	13.7	13.7	13.7	13.7	13.7	11.3	11.3	11.3	8.9	4.1	4.1	6.5	11.3	18.5	25.7	25.7	23.3	20.9	20.9	13.7	13.7	14.0
26		16.1	16.1	16.1	13.7	16.1	16.1	11.3	13.7	16.1	8.9	8.9	6.5	4.1	4.1	8.9	13.7	20.9	23.3	20.9	20.9	13.7	16.1	11.3	8.9	13.6
27		6.5	8.9	13.7	13.7	13.7	16.1	11.3	8.9	8.9	11.3	8.9	8.9	4.1	6.5	16.1	16.1	18.5	23.3	25.7	23.3	20.9	18.5	16.1	13.7	13.9
28	D	13.7	13.7	20.9	25.7	37.7	28.1	-0.7	-3.1	-3.1	-0.7	4.1	35.3	11.3	13.7	18.5	18.5	23.3	-7.9	-10.3	-0.7	-0.7	-0.7	13.7	16.1	11.1
29	C	54.5	59.3	42.5	61.7	25.7	61.7	18.5	30.5	11.3	-10.3	-0.7	4.1	11.3	20.9	25.7	28.1	28.1	-7.9	-7.9	-0.7	-0.7	4.1	6.5	16.1	20.1
30	D	28.1	78.5	80.9	59.3	49.7	25.7	44.9	6.5	-7.9	-3.1	42.5	40.1	16.1	23.3	28.1	11.3	-0.7	13.7	16.1	16.1	16.1	13.7	8.9	6.5	25.6
MEAN A		16.3	21.2	22.5	25.2	24.3	20.9	19.0	13.9	8.7	8.7	8.1	5.5	5.2	9.1	13.3	16.8	19.5	20.1	17.9	14.4	11.6	9.0	10.1	14.6	14.8
MEAN Q		13.2	14.7	15.1	19.0	15.6	15.6	13.2	13.2	12.3	9.9	7.5	4.6	4.1	6.5	10.8	16.1	19.9	23.8	22.8	19.9	16.6	14.7	15.6	15.6	14.2
MEAN D		27.6	43.5	43.5	51.1	37.2	29.5	23.8	14.7	-3.6	9.4	18.0	13.2	16.1	18.5	18.5	18.5	12.3	4.1	4.1	7.0	8.9	2.2	6.0	25.7	33.6

VERTICAL INTENSITY

TABLE 27 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

SEPTEMBER 1967

DAY	HCUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TC 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TC 23	TO 24	
1		272	231	314	396	423	492	519	437	403	355	307	286	279	293	231	245	293	320	341	327	334	266	272	156	325
2		292	265	333	299	333	402	504	518	374	436	361	299	237	278	285	306	319	340	333	326	326	333	319	306	339
3		298	298	277	277	291	318	305	291	284	277	284	284	291	291	291	298	298	312	298	291	291	305	332	305	295
4		290	290	242	263	331	283	311	324	269	290	297	304	290	276	290	304	304	311	317	331	311	311	304	304	298
5	Q	304	290	283	283	304	304	290	283	290	276	304	297	297	297	297	304	311	311	317	324	317	304	297	297	299
6		303	289	227	193	214	289	303	303	296	296	303	296	289	296	296	296	303	303	310	316	330	330	330	303	292
7		296	303	303	296	289	296	296	289	289	296	303	289	275	282	289	282	289	316	323	303	310	296	289	296	296
8		298	298	408	408	415	422	291	305	284	291	291	284	291	277	277	284	291	305	319	332	305	298	332	250	315
9		215	305	250	305	305	291	305	305	312	291	263	263	229	236	291	298	305	305	319	326	339	312	326	270	290
10	Q	152	207	221	221	235	262	290	297	290	297	304	304	304	304	304	304	304	304	297	297	297	297	290	290	278
11	C	297	290	297	297	297	297	297	297	297	290	276	283	290	290	290	297	304	297	311	318	318	311	297	290	297
12	C	289	289	296	296	296	296	289	289	289	289	289	289	282	275	289	296	303	303	303	310	310	303	296	296	294
13		296	303	289	282	241	344	296	324	399	399	351	296	268	289	289	310	434	365	227	248	234	241	179	248	298
14		254	309	295	316	309	357	378	309	350	343	295	240	178	185	191	281	288	316	316	316	316	281	309	260	291
15		205	219	226	219	316	509	509	405	316	302	302	288	288	295	302	302	302	302	302	302	302	302	309	185	305
16		186	158	311	290	380	346	297	297	311	297	297	297	290	269	290	290	311	318	311	304	304	304	311	304	295
17		304	290	290	227	283	304	304	304	262	276	290	290	297	297	297	304	304	311	318	311	304	304	297	297	294
18		289	296	296	289	289	289	289	289	289	289	289	261	240	261	275	282	296	310	317	289	268	240	178	94	271
19		164	310	289	226	275	303	296	345	296	296	303	289	289	254	282	289	303	310	317	310	261	310	317	303	289
20	D	260	232	260	205	253	253	302	510	490	413	267	274	239	246	232	309	337	330	309	316	177	163	219	135	280
21	D	121	212	462	545	385	330	524	649	601	462	316	316	225	219	302	309	288	288	198	-94	52	93	121	149	295
22		287	294	266	197	266	322	315	315	308	301	308	315	315	308	315	308	308	301	301	315	315	308	301	301	299
23	Q	301	301	308	308	308	301	294	287	273	287	294	294	301	301	308	315	315	315	308	308	315	315	308	301	303
24		303	310	289	275	296	303	310	303	303	268	240	247	247	261	282	303	324	331	331	331	338	345	338	331	300
25		317	310	317	310	303	303	303	289	296	303	303	310	310	310	317	310	303	303	310	324	324	317	324	331	310
26		309	302	302	309	302	302	288	309	274	288	302	302	302	309	309	302	302	302	302	309	323	323	337	344	306
27		302	316	309	309	295	274	302	309	302	302	302	309	309	302	302	302	316	316	316	316	316	309	302	302	306
28	D	301	294	266	245	287	469	413	399	434	525	581	406	322	238	294	315	329	315	336	322	294	189	21	147	323
29	D	328	181	237	349	440	622	699	692	615	573	384	321	272	272	328	335	363	384	377	328	139	153	237	167	367
30	D	26	362	411	411	411	453	537	376	341	425	369	180	271	278	278	327	327	320	334	327	320	327	327	306	335
MEAN A		262	278	296	295	312	344	355	355	338	334	312	290	277	276	287	300	312	315	310	299	290	283	281	262	303
MEAN Q		268	275	281	281	288	292	292	291	288	288	293	293	295	293	298	303	307	306	307	311	311	306	298	295	294
MEAN D		207	256	327	351	355	425	495	525	496	480	383	299	266	251	287	319	329	327	311	240	196	185	185	181	604

GREAT WHALE MAGNETIC OBSERVATORY 1967

## HORIZONTAL INTENSITY

TABLE 28 GREAT WHALE RIVER			H = 9500 PLUS TABULAR VALUES IN GAMMAS																							OCTOBER 1967	
DAY	HCUR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
	UT	TO	TO	TO	TC	TC	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TC	TO	TO	TO	TO	TC	TO	TC	TO		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1		353	277	222	360	319	277	277	263	160	194	229	256	284	333	333	319	312	319	333	340	346	340	346	346	297	
2		346	346	340	346	346	340	346	340	298	243	333	333	319	305	298	298	312	319	360	388	395	340	340	346	332	
3		346	346	367	374	333	229	146	215	277	340	346	333	319	298	298	305	305	319	333	374	374	374	409	402	323	
4		360	333	340	346	333	326	319	333	340	333	333	333	319	312	305	305	305	319	333	340	353	381	360	367	334	
5		374	353	346	333	340	360	346	298	187	284	360	346	326	326	305	291	305	333	353	367	346	340	340	346	329	
6		360	346	326	256	208	319	360	346	326	340	333	312	298	326	326	305	298	305	319	333	333	346	346	353	322	
7		382	396	430	368	347	341	341	341	306	98	154	223	306	306	327	327	327	334	347	361	361	347	347	341	323	
8		341	334	341	347	354	347	347	347	347	347	341	334	299	285	334	341	334	320	341	375	403	410	389	368	347	
9	D	361	396	361	430	382	368	341	320	320	174	126	306	334	334	327	327	320	341	361	500	541	493	430	424	359	
10	D	306	382	334	327	361	327	285	230	216	313	299	98	-26	181	292	299	313	375	410	396	417	458	424	396	309	
11		389	382	382	368	327	285	292	313	334	334	306	292	306	306	264	306	320	313	334	368	334	361	347	375	331	
12	D	396	119	251	382	216	181	209	285	264	244	347	341	334	320	320	306	320	334	347	347	361	347	347	382	304	
13		397	300	404	279	383	348	335	335	335	335	335	321	300	321	321	328	335	348	355	355	362	355	348	340	340	
14		348	355	376	369	348	321	286	148	148	272	335	321	335	314	307	321	328	342	369	397	438	411	397	390	332	
15		390	238	466	404	355	348	342	348	342	335	348	348	342	328	321	314	314	321	335	342	342	348	348	369	345	
16		404	397	397	369	335	355	348	348	348	348	342	342	335	328	321	321	321	328	342	348	355	355	348	348	349	
17		348	348	348	335	307	238	175	169	127	106	141	369	342	335	335	321	321	335	362	418	418	459	418	369	310	
18		362	369	376	369	355	328	238	134	169	272	279	342	362	335	314	307	314	321	335	348	348	362	369	355	319	
19		362	355	348	369	314	342	348	348	342	342	335	342	335	321	307	307	321	328	348	348	355	348	342	348	340	
20	C	356	391	377	349	343	343	343	343	343	343	343	343	329	322	308	301	308	322	336	343	343	343	349	349	340	
21	Q	349	349	343	343	349	349	349	349	349	349	349	349	336	322	308	301	308	322	336	343	343	349	349	349	339	
22		349	349	349	356	356	349	349	349	349	349	349	349	343	329	308	308	308	322	343	356	363	363	356	356	345	
23		377	384	329	398	377	322	294	114	204	308	349	343	329	356	329	308	308	329	343	336	356	349	349	349	327	
24	C	349	349	349	349	349	363	336	246	170	197	239	329	336	329	349	329	322	315	336	343	336	349	349	356	320	
25	C	356	363	356	349	349	343	336	329	315	336	336	349	349	336	322	308	308	308	322	336	343	343	349	349	337	
26	C	350	350	350	337	295	316	337	350	350	350	350	350	344	330	316	309	309	316	323	344	350	357	357	350	337	
27		350	350	350	344	344	337	337	309	129	81	316	330	309	302	309	309	302	316	344	371	350	344	350	350	314	
28	D	371	350	350	309	233	164	101	60	39	67	-72	-99	150	323	316	323	302	323	350	371	413	468	357	371	248	
29	D	350	371	330	323	337	337	337	323	309	302	171	-72	53	87	226	357	309	309	337	364	364	350	344	350	286	
30		357	344	281	302	274	281	309	316	254	323	323	323	309	295	295	295	302	316	323	330	316	323	330	310	310	
31		330	323	323	337	323	323	323	330	323	330	323	330	330	323	309	309	316	323	337	344	344	323	337	344	327	
MEAN A		360	344	350	349	329	317	304	286	268	277	290	294	300	308	311	313	313	324	343	362	368	369	360	361	325	
MEAN Q		352	361	355	345	337	343	340	323	305	315	323	344	339	327	321	310	311	316	330	341	343	348	351	351	335	
MEAN C		357	324	325	354	306	275	255	243	230	220	174	115	169	249	296	322	313	336	361	396	419	423	380	385	644	

## DECLINATION

TABLE 29 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

OCTOBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TC 7	TO 8	TO 9	TO 10	TO 11	TC 12	TO 13	TC 14	TO 15	TC 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1		13.7	25.7	52.1	16.1	20.9	23.3	16.1	8.9	8.9	4.1	6.5	11.3	8.9	8.9	4.1	11.3	20.9	23.3	23.3	18.5	16.1	16.1	13.7	13.7	16.1
2		16.1	16.1	8.9	8.9	18.5	16.1	13.7	11.3	11.3	11.3	6.5	4.1	4.1	8.9	13.7	16.1	23.3	28.1	18.5	8.9	8.9	16.1	13.7	16.1	13.3
3		16.1	13.7	8.9	11.3	18.5	37.7	37.7	8.9	4.1	1.7	6.5	4.1	1.7	4.1	8.9	18.5	20.9	23.3	20.9	18.5	16.1	13.7	11.3	8.9	14.0
4		11.3	13.7	16.1	13.7	13.7	11.3	11.3	8.9	8.9	8.9	8.9	6.5	4.1	4.1	6.5	11.3	18.5	23.3	20.9	18.5	16.1	13.7	13.7	16.1	12.5
5		13.7	13.7	13.7	18.5	23.3	11.3	8.9	8.9	13.7	8.9	6.5	6.5	4.1	4.1	4.1	13.7	18.5	23.3	23.3	16.1	20.9	16.1	13.7	13.7	13.3
6		8.9	4.1	8.9	13.7	23.3	11.3	8.9	8.9	8.9	8.9	8.9	8.9	6.5	4.1	6.5	8.9	13.7	18.5	18.5	18.5	16.1	13.7	13.7	11.3	11.4
7		8.9	18.5	1.7	8.9	13.7	13.7	11.3	8.9	8.9	18.5	8.9	-3.1	-3.1	1.7	8.9	11.3	20.9	20.9	20.9	18.5	18.5	16.1	16.1	13.7	11.8
8		13.7	13.7	13.7	11.3	13.7	13.7	11.3	8.9	8.9	8.9	8.9	4.1	-5.5	4.1	23.3	25.7	23.3	20.9	18.5	16.1	16.1	13.7	6.5	11.3	12.7
9	C	13.7	6.5	-0.7	8.9	11.3	13.7	11.3	8.9	6.5	8.9	1.7	1.7	1.7	4.1	8.9	11.3	11.3	13.7	11.3	1.7	-3.1	4.1	11.3	61.7	9.6
10	C	90.5	44.9	52.1	18.5	20.9	11.3	6.5	8.9	6.5	4.1	6.5	8.9	25.7	16.1	13.7	18.5	30.5	11.3	6.5	11.3	6.5	-3.1	-7.9	13.7	17.6
11		4.1	4.1	8.9	13.7	20.9	16.1	13.7	8.9	11.3	8.9	8.9	8.9	4.1	4.1	8.9	6.5	23.3	23.3	23.3	16.1	18.5	16.1	16.1	13.7	12.6
12	D	13.7	-0.7	35.3	18.5	8.9	13.7	35.3	4.1	6.5	8.9	4.1	4.1	4.1	4.1	8.9	4.1	16.1	25.7	18.5	18.5	16.1	13.7	16.1	23.3	13.4
13		35.3	35.3	11.3	25.7	13.7	11.3	11.3	11.3	11.3	11.3	8.9	8.9	6.5	8.9	8.9	11.3	16.1	18.5	20.9	18.5	18.5	16.1	13.7	13.7	15.3
14		13.7	13.7	8.9	13.7	16.1	13.7	13.7	23.3	28.1	16.1	8.9	4.1	4.1	-0.7	8.9	13.7	13.7	20.9	18.5	16.1	11.3	11.3	13.7	13.7	13.3
15		18.5	-10.3	8.9	8.9	13.7	13.7	11.3	11.3	11.3	8.9	8.9	6.5	4.1	6.5	8.9	13.7	16.1	20.9	23.3	23.3	20.9	16.1	16.1	13.7	12.3
16		6.5	6.5	8.9	11.3	13.7	13.7	13.7	11.3	11.3	8.9	8.9	8.9	4.1	6.5	6.5	11.3	18.5	20.9	20.9	18.5	16.1	13.7	13.7	13.7	12.0
17		13.7	13.7	13.7	6.5	23.3	40.1	18.5	13.7	23.3	8.9	-0.7	-0.7	1.7	-0.7	8.9	11.3	16.1	23.3	23.3	16.1	13.7	8.9	6.5	13.7	13.2
18		11.3	8.9	11.3	11.3	13.7	13.7	20.9	37.7	16.1	8.9	4.1	6.5	4.1	1.7	6.5	11.3	18.5	20.9	23.3	20.9	16.1	13.7	11.3	11.3	13.5
19		11.3	8.9	13.7	11.3	23.3	16.1	13.7	13.7	13.7	13.7	11.3	8.9	4.1	1.7	4.1	11.3	18.5	23.3	23.3	20.9	18.5	16.1	16.1	13.7	13.8
20	C	11.3	4.1	4.1	11.3	11.3	11.3	11.3	11.3	8.9	8.9	6.5	6.5	1.7	1.7	4.1	8.9	16.1	18.5	18.5	18.5	18.5	13.7	13.7	13.7	10.6
21	Q	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	8.9	8.9	6.5	4.1	6.5	11.3	18.5	20.9	20.9	18.5	16.1	13.7	13.7	13.7	12.3
22		13.7	13.7	16.1	13.7	13.7	13.7	11.3	11.3	8.9	8.9	6.5	6.5	4.1	4.1	1.7	11.3	16.1	23.3	20.9	23.3	20.9	18.5	16.1	13.7	13.0
23		8.9	8.9	8.9	8.9	8.9	16.1	11.3	28.1	13.7	6.5	6.5	4.1	6.5	4.1	4.1	8.9	16.1	20.9	23.3	23.3	18.5	16.1	13.7	11.3	12.4
24	C	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	20.9	11.3	1.7	4.1	1.7	4.1	13.7	13.7	18.5	20.9	18.5	18.5	18.5	16.1	13.7	13.7	12.5
25	C	11.3	11.3	11.3	11.3	13.7	13.7	13.7	13.7	11.3	11.3	11.3	8.9	6.5	4.1	4.1	8.9	13.7	18.5	20.9	20.9	18.5	16.1	13.7	13.7	12.6
26	C	11.3	13.7	11.3	11.3	18.5	13.7	13.7	11.3	8.9	8.9	8.9	8.9	6.5	4.1	4.1	8.9	13.7	18.5	20.9	23.3	18.5	16.1	16.1	16.1	12.8
27		13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	20.9	1.7	6.5	4.1	1.7	8.9	23.3	23.3	18.5	25.7	20.9	16.1	16.1	16.1	13.7	13.7	14.2
28	D	8.9	8.9	13.7	16.1	28.1	42.5	30.5	8.9	-7.9	4.1	20.9	47.3	16.1	1.7	8.9	11.3	20.9	23.3	18.5	18.5	16.1	-3.1	13.7	13.7	15.9
29	C	11.3	4.1	13.7	25.7	13.7	13.7	11.3	8.9	8.9	8.9	11.3	-0.7	11.3	35.3	6.5	28.1	13.7	20.9	18.5	16.1	13.7	13.7	13.7	8.9	13.8
30		6.5	13.7	20.9	23.3	13.7	4.1	4.1	1.7	4.1	6.5	6.5	4.1	4.1	6.5	11.3	13.7	13.7	16.1	13.7	13.7	11.3	11.3	11.3	11.3	10.3
31		13.7	13.7	11.3	11.3	11.3	8.9	8.9	8.9	8.9	8.9	8.9	8.9	6.5	4.1	4.1	13.7	16.1	16.1	13.7	13.7	11.3	11.3	11.3	16.1	10.9
MEAN A		15.1	12.2	14.3	13.5	15.9	15.8	14.2	11.8	10.9	8.9	7.7	7.1	5.1	5.6	8.4	13.0	17.9	20.9	19.6	17.4	15.5	13.1	12.7	15.2	13.0
MEAN C		11.3	10.3	9.9	11.3	13.2	12.3	12.3	11.8	12.3	10.3	7.5	7.5	4.6	3.6	6.5	10.3	16.1	19.5	19.9	19.9	18.0	15.1	14.2	14.2	12.2
MEAN D		27.6	12.7	22.8	17.5	16.6	19.0	19.0	7.9	4.1	7.0	8.9	12.3	11.8	12.3	9.4	14.7	18.5	19.0	14.7	13.2	9.9	5.1	9.4	24.3	26.8



VERTICAL INTENSITY

TABLE 30 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

OCTOBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TC 6	TC 7	TC 8	TO 9	TO 10	TO 11	TC 12	TO 13	TC 14	TO 15	TC 16	TO 17	TO 18	TO 19	TO 20	TC 21	TO 22	TC 23	TO 24	
1		236	208	411	306	327	327	320	369	327	313	292	229	243	285	313	313	313	320	327	334	327	320	320	320	308
2		313	313	299	299	299	313	313	313	299	264	292	306	299	306	306	313	320	327	334	348	320	320	313	313	310
3		314	314	307	286	272	314	356	335	286	293	307	300	307	300	300	300	314	314	314	321	342	342	349	356	314
4		328	314	314	307	307	307	293	300	307	307	307	314	307	314	307	307	307	307	307	314	314	328	328	314	311
5		315	315	315	273	266	301	315	343	315	259	301	315	308	315	315	315	315	343	357	329	329	329	315	315	313
6		315	301	266	406	315	322	315	315	301	315	308	301	259	287	287	301	301	301	315	315	315	315	315	322	309
7		294	280	301	322	308	308	308	308	287	315	189	203	259	259	294	315	315	315	315	322	329	329	322	315	296
8		316	316	316	316	323	316	316	302	302	302	309	309	281	267	288	302	302	316	330	330	330	330	323	330	310
9	C	330	288	204	288	295	302	302	302	302	330	337	274	302	309	316	316	309	337	358	351	232	211	155	-55	279
10	D	-68	135	233	268	387	317	359	345	324	303	289	317	345	289	310	310	359	352	352	317	331	275	303	338	295
11		338	317	317	296	275	338	331	317	317	310	296	289	289	303	296	289	303	317	324	331	331	324	317	310	311
12	C	275	240	191	240	310	254	345	366	373	324	317	310	324	324	317	324	331	331	317	317	324	317	317	275	307
13		157	262	290	283	290	318	318	318	318	318	318	318	318	304	311	318	318	318	325	332	332	332	339	318	307
14		318	325	304	318	318	318	360	381	339	297	304	304	318	311	311	318	318	325	332	332	346	346	339	339	326
15		298	165	193	298	319	312	319	312	312	305	305	312	312	312	305	305	305	305	312	312	319	319	319	326	300
16		298	249	277	298	298	298	312	305	305	312	312	312	319	319	319	312	312	319	319	319	319	319	319	319	308
17		319	312	312	270	270	319	235	242	277	270	284	291	305	312	319	312	312	319	312	326	347	319	312	333	301
18		327	320	285	292	292	320	376	355	320	299	278	306	320	320	313	306	306	306	313	320	320	327	341	327	317
19		320	271	313	292	299	313	313	313	306	306	299	313	320	313	306	313	313	313	313	313	320	320	313	320	310
20	Q	321	321	321	314	307	307	314	314	314	307	314	314	321	321	314	307	307	314	321	321	321	321	314	314	315
21	Q	314	307	307	307	307	307	307	307	307	307	314	314	321	321	321	321	314	314	321	321	321	321	314	314	314
22		314	314	307	307	314	314	307	314	307	307	307	314	314	321	321	314	314	314	321	335	342	328	321	321	316
23		329	294	224	266	294	357	392	441	308	280	301	308	308	329	315	322	322	329	343	343	322	322	336	322	321
24	Q	322	315	315	315	315	315	322	322	294	259	245	259	280	287	308	315	315	322	329	322	322	322	322	322	307
25	Q	323	323	323	316	316	316	302	295	295	295	295	309	316	316	323	323	323	330	330	330	323	323	323	323	316
26	Q	323	316	316	295	309	295	295	309	309	309	309	316	316	309	316	316	316	316	323	323	316	309	309	316	312
27		360	354	354	360	347	347	340	340	347	239	320	333	306	327	320	327	367	381	360	367	387	374	360	374	345
28	C	347	306	327	374	435	401	543	475	522	529	306	205	158	266	320	347	347	347	360	367	354	313	347	367	361
29	D	363	302	214	275	343	350	350	350	343	343	336	323	173	221	295	391	343	350	363	370	363	370	363	350	327
30		332	332	367	278	462	456	462	421	435	353	346	346	346	353	346	360	367	360	360	360	360	360	360	353	370
31		353	353	360	360	353	353	346	353	353	353	346	353	353	353	353	346	353	353	353	360	360	360	353	346	353
MEAN A		301	293	296	304	318	324	335	335	324	310	302	300	299	306	312	318	321	326	331	332	330	324	322	314	316
MEAN Q		321	316	316	309	311	308	308	309	304	295	295	301	311	312	315	316	315	319	325	323	321	319	316	318	313
MEAN D		249	254	234	289	354	325	380	368	373	366	317	286	260	282	312	337	338	343	350	344	321	297	297	255	595

HORIZONTAL INTENSITY

TABLE 31 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

NOVEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TC 7	TC 8	TC 9	TO 10	TO 11	TC 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TC 21	TO 22	TC 23	TO 24		
1		323	323	323	330	330	330	323	323	323	316	323	323	316	309	302	295	309	316	309	337	337	365	379	372	327	
2		420	448	441	392	344	309	295	289	102	192	240	233	295	309	302	309	309	323	372	427	510	434	489	531	347	
3	C	455	427	385	337	309	309	289	295	185	157	219	295	323	289	275	295	316	344	476	434	413	379	351	323	328	
4		330	185	219	282	323	282	275	282	247	289	302	302	316	302	309	289	295	302	309	316	309	323	337	351	295	
5		344	309	316	302	330	323	143	150	136	247	233	330	351	330	295	289	295	337	351	385	385	344	344	351	301	
6		330	316	309	316	309	309	302	295	295	309	309	316	309	295	289	289	295	302	309	309	323	309	316	316	308	
7	C	317	317	324	324	269	186	234	331	331	324	317	310	310	310	310	303	303	310	317	317	324	324	324	331	307	
8	D	352	220	206	359	345	338	310	303	324	317	310	317	310	303	290	310	310	366	435	421	338	428	407	331	307	
9		338	317	324	290	255	317	331	310	303	248	296	310	290	269	283	296	296	345	324	324	324	324	324	324	307	
10		331	345	345	324	324	324	317	317	310	310	310	303	310	296	296	296	296	310	310	331	317	317	324	324	316	
11		338	324	331	345	359	359	324	324	324	317	317	317	310	303	296	303	303	303	317	345	407	511	573	393	348	
12	D	393	324	338	324	303	186	13	262	158	200	241	317	338	331	317	296	317	331	366	490	400	359	386	338	305	
13	D	360	367	346	187	304	339	311	263	173	228	256	304	360	332	325	304	318	311	353	353	325	325	374	346	312	
14		346	325	339	332	297	173	62	228	311	325	297	318	332	311	297	297	311	339	325	318	332	332	318	325	300	
15		325	325	318	318	311	256	201	263	311	325	304	311	297	284	304	277	277	318	381	374	304	332	415	360	312	
16		360	367	367	353	256	311	291	291	297	311	311	311	311	311	311	304	297	311	318	318	318	318	325	339	339	318
17	C	339	325	325	332	332	311	325	318	318	318	318	311	311	311	297	297	304	311	311	318	318	325	318	325	318	
18	C	332	332	332	332	332	339	339	318	325	318	311	311	311	311	297	284	291	297	304	311	325	325	325	325	318	
19	C	326	326	340	333	312	271	305	326	319	319	319	319	312	305	298	285	285	292	312	319	326	326	326	326	314	
20	C	326	340	326	326	326	319	326	326	319	319	319	319	312	305	298	285	285	292	298	312	319	326	326	326	316	
21		326	326	319	319	319	319	319	319	326	326	326	326	319	312	298	298	298	312	319	333	333	347	423	416	328	
22		340	319	312	298	236	257	236	-41	49	105	188	319	292	326	354	312	298	305	326	326	319	326	326	326	269	
23		326	340	333	326	271	285	312	319	298	202	243	319	312	305	319	312	298	298	312	326	340	326	326	375	309	
24	C	326	305	340	347	298	111	42	105	215	77	56	285	305	285	333	312	312	340	368	340	395	395	347	340	274	
25		348	376	341	313	306	293	286	313	299	286	258	244	223	265	313	286	306	320	341	362	410	362	348	341	314	
26		327	327	355	341	334	313	299	293	306	258	286	320	313	306	299	306	306	320	320	334	334	334	327	348	317	
27		334	327	313	272	209	154	140	147	209	279	306	313	313	320	313	313	313	313	341	362	396	389	376	410	299	
28		417	362	279	272	209	189	161	168	299	216	161	196	251	279	313	313	313	355	383	403	438	480	445	348	302	
29		410	355	341	341	313	313	306	265	133	-19	203	272	293	355	334	313	306	313	327	334	327	334	334	334	297	
30		334	348	355	355	327	258	126	29	133	175	279	313	320	327	299	320	313	327	362	417	480	410	369	376	306	
MEAN A		349	332	328	321	303	279	252	258	256	253	272	303	309	307	306	299	303	317	338	354	361	355	365	355	311	
MEAN C		328	328	330	330	314	285	306	324	323	320	317	314	311	309	300	291	293	300	309	316	324	324	325	327	315	
MEAN D		377	329	323	311	312	257	193	246	211	196	217	304	329	309	311	300	315	327	385	410	391	363	377	351	646	

GREAT WHALE MAGNETIC OBSERVATORY 1967

## DECLINATION

TABLE 32 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

NOVEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TC 12	TO 13	TO 14	TO 15	TC 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24		
1		18.5	18.5	16.1	16.1	16.1	16.1	13.7	13.7	13.7	13.7	11.3	8.9	8.9	8.9	11.3	13.7	16.1	18.5	20.9	20.9	23.3	23.3	20.9	13.7	15.7	
2		8.9	11.3	8.9	8.9	16.1	16.1	13.7	13.7	32.9	13.7	8.9	8.9	8.9	11.3	18.5	18.5	18.5	18.5	13.7	8.9	-3.1	8.9	-0.7	-7.9	11.5	
3	C	-0.7	1.7	6.5	13.7	16.1	16.1	16.1	13.7	16.1	20.9	6.5	4.1	6.5	1.7	23.3	30.5	11.3	6.5	1.7	20.9	4.1	13.7	13.7	11.3	11.5	
4		13.7	11.3	-3.1	35.3	16.1	18.5	13.7	16.1	11.3	11.3	11.3	11.3	11.3	13.7	13.7	13.7	18.5	20.9	23.3	23.3	20.9	16.1	13.7	11.3	15.3	
5		8.9	13.7	13.7	18.5	30.5	18.5	37.7	23.3	6.5	6.5	-0.7	6.5	8.9	8.9	11.3	13.7	20.9	18.5	16.1	13.7	18.5	18.5	13.7	8.9	14.8	
6		11.3	13.7	13.7	13.7	13.7	16.1	16.1	16.1	13.7	11.3	8.9	8.9	11.3	11.3	13.7	16.1	18.5	20.9	20.9	18.5	18.5	18.5	13.7	13.7	14.7	
7	C	16.1	16.1	13.7	16.1	40.1	40.1	20.9	13.7	11.3	11.3	8.9	8.9	8.9	8.9	13.7	16.1	18.5	18.5	20.9	18.5	18.5	16.1	16.1	16.1	17.0	
8	D	16.1	16.1	13.7	20.9	18.5	18.5	18.5	13.7	13.7	13.7	13.7	16.1	16.1	13.7	11.3	20.9	23.3	23.3	18.5	8.9	23.3	18.5	6.5	4.1	15.9	
9		8.9	16.1	16.1	16.1	37.7	16.1	13.7	13.7	13.7	11.3	13.7	13.7	11.3	18.5	23.3	23.3	23.3	18.5	18.5	20.9	23.3	20.9	18.5	16.1	17.8	
10		16.1	11.3	11.3	16.1	16.1	18.5	18.5	18.5	16.1	16.1	16.1	13.7	13.7	13.7	11.3	16.1	18.5	23.3	23.3	20.9	18.5	20.9	18.5	16.1	16.8	
11		16.1	13.7	13.7	13.7	8.9	16.1	13.7	16.1	18.5	18.5	13.7	13.7	11.3	11.3	11.3	16.1	18.5	23.3	23.3	20.9	13.7	-0.7	-0.7	8.9	13.9	
12	D	4.1	18.5	20.9	18.5	25.7	32.9	20.9	23.3	16.1	8.9	4.1	8.9	8.9	8.9	8.9	11.3	18.5	16.1	18.5	-3.1	18.5	25.7	18.5	16.1	15.4	
13	D	11.3	11.3	18.5	18.5	18.5	13.7	18.5	18.5	16.1	8.9	6.5	6.5	8.9	11.3	13.7	13.7	18.5	18.5	18.5	18.5	20.9	18.5	1.7	11.3	14.2	
14		18.5	18.5	11.3	13.7	23.3	37.7	73.7	23.3	13.7	13.7	13.7	13.7	13.7	8.9	8.9	13.7	18.5	20.9	16.1	23.3	20.9	18.5	18.5	18.5	16.1	19.9
15		16.1	16.1	16.1	16.1	16.1	20.9	28.1	20.9	16.1	13.7	11.3	11.3	11.3	13.7	13.7	18.5	20.9	20.9	25.7	23.3	25.7	20.9	13.7	11.3	17.6	
16		13.7	8.9	13.7	23.3	61.7	23.3	16.1	16.1	13.7	13.7	11.3	11.3	13.7	11.3	11.3	13.7	18.5	20.9	23.3	23.3	20.9	18.5	18.5	18.5	18.3	
17	C	16.1	16.1	16.1	13.7	16.1	18.5	13.7	16.1	16.1	16.1	13.7	13.7	13.7	13.7	13.7	18.5	20.9	23.3	23.3	20.9	20.9	18.5	18.5	18.5	17.1	
18	C	13.7	13.7	13.7	13.7	18.5	18.5	18.5	16.1	16.1	16.1	13.7	13.7	13.7	8.9	8.9	13.7	16.1	18.5	20.9	20.9	23.3	18.5	18.5	18.5	16.1	
19	C	18.5	18.5	18.5	16.1	13.7	23.3	18.5	18.5	16.1	13.7	13.7	13.7	13.7	13.7	13.7	13.7	18.5	23.3	23.3	23.3	20.9	18.5	18.5	16.1	17.5	
20	C	16.1	13.7	16.1	16.1	16.1	18.5	16.1	16.1	13.7	13.7	13.7	13.7	13.7	11.3	8.9	13.7	18.5	23.3	25.7	25.7	20.9	18.5	16.1	13.7	16.4	
21		13.7	13.7	13.7	13.7	13.7	13.7	16.1	16.1	13.7	13.7	11.3	11.3	8.9	8.9	8.9	11.3	16.1	18.5	18.5	20.9	18.5	13.7	4.1	4.1	13.2	
22		8.9	11.3	13.7	16.1	11.3	23.3	18.5	56.9	16.1	13.7	1.7	6.5	8.9	23.3	13.7	18.5	23.3	23.3	20.9	20.9	18.5	16.1	16.1	16.1	17.4	
23		13.7	11.3	13.7	13.7	28.1	13.7	13.7	13.7	13.7	16.1	8.9	4.1	4.1	8.9	8.9	13.7	18.5	20.9	20.9	20.9	20.9	18.5	20.9	13.7	14.8	
24	D	20.9	61.7	23.3	13.7	18.5	49.7	37.7	20.9	11.3	11.3	1.7	4.1	4.1	4.1	6.5	13.7	13.7	13.7	13.7	16.1	11.3	8.9	13.7	13.7	17.0	
25		20.9	6.5	8.9	11.3	13.7	13.7	13.7	13.7	13.7	11.3	11.3	16.1	25.7	16.1	16.1	23.3	28.1	25.7	23.3	23.3	16.1	16.1	16.1	13.7	16.6	
26		4.1	11.3	6.5	11.3	8.9	13.7	13.7	13.7	13.7	13.7	13.7	13.7	8.9	8.9	18.5	18.5	23.3	23.3	23.3	20.9	18.5	16.1	16.1	16.1	14.6	
27		13.7	13.7	13.7	32.9	42.5	32.9	28.1	11.3	11.3	8.9	4.1	11.3	11.3	13.7	16.1	18.5	23.3	20.9	18.5	20.9	18.5	16.1	13.7	13.7	17.9	
28		6.5	30.5	18.5	44.9	59.3	20.9	16.1	16.1	13.7	13.7	18.5	8.9	8.9	13.7	16.1	23.3	23.3	13.7	11.3	8.9	8.9	4.1	6.5	11.3	17.4	
29		1.7	11.3	13.7	13.7	13.7	13.7	13.7	13.7	8.9	18.5	-0.7	4.1	11.3	13.7	13.7	18.5	20.9	23.3	20.9	18.5	13.7	13.7	13.7	13.7	13.4	
30		13.7	13.7	13.7	13.7	16.1	23.3	18.5	25.7	11.3	-0.7	8.9	13.7	11.3	11.3	18.5	23.3	23.3	20.9	13.7	6.5	8.9	8.9	13.7	11.3	14.3	
MEAN A		12.7	15.5	13.6	17.5	22.2	21.2	20.3	18.1	14.4	12.9	9.8	10.5	10.9	11.5	13.5	17.2	19.7	19.9	19.6	18.3	17.5	16.1	13.7	12.7	15.8	
MEAN C		16.1	15.6	15.6	15.1	20.9	23.8	17.5	16.1	14.7	14.2	12.7	12.7	12.7	11.3	11.8	15.1	18.5	21.4	22.8	21.9	20.9	18.0	17.5	16.6	16.8	
MEAN D		10.3	21.9	16.6	17.1	19.5	26.2	22.3	18.0	14.7	12.7	6.5	7.9	8.9	7.9	12.7	18.0	17.1	15.6	14.2	12.3	15.6	17.1	10.8	11.3	27.7	

VERTICAL INTENSITY

TABLE 33 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

NOVEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TO 9	TO 10	TC 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TC 21	TO 22	TC 23	TO 24	
1		385	385	385	385	385	392	392	392	385	385	378	378	385	385	385	385	378	385	385	399	399	413	427	420	391
2		377	329	343	370	363	384	370	391	391	336	315	287	301	322	329	343	356	370	384	363	301	363	308	239	343
3	C	245	252	308	335	349	349	370	377	426	363	335	328	349	342	356	335	370	377	301	370	335	377	391	377	347
4		339	367	256	360	298	360	367	339	332	325	311	311	325	325	325	325	332	339	339	339	339	346	353	332	333
5		299	299	278	201	320	334	264	355	355	285	271	299	292	313	327	327	341	341	348	348	362	355	355	348	317
6		322	322	315	322	301	301	308	301	301	308	308	301	301	308	308	308	315	315	315	315	315	315	315	315	311
7	C	308	308	308	301	258	286	293	301	315	308	301	301	308	308	308	308	315	315	315	308	308	308	308	308	304
8	C	298	319	227	255	291	298	312	298	305	298	298	298	298	298	305	312	312	319	326	283	120	156	234	276	280
9		312	305	290	298	219	326	348	319	305	305	290	290	276	262	276	276	312	312	319	312	319	319	319	319	301
10		319	312	312	319	312	319	312	312	312	312	312	298	305	312	312	312	319	319	326	326	319	319	319	319	315
11		311	311	304	311	290	311	311	311	304	304	304	304	311	311	311	304	311	311	311	311	290	74	211	297	293
12	C	234	227	205	263	336	401	387	343	336	307	307	300	314	321	314	314	343	336	343	242	329	343	343	350	314
13	C	328	335	306	292	328	314	321	328	343	328	328	299	299	314	314	314	321	321	321	306	314	314	343	321	319
14		278	190	307	307	307	446	380	300	300	307	300	292	307	314	307	307	321	343	336	329	329	336	329	329	317
15		311	311	311	311	311	348	319	304	304	326	304	297	297	297	319	304	311	319	341	355	363	348	326	319	319
16		322	315	292	212	270	307	307	322	315	315	307	307	315	325	322	315	322	329	329	329	329	329	329	329	313
17	Q	325	318	318	318	318	318	318	318	310	310	318	318	318	318	318	318	318	325	318	318	318	318	318	325	318
18	Q	318	318	325	310	303	303	295	303	318	318	310	310	318	325	318	318	318	318	318	318	325	318	318	325	315
19	C	319	311	326	326	282	259	304	311	311	311	311	311	311	319	319	311	311	311	319	311	319	319	311	319	311
20	Q	313	328	313	305	305	305	305	305	305	305	305	305	305	313	313	313	313	313	313	313	313	313	313	313	310
21		310	310	310	303	303	303	303	295	295	310	303	303	310	310	310	303	303	303	303	310	310	318	325	385	310
22		334	311	319	319	206	289	387	394	334	274	274	289	319	319	319	326	334	349	349	349	349	349	349	349	326
23		338	338	338	308	384	361	338	338	331	323	338	331	323	353	361	361	369	369	369	369	369	369	361	338	348
24	D	321	153	351	328	374	503	419	435	381	374	359	298	343	359	359	381	389	404	419	412	404	397	404	359	372
25		325	363	340	340	348	371	386	363	363	356	348	287	271	325	356	386	409	424	409	409	409	409	394	401	366
26		335	365	381	373	373	373	373	373	365	358	365	373	373	373	373	358	381	396	404	412	404	388	373	381	376
27		371	371	371	371	394	409	363	378	355	355	348	340	348	355	355	363	371	386	409	409	409	417	409	378	376
28		327	358	334	342	420	451	458	482	381	420	381	342	311	303	311	350	389	412	373	389	365	334	272	288	366
29		267	317	296	296	303	303	303	303	424	482	217	253	260	303	303	310	317	331	331	317	324	324	317	317	313
30		307	286	279	300	314	336	264	314	286	271	286	286	286	286	279	279	293	314	329	336	300	321	236	236	293
MEAN A		317	311	312	313	319	345	339	340	338	331	314	308	312	320	324	325	336	343	343	340	333	330	330	331	327
MEAN C		316	316	318	312	293	294	303	307	312	310	309	309	312	316	315	313	315	316	316	313	316	315	315	318	312
MEAN D		285	257	279	295	335	373	362	356	358	334	325	304	321	327	329	331	347	351	342	323	300	317	343	337	635

GREAT WHALE MAGNETIC OBSERVATORY 1967

## HORIZONTAL INTENSITY

TABLE 34 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

DECEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TC 7	TO 8	TO 9	TO 10	TO 11	TC 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1	D	397	369	334	258	272	182	244	196	23	50	-19	-5	279	307	265	293	314	369	425	431	418	348	362	321	268
2		251	16	279	279	272	224	231	217	224	244	286	279	272	265	300	300	300	307	314	314	321	328	341	328	270
3		314	307	307	307	314	307	307	244	182	196	244	244	237	258	265	334	314	328	307	314	328	348	383	397	295
4		438	376	286	321	300	334	300	237	224	272	293	314	314	314	300	300	300	307	314	314	321	328	348	321	311
5		328	321	328	334	328	321	334	321	321	314	314	314	314	314	314	314	307	300	314	334	362	431	348	348	328
6		328	321	328	272	147	300	334	314	272	265	30	147	258	265	265	293	314	341	362	348	348	383	431	321	291
7		232	398	384	294	280	335	266	218	128	225	280	294	308	287	308	287	315	315	315	322	315	322	329	363	296
8	D	377	370	384	384	308	155	24	190	280	287	315	301	315	308	315	308	322	322	335	398	384	363	495	439	320
9		412	405	384	356	329	322	308	315	315	315	315	315	315	308	329	322	315	315	329	335	349	342	335	322	333
10		335	349	384	349	329	335	342	287	252	259	273	301	322	322	322	315	308	308	315	315	322	329	322	329	318
11	Q	342	384	349	329	322	335	315	315	308	301	308	315	308	308	301	301	301	301	301	308	315	315	315	322	317
12		322	329	349	356	363	356	329	329	308	287	273	308	315	308	308	301	294	301	301	329	322	329	342	342	321
13	Q	330	330	343	350	343	309	309	288	309	316	316	323	323	316	316	316	309	309	302	316	330	330	330	330	320
14	Q	330	330	336	357	357	343	336	323	316	288	309	309	316	316	316	302	316	302	316	323	323	323	330	330	323
15		343	385	413	378	350	330	330	323	316	302	302	316	316	323	316	316	309	323	330	364	378	399	385	385	343
16		378	371	385	336	330	323	330	330	330	330	330	330	330	330	323	309	302	302	302	316	323	330	350	364	332
17		357	330	302	295	253	129	52	-17	-114	-183	-156	-45	59	212	288	302	295	295	302	309	330	323	330	350	192
18		343	316	330	330	330	323	323	288	87	281	323	302	309	288	191	226	330	371	392	413	343	330	336	357	311
19	D	350	309	288	219	122	184	274	295	158	149	87	156	191	260	316	281	350	371	392	447	433	357	385	461	287
20	C	414	344	178	143	303	192	150	123	-23	5	137	-23	178	303	289	317	317	324	358	344	324	324	331	331	237
21		337	358	337	331	240	143	268	310	213	67	157	213	303	310	317	317	317	331	324	331	344	351	358	344	288
22		358	344	324	317	351	317	268	303	310	317	185	324	337	317	317	310	303	317	310	324	331	365	414	400	323
23		296	109	372	337	227	296	303	268	247	206	240	303	303	324	310	296	324	324	358	365	358	331	344	331	299
24		331	331	324	324	324	310	303	261	289	282	296	296	303	289	296	303	310	310	310	310	310	317	317	317	307
25	Q	317	324	324	317	317	303	254	296	317	317	317	317	317	310	303	303	303	303	310	310	317	317	317	317	310
26		318	318	325	304	276	325	318	290	228	248	304	304	269	255	297	297	304	311	304	318	304	318	318	332	299
27		338	332	318	311	290	241	269	221	221	276	255	276	276	283	276	304	283	276	290	304	311	325	332	332	289
28	Q	332	325	332	332	318	318	318	325	325	325	325	318	318	318	304	297	297	304	311	318	332	338	373	422	326
29		366	394	359	325	311	276	297	318	318	318	311	318	318	318	311	297	297	297	311	318	318	318	318	332	319
30		332	332	332	325	297	228	131	283	297	283	248	318	325	318	297	311	311	311	311	318	332	332	332	332	302
31	D	325	290	235	193	117	-57	-105	-112	-202	-479	-313	-174	40	165	179	144	193	138	290	304	332	297	290	200	95
MEAN A		341	326	331	312	291	269	260	255	220	215	222	245	280	294	295	297	305	311	324	336	338	338	350	345	296
MEAN Q		330	338	337	337	331	322	306	309	315	309	315	317	316	313	308	304	305	304	308	315	323	324	333	344	319
MEAN D		373	336	284	239	224	131	117	138	55	2	41	51	201	269	273	269	299	305	360	385	378	338	373	350	568

## DECLINATION

TABLE 35 GREAT WHALE RIVER

D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

DECEMBER 1967

DAY	HOUR UT	DECLINATION																							MEAN	
		0 TO 1	1 TO 2	2 TO 3	3 TC 4	4 TC 5	5 TO 6	6 TO 7	7 TC 8	8 TO 9	9 TO 10	10 TO 11	11 TC 12	12 TO 13	13 TO 14	14 TO 15	15 TO 16	16 TO 17	17 TO 18	18 TO 19	19 TO 20	20 TO 21	21 TO 22	22 TC 23		23 TO 24
1	C	8.9	4.1	13.7	35.3	61.7	52.1	32.9	16.1	28.1	20.9	13.7	37.7	20.9	16.1	28.1	30.5	37.7	13.7	-3.1	11.3	11.3	16.1	47.3	25.7	24.2
2		28.1	64.1	32.9	32.9	35.3	49.7	11.3	13.7	13.7	11.3	8.9	11.3	13.7	23.3	13.7	13.7	18.5	18.5	18.5	18.5	16.1	13.7	13.7	13.7	21.2
3		13.7	13.7	13.7	13.7	16.1	16.1	16.1	16.1	13.7	11.3	8.9	11.3	16.1	20.9	28.1	23.3	25.7	28.1	30.5	23.3	18.5	16.1	11.3	-0.7	16.9
4		6.5	6.5	13.7	13.7	28.1	13.7	16.1	13.7	13.7	11.3	13.7	8.9	8.9	8.9	11.3	16.1	18.5	23.3	18.5	18.5	18.5	18.5	13.7	13.7	14.5
5		13.7	13.7	16.1	20.9	23.3	13.7	16.1	16.1	16.1	13.7	13.7	13.7	16.1	13.7	11.3	16.1	13.7	16.1	20.9	20.9	18.5	11.3	16.1	11.3	15.7
6		13.7	13.7	13.7	32.9	54.5	44.9	13.7	16.1	13.7	18.5	11.3	18.5	13.7	8.9	20.9	32.9	18.5	11.3	11.3	18.5	20.9	18.5	8.9	49.7	20.8
7		25.7	30.5	42.5	49.7	52.1	40.1	44.9	47.3	59.3	40.1	37.7	37.7	44.9	44.9	40.1	44.9	40.1	42.5	44.9	42.5	44.9	44.9	42.5	40.1	42.7
8	D	37.7	23.3	37.7	40.1	42.5	68.9	76.1	47.3	42.5	40.1	40.1	42.5	44.9	42.5	44.9	42.5	40.1	37.7	44.9	40.1	20.9	44.9	25.7	-3.1	40.2
9		1.6	-0.8	-5.6	6.4	8.8	11.2	11.2	11.2	11.2	11.2	11.2	11.2	8.8	6.4	6.4	8.8	11.2	16.0	16.0	16.0	11.2	11.2	11.2	13.6	9.4
10		8.8	1.6	8.8	11.2	11.2	13.6	16.0	16.0	16.0	18.4	13.6	8.8	13.6	11.2	8.8	11.2	16.0	18.4	18.4	18.4	18.4	18.4	16.0	23.2	14.0
11	C	1.6	16.0	16.0	18.4	20.8	20.8	23.2	20.8	20.8	20.8	16.0	18.4	18.4	16.0	16.0	18.4	23.2	25.6	25.6	23.2	23.2	23.2	20.8	20.8	19.5
12		20.8	20.8	13.6	18.4	18.4	11.2	18.4	18.4	18.4	18.4	20.8	18.4	16.0	16.0	16.0	18.4	18.4	25.6	28.0	25.6	23.2	20.8	20.8	20.8	19.4
13	Q	18.4	16.0	13.6	16.0	18.4	18.4	16.0	16.0	13.6	16.0	16.0	16.0	16.0	13.6	16.0	16.0	20.8	25.6	25.6	20.8	18.4	18.4	16.0	16.0	17.5
14	G	16.0	16.0	11.2	11.2	11.2	16.0	16.0	16.0	16.0	16.0	13.6	11.2	11.2	11.2	16.0	23.2	20.8	23.2	20.8	23.2	20.8	20.8	18.4	18.4	16.6
15		16.0	11.2	6.4	16.0	20.8	18.4	18.4	16.0	18.4	18.4	16.0	11.2	13.6	16.0	18.4	25.6	25.6	25.6	25.6	25.6	23.2	16.0	16.0	18.4	18.2
16		11.2	8.8	8.8	13.6	16.0	18.4	18.4	18.4	16.0	16.0	16.0	13.6	13.6	11.2	16.0	20.8	20.8	25.6	23.2	23.2	20.8	20.8	16.0	11.2	16.3
17		11.2	11.2	16.0	20.8	25.6	37.6	23.2	28.0	8.8	28.0	8.8	30.4	47.2	40.0	30.4	28.0	28.0	25.6	30.4	28.0	25.6	25.6	23.2	20.8	25.1
18		20.8	20.8	18.4	18.4	16.0	20.8	23.2	35.2	64.0	13.6	25.6	16.0	13.6	11.2	30.4	40.0	20.8	18.4	18.4	18.4	25.6	23.2	20.8	16.0	22.9
19	D	11.2	25.6	25.6	37.6	35.2	18.4	25.6	16.0	13.6	20.8	23.2	25.6	20.8	8.8	13.6	18.4	8.8	11.2	16.0	4.0	18.4	23.2	25.6	13.6	19.2
20	C	1.6	11.2	40.0	28.0	40.0	32.8	25.6	28.0	44.8	16.0	18.4	23.2	16.0	23.2	6.4	13.6	16.0	13.6	20.8	16.0	20.8	20.8	20.8	20.8	21.6
21		16.0	11.2	1.6	23.2	35.2	52.0	18.4	16.0	11.2	11.2	16.0	20.8	16.0	8.8	16.0	16.0	16.0	16.0	20.8	23.2	23.2	20.8	23.2	16.0	18.7
22		11.2	13.6	16.0	16.0	11.2	23.2	20.8	16.0	16.0	13.6	11.2	16.0	16.0	13.6	18.4	18.4	20.8	23.2	25.6	25.6	25.6	20.8	6.4	-3.2	16.5
23		20.8	56.8	20.8	20.8	59.2	25.6	16.0	16.0	18.4	25.6	16.0	16.0	16.0	16.0	20.8	28.0	20.8	23.2	23.2	25.6	25.6	25.6	23.2	20.8	24.2
24		16.0	18.4	20.8	20.8	20.8	20.8	20.8	25.6	20.8	18.4	18.4	16.0	16.0	20.8	23.2	20.8	20.8	23.2	23.2	23.2	23.2	20.8	20.8	18.4	20.5
25	C	16.0	16.0	18.4	20.8	20.8	20.8	28.0	20.8	18.4	18.4	18.4	18.4	18.4	16.0	18.4	20.8	23.2	25.6	25.6	23.2	23.2	20.8	20.8	20.8	20.5
26		20.8	13.6	25.6	28.0	30.4	20.8	16.0	18.4	20.8	16.0	16.0	16.0	20.8	25.6	20.8	23.2	25.6	40.0	32.8	25.6	25.6	23.2	20.8	18.4	22.7
27		11.2	13.6	18.4	20.8	20.8	23.2	20.8	20.8	23.2	20.8	18.4	20.8	25.6	28.0	25.6	35.2	28.0	30.4	25.6	23.2	20.8	20.8	20.8	18.4	22.3
28	C	18.4	18.4	13.6	18.4	18.4	18.4	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	18.4	20.8	20.8	23.2	23.2	20.8	16.0	6.4	17.3
29		8.8	6.4	16.0	16.0	18.4	23.2	20.8	16.0	18.4	20.8	20.8	16.0	16.0	13.6	16.0	16.0	20.8	20.8	25.6	20.8	20.8	20.8	18.4	16.0	17.8
30		16.0	16.0	18.4	8.8	16.0	25.6	23.2	16.0	13.6	16.0	23.2	13.6	11.2	11.2	25.6	25.6	23.2	20.8	16.0	16.0	16.0	13.6	13.6	13.6	17.2
31	D	16.0	40.0	49.6	40.0	44.8	61.6	37.6	23.2	23.2	-0.8	148.0	112.0	42.4	11.2	-8.0	-3.2	-5.6	-0.8	6.4	16.0	25.6	25.6	32.8	61.6	33.3
MEAN A		14.8	17.8	18.6	22.2	27.5	27.5	22.6	20.4	21.4	18.0	21.6	21.6	19.4	17.7	18.7	21.8	21.1	21.9	22.7	22.1	21.8	21.3	20.1	18.4	20.9
MEAN C		14.1	16.5	14.6	17.0	17.9	18.9	19.8	17.9	17.0	17.4	16.0	16.0	16.0	14.6	16.5	18.9	20.8	23.2	23.7	23.7	22.2	20.8	18.9	16.5	18.3
MEAN D		15.1	20.8	33.3	36.2	44.8	46.8	39.6	26.1	30.4	19.4	48.7	48.2	29.0	20.4	17.0	20.4	19.4	15.1	17.0	17.5	19.4	26.1	30.4	23.7	55.5

GREAT WHALE MAGNETIC OBSERVATORY 1967

## VERTICAL INTENSITY

TABLE 36 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

DECEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
		TO 1	TO 2	TO 3	TC 4	TC 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TC 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TC 20	TC 21	TO 22	TC 23	TO 24	
1	D	293	280	233	286	219	326	340	460	467	333	300	313	253	273	300	347	353	353	226	72	85	139	58	166	270
2		192	434	313	280	306	400	373	367	353	313	300	286	266	273	293	300	306	313	313	320	320	320	326	326	316
3		313	306	306	306	306	300	300	293	280	266	266	233	246	266	280	266	293	320	326	320	320	320	320	286	293
4		286	105	246	246	286	300	313	326	273	300	293	293	293	300	300	306	306	313	313	313	313	313	313	306	290
5		306	306	300	246	273	300	300	300	293	293	293	293	293	293	293	293	300	300	313	320	326	239	300	313	295
6		300	306	300	326	414	333	320	300	280	286	300	219	259	259	266	293	280	306	313	306	313	300	219	199	292
7		199	146	226	166	246	306	347	414	387	326	286	273	286	286	300	313	313	306	306	320	306	306	306	320	291
8	C	293	219	306	333	320	407	333	320	300	286	286	286	293	300	300	300	313	326	306	280	280	300	192	280	298
9		300	273	286	313	300	306	300	286	300	300	293	293	293	300	293	306	300	306	306	313	313	313	306	300	301
10		306	286	246	313	306	300	300	300	293	300	293	286	293	300	306	300	300	300	300	300	300	300	300	300	297
11	C	241	295	315	302	295	295	302	302	302	302	302	302	302	308	308	302	302	302	302	302	302	302	302	302	299
12		302	302	288	315	308	295	295	302	302	295	275	288	308	308	308	308	308	315	315	322	315	315	315	322	305
13	C	308	315	315	302	315	308	295	288	295	302	288	288	302	295	302	302	308	308	308	315	315	308	308	308	304
14	C	308	308	308	315	308	302	308	302	302	275	275	281	288	288	288	288	302	302	302	302	302	302	302	302	298
15		315	315	329	308	308	315	295	288	288	281	261	275	268	268	275	281	288	302	308	315	302	322	315	329	298
16		322	308	288	295	288	288	288	288	288	288	295	288	295	295	295	295	302	302	308	315	315	315	322	315	300
17		295	308	302	288	342	369	416	497	457	430	288	153	214	227	268	275	315	302	288	295	302	302	302	302	314
18		275	268	281	288	288	302	329	416	342	281	288	275	288	288	261	315	335	302	322	302	302	315	322	315	304
19	C	288	281	288	295	430	335	329	308	369	335	349	302	214	248	241	275	315	288	302	200	254	207	32	-104	266
20	C	283	283	317	276	229	460	433	412	514	324	310	317	167	263	303	303	331	317	331	317	317	324	324	317	324
21		310	269	235	256	371	358	303	310	324	385	317	215	256	310	303	324	337	331	331	324	331	317	331	331	312
22		317	303	283	331	317	358	358	331	310	310	235	297	324	310	310	324	317	317	317	317	331	331	303	201	310
23		174	290	276	303	331	331	317	331	351	317	283	283	290	303	303	317	331	303	324	303	317	317	317	317	305
24		310	303	303	310	303	303	303	283	303	290	290	303	310	303	303	317	324	317	324	324	317	317	317	317	308
25	C	317	310	317	310	303	290	283	290	303	303	303	303	303	303	303	303	303	310	317	317	317	310	303	303	305
26		310	297	283	297	303	310	303	290	256	249	283	297	269	242	283	331	358	371	358	337	344	331	324	310	306
27		283	303	290	290	290	303	290	331	324	283	276	242	249	249	303	317	290	303	310	317	317	317	310	310	296
28	C	310	303	290	290	303	303	303	303	303	303	303	303	303	303	303	303	303	310	324	331	324	297	290	305	
29		242	256	310	303	276	263	290	303	303	290	290	303	310	303	310	310	310	310	317	317	310	310	303	303	298
30		300	294	294	242	261	274	340	287	268	255	274	287	287	287	274	274	294	300	314	320	320	320	300	281	290
31	D	281	202	235	340	458	654	641	615	569	215	45	582	504	438	412	346	268	215	163	150	169	196	169	281	339
MEAN A		286	283	287	293	310	332	330	337	332	300	282	289	285	290	297	304	310	308	306	297	300	298	283	282	301
MEAN C		297	306	309	304	305	300	298	297	301	297	294	296	300	300	301	300	304	305	308	312	313	309	302	302	302
MEAN D		288	253	276	306	331	436	415	423	444	299	258	360	286	304	311	314	316	300	265	204	221	233	155	188	566

MEAN VALUES OF MAGNETIC ELEMENTS

HORIZONTAL INTENSITY-ALL DAYS

TABLE 37 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	CCT	NOV	DEC	YEAR	SUMMER	EQUINCX	WINTER
0-1	311	334	337	353	378	375	400	394	364	360	349	341	358	387	354	334
1-2	309	327	330	347	341	349	376	374	349	344	332	326	342	360	343	324
2-3	312	321	312	315	313	328	348	348	319	350	328	331	327	334	324	323
3-4	300	304	300	285	252	306	322	342	293	349	321	312	307	305	307	309
4-5	291	297	290	291	255	289	295	317	309	329	303	291	295	289	302	295
5-6	272	274	277	276	211	271	284	288	291	317	279	269	276	264	290	274
6-7	262	266	277	266	221	258	283	288	261	304	252	260	267	263	277	260
7-8	260	254	274	270	231	237	289	271	255	286	258	255	262	257	271	257
8-9	227	248	271	256	210	260	272	257	263	268	256	220	251	250	264	238
9-10	236	249	270	235	203	256	266	275	262	277	253	215	250	250	261	238
10-11	262	250	285	243	208	229	294	286	238	290	272	222	257	254	264	252
11-12	279	268	288	255	227	245	305	301	234	294	303	245	271	270	268	274
12-13	279	278	279	270	250	284	302	296	267	300	309	280	283	283	279	287
13-14	277	281	282	284	231	288	300	311	278	308	307	294	287	282	288	290
14-15	284	285	282	285	250	292	306	312	297	311	306	295	292	290	294	293
15-16	286	280	279	284	274	296	313	314	302	313	299	297	295	299	294	291
16-17	297	285	283	292	300	305	326	325	321	313	303	305	305	314	302	297
17-18	304	292	297	311	323	325	340	343	349	324	317	311	320	333	320	306
18-19	312	311	313	337	376	352	355	365	365	343	338	324	341	362	340	321
19-20	319	322	324	362	407	394	386	389	390	362	354	336	362	394	359	333
20-21	321	318	336	375	425	408	413	400	402	368	361	338	372	412	370	335
21-22	323	313	344	373	414	411	403	410	397	369	355	338	371	409	371	332
22-23	322	321	347	367	409	409	401	422	371	360	365	350	370	410	361	339
23-24	319	325	341	361	411	400	402	403	371	361	355	345	366	404	358	336
MEAN	290	292	301	304	297	315	333	335	314	325	311	296	309	320	311	297

GREAT WHALE MAGNETIC OBSERVATORY 1967



MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION-ALL DAYS

TABLE 38 GREAT WHALE RIVER D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	24.0	21.2	19.4	17.5	23.1	23.3	10.4	10.2	16.3	15.1	12.7	14.8	17.3	16.8	17.1	18.2
1-2	24.2	22.3	19.3	20.7	24.6	25.9	14.9	11.5	21.2	12.2	15.5	17.8	19.2	19.2	18.3	19.9
2-3	26.4	19.5	21.1	25.0	26.6	26.1	18.3	16.2	22.5	14.3	13.6	18.6	20.7	21.8	20.7	19.5
3-4	26.0	23.9	20.4	28.7	34.0	24.8	21.8	18.3	25.2	13.5	17.5	22.2	23.0	24.7	22.0	22.4
4-5	27.1	25.6	22.4	27.1	31.4	23.7	24.2	19.6	24.3	15.9	22.2	27.5	24.2	24.7	22.4	25.6
5-6	31.5	27.7	22.7	23.0	29.7	23.3	20.7	18.8	20.9	15.8	21.2	27.5	23.6	23.1	20.6	27.0
6-7	29.4	24.8	20.5	19.6	22.9	21.0	19.2	18.7	19.0	14.2	20.3	22.6	21.0	20.4	18.3	24.3
7-8	24.7	25.4	20.1	15.9	16.9	18.0	16.2	18.3	13.9	11.8	18.1	20.4	18.3	17.4	15.4	22.1
8-9	25.5	23.1	18.2	14.7	14.3	13.5	15.8	14.7	8.7	10.9	14.4	21.4	16.3	14.6	13.1	21.1
9-10	22.0	23.5	17.4	13.5	9.7	9.7	9.3	9.1	8.7	8.9	12.9	18.0	13.6	9.4	12.1	19.1
10-11	21.9	18.5	16.0	9.9	4.6	6.0	2.8	3.3	8.1	7.7	9.8	21.6	10.8	4.2	10.4	17.9
11-12	22.6	16.4	14.2	7.0	-0.2	1.0	-1.2	-2.3	5.5	7.1	10.5	21.6	8.5	-0.7	8.5	17.8
12-13	22.1	15.9	12.4	5.9	1.5	-1.2	-2.2	-3.3	5.2	5.1	10.9	19.4	7.7	-1.3	7.2	17.1
13-14	21.1	16.1	11.4	7.5	3.7	1.1	.6	-0.4	9.1	5.6	11.5	17.7	8.8	1.3	8.4	16.6
14-15	23.4	16.3	14.1	11.9	6.0	5.9	5.3	5.0	13.3	8.4	13.5	18.7	11.8	5.5	11.9	18.0
15-16	24.6	19.2	18.8	17.9	13.9	12.1	10.4	12.5	16.8	13.0	17.2	21.8	16.5	12.3	16.6	20.7
16-17	27.1	22.3	23.5	22.5	20.0	19.1	16.7	19.7	19.5	17.9	19.7	21.1	20.7	18.9	20.8	22.5
17-18	28.5	24.8	25.8	26.2	19.3	21.4	20.5	23.4	20.1	20.9	19.9	21.9	22.7	21.1	23.2	23.8
18-19	28.4	26.1	26.6	24.5	11.1	19.9	21.4	24.1	17.9	19.6	19.6	22.7	21.8	19.1	22.2	24.2
19-20	28.4	26.7	26.8	21.2	11.5	14.6	18.9	20.1	14.4	17.4	18.3	22.1	20.0	16.3	20.0	23.9
20-21	27.4	27.5	24.5	17.5	11.3	12.7	14.2	15.7	11.6	15.5	17.5	21.8	18.1	13.5	17.3	23.5
21-22	26.0	26.7	22.1	17.9	14.3	13.5	13.3	12.0	9.0	13.1	16.1	21.3	17.1	13.3	15.5	22.5
22-23	24.7	25.2	20.0	15.1	14.3	14.7	12.8	6.7	10.1	12.7	13.7	20.1	15.8	12.1	14.5	20.9
23-24	22.6	23.8	19.1	14.5	17.6	18.1	11.1	7.7	14.6	15.2	12.7	18.4	16.3	13.6	15.8	19.4
MEAN	25.4	22.6	19.9	17.7	15.9	15.3	13.2	12.5	14.8	13.0	15.8	20.9	17.2	14.2	16.4	21.2

MEAN VALUES OF MAGNETIC ELEMENTS

VERTICAL INTENSITY-ALL DAYS

TABLE 39 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	CCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	278	287	280	278	276	302	286	280	262	301	317	286	286	286	280	292
1-2	282	277	272	271	280	311	278	276	278	293	311	283	284	286	279	288
2-3	274	276	268	285	299	303	302	276	296	296	312	287	290	295	286	287
3-4	269	265	262	305	325	316	310	269	295	304	313	293	294	305	292	285
4-5	270	274	276	313	352	336	325	297	312	318	319	310	309	327	305	293
5-6	286	286	293	324	388	348	331	317	344	324	345	332	326	346	321	312
6-7	290	288	295	323	375	375	324	327	355	335	339	330	330	350	327	312
7-8	295	298	298	315	366	346	318	328	355	335	340	337	327	340	326	317
8-9	303	295	293	312	364	330	320	316	338	324	338	332	322	333	317	317
9-10	285	294	281	322	341	328	311	296	334	310	331	300	311	319	312	303
10-11	267	295	274	293	329	322	292	289	312	302	314	282	298	308	295	290
11-12	267	293	277	284	335	300	289	280	290	300	308	289	293	301	288	289
12-13	259	291	281	275	321	295	285	276	277	299	312	285	288	294	283	287
13-14	257	290	282	279	310	296	280	279	276	306	320	290	289	291	286	289
14-15	261	284	284	285	305	299	283	282	287	312	324	297	292	292	292	291
15-16	272	287	290	295	297	303	288	290	300	318	325	304	297	294	301	297
16-17	278	292	297	300	296	309	290	298	312	321	336	310	303	298	308	304
17-18	284	294	300	306	296	317	297	303	315	326	343	308	307	303	312	307
18-19	284	295	302	312	289	324	305	305	310	331	343	306	309	306	314	307
19-20	282	294	304	312	279	313	308	308	299	332	340	297	306	302	312	303
20-21	284	293	307	313	274	301	306	311	290	330	333	300	303	298	310	302
21-22	281	298	300	310	276	286	297	307	283	324	330	298	299	292	304	302
22-23	282	291	300	309	255	275	287	296	281	322	330	283	293	278	303	296
23-24	280	288	299	299	266	278	297	286	262	314	331	282	290	282	294	295
MEAN	278	289	288	301	312	313	300	296	303	316	327	301	302	305	302	299

GREAT WHALE MAGNETIC OBSERVATORY 1967

## MEAN VALUES OF MAGNETIC ELEMENTS

## HORIZONTAL INTENSITY—QUIET DAYS

TABLE 40 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	313	310	314	326	370	369	357	354	376	352	328	330	341	362	342	320
1-2	315	310	309	312	358	356	348	348	364	361	328	338	337	353	336	323
2-3	313	310	309	310	323	348	343	348	342	355	330	337	331	340	329	322
3-4	313	309	308	328	309	320	333	341	349	345	330	337	327	326	333	322
4-5	308	306	312	294	284	313	336	347	347	337	314	331	319	320	323	315
5-6	305	310	311	287	225	298	319	333	335	343	285	322	306	294	319	305
6-7	294	306	308	306	236	264	318	314	334	340	306	306	303	283	322	303
7-8	294	295	307	309	239	256	322	345	316	323	324	309	303	290	314	306
8-9	302	302	305	308	240	286	324	344	311	305	323	315	305	298	307	310
9-10	305	285	300	309	259	313	319	336	325	315	320	309	308	307	312	305
10-11	309	277	308	308	280	312	325	326	328	323	317	315	311	311	317	305
11-12	309	302	309	306	288	307	324	312	324	344	314	317	313	308	321	311
12-13	307	304	304	301	281	307	324	314	317	339	311	316	310	306	315	310
13-14	304	299	296	297	279	301	318	316	313	327	309	313	306	304	308	306
14-15	294	293	287	288	274	302	317	315	309	321	300	308	301	302	301	299
15-16	289	288	281	284	290	301	315	323	305	310	291	304	298	307	295	293
16-17	286	287	276	287	303	305	326	334	311	311	293	305	302	317	296	293
17-18	287	288	285	297	320	318	332	347	327	316	300	304	310	329	306	295
18-19	294	299	294	306	341	326	342	367	342	330	309	308	321	344	318	302
19-20	302	310	305	315	352	334	353	370	353	341	316	315	330	352	329	311
20-21	309	314	309	326	356	348	359	377	352	343	324	323	337	360	332	318
21-22	316	318	311	328	360	351	368	370	343	348	324	324	338	362	333	321
22-23	318	325	312	326	363	363	370	374	338	351	325	333	341	368	332	325
23-24	319	333	315	328	353	353	377	359	339	351	327	344	342	361	333	331
MEAN	304	303	303	308	303	319	336	342	333	335	315	319	318	325	320	310

MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION-QUIET DAYS

TABLE 41 GREAT WHALE RIVER D = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	23.8	23.2	19.8	17.9	7.7	13.2	10.8	11.3	13.2	11.3	16.1	14.1	15.2	10.7	15.6	19.3
1-2	23.3	22.3	19.3	17.4	9.6	12.7	12.3	13.7	14.7	10.3	15.6	16.5	15.6	12.1	15.4	19.4
2-3	22.3	22.3	18.8	20.3	16.3	15.1	13.7	14.2	15.1	9.9	15.6	14.6	16.5	14.8	16.0	18.7
3-4	23.3	24.2	18.8	17.0	20.1	14.2	18.5	12.3	19.0	11.3	15.1	17.0	17.6	16.3	16.5	19.9
4-5	25.2	26.1	18.3	22.7	23.0	18.5	17.1	14.7	15.6	13.2	20.9	17.9	19.4	18.3	17.5	22.5
5-6	24.3	22.3	18.3	21.3	32.1	18.0	17.5	15.1	15.6	12.3	23.8	18.9	20.0	20.7	16.9	22.3
6-7	24.7	22.8	18.3	17.0	19.2	20.4	16.6	18.0	13.2	12.3	17.5	19.8	18.3	18.5	15.2	21.2
7-8	25.2	23.2	17.8	16.0	16.8	18.0	14.2	12.3	13.2	11.8	16.1	17.9	16.9	15.3	14.7	20.6
8-9	24.7	21.8	17.8	16.0	14.4	14.2	12.7	9.9	12.3	12.3	14.7	17.0	15.6	12.8	14.6	19.5
9-10	23.8	22.8	15.9	15.0	11.0	7.9	8.4	8.4	9.9	10.3	14.2	17.4	13.8	9.0	12.8	19.5
10-11	23.3	20.4	15.0	12.6	5.3	5.1	4.1	5.5	7.5	7.5	12.7	16.0	11.2	5.0	10.6	18.1
11-12	22.8	19.4	14.5	10.2	1.4	2.2	1.2	3.6	4.6	7.5	12.7	16.0	9.7	2.1	9.2	17.7
12-13	20.9	18.0	11.1	8.3	3.3	2.7	-0.2	-0.2	4.1	4.6	12.7	16.0	8.4	1.4	7.0	16.9
13-14	19.5	16.0	10.6	9.8	8.1	4.1	2.2	3.6	6.5	3.6	11.3	14.6	9.2	4.5	7.6	15.3
14-15	19.0	16.5	12.1	12.2	13.9	7.5	6.5	8.4	10.8	6.5	11.8	16.5	11.8	9.1	10.4	15.9
15-16	21.9	19.4	15.4	16.0	20.6	15.1	11.8	14.2	16.1	10.3	15.1	18.9	16.2	15.4	14.5	18.8
16-17	24.3	22.8	21.7	21.3	26.9	19.0	17.5	20.9	19.9	16.1	18.5	20.8	20.8	21.1	19.7	21.6
17-18	26.7	27.1	26.0	25.1	27.8	23.3	23.3	24.7	23.8	19.5	21.4	23.2	24.3	24.8	23.6	24.6
18-19	28.6	29.0	27.9	27.5	25.9	26.7	25.2	24.7	22.8	19.9	22.8	23.7	25.4	25.6	24.6	26.0
19-20	29.5	29.5	28.4	26.1	23.5	23.3	23.3	22.3	19.9	19.9	21.9	23.7	24.3	23.1	23.6	26.1
20-21	29.1	30.0	26.5	24.2	19.7	21.9	20.4	19.0	16.6	18.0	20.9	22.2	22.4	20.2	21.3	25.5
21-22	27.6	27.1	24.6	21.8	13.4	18.0	18.0	16.1	14.7	15.1	18.0	20.8	19.6	16.4	19.0	23.4
22-23	26.2	25.6	22.6	19.4	10.1	14.2	13.7	11.8	15.6	14.2	17.5	18.9	17.5	12.4	17.9	22.1
23-24	24.3	23.2	21.2	18.9	11.0	13.2	10.8	11.8	15.6	14.2	16.6	16.5	16.4	11.7	17.5	20.1
MEAN	24.3	23.1	19.2	18.1	15.9	14.5	13.3	13.2	14.2	12.2	16.8	18.3	16.9	14.2	15.9	20.6

GREAT WHALE MAGNETIC OBSERVATORY 1967

## MEAN VALUES OF MAGNETIC ELEMENTS

## VERTICAL INTENSITY—QUIET DAYS

TABLE 42 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUPPER	EQUINOX	WINTER
0-1	280	292	296	299	289	302	306	298	268	321	316	297	297	299	296	296
1-2	280	291	294	279	270	310	301	292	275	316	316	306	294	293	291	298
2-3	278	288	292	287	278	302	295	292	281	316	318	309	295	292	294	298
3-4	272	280	292	286	285	290	297	282	281	309	312	304	291	288	292	292
4-5	270	287	292	274	309	310	287	293	288	311	293	305	293	300	291	289
5-6	274	288	292	279	329	314	289	298	292	308	294	300	296	308	293	289
6-7	275	286	290	288	313	320	287	290	292	308	303	298	296	303	294	290
7-8	264	278	290	291	313	324	293	293	291	309	307	297	296	306	295	287
8-9	268	283	290	288	301	304	294	296	288	304	312	301	294	299	292	291
9-10	270	272	283	290	284	309	297	297	288	295	310	297	291	297	289	287
10-11	271	270	290	291	281	312	300	292	293	295	309	294	291	296	292	286
11-12	272	275	294	294	289	306	301	286	293	301	309	296	293	296	295	288
12-13	276	284	296	294	285	302	300	289	295	311	312	300	295	294	299	293
13-14	276	287	295	294	281	304	297	290	293	312	316	300	295	293	299	295
14-15	275	283	294	290	282	302	294	293	298	315	315	301	295	293	299	293
15-16	275	283	291	288	288	302	293	294	303	316	313	300	296	294	300	293
16-17	275	283	294	292	293	304	289	294	307	315	315	304	297	295	302	294
17-18	275	286	294	292	298	302	289	294	306	319	316	305	298	296	303	295
18-19	278	291	294	294	308	309	293	298	307	325	316	308	302	302	305	298
19-20	278	292	294	295	316	313	298	305	311	323	313	312	304	308	306	299
20-21	279	298	294	298	322	319	306	303	311	321	316	313	307	312	306	302
21-22	280	298	292	304	322	323	313	303	306	319	315	309	307	315	305	300
22-23	280	294	294	304	313	327	323	303	298	316	315	302	306	316	303	298
23-24	283	291	292	303	308	328	317	301	295	318	318	302	305	314	302	299
MEAN	275	286	292	291	298	310	298	295	294	313	312	302	297	300	298	294

MEAN VALUES OF MAGNETIC ELEMENTS

HORIZONTAL INTENSITY-DISTURBED DAYS

TABLE 43 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	254	343	354	394	336	402	438	434	340	357	377	373	367	403	361	337
1-2	235	328	352	361	241	375	396	403	311	324	329	336	333	354	337	307
2-3	278	284	317	324	298	327	340	328	276	325	323	284	309	323	311	292
3-4	231	241	258	291	155	308	319	306	205	354	311	239	268	272	277	256
4-5	247	258	254	234	170	305	283	303	261	306	312	224	263	265	264	260
5-6	202	251	249	264	224	253	225	255	228	275	257	131	234	239	254	210
6-7	178	274	244	275	138	240	176	281	95	255	193	117	206	209	217	191
7-8	165	255	240	279	71	256	230	258	108	243	246	138	207	203	218	201
8-9	50	160	203	198	-12	301	125	233	117	230	211	55	156	162	187	119
9-10	60	129	200	85	3	289	119	273	126	220	196	2	142	171	158	97
10-11	151	126	280	81	-86	240	213	273	-8	174	217	41	142	160	132	134
11-12	189	152	272	144	-15	267	239	263	-13	115	304	51	164	189	130	174
12-13	157	175	214	220	112	293	220	237	131	169	329	201	205	215	184	215
13-14	158	211	238	278	-8	305	231	307	191	249	309	269	228	209	239	237
14-15	246	274	258	290	129	309	274	306	274	296	311	273	270	254	279	276
15-16	275	291	265	289	230	305	300	307	286	322	300	269	287	286	291	283
16-17	316	281	288	291	277	300	326	329	350	313	315	299	307	308	311	303
17-18	331	288	338	319	313	320	355	353	400	336	327	305	332	335	348	313
18-19	342	334	375	393	469	360	379	394	431	361	385	360	382	400	390	356
19-20	350	362	401	443	473	466	428	445	442	396	410	385	417	453	420	377
20-21	353	336	412	477	487	523	479	481	459	419	391	378	433	493	442	364
21-22	342	302	434	499	358	552	464	492	454	423	363	338	418	467	452	336
22-23	328	315	441	444	365	502	441	501	384	380	377	373	404	452	412	348
23-24	297	312	396	388	422	451	414	436	330	385	351	350	378	431	375	328
MEAN	522	523	619	600	412	717	592	691	532	644	646	568	285	302	291	263

GREAT WHALE MAGNETIC OBSERVATORY 1967

MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION-DISTURBED DAYS

TABLE 44 GREAT WHALE RIVER C = 20.0 DEGREES WEST PLUS TABULAR VALUES IN MINUTES

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	CCT	NOV	DEC	YEAR	SUMMER	EQUINCX	WINTER
0-1	30.5	19.2	19.5	16.9	72.0	52.6	9.4	7.9	27.6	27.6	10.3	15.1	25.7	35.5	22.9	18.8
1-2	38.2	23.0	18.6	29.8	62.9	43.5	22.8	12.3	43.5	12.7	21.9	20.8	29.2	35.4	26.2	26.0
2-3	46.9	20.6	22.4	36.1	45.6	41.1	21.9	20.9	43.5	22.8	16.6	33.3	31.0	32.4	31.2	29.3
3-4	35.8	36.0	17.6	32.2	57.6	29.5	21.9	32.9	51.1	17.5	17.1	36.2	32.1	35.5	29.6	31.3
4-5	37.3	34.5	23.9	29.8	51.9	19.0	32.4	17.5	37.2	16.6	19.5	44.8	30.4	30.2	26.9	34.0
5-6	37.3	39.8	24.8	24.6	27.4	21.9	26.7	20.9	29.5	19.0	26.2	46.8	28.7	24.2	24.5	37.5
6-7	31.5	23.0	21.5	21.2	34.1	16.6	28.1	17.1	23.8	19.0	22.3	39.6	24.8	24.0	21.4	29.1
7-8	26.2	22.1	21.0	16.4	29.8	16.6	20.9	25.7	14.7	7.9	18.0	26.1	20.4	23.2	15.0	23.1
8-9	25.3	26.9	18.1	15.0	22.6	8.4	30.5	12.3	-3.6	4.1	14.7	30.4	17.0	18.4	8.4	24.3
9-10	20.5	36.5	14.3	10.2	9.1	5.1	10.3	4.1	9.4	7.0	12.7	19.4	13.2	7.2	10.2	22.3
10-11	19.5	14.4	12.3	-0.4	13.0	3.1	5.5	-4.1	18.0	8.9	6.5	48.7	12.1	4.4	9.7	22.3
11-12	26.2	7.7	10.4	-1.4	1.5	-3.1	-3.1	-6.9	13.2	12.3	7.9	48.2	9.4	-2.9	8.6	22.5
12-13	31.5	16.3	16.7	1.5	6.7	-6.0	-2.1	-6.0	16.1	11.8	8.9	29.0	10.4	-1.8	11.5	21.4
13-14	33.4	20.1	16.2	4.9	-1.9	-2.1	1.2	-7.4	18.5	12.3	7.9	20.4	10.3	-2.6	13.0	20.5
14-15	33.9	17.7	21.9	9.2	16.8	4.1	6.0	-5.5	18.5	9.4	12.7	17.0	10.7	-3.0	14.8	20.3
15-16	21.9	18.2	24.8	15.4	-3.8	9.4	14.2	9.4	18.5	14.7	18.0	20.4	15.1	7.3	18.4	19.6
16-17	27.2	15.8	26.3	24.6	4.8	17.1	17.5	19.0	12.3	18.5	17.1	19.4	18.3	14.6	20.4	19.9
17-18	28.6	21.1	17.1	26.5	6.7	19.0	19.5	20.4	4.1	19.0	15.6	15.1	17.7	16.4	16.7	20.1
18-19	26.7	23.0	19.5	12.1	19.7	14.2	18.5	20.9	4.1	14.7	14.2	17.0	13.8	8.5	12.6	20.2
19-20	25.3	21.1	18.1	6.8	-0.9	-0.7	12.3	14.2	7.0	13.2	12.3	17.5	12.2	6.2	11.3	19.0
20-21	23.8	25.9	16.7	.1	12.0	-5.5	3.1	7.9	8.9	9.9	15.6	19.4	11.5	4.4	8.9	21.2
21-22	22.4	27.8	15.2	7.3	46.6	6.0	2.7	5.1	2.2	5.1	17.1	26.1	15.3	15.1	7.4	23.3
22-23	21.4	27.8	13.3	3.9	51.9	28.6	10.3	-1.7	6.0	9.4	10.8	30.4	17.7	22.3	8.2	22.6
23-24	18.1	26.4	12.8	9.2	54.3	46.3	11.3	8.4	25.7	24.3	11.3	23.7	22.6	30.1	18.0	19.9
MEAN	52.4	48.3	35.8	30.9	43.7	30.8	29.3	19.5	33.6	26.8	27.7	55.5	18.7	16.0	16.5	23.7

MEAN VALUES OF MAGNETIC ELEMENTS

VERTICAL INTENSITY-DISTURBED DAYS

TABLE 45 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

1967

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	256	278	260	234	309	316	274	252	207	249	285	288	267	288	238	277
1-2	288	270	243	246	363	351	263	234	256	254	257	253	273	303	250	267
2-3	276	274	239	318	386	305	293	256	327	234	279	276	289	310	279	276
3-4	255	214	242	327	482	328	335	266	351	289	295	306	307	353	302	267
4-5	266	258	262	363	423	351	373	312	355	354	335	331	332	365	333	297
5-6	307	292	319	338	502	411	400	335	425	325	373	436	372	412	352	352
6-7	340	296	344	340	532	419	396	356	495	380	362	415	390	426	390	353
7-8	369	324	344	339	566	353	378	342	525	368	356	423	391	410	394	368
8-9	412	344	324	361	580	346	402	340	496	373	358	444	398	417	389	389
9-10	384	360	283	444	483	342	365	296	480	366	334	299	370	371	393	344
10-11	294	380	268	324	479	319	301	300	383	317	325	258	329	350	323	314
11-12	271	373	275	279	562	310	285	278	299	286	304	360	324	359	285	327
12-13	213	332	258	259	516	305	267	251	266	260	321	286	294	335	261	288
13-14	209	314	254	263	450	305	246	277	251	282	327	304	290	319	262	288
14-15	240	279	266	279	403	301	272	279	287	312	329	311	297	314	286	290
15-16	284	292	290	298	316	304	283	286	319	337	331	314	305	297	311	305
16-17	280	295	308	310	273	300	291	308	329	338	347	316	308	293	321	310
17-18	296	300	310	332	248	306	316	311	327	343	351	300	312	295	328	312
18-19	291	298	306	340	212	325	314	309	311	350	342	265	305	290	327	299
19-20	282	267	308	320	107	291	317	286	240	344	323	204	274	250	303	269
20-21	278	250	310	318	59	251	300	298	196	321	300	221	258	227	286	262
21-22	258	278	266	307	111	140	245	268	185	297	317	233	242	191	264	271
22-23	263	264	298	296	103	115	225	214	185	297	343	155	230	164	269	256
23-24	242	255	299	290	160	170	267	229	181	255	337	188	239	206	256	255
MEAN	557	562	576	606	697	584	621	566	604	595	635	566	308	314	308	302

GREAT WHALE MAGNETIC OBSERVATORY 1967



HOURLY RANGES

TABLE 46 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

JANUARY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS	
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23	T0 24			
1	D	1	1	3	17	16	5	5	5	4	3	21	15	11	7	12	9	11	9	10	3	12	10	6	4	200	8	
2		1	4	5	4	14	12	4	5	3	1	2	2	1	1	1	1	2	2	2	4	3	4	3	1	82	3	
3		1	3	1	1	1	3	7	1	1	9	14	10	5	12	7	4	3	5	3	5	2	3	1	1	103	4	
4	Q	1	1	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17	1	
5		1	1	1	1	1	3	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	23	1	
6		1	2	3	4	1	1	1	12	11	18	4	1	1	2	1	1	1	1	2	1	1	1	1	1	73	3	
7	D	1	1	1	1	2	10	5	7	45	26	38	14	19	21	22	12	14	7	18	16	4	3	15	20	322	13	
8	D	5	12	21	49	29	19	18	14	16	18	55	25	15	16	19	20	13	11	4	5	10	3	1	2	400	17	
9		1	1	5	7	25	40	18	5	3	5	3	5	9	12	5	5	4	7	1	3	2	1	2	2	171	7	
10		3	3	1	1	1	1	1	1	1	0	0	0	1	1	1	2	1	1	1	3	1	1	1	3	30	1	
11		12	5	5	5	4	5	12	17	19	21	2	2	3	23	18	10	4	6	7	5	5	4	4	1	199	8	
12	Q	1	1	1	1	1	1	1	4	5	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	28	1	
13	D	1	1	1	3	3	5	4	21	13	18	4	3	58	47	8	7	3	3	3	7	11	23	10	12	269	11	
14	D	20	42	34	41	10	59	29	18	29	73	29	5	5	3	6	3	6	4	3	2	1	3	8	2	435	18	
15		3	6	1	1	1	1	1	1	2	5	5	8	5	4	1	1	3	3	3	5	3	2	1	3	69	3	
16		7	1	3	4	22	27	25	8	7	14	16	10	5	4	3	3	2	3	2	1	2	1	1	3	174	7	
17		3	2	3	4	3	3	5	3	3	2	4	2	1	1	1	2	1	1	2	1	1	1	1	1	51	2	
18		3	1	4	3	3	5	2	1	1	1	0	0	1	1	2	1	1	3	1	1	1	1	1	1	39	2	
19		1	1	0	1	1	9	10	6	1	1	1	1	1	1	1	1	1	1	1	1	3	2	3	1	50	2	
20		2	1	1	5	13	4	2	7	21	12	12	9	8	7	7	4	10	6	7	4	8	5	3	4	162	7	
21		3	3	3	10	6	5	13	7	10	10	13	3	2	3	3	3	4	3	3	2	1	1	2	3	116	5	
22		4	4	5	1	0	1	1	1	2	4	1	2	1	1	1	2	1	1	1	1	1	1	2	1	40	2	
23		5	2	4	2	2	5	24	20	4	2	5	1	1	1	1	1	1	1	1	1	1	1	1	1	88	4	
24	Q	0	1	2	3	3	3	1	1	1	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	25	1	
25		2	1	1	1	1	1	1	1	1	3	1	4	3	3	1	1	1	1	1	1	1	1	1	1	34	1	
26		1	3	1	1	1	6	8	10	2	2	3	1	2	3	3	0	0	1	1	1	1	0	0	0	51	2	
27		0	0	0	0	0	0	0	0	1	0	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	1	
28		1	4	9	7	25	16	10	12	43	23	6	4	5	4	3	3	3	2	3	3	3	2	3	4	198	8	
29		3	1	3	22	3	3	1	36	23	3	2	1	1	1	1	1	1	1	1	1	1	0	1	1	112	5	
30	Q	1	1	0	1	2	4	7	4	1	1	1	1	1	1	1	1	1	1	1	3	1	1	0	37	2		
31	Q	1	0	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	1	1	2	1	1	1	1	24	1	
SUMS		90	110	123	202	196	258	218	230	275	280	247	135	168	185	135	103	95	89	88	87	86	81	79	79	3639		
MEANS		3	4	4	7	6	8	7	7	9	9	8	4	5	6	4	3	3	3	3	3	3	3	3	3	3	5	

HOURLY RANGES

TABLE 47 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

JANUARY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24		
1	D	1	1	4	12	11	3	4	3	1	1	3	6	5	5	7	4	18	9	4	3	5	2	3	2	117	5
2		2	3	3	4	28	6	1	1	1	1	1	1	2	1	3	1	1	1	1	1	1	1	1	1	67	3
3		1	3	4	1	1	4	10	1	1	2	5	4	5	3	5	5	3	3	1	1	1	1	0	1	66	3
4	Q	1	0	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1
5		1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	18	1
6		1	1	3	4	1	1	0	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0	1	30	1
7	D	1	1	1	1	1	4	5	3	16	40	14	7	10	19	16	13	11	5	7	7	3	2	14	10	211	9
8	D	7	18	23	30	21	23	16	15	18	13	27	25	30	18	14	12	5	8	4	4	5	1	1	1	339	14
9		1	1	3	4	22	28	10	3	1	3	1	3	5	9	6	4	3	5	1	1	1	1	1	2	119	5
10		3	2	1	1	1	1	0	0	1	0	0	0	1	1	2	2	1	1	2	1	1	1	1	2	26	1
11		10	5	3	5	1	1	1	10	12	4	1	1	3	17	8	13	5	6	5	4	3	3	3	1	125	5
12	Q	1	1	1	2	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	1
13	D	0	0	1	6	1	1	1	5	13	6	3	3	16	23	10	7	3	4	3	3	10	11	4	7	141	6
14	D	21	26	21	40	8	18	17	15	31	49	10	2	1	3	3	3	3	3	1	1	1	1	3	1	282	12
15		2	4	1	1	1	1	0	1	1	1	1	4	3	6	1	2	1	1	3	1	1	1	1	3	42	2
16		4	1	1	4	16	19	19	3	8	11	7	3	2	4	4	2	1	1	1	1	1	1	1	2	117	5
17		1	2	4	3	4	3	3	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	38	2
18		1	1	3	2	4	5	1	1	0	1	1	1	1	1	2	3	1	3	1	1	1	1	1	1	38	2
19		1	1	0	0	0	8	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	33	1
20		1	1	1	5	13	5	1	1	4	10	4	3	4	3	3	2	6	3	4	4	4	4	3	3	92	4
21		1	1	2	7	7	5	3	2	6	7	4	3	1	5	2	2	3	4	1	1	1	1	1	1	71	3
22		2	6	1	1	1	0	0	0	2	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	26	1
23		2	1	2	2	2	3	7	5	1	1	2	1	1	1	1	1	1	1	1	0	0	0	1	0	37	2
24	Q	0	1	3	4	5	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	0	0	0	0	25	1
25		2	1	1	0	1	0	0	1	1	1	1	3	3	1	1	1	1	1	1	0	0	1	1	1	24	1
26		0	1	1	0	0	1	4	4	1	1	3	2	3	1	3	1	0	1	1	0	0	0	0	0	28	1
27		0	0	0	0	0	0	0	0	1	0	1	3	1	1	1	1	1	1	1	1	0	0	0	0	13	1
28		1	3	9	14	11	22	12	5	18	16	3	2	3	2	3	2	1	1	1	1	1	1	1	1	134	6
29		1	1	5	14	1	1	1	10	8	3	1	1	1	1	1	1	1	1	1	0	1	1	0	0	56	2
30	Q	1	0	0	0	1	1	2	2	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	20	1
31	Q	0	0	0	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	1
SUMS		71	88	102	169	166	169	128	99	156	182	103	88	110	134	106	92	80	72	54	43	49	42	48	46	2397	
MEANS		2	3	3	5	5	5	4	3	5	6	3	3	4	4	3	3	3	2	2	1	2	1	2	1	3	

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 48 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

FEBRUARY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24		
1		3	4	4	7	9	7	5	12	8	4	8	4	2	1	1	1	1	1	1	1	1	1	1	1	88	4
2	Q	0	0	0	1	0	1	2	3	2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	23	1
3	Q	1	1	0	0	0	1	3	1	3	13	25	5	1	1	1	1	1	0	1	1	1	1	1	1	64	3
4		0	0	0	0	1	23	11	5	3	5	3	4	3	3	3	5	3	1	5	5	7	8	11	17	126	5
5		10	38	23	10	13	10	6	5	4	5	5	7	9	6	3	7	3	8	3	1	1	2	1	1	181	8
6		1	1	1	9	6	5	3	6	17	3	2	2	2	2	1	1	1	1	1	1	1	8	2	1	78	3
7	D	1	2	1	3	1	1	1	2	1	1	2	5	1	1	3	5	14	16	17	15	29	12	18	27	179	7
8	D	21	14	34	24	42	15	11	23	24	21	20	30	18	29	17	12	12	12	19	14	16	7	16	8	459	19
9		14	14	10	6	5	19	15	19	4	3	1	1	2	3	1	1	1	1	1	3	2	1	1	1	129	5
10	Q	1	1	1	9	9	4	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	41	2
11		0	1	1	3	3	43	10	15	14	13	10	3	5	4	1	1	3	1	3	3	3	3	1	0	144	6
12	Q	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	1
13	Q	1	1	1	1	1	3	3	2	1	0	1	1	0	1	1	1	1	3	3	1	3	2	4	4	40	2
14		6	9	3	9	6	1	3	4	4	1	4	5	4	1	1	1	0	1	3	2	1	1	3	1	74	3
15		5	5	7	5	5	3	7	7	3	1	1	1	1	1	1	1	1	1	1	2	1	1	1	12	74	3
16	D	7	7	7	10	5	7	15	10	30	134	62	25	29	78	62	12	6	7	7	27	10	5	5	1	568	24
17	D	2	4	16	44	18	6	4	8	8	10	6	10	12	8	7	7	7	3	3	2	8	4	10	1	208	9
18		1	3	2	10	12	14	5	7	7	8	3	2	5	3	1	1	1	1	1	1	1	1	0	91	4	
19		0	0	0	0	1	1	2	5	3	1	2	2	3	3	3	5	2	3	1	3	1	1	1	1	44	2
20		1	1	3	3	5	3	1	1	1	3	3	1	1	1	1	1	1	1	1	1	3	1	2	1	41	2
21		1	1	1	0	0	1	1	0	1	1	3	3	5	3	3	2	5	5	3	3	3	3	4	4	56	2
22		5	9	3	3	3	5	5	12	5	7	4	10	4	3	4	5	1	3	1	3	1	3	2	3	104	4
23		7	5	3	1	1	1	1	1	10	18	18	13	7	4	12	11	13	6	4	10	2	5	1	1	155	6
24		1	1	1	1	0	2	6	4	5	10	3	3	3	1	2	3	3	3	3	5	3	3	1	1	68	3
25	D	1	1	1	2	33	53	18	12	5	5	3	10	4	3	3	3	5	7	5	10	3	2	2	10	201	8
26		32	27	8	10	8	7	3	5	3	4	6	7	3	4	5	3	5	3	2	3	2	3	5	1	159	7
27		1	1	1	1	2	3	10	18	4	1	2	6	3	1	1	2	2	2	4	3	1	1	1	1	72	3
28		1	1	1	9	14	3	3	1	1	2	2	2	1	1	1	2	1	1	3	1	2	1	1	2	57	2
SUMS		125	153	134	182	203	242	156	190	173	277	201	165	131	169	142	97	95	94	99	126	107	83	98	104	3546	
MEANS		4	5	5	7	7	9	6	7	6	10	7	6	5	6	5	3	3	3	4	5	4	3	4	4		5

HOURLY RANGES

TABLE 49 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

FEBRUARY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS	
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23				
1		3	1	7	10	8	6	3	7	3	3	2	3	1	2	2	1	1	1	1	1	1	0	1	0	68	3	
2	Q	0	0	0	1	1	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	20	1	
3	Q	0	0	0	0	0	1	2	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	0	0	21	1	
4		0	0	0	1	1	17	3	2	1	3	1	4	5	4	2	6	7	2	3	1	1	2	7	16	89	4	
5		12	29	17	3	20	16	4	3	2	1	3	3	3	6	5	7	7	6	3	1	1	1	1	1	155	6	
6		1	0	0	10	5	2	1	4	9	2	2	1	1	3	1	1	1	1	1	1	1	1	1	1	51	2	
7	D	1	1	1	1	1	0	1	1	1	1	2	2	1	1	3	8	16	27	10	10	9	9	19	11	137	6	
8	D	7	6	17	27	35	22	15	15	26	21	21	17	14	12	10	9	7	15	20	7	10	3	10	7	353	15	
9		7	6	3	5	7	17	19	16	5	1	1	1	1	3	1	1	1	1	1	1	1	0	0	0	99	4	
10	Q	1	1	1	14	15	3	0	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	44	2	
11		0	0	0	3	3	29	9	7	7	6	2	1	3	4	1	1	3	1	1	1	1	1	0	0	84	4	
12	Q	0	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	16	1	
13	Q	0	0	1	1	1	1	3	1	0	0	1	1	1	1	1	2	1	4	1	1	1	2	2	4	31	1	
14		5	4	3	3	1	2	1	3	1	1	1	4	5	1	1	1	1	1	2	1	1	1	1	1	46	2	
15		5	4	7	4	3	3	14	13	1	0	1	1	1	1	1	1	1	1	1	0	0	1	1	4	69	3	
16	D	11	9	9	4	4	7	7	4	20	82	55	37	35	48	36	6	6	5	6	8	11	6	3	1	420	18	
17	D	1	1	14	41	14	3	1	2	3	3	2	3	4	6	7	4	7	3	2	1	4	3	3	1	133	6	
18		1	1	1	4	7	14	7	6	5	2	1	1	2	3	1	1	1	1	1	0	0	0	0	0	61	3	
19		1	0	0	0	2	1	1	3	3	1	1	2	2	4	5	6	3	2	1	1	1	1	1	1	43	2	
20		1	1	2	4	5	2	1	1	1	1	2	1	1	1	1	1	2	3	1	0	0	1	0	1	34	1	
21		1	1	0	1	0	1	0	0	1	1	1	3	3	1	3	3	2	2	2	1	1	1	2	3	34	1	
22		3	3	1	3	3	3	3	3	3	3	4	3	2	5	2	3	3	1	2	1	1	1	1	2	59	2	
23		3	3	1	1	1	2	1	1	2	5	5	8	5	5	6	4	11	3	4	6	2	3	1	1	84	4	
24		0	0	0	0	0	0	3	2	2	3	1	2	3	2	2	2	2	2	1	3	1	1	1	1	34	1	
25	D	1	1	1	1	16	29	11	3	3	1	3	6	3	1	2	3	2	3	4	3	1	1	1	3	103	4	
26		26	26	7	6	3	3	1	1	2	1	4	3	3	4	3	4	5	1	2	2	2	1	1	1	112	5	
27		1	0	1	1	2	1	5	4	3	2	1	3	1	1	1	3	1	1	2	1	1	1	1	1	39	2	
28		0	0	1	5	7	4	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	37	2	
SUMS		92	98	95	155	165	189	118	108	107	148	124	116	105	124	102	83	97	93	76	57	56	45	61	62	2476		
MEANS		3	4	3	6	6	7	4	4	4	5	4	4	4	4	4	3	3	3	3	2	2	2	2	2		4	

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 50 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

MARCH 1967

DAY	HCUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23	T0 24		
1		1	2	8	6	13	5	3	7	4	2	2	1	1	3	3	3	3	1	1	1	1	1	1	1	74	3
2		1	0	1	1	5	3	1	1	1	1	3	3	3	2	1	1	1	1	1	2	2	2	1	1	39	2
3		1	1	1	6	20	10	1	1	1	3	14	10	5	5	5	4	1	1	1	2	3	1	1	1	99	4
4		1	3	1	16	3	3	9	12	5	2	1	1	1	3	2	2	2	2	1	1	1	1	3	3	79	3
5		3	11	9	10	11	18	5	9	5	5	3	1	1	1	5	5	10	7	11	3	5	6	9	3	156	7
6		10	10	30	14	10	20	12	10	2	1	1	1	2	2	2	1	1	1	3	5	5	2	1	1	148	6
7		0	1	1	0	0	2	2	3	5	3	2	1	2	3	1	2	1	1	1	3	1	1	1	1	38	2
8	Q	0	0	0	1	0	0	0	0	1	0	1	1	1	1	1	1	1	1	2	4	3	1	3	2	25	1
9	D	1	2	1	2	3	5	10	2	5	6	3	3	4	6	4	3	3	4	7	5	10	16	15	9	129	5
10		34	13	3	10	6	2	14	12	5	1	1	2	2	5	4	2	1	1	2	1	1	1	1	1	125	5
11	Q	1	1	0	0	0	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	18	1
12	Q	1	0	0	0	0	0	3	3	3	3	2	1	1	1	1	0	1	1	1	1	1	1	1	1	27	1
13		0	1	1	0	1	1	18	14	8	8	10	10	7	1	1	1	2	2	1	1	1	1	2	2	94	4
14		8	1	1	10	9	3	1	2	3	6	9	2	1	1	1	1	1	1	1	5	1	3	3	1	75	3
15	Q	1	1	1	1	2	2	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	22	1
16	Q	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	1	1	2	19	1
17		1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	2	2	2	3	2	2	4	3	1	32	1
18	D	1	0	2	27	24	9	10	10	11	11	5	18	14	15	5	3	5	3	6	2	5	5	4	6	201	8
19	D	14	3	51	24	14	7	14	6	10	6	3	4	3	4	4	8	10	14	10	8	8	67	36	9	337	14
20	D	10	10	21	28	27	6	10	29	18	24	12	10	8	8	3	2	5	5	3	10	12	22	21	14	318	13
21		5	23	21	8	6	2	1	1	1	1	2	8	7	1	3	1	1	4	4	3	9	8	11	6	137	6
22		5	8	5	4	6	14	13	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	73	3
23		1	0	0	0	1	0	0	1	0	0	0	0	1	1	1	3	2	2	1	3	8	6	6	1	38	2
24		1	1	1	3	3	1	1	1	1	0	1	1	2	5	1	1	1	1	1	1	1	1	1	1	32	1
25		1	1	1	1	9	5	3	16	11	5	1	1	1	1	1	1	2	1	1	2	1	1	1	1	69	3
26		1	1	1	1	2	1	1	0	1	0	0	1	1	3	1	1	1	3	1	2	1	2	3	3	32	1
27	D	3	6	9	9	21	19	3	3	14	23	10	8	10	14	8	3	5	3	3	3	2	5	2	1	187	8
28		1	1	1	16	20	13	16	4	2	3	3	2	2	2	3	3	2	5	3	4	3	2	1	1	113	5
29		1	2	1	5	27	21	10	9	15	17	21	11	12	3	4	3	2	3	1	2	2	3	1	2	178	7
30		1	1	32	25	12	3	3	4	5	3	6	5	1	1	1	3	2	3	6	4	5	3	10	14	153	6
31		16	1	3	8	5	6	3	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	61	3
SUMS		126	106	208	237	261	182	170	164	141	138	121	110	98	97	72	67	73	80	82	86	99	171	148	91	3128	
MEANS		4	3	7	8	8	6	5	5	5	4	4	4	3	3	2	2	2	3	3	3	3	6	5	3		4

HOURLY RANGES

TABLE 51 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

MARCH 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS	
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23	T0 24			
1		0	0	6	10	7	3	1	3	0	1	1	1	1	1	7	3	4	1	1	1	1	1	1	0	55	2	
2		0	0	0	3	3	3	2	1	0	1	1	1	2	3	2	3	1	1	1	1	1	1	0	0	31	1	
3		0	0	1	2	21	3	1	1	1	2	3	5	3	7	3	4	3	4	1	1	1	1	1	1	70	3	
4		1	2	1	16	3	1	3	7	1	1	1	1	1	1	3	1	2	3	1	1	0	1	1	1	54	2	
5		2	14	5	3	7	14	3	3	3	1	1	1	2	3	3	3	5	3	4	3	2	3	3	1	92	4	
6		14	12	41	12	7	14	14	5	1	1	1	1	1	2	2	1	3	1	1	2	3	1	1	0	141	6	
7		0	0	0	0	0	3	1	1	1	3	2	3	3	2	1	1	1	1	1	1	1	1	1	0	30	1	
8	Q	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	15	1	
9	D	1	1	1	1	3	2	3	1	1	3	3	5	1	5	5	6	2	4	2	3	5	7	7	4	76	3	
10		36	11	3	6	6	1	10	11	2	2	1	1	1	3	3	3	1	1	1	1	1	1	0	1	107	4	
11	Q	1	0	0	0	0	0	0	0	1	1	0	1	1	1	3	1	1	1	1	1	1	1	0	0	16	1	
12	Q	1	0	0	0	1	0	1	2	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	0	22	1	
13		0	0	0	0	1	1	5	4	4	3	2	3	1	1	2	2	4	1	1	1	2	1	1	1	41	2	
14		3	1	0	5	5	1	1	1	2	3	3	1	1	1	1	1	1	2	1	2	1	1	1	1	40	2	
15	Q	1	0	0	1	2	1	1	1	1	1	0	1	1	1	2	1	1	1	0	1	1	1	0	0	20	1	
16	Q	0	0	0	0	0	0	0	0	0	1	3	2	1	1	1	1	4	1	1	1	1	1	0	0	19	1	
17		1	1	1	1	1	1	1	0	0	0	1	1	1	2	2	3	1	3	1	1	1	3	3	1	31	1	
18	D	0	1	1	18	16	6	7	4	3	7	5	6	14	9	5	3	2	5	2	1	4	3	4	3	129	5	
19	D	7	2	18	15	24	4	5	7	5	1	1	2	1	5	6	4	14	12	10	5	3	37	14	4	206	9	
20	D	5	7	5	15	13	4	5	14	12	10	4	5	5	5	4	1	2	2	2	3	4	9	10	8	154	6	
21		2	27	31	12	1	0	0	0	0	0	1	3	3	2	1	1	3	1	2	1	4	5	5	5	111	5	
22		3	3	7	8	5	14	5	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	63	3	
23		1	0	0	0	0	0	0	1	0	0	0	1	1	1	3	5	3	1	3	3	5	1	1	1	31	1	
24		1	1	1	1	1	1	0	1	1	0	1	1	1	4	1	2	1	1	1	1	1	1	0	1	25	1	
25		1	1	1	1	5	3	1	5	3	1	1	2	2	1	4	1	3	1	1	1	1	1	1	0	42	2	
26		1	1	1	1	1	1	0	0	1	0	1	1	3	5	2	2	3	2	1	1	1	1	1	1	32	1	
27	D	3	3	4	6	16	6	1	1	6	14	5	7	7	5	4	3	6	3	3	2	2	3	1	1	112	5	
28		1	1	1	21	13	7	5	2	1	1	2	2	2	3	5	3	4	3	2	1	1	1	1	1	84	4	
29		1	1	1	5	14	13	4	3	8	31	16	4	5	3	5	4	3	3	1	1	2	1	1	1	131	5	
30		1	1	14	21	5	2	1	1	1	1	2	3	2	2	2	3	2	1	3	3	1	1	12	9	94	4	
31		4	2	4	7	3	3	1	1	1	1	1	1	2	1	1	2	2	1	1	1	2	1	1	2	46	2	
SUMS		92	93	148	191	184	113	82	82	62	94	66	69	72	83	84	70	86	71	53	49	54	97	75	50	2120		
MEANS		3	3	5	6	6	4	3	3	2	3	2	2	2	3	3	2	3	2	2	2	2	3	2	2		3	

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 52 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

APRIL 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS	
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23				
1	D	1	1	1	1	0	1	1	1	25	30	32	18	22	11	5	2	1	3	8	8	6	21	18	8	225	9	
2		2	1	1	1	10	5	3	2	10	10	12	37	47	7	5	3	5	7	5	8	5	3	11	3	203	8	
3		7	16	19	5	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	2	3	1	3	74	3	
4		1	1	1	7	3	12	10	12	4	5	6	2	19	6	6	10	5	3	7	7	3	4	5	4	143	6	
5		3	3	8	12	25	10	9	14	13	22	13	20	8	8	8	5	7	4	3	5	3	4	3	4	214	9	
6		4	10	21	35	25	25	14	10	7	14	9	8	7	5	4	3	5	4	1	5	5	2	1	3	227	9	
7		3	12	45	11	10	19	10	11	4	4	1	1	4	5	3	2	1	3	7	5	4	7	1	1	174	7	
8		2	4	14	14	14	5	4	3	4	3	4	3	1	2	1	1	1	2	2	4	2	2	3	2	97	4	
9		9	6	16	1	1	0	1	1	1	14	9	5	3	2	1	1	1	1	1	3	2	5	5	4	93	4	
10		3	2	13	10	2	2	5	3	5	1	1	1	2	1	1	1	1	1	3	3	7	5	9	1	3	85	4
11		1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	3	2	4	1	5	3	2	38	2	
12		5	11	10	30	5	3	6	4	5	4	1	1	1	1	1	0	1	2	1	1	1	1	1	1	97	4	
13	Q	2	4	7	5	3	3	1	1	1	1	1	0	0	1	1	1	1	2	2	1	1	1	2	1	43	2	
14	Q	1	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	33	1	
15		1	1	1	1	3	2	15	10	3	3	1	1	1	1	1	1	3	1	3	3	2	5	4	3	70	3	
16		2	1	3	11	10	19	7	15	4	6	4	5	4	8	1	3	4	5	3	15	21	8	3	7	169	7	
17		12	19	63	54	12	4	5	2	5	22	16	12	3	1	3	1	2	3	1	1	3	5	3	4	256	11	
18		3	3	9	16	13	1	3	10	3	5	2	3	5	5	3	2	3	1	1	2	4	8	10	10	125	5	
19	D	14	16	13	24	16	7	6	14	46	28	36	22	8	9	7	5	5	5	10	14	5	7	21	12	350	15	
20		2	5	20	10	8	3	12	9	5	12	4	4	3	2	3	2	3	1	3	10	6	15	3	7	152	6	
21		6	9	11	19	21	8	10	6	13	9	6	8	3	3	1	1	5	3	4	4	2	8	2	5	167	7	
22	D	11	14	12	30	18	61	58	19	29	19	9	19	7	6	4	5	3	4	7	4	6	5	4	7	361	15	
23	D	8	14	18	4	1	1	1	2	1	3	2	2	3	3	12	12	7	16	15	21	4	3	5	5	163	7	
24	D	8	8	20	14	46	23	16	6	8	20	30	34	21	19	16	14	11	12	11	8	11	7	8	10	381	16	
25		28	32	47	43	36	6	3	5	5	8	3	1	1	1	1	1	3	3	3	3	2	4	2	1	242	10	
26	Q	1	1	1	3	15	9	2	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	51	2	
27	Q	1	1	2	1	2	7	3	3	1	1	0	0	0	1	2	2	1	1	1	1	1	3	3	1	39	2	
28	Q	1	1	1	5	12	7	1	1	0	1	1	1	1	1	1	2	1	3	1	1	1	1	2	1	48	2	
29		1	3	3	2	1	1	1	3	8	4	3	1	2	3	2	1	1	5	1	2	2	3	1	5	59	2	
30		2	3	3	3	1	1	3	8	5	5	3	2	2	1	2	3	1	2	1	1	0	0	1	1	54	2	
SUMS		145	206	387	376	318	249	213	179	220	258	213	215	182	118	100	87	87	105	112	151	112	151	129	120	4433		
MEANS		5	7	13	13	11	8	7	6	7	9	7	7	6	4	3	3	3	4	4	5	4	5	4	4		6	

HOURLY RANGES

TABLE 53 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

APRIL 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS	
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24			
1	D	1	1	1	1	1	1	1	1	5	30	18	18	12	5	7	2	3	6	4	7	3	12	10	4	154	6	
2		1	1	1	1	7	5	1	1	2	3	3	21	17	6	4	2	5	4	3	3	2	2	4	1	100	4	
3		3	15	11	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	C	1	1	1	1	2	52	2	
4		1	1	1	5	2	6	5	4	3	3	1	2	10	6	5	6	5	6	6	6	6	3	1	1	2	91	4
5		2	1	3	5	27	12	10	9	4	6	4	9	4	4	4	7	3	3	1	3	1	1	1	1	125	5	
6		1	4	10	34	19	23	11	11	5	5	4	3	3	1	3	2	4	4	2	3	4	1	1	2	160	7	
7		3	11	20	12	8	7	8	1	1	1	1	1	2	3	2	4	1	3	3	1	1	1	1	0	96	4	
8		1	3	13	17	14	2	2	1	1	1	1	3	1	1	1	2	1	2	3	1	1	1	1	2	76	3	
9		3	7	11	1	1	0	1	1	1	3	3	4	1	1	1	2	1	1	1	1	1	3	3	1	53	2	
10		1	1	9	6	1	1	5	2	1	0	1	1	1	1	2	2	1	1	1	4	1	3	1	1	48	2	
11		0	0	0	0	0	0	1	1	1	0	1	1	1	1	3	2	2	1	1	3	1	2	2	5	29	1	
12		5	5	7	22	7	1	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	68	3	
13	Q	1	2	5	12	5	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	46	2	
14	Q	1	2	3	4	7	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	37	2	
15		1	1	1	1	1	1	2	3	2	1	1	1	1	1	1	1	1	2	2	2	2	1	2	3	34	1	
16		1	1	1	16	10	14	11	5	1	2	1	1	3	2	3	5	6	5	1	7	10	4	1	3	114	5	
17		8	18	31	35	9	7	7	1	2	4	8	4	1	2	5	1	1	1	1	1	1	2	1	3	154	6	
18		2	3	9	14	18	3	1	3	2	2	1	3	3	3	4	3	4	3	1	1	1	2	4	14	104	4	
19	D	10	8	10	18	19	6	2	3	40	44	17	14	5	6	9	4	5	3	4	3	8	6	6	5	255	11	
20		1	1	14	14	4	3	8	3	3	7	2	2	1	2	3	2	2	1	3	3	3	3	1	2	88	4	
21		7	20	7	22	38	6	10	5	5	14	4	3	5	3	3	1	4	2	3	1	1	2	1	3	170	7	
22	D	11	10	28	9	16	28	30	7	13	14	7	4	3	3	3	4	4	3	3	2	5	3	3	3	216	9	
23	D	3	12	16	1	1	1	1	1	1	2	2	2	2	1	6	12	19	16	9	14	4	3	4	4	137	6	
24	D	5	26	18	16	15	10	3	3	4	7	14	11	8	7	11	10	7	12	10	6	6	11	5	6	231	10	
25		32	15	27	33	7	3	1	2	1	3	2	1	1	2	1	1	1	2	2	1	1	2	1	1	143	6	
26	Q	1	1	1	2	10	7	1	1	1	1	1	1	1	1	3	1	1	1	1	1	0	1	0	1	40	2	
27	Q	1	1	1	2	2	3	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	27	1	
28	Q	1	1	1	2	10	4	1	1	0	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	37	2	
29		1	2	3	4	1	1	1	1	3	3	3	1	2	1	3	1	5	4	3	1	2	3	1	1	51	2	
30		2	3	3	2	1	0	1	3	5	2	1	1	1	1	1	3	1	1	1	1	1	1	1	1	38	2	
SUMS		111	177	266	314	262	159	133	80	112	164	107	117	95	70	94	85	96	94	74	82	68	78	63	73	2974		
MEANS		4	6	9	10	9	5	4	3	4	5	4	4	3	2	3	3	3	3	2	3	2	3	2	2		4	

GREAT WHALE MAGNETIC OBSERVATORY 1967



HOURLY RANGES

TABLE 54 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

MAY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23			
1		3	3	8	13	21	14	21	3	2	8	5	7	5	1	1	2	5	2	1	21	12	14	16	12	200	8
2		9	3	3	3	19	7	8	13	3	11	27	30	10	8	5	8	4	5	8	8	15	7	27	21	262	11
3	D	23	47	29	50	20	52	41	24	27	80	118	53	45	41	14	36	11	8	47	12	20	22	26	14	860	36
4		12	7	13	25	9	3	6	10	5	8	3	3	3	5	9	3	3	4	8	11	8	5	8	5	176	7
5		12	21	12	14	17	7	15	10	12	16	14	4	1	2	1	1	1	4	3	3	8	5	11	11	205	9
6		9	2	21	30	16	16	12	5	2	3	3	3	1	2	2	1	1	3	1	3	4	3	4	5	152	6
7		3	14	12	13	37	25	24	19	15	18	7	3	3	1	2	2	1	1	2	1	5	7	4	2	221	9
8	Q	1	2	1	3	3	4	3	3	2	3	1	5	5	3	5	5	3	5	2	3	2	3	2	1	70	3
9	Q	3	4	3	1	11	21	13	12	12	6	5	2	4	3	3	5	2	3	1	1	1	1	1	2	120	5
10		0	3	3	5	5	10	11	3	3	1	2	4	5	1	3	3	6	2	4	4	5	5	1	3	92	4
11		5	8	10	55	16	26	10	5	7	8	1	2	1	7	1	1	2	3	1	3	2	10	14	15	213	9
12		1	3	26	13	16	20	8	5	10	12	21	3	1	2	1	2	2	1	9	10	4	7	12	5	194	8
13		5	3	27	26	6	14	10	8	6	5	3	3	8	3	2	1	3	3	5	3	8	6	10	6	174	7
14		8	17	11	12	11	20	7	4	3	5	1	3	2	3	4	3	2	4	12	18	6	14	11	10	191	8
15		19	15	16	3	1	1	1	1	0	0	1	3	3	5	2	2	2	2	4	9	8	3	3	5	109	5
16	Q	5	4	14	10	5	27	23	5	10	5	7	5	5	3	1	1	1	3	2	5	8	7	1	7	164	7
17		19	16	15	5	17	43	7	6	1	4	5	11	14	3	3	2	1	4	5	8	5	4	5	12	215	9
18		15	3	3	6	5	34	12	5	16	21	34	11	3	3	3	3	3	1	3	1	3	1	3	3	195	8
19		3	4	8	41	18	28	21	10	9	15	8	6	5	6	8	6	4	2	2	1	5	3	2	3	218	9
20	Q	5	16	11	9	9	4	8	12	5	7	5	1	3	1	1	2	1	3	3	3	5	3	7	1	125	5
21		3	1	7	5	12	4	3	5	2	2	1	1	1	1	1	2	1	3	2	7	6	3	2	7	82	3
22	Q	6	6	4	7	6	12	3	3	1	3	2	5	1	1	1	1	1	1	1	1	0	1	0	1	68	3
23		1	0	1	1	8	11	7	5	2	2	1	3	1	1	2	1	4	3	5	5	15	8	14	3	104	4
24		5	5	5	1	3	4	1	8	5	6	2	4	2	1	1	1	2	7	10	11	4	5	1	5	99	4
25	D	5	3	5	4	5	3	6	4	4	5	33	21	94	72	53	50	20	35	32	48	51	87	47	32	719	30
26	D	87	43	21	81	39	14	47	70	53	32	28	27	30	35	21	14	7	7	15	12	11	8	12	11	725	30
27		15	5	32	24	11	11	16	23	9	11	12	19	4	4	3	1	3	4	7	6	12	12	44	32	320	13
28	D	5	5	7	23	21	15	7	54	34	67	49	58	18	25	25	28	21	22	28	49	19	17	21	35	653	27
29	D	39	43	18	27	53	28	30	30	25	43	26	36	27	27	24	10	5	5	5	5	4	5	3	7	525	22
30		5	4	3	15	25	18	13	4	3	5	3	4	3	4	32	43	10	43	53	23	27	8	22	27	397	17
31		26	12	51	45	14	48	26	8	5	10	8	5	4	3	2	10	15	8	9	13	3	3	3	3	334	14
SUMS		357	322	400	570	459	544	420	377	293	422	436	345	312	277	236	250	147	201	290	308	286	287	337	306	8182	
MEANS		12	10	13	18	15	18	14	12	9	14	14	11	10	9	8	8	5	6	9	10	9	9	11	10	11	

HOURLY RANGES

TABLE 55 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

MAY 1967

HOUR UT DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
	TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24		
1	1	1	5	8	14	7	5	1	1	2	4	3	3	1	1	1	3	2	1	12	5	5	4	6	96	4
2	3	1	3	5	12	7	4	5	4	7	12	9	2	3	5	7	4	7	5	7	19	20	23	16	190	8
3	29	38	20	23	25	18	35	19	35	62	102	67	23	25	16	18	17	6	19	16	22	15	13	13	676	28
4	6	10	4	16	5	3	3	5	5	1	1	2	1	3	1	3	4	1	4	3	3	3	5	3	95	4
5	34	13	12	18	14	8	9	7	8	12	5	2	1	3	3	2	1	3	5	3	4	2	4	7	180	8
6	4	1	12	14	8	12	5	3	2	1	2	1	3	2	2	2	1	1	1	1	2	2	3	4	89	4
7	5	9	16	10	17	13	8	9	7	5	2	1	1	3	2	2	1	1	1	1	3	3	1	1	122	5
8	0	1	1	1	5	1	1	1	1	3	1	3	3	2	1	3	5	2	2	5	2	1	1	1	47	2
9	1	2	3	1	9	12	7	5	4	3	3	1	2	2	1	3	1	2	1	1	1	1	1	1	68	3
10	1	1	2	5	7	7	5	1	1	1	1	1	3	3	4	5	1	1	2	3	3	5	1	1	65	3
11	6	15	7	30	16	21	3	1	2	1	1	1	2	2	1	3	2	2	1	1	1	4	7	6	136	6
12	1	1	18	21	12	20	1	1	3	3	5	2	2	3	3	1	1	2	3	7	1	3	5	3	122	5
13	3	1	10	21	17	8	8	3	1	2	1	1	4	3	3	2	3	2	3	1	1	4	4	7	113	5
14	7	18	9	7	6	20	4	1	3	1	2	1	1	1	4	4	5	4	7	12	5	5	7	12	146	6
15	26	19	12	7	1	1	1	1	1	1	1	1	1	3	1	1	2	2	2	6	3	3	2	3	101	4
16	3	2	5	7	5	26	12	2	4	3	2	2	1	1	1	2	2	1	1	2	4	4	2	1	95	4
17	16	24	12	6	21	22	5	1	1	2	2	5	4	3	5	2	3	2	4	5	5	3	3	5	161	7
18	4	2	3	3	3	20	18	3	8	23	16	5	1	3	3	2	3	1	2	1	1	1	1	1	128	5
19	3	7	12	21	29	21	26	3	4	8	3	1	1	3	3	3	4	1	2	1	3	1	1	1	162	7
20	5	9	3	9	3	3	3	3	3	2	3	1	1	1	3	3	1	1	1	1	4	2	1	1	67	3
21	1	1	5	4	14	3	3	1	1	1	1	1	1	1	2	1	2	1	1	2	5	1	1	2	56	2
22	3	8	5	3	2	4	2	1	1	1	1	3	2	2	2	1	2	1	1	1	2	1	1	1	51	2
23	2	3	2	1	1	3	1	1	3	1	3	2	1	5	3	2	3	7	7	12	3	3	1	2	72	3
24	1	1	1	2	5	5	4	1	1	1	1	1	2	2	2	2	2	2	7	3	10	4	3	1	64	3
25	1	2	3	2	1	2	3	2	2	3	27	15	60	51	61	38	18	27	47	15	65	110	17	26	598	25
26	42	35	18	27	18	19	41	42	66	18	21	30	21	21	15	11	5	8	12	14	7	5	6	14	516	22
27	5	5	21	11	10	12	13	16	7	10	8	7	3	7	3	1	1	3	5	5	9	13	36	18	229	10
28	3	7	10	13	13	9	3	24	30	42	82	44	5	16	12	18	27	13	18	34	27	15	14	25	504	21
29	5	3	1	14	14	11	7	3	3	1	1	2	3	2	15	11	7	27	25	29	23	10	26	21	264	11
30	15	37	13	18	34	8	35	23	10	35	25	42	28	21	7	6	4	3	3	3	1	3	3	5	382	16
31	12	14	27	26	10	48	23	3	1	1	3	2	3	2	2	5	9	5	10	5	1	1	2	1	216	9
SUMS	248	291	275	354	351	374	298	192	223	257	342	259	189	200	187	165	144	141	203	212	245	253	199	209	5811	
MEANS	8	9	9	11	11	12	10	6	7	8	11	8	6	6	6	5	5	5	7	7	8	8	6	7		8

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 56 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

JUNE 1967

DAY	HCUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23			
1	Q	2	2	1	3	2	1	1	1	1	1	3	3	3	3	3	1	2	3	3	2	4	3	2	2	52	2
2		3	4	1	1	5	3	8	3	10	23	14	8	4	4	3	7	3	5	5	10	7	3	4	8	146	6
3		14	23	19	10	32	11	10	12	15	5	3	2	1	2	2	2	3	4	4	3	3	3	3	2	188	8
4		8	2	4	5	3	1	2	1	1	2	2	1	10	5	6	3	8	13	17	7	13	9	14	23	160	7
5	D	15	6	3	5	5	5	1	5	3	3	8	19	16	4	4	1	2	1	8	34	15	17	30	23	233	10
6	D	66	67	19	11	2	14	12	4	3	2	4	3	2	5	4	2	4	3	20	6	10	23	14	25	325	14
7		27	47	19	14	19	21	9	47	28	10	17	5	3	1	1	1	1	2	1	1	1	2	2	2	281	12
8		2	1	2	1	1	3	5	5	5	27	27	39	19	4	8	6	8	3	5	8	14	13	8	10	224	9
9		15	39	45	28	28	11	10	5	9	12	12	23	21	3	1	1	2	1	5	7	7	3	22	21	331	14
10		12	32	10	15	14	8	5	6	10	5	3	3	3	2	2	1	1	3	2	3	2	2	4	2	150	6
11		2	3	12	21	10	4	3	1	1	1	1	1	3	1	1	2	2	1	5	11	5	5	3	2	101	4
12		2	6	9	8	9	4	3	13	7	6	0	4	3	3	3	2	3	1	3	3	3	4	3	3	105	4
13		6	5	23	9	3	3	5	3	1	1	2	1	2	2	1	1	2	2	3	2	8	6	5	4	100	4
14		2	19	13	15	8	12	8	13	19	12	17	20	24	8	5	3	3	2	12	10	11	12	14	11	273	11
15		23	24	6	30	18	14	5	12	16	3	3	2	1	1	3	1	2	2	2	5	3	1	2	4	183	8
16		3	1	2	5	4	2	4	3	16	8	19	2	5	3	4	2	1	3	2	3	2	2	2	2	100	4
17		6	5	3	4	5	9	3	3	9	23	9	23	9	2	4	4	3	13	8	8	4	7	14	8	186	8
18	Q	7	8	3	12	4	8	8	3	3	1	1	1	1	1	1	2	2	1	1	3	1	2	2	2	77	3
19		2	1	2	5	3	3	1	1	1	2	3	1	3	1	2	3	5	4	3	3	1	3	3	1	57	2
20	Q	3	3	1	2	9	5	12	11	16	3	1	1	1	1	1	1	1	2	1	1	1	1	0	2	80	3
21		2	1	1	4	12	7	3	6	1	1	1	1	1	1	1	3	1	1	1	1	3	5	5	9	72	3
22		3	1	2	3	8	5	18	25	8	3	3	3	2	3	2	1	2	1	2	3	2	1	1	1	103	4
23	Q	1	1	2	8	6	2	2	2	3	1	1	1	0	1	1	1	1	1	2	1	3	3	2	1	47	2
24	Q	1	3	3	3	1	12	13	8	5	1	1	1	1	1	1	1	1	2	1	1	1	2	5	4	73	3
25	D	3	3	6	4	6	8	32	19	8	6	5	3	3	3	2	7	7	10	10	28	21	30	21	26	271	11
26	D	16	14	12	16	14	16	14	8	6	3	3	21	10	5	4	12	12	6	5	5	10	21	21	6	260	11
27	D	54	27	38	32	15	38	16	12	13	23	25	21	4	3	3	2	3	6	5	10	5	2	3	13	373	16
28		9	6	6	3	3	1	1	2	3	16	36	28	25	5	3	3	2	5	14	7	14	4	2	3	201	8
29		1	1	2	2	3	27	24	19	7	8	2	3	6	8	5	5	6	8	5	4	14	10	3	12	185	8
30		16	8	5	5	8	19	19	29	32	13	8	19	10	6	1	3	3	7	8	3	8	7	8	10	255	11
SUMS		326	363	274	284	260	277	257	282	260	225	234	263	196	92	82	83	96	117	163	191	198	205	222	242	5192	
MEANS		11	12	9	9	9	9	9	9	9	8	8	9	7	3	3	3	3	4	5	6	7	7	7	8		7

HOURLY RANGES

TABLE 57 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

JUNE 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24		
1	Q	1	1	1	2	3	1	1	1	1	1	1	2	1	2	3	1	1	1	2	1	2	1	1	1	33	1
2		1	3	1	2	7	3	7	1	1	8	9	6	1	2	2	10	5	3	1	6	3	1	3	2	88	4
3		23	23	5	21	26	5	1	2	4	3	1	1	1	1	3	2	2	5	3	1	1	1	1	1	137	6
4		1	1	3	3	1	1	1	0	1	1	5	2	3	7	1	3	3	10	11	12	9	7	6	23	115	5
5	D	13	3	5	5	8	1	1	1	1	1	2	3	4	3	3	3	2	3	5	15	15	13	26	32	168	7
6	D	36	29	23	4	11	10	5	2	1	1	3	2	1	3	1	3	3	3	14	10	11	15	8	14	213	9
7		32	37	13	9	19	25	14	25	14	13	11	5	3	5	3	3	1	1	1	1	1	1	1	1	239	10
8		1	1	2	1	3	2	4	3	2	8	19	12	12	4	9	7	8	5	3	3	12	11	3	4	139	6
9		10	20	57	40	10	8	6	3	3	12	12	28	5	3	3	2	4	2	1	3	7	4	18	23	284	12
10		4	25	14	10	10	10	8	2	3	5	1	1	1	3	2	1	2	2	1	2	1	1	1	2	112	5
11		1	2	5	11	9	5	1	1	1	1	1	1	1	3	3	5	1	3	2	7	3	1	1	1	70	3
12		1	2	5	8	5	3	2	3	3	1	1	2	1	1	2	2	3	1	2	2	1	3	1	1	56	2
13		3	6	41	9	2	2	3	1	1	1	1	2	1	1	1	3	1	3	2	5	4	2	2	2	98	4
14		1	10	10	6	5	9	5	15	10	7	8	10	10	3	5	3	5	2	9	3	3	6	10	14	169	7
15		12	14	6	23	27	6	5	5	2	1	1	1	1	1	3	1	2	3	1	3	2	1	2	1	124	5
16		2	1	2	3	2	1	1	2	5	5	3	2	3	3	3	2	3	2	3	1	1	2	2	1	55	2
17		4	4	3	4	2	2	1	1	2	8	11	8	5	2	1	4	3	10	5	5	3	2	5	5	100	4
18	Q	8	2	3	11	7	3	1	1	1	1	1	1	1	2	1	3	1	1	1	1	1	1	1	1	55	2
19		1	1	1	1	1	1	1	1	1	1	2	2	2	1	5	5	7	5	3	2	1	4	1	1	51	2
20	Q	3	2	1	2	5	3	3	6	8	2	1	1	2	1	2	2	2	2	1	1	1	1	0	1	53	2
21		1	1	1	3	5	5	2	3	1	1	2	1	1	1	3	3	3	1	1	1	3	2	2	3	50	2
22		2	1	0	3	7	1	8	5	3	3	4	1	3	2	4	3	2	1	2	1	1	1	1	1	60	3
23	Q	1	1	2	8	5	2	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	2	2	1	42	2
24	Q	1	2	3	1	1	5	8	4	1	1	1	0	1	1	3	1	1	1	1	1	1	1	4	1	45	2
25	D	2	3	2	4	2	2	13	7	5	3	5	3	3	2	3	4	3	9	10	25	21	24	14	19	188	8
26	D	11	10	15	10	5	7	3	3	3	1	2	14	5	3	6	8	12	4	3	5	4	9	7	8	158	7
27	D	43	18	14	17	17	21	12	5	5	9	12	8	5	3	3	3	3	5	6	4	3	2	2	3	223	9
28		10	3	4	2	2	1	1	1	2	5	17	19	6	3	4	1	3	4	7	5	11	2	1	1	115	5
29		1	1	1	2	3	19	26	26	7	1	2	2	2	5	3	3	3	12	3	3	9	5	1	6	146	6
30		10	5	6	3	2	6	12	28	20	6	9	6	4	5	2	3	4	3	5	3	3	3	3	5	156	7
SUMS		240	232	249	228	212	170	157	159	113	112	149	146	91	76	90	92	99	106	111	130	140	131	130	179	3542	
MEANS		8	8	8	8	7	6	5	5	4	4	5	5	3	3	3	3	3	4	4	4	5	4	4	6		5

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 58 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

JULY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS	
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23	T0 24			
1	D	5	8	9	8	26	11	12	14	46	25	30	28	23	19	12	12	9	8	5	5	8	6	8	4	341	14	
2		6	18	10	33	27	12	8	5	3	3	1	1	1	1	1	1	1	1	1	1	2	5	4	3	149	6	
3	Q	4	2	5	17	10	5	2	1	1	3	3	2	1	1	1	1	1	2	1	3	1	3	1	2	73	3	
4		8	3	9	11	27	17	9	5	9	17	1	1	1	1	1	2	3	2	2	3	1	3	4	14	154	6	
5	D	8	12	17	5	17	8	3	8	52	54	14	10	23	21	8	7	5	7	6	4	10	5	7	9	320	13	
6		3	7	7	7	5	3	1	1	1	1	1	5	3	5	14	5	1	5	3	5	17	10	17	12	139	6	
7		14	15	48	36	16	17	7	5	7	6	5	3	2	5	5	1	2	2	7	4	4	2	3	3	219	9	
8		3	3	4	10	14	8	3	5	2	5	2	3	3	1	2	1	1	1	1	2	1	0	1	1	77	3	
9	Q	1	1	1	1	1	1	12	12	5	1	1	0	1	1	2	1	1	1	2	1	3	3	1	1	55	2	
10	Q	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	1	9	28	1	
11	D	12	23	8	3	7	3	43	14	10	14	14	11	10	14	10	3	7	8	13	7	17	7	10	5	273	11	
12		6	3	30	20	19	5	6	10	14	13	5	3	3	1	2	1	2	4	4	3	7	8	6	1	176	7	
13		5	14	6	3	9	7	5	6	7	1	1	2	1	2	1	1	2	3	6	6	8	6	17	17	136	6	
14		5	6	8	25	36	25	17	19	18	8	14	5	2	4	3	1	2	3	1	3	3	7	10	1	226	9	
15		1	1	2	1	2	2	3	1	1	1	1	2	2	2	3	5	3	4	12	10	22	12	5	1	99	4	
16		2	1	3	17	14	12	3	3	3	3	1	1	1	1	1	0	1	1	2	2	5	3	1	3	84	4	
17		5	6	3	5	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	6	5	3	1	3	56	2	
18		5	1	1	1	1	8	14	8	5	37	16	6	5	2	1	3	2	3	3	2	1	1	5	7	138	6	
19		5	14	3	3	5	3	1	1	0	0	0	1	1	1	1	1	1	1	2	1	2	1	1	1	50	2	
20		5	2	2	19	13	3	1	1	8	5	4	2	3	2	2	2	1	1	2	3	3	2	3	3	92	4	
21		3	3	5	10	10	10	16	17	9	5	8	2	3	1	1	2	3	1	2	4	3	2	1	4	125	5	
22	Q	4	3	1	1	14	12	3	2	3	2	1	1	1	2	1	1	2	2	1	1	3	1	2	2	66	3	
23	D	2	0	1	2	10	7	12	5	6	6	3	3	3	1	3	3	3	9	6	15	19	20	12	14	165	7	
24		8	3	7	3	4	7	14	9	5	5	5	1	2	3	1	3	4	4	4	7	5	5	5	7	121	5	
25		4	18	15	3	5	6	16	14	2	2	28	10	6	3	3	2	1	5	12	4	10	6	4	19	198	8	
26		17	16	21	30	15	2	3	2	3	3	2	4	3	4	2	2	1	1	2	2	1	2	3	2	143	6	
27		1	1	0	0	0	0	1	13	9	19	5	0	1	1	2	0	1	2	3	5	9	3	3	6	85	4	
28		5	5	5	1	12	11	12	5	10	9	10	7	3	1	8	12	9	5	5	7	5	2	2	3	154	6	
29		5	3	6	17	34	23	8	7	8	10	3	1	1	1	1	2	3	9	6	5	3	3	19	11	189	8	
30	D	17	17	26	25	12	33	22	23	8	5	2	1	1	1	2	1	1	1	1	1	1	1	0	0	202	8	
31	Q	1	1	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	2	1	1	16	1
SUMS		170	210	265	318	369	263	260	218	257	266	183	118	112	104	96	78	75	100	120	124	180	136	158	169	4349		
MEANS		5	7	9	10	12	8	8	7	8	9	6	4	4	3	3	3	2	3	4	4	6	4	5	5		6	

HOURLY RANGES

TABLE 59 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

JULY 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS	
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24			
1	D	8	6	8	4	25	15	14	19	32	49	28	21	21	17	9	5	3	5	3	6	3	7	5	4	317	13	
2		10	12	10	27	11	14	10	2	4	1	0	0	1	1	1	1	1	0	1	1	1	3	2	1	115	5	
3	Q	4	3	8	14	6	2	2	1	1	1	1	1	1	1	1	1	2	1	1	3	1	3	1	1	61	3	
4		1	1	5	7	12	10	5	3	2	4	1	2	1	1	1	2	6	4	1	3	2	2	2	4	82	3	
5	D	5	16	12	5	16	17	3	3	23	27	6	4	5	7	5	7	5	2	3	3	5	2	5	3	189	8	
6		1	2	4	3	2	4	1	1	0	1	1	1	3	5	3	3	2	5	5	2	4	5	19	11	88	4	
7		8	12	31	21	27	28	2	1	2	1	1	2	1	5	5	1	2	2	5	4	1	1	1	1	165	7	
8		2	4	3	5	5	4	2	2	1	2	2	3	1	1	2	1	2	1	0	1	1	1	1	0	47	2	
9	Q	0	1	1	1	1	1	4	3	2	2	2	1	1	1	2	1	2	1	2	1	3	1	1	0	35	1	
10	Q	0	0	0	0	0	0	0	1	1	3	1	1	2	1	2	1	2	3	1	1	1	2	3	3	29	1	
11	D	7	19	11	3	4	3	18	14	6	8	9	5	5	8	6	8	7	9	7	5	5	2	3	5	177	7	
12		3	2	32	17	9	2	2	5	3	5	3	3	3	2	2	1	3	3	3	3	5	3	4	1	119	5	
13		3	11	6	3	6	5	3	2	3	1	1	1	1	1	3	1	1	1	3	3	4	2	8	5	78	3	
14		2	3	4	15	28	20	12	12	11	10	10	3	1	3	1	4	2	1	3	1	3	3	3	0	155	6	
15		1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	8	5	3	6	3	5	3	3	1	57	2	
16		1	1	3	21	13	5	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	1	2	66	3	
17		2	8	3	4	2	1	0	0	1	1	1	1	1	1	1	2	1	3	2	4	3	1	2	1	46	2	
18		1	1	1	1	1	8	7	3	3	19	7	3	3	3	2	4	3	2	1	1	1	1	2	3	81	3	
19		10	12	2	2	2	1	1	1	1	0	0	1	1	1	1	2	1	2	1	0	0	1	1	3	47	2	
20		4	1	2	9	3	1	1	1	3	3	3	1	1	1	3	4	2	2	1	1	3	1	1	1	53	2	
21		1	2	5	6	6	5	9	10	3	2	5	3	3	3	3	2	2	1	1	1	1	1	2	4	81	3	
22	Q	1	1	1	1	10	9	5	2	1	2	1	1	1	1	3	2	1	2	1	1	1	2	3	1	54	2	
23	D	1	0	1	1	6	2	5	4	5	5	2	2	2	3	3	3	6	6	5	9	11	16	11	7	116	5	
24		3	3	3	3	7	5	4	1	2	3	3	1	1	2	4	3	3	2	4	5	3	2	1	3	71	3	
25		3	25	11	3	6	6	4	3	1	1	5	6	5	3	4	1	3	4	6	5	6	4	1	12	128	5	
26		14	8	8	25	9	1	1	1	1	1	2	2	3	2	3	3	3	1	1	2	1	2	1	1	96	4	
27		0	1	0	0	1	1	0	5	5	13	1	1	1	1	1	2	3	2	1	2	3	1	1	3	49	2	
28		5	3	2	1	6	10	3	3	2	3	4	2	2	3	3	5	6	8	8	4	3	1	1	3	91	4	
29		4	3	9	10	34	15	7	3	3	3	1	1	1	1	1	4	4	5	1	2	3	2	10	12	139	6	
30	D	10	7	14	17	7	17	26	17	9	3	3	1	1	2	2	3	1	1	1	1	0	0	1	0	144	6	
31	Q	1	1	1	1	2	1	1	0	0	1	0	1	0	1	0	2	1	0	1	1	1	1	0	0	18	1	
SUMS		116	170	202	231	268	214	154	125	133	178	106	77	76	85	79	90	86	84	80	80	86	78	100	96	2994		
MEANS		4	5	7	7	9	7	5	4	4	6	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 60 GREAT WHALE RIVER		HORIZONTAL COMPONENT IN TEN GAMMA UNITS																								AUGUST 1967	
DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23	T0 24		
1	Q	1	1	2	1	0	1	0	0	0	0	0	2	1	2	2	5	1	6	2	3	1	1	0	2	34	1
2	Q	1	2	1	1	1	1	0	0	0	1	2	2	1	1	1	1	1	2	1	1	2	3	1	1	28	1
3	Q	1	0	0	0	0	0	1	1	1	1	1	1	2	1	1	1	2	2	2	1	4	4	6	2	35	1
4		2	1	1	1	1	1	6	9	3	4	2	3	4	3	7	2	5	6	7	3	6	4	2	5	88	4
5		6	7	5	2	6	10	20	10	12	8	5	6	5	4	2	2	2	5	2	6	6	6	2	2	141	6
6		1	1	2	2	7	17	5	4	7	15	19	2	2	1	1	3	1	1	4	6	5	4	7	5	122	5
7		5	7	3	3	3	2	2	23	15	23	6	13	2	2	3	4	5	3	8	8	5	10	5	8	168	7
8		10	9	10	6	18	10	21	21	33	24	20	3	3	2	4	3	3	2	5	5	2	4	3	6	227	9
9		5	1	2	3	1	1	7	6	4	9	8	5	1	2	4	3	3	1	1	5	2	6	4	6	90	4
10	D	10	12	23	16	18	43	11	6	4	2	5	31	28	17	5	6	1	3	2	8	5	21	9	28	314	13
11	D	6	8	18	12	9	6	14	14	30	23	17	14	11	8	12	14	7	9	20	12	15	18	9	30	336	14
12		22	44	23	5	2	3	8	8	17	7	5	3	3	6	3	3	3	3	2	3	6	5	5	7	196	8
13		3	7	6	10	6	3	2	1	1	1	2	4	2	3	1	3	8	4	3	5	7	4	6	10	102	4
14		13	10	27	14	39	33	8	16	13	7	20	16	3	5	3	1	1	3	2	4	3	3	3	5	252	11
15		5	1	4	19	8	3	3	2	3	9	10	17	9	2	1	2	2	4	3	5	4	5	4	5	130	5
16		4	3	8	7	7	4	5	5	9	3	5	11	6	4	4	3	2	3	5	5	5	10	11	9	138	6
17	D	16	13	21	38	16	8	10	13	5	17	26	25	18	8	10	9	6	8	5	3	2	3	2	12	294	12
18	D	13	12	8	8	14	12	25	20	32	20	9	10	5	7	4	5	6	5	11	8	14	8	13	3	272	11
19		8	9	5	6	9	32	15	16	14	12	10	10	7	3	3	4	3	3	3	10	13	10	7	8	220	9
20		5	5	5	19	34	19	16	14	14	12	9	10	8	5	5	3	5	4	4	3	7	5	4	3	218	9
21		3	8	4	13	13	14	3	8	8	8	7	3	2	2	3	3	2	3	3	3	3	2	3	3	124	5
22	Q	3	1	1	1	1	20	22	2	1	1	1	4	5	4	3	2	2	2	1	3	1	3	8	1	93	4
23	Q	1	2	5	12	3	10	10	2	1	3	8	3	4	1	1	1	3	5	4	4	4	1	3	2	93	4
24		6	6	5	8	12	5	6	8	12	7	8	8	5	3	4	3	2	3	3	2	3	3	2	5	129	5
25	D	2	1	2	3	12	15	15	12	11	5	13	7	9	3	2	5	3	6	4	12	8	3	13	17	183	8
26		11	7	5	6	4	1	2	13	10	10	15	5	2	3	3	1	3	2	8	12	9	13	14	5	164	7
27		10	5	22	15	15	3	2	3	8	15	21	5	2	4	4	3	1	3	2	3	5	10	8	5	174	7
28		2	2	3	3	4	12	8	4	2	1	1	2	2	2	2	1	2	2	1	3	2	1	4	1	67	3
29		2	1	1	1	1	2	2	12	8	6	12	3	2	5	1	2	1	2	3	2	8	8	8	2	95	4
30		1	0	1	2	31	21	12	13	32	8	9	8	4	8	4	2	2	3	5	8	8	5	5	5	197	8
31		9	12	27	14	17	9	16	12	38	20	17	7	5	4	3	4	4	3	2	8	1	5	7	7	251	10
SUMS		187	198	250	251	312	321	277	278	348	282	293	243	163	125	106	104	92	111	128	164	166	188	178	210	4975	
MEANS		6	6	8	8	10	10	9	9	11	9	9	8	5	4	3	3	3	4	4	5	5	6	6	7	7	

HOURLY RANGES

TABLE 61 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

AUGUST 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23	T0 24		
1	Q	1	1	1	1	0	0	0	0	0	1	1	1	2	2	3	3	3	2	3	2	2	1	1	1	32	1
2	Q	1	0	0	0	0	0	0	0	0	1	2	2	0	1	2	1	2	1	1	1	1	2	1	1	20	1
3	Q	1	0	1	0	0	1	0	0	1	1	1	1	1	2	1	2	2	1	1	2	1	1	3	1	25	1
4		1	1	1	1	1	1	4	6	4	3	1	1	2	3	4	3	8	4	6	4	3	2	2	1	67	3
5		5	7	2	1	1	1	10	8	4	5	4	4	3	4	3	3	1	2	2	3	3	3	1	1	81	3
6		1	1	1	1	2	8	1	1	2	3	4	2	2	2	2	3	2	1	5	2	2	2	4	4	58	2
7		6	8	3	2	4	1	1	6	14	12	6	3	1	1	4	1	5	2	6	3	3	6	3	5	106	4
8		5	6	14	17	9	3	5	8	21	17	4	1	2	1	3	3	2	3	3	2	1	3	3	4	140	6
9		1	1	1	3	1	1	2	2	1	2	4	3	1	3	3	6	5	1	1	1	1	3	2	3	52	2
10	D	10	8	19	17	13	30	3	1	1	1	1	5	17	5	4	7	2	1	1	2	4	7	8	8	175	7
11	D	2	2	16	8	3	5	4	9	19	8	10	7	10	6	10	19	7	4	8	10	5	15	10	27	224	9
12		22	28	30	4	1	1	3	2	5	3	3	2	1	2	3	3	1	1	1	5	3	3	5	5	133	6
13		2	6	5	11	10	1	1	1	1	1	1	2	1	2	1	3	3	8	2	2	1	3	1	13	82	3
14		8	8	13	13	29	28	8	15	12	5	10	5	3	3	5	1	2	1	2	2	2	2	3	5	185	8
15		6	1	3	22	10	2	1	1	1	1	2	8	4	2	3	3	1	2	1	2	1	3	2	3	85	4
16		3	3	5	4	4	2	1	1	1	1	2	3	3	5	3	6	4	4	3	3	3	2	5	4	75	3
17	D	6	10	14	50	14	3	5	3	2	5	12	10	5	7	8	8	7	8	4	1	3	1	1	3	190	8
18	D	9	14	5	8	11	7	27	23	12	10	3	3	5	7	4	3	5	5	5	3	5	5	10	3	192	8
19		9	8	3	3	5	25	22	3	3	5	5	3	3	3	4	3	4	4	1	3	5	6	2	3	135	6
20		3	3	1	11	31	21	18	12	7	3	2	5	4	3	5	4	8	5	3	1	3	5	3	1	162	7
21		1	7	3	8	7	5	1	1	3	3	5	3	3	2	4	3	3	1	4	4	2	1	1	1	76	3
22	Q	3	2	1	1	1	11	5	1	1	1	2	2	3	3	3	3	1	5	2	2	3	2	5	1	64	3
23	Q	1	1	13	10	2	3	7	1	1	1	2	3	2	1	2	2	1	1	3	2	2	1	1	1	64	3
24		3	8	3	8	4	5	3	2	5	8	6	3	3	3	3	3	3	3	1	1	1	2	1	1	83	3
25	D	1	1	1	1	11	11	8	10	8	3	5	3	3	4	4	8	2	3	3	6	1	1	4	9	111	5
26		17	5	2	4	3	1	2	5	3	2	2	2	2	3	1	2	6	2	3	6	5	3	5	3	89	4
27		12	5	18	10	4	3	1	1	3	8	7	2	1	3	3	4	3	3	2	2	3	3	3	1	105	4
28		1	1	3	1	3	4	3	1	1	1	1	3	1	2	3	1	7	3	1	3	2	1	1	1	49	2
29		2	1	1	1	1	2	1	3	5	4	5	2	2	2	2	3	1	4	1	1	1	2	1	1	49	2
30		1	0	1	1	22	11	7	16	18	6	8	3	3	8	4	3	3	4	3	7	2	3	4	4	142	6
31		7	5	18	14	13	15	10	18	18	11	6	3	3	5	2	5	3	3	2	4	1	2	3	3	174	7
SUMS		151	152	202	236	220	212	164	161	177	136	127	100	96	100	106	122	107	92	84	88	77	96	97	122	3225	
MEANS		5	5	7	8	7	7	5	5	6	4	4	3	3	3	3	4	3	3	3	3	2	3	3	4		4

GREAT WHALE MAGNETIC OBSERVATORY 1967



HOURLY RANGES

TABLE 62 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

SEPTEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24		
1		11	21	38	20	8	10	36	37	8	6	9	13	13	6	21	8	7	14	12	37	12	13	11	19	390	16
2		10	10	22	26	9	5	22	17	10	20	26	18	27	5	10	5	6	12	7	3	4	3	3	3	283	12
3		1	3	3	4	3	15	10	8	3	8	6	3	5	4	2	3	3	3	3	2	1	5	6	4	108	5
4		1	3	12	10	24	10	5	11	10	3	1	3	2	3	1	2	4	4	3	2	2	2	2	2	122	5
5	Q	3	2	2	3	5	8	3	12	5	9	2	1	2	1	1	2	2	1	2	3	1	3	1	1	75	3
6		1	3	13	21	16	5	1	1	1	1	1	1	1	1	2	1	2	3	2	4	2	5	3	92	4	
7		1	1	3	1	3	4	1	2	2	0	1	1	1	3	5	3	5	7	5	2	1	3	1	1	57	2
8		3	3	2	3	3	4	1	3	1	1	4	1	3	5	4	2	3	3	12	12	10	15	7	10	115	5
9		11	3	28	26	15	3	5	3	14	8	26	32	5	8	3	1	1	4	5	6	13	10	6	4	240	10
10	Q	8	14	6	20	11	10	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	92	4
11	Q	1	1	0	1	1	1	1	1	1	2	3	3	1	1	1	2	2	1	2	1	2	2	2	1	33	1
12	Q	1	1	1	1	1	1	3	1	1	1	1	2	1	3	1	1	1	1	2	3	4	2	2	1	37	2
13		1	2	1	16	29	32	19	12	20	38	39	23	23	20	11	9	17	10	18	7	11	12	12	14	396	17
14		12	5	4	4	13	14	26	10	22	17	13	13	26	34	17	10	5	5	6	7	14	16	7	10	310	13
15		19	12	17	15	4	36	29	23	14	5	5	4	2	3	1	3	1	3	2	5	9	2	3	5	222	9
16		34	44	35	17	15	14	5	3	3	3	1	6	6	10	4	2	3	4	2	3	5	3	5	4	231	10
17		4	2	9	16	3	3	6	12	3	5	2	2	3	2	4	1	1	4	4	4	1	3	1	1	96	4
18		1	1	1	1	1	1	1	0	1	5	3	5	8	5	4	2	3	3	6	16	9	9	14	26	126	5
19		9	53	13	8	5	57	35	8	12	18	6	5	10	15	6	1	2	3	6	6	13	14	6	3	314	13
20	D	5	8	8	19	11	5	6	39	23	21	28	57	31	16	30	14	13	26	14	14	27	11	14	41	481	20
21	D	46	33	80	57	17	31	48	29	37	29	48	34	12	28	39	22	23	18	23	18	11	11	10	59	763	32
22		32	11	11	50	17	5	2	1	2	3	1	2	5	3	5	3	3	3	5	3	4	3	2	1	177	7
23	Q	1	1	1	2	1	4	4	4	6	6	4	3	5	2	1	1	1	2	1	2	1	5	3	1	62	3
24		0	2	3	8	10	1	0	1	10	13	8	4	3	3	3	1	4	4	3	3	9	3	5	7	108	5
25		6	3	1	1	1	1	7	4	3	1	1	2	1	1	1	1	1	1	4	3	5	6	4	5	64	3
26		3	1	1	1	2	6	3	10	10	1	1	1	1	1	1	0	1	3	2	3	6	3	8	3	72	3
27		9	5	1	2	5	5	3	2	1	1	0	1	2	1	3	1	1	1	3	3	1	1	1	1	54	2
28	D	2	1	8	17	19	40	15	6	7	9	59	33	32	12	17	12	7	14	10	9	14	19	10	12	384	16
29	D	44	41	16	44	30	52	39	37	53	14	28	40	24	21	10	11	35	8	11	23	19	12	11	28	651	27
30	D	39	60	46	38	15	21	36	26	35	19	22	29	46	17	17	7	15	14	11	3	2	1	5	6	530	22
SUMS		319	350	386	452	297	404	375	326	320	268	350	343	302	235	225	132	172	180	187	207	215	195	168	277	6685	
MEANS		11	12	13	15	10	13	13	11	11	9	12	11	10	8	8	4	6	6	6	7	7	7	6	9		9

HOURLY RANGES

TABLE 63 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

SEPTEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23	T0 24		
1		8	28	22	34	8	14	23	19	6	8	3	5	8	6	8	5	3	9	8	19	10	8	5	31	298	12
2		30	5	9	10	3	4	5	12	10	29	23	21	8	5	5	4	4	9	3	2	3	1	1	2	208	9
3		1	1	5	4	3	8	3	5	1	2	3	2	2	2	1	1	2	2	3	1	1	3	5	63	3	
4		1	3	10	8	23	5	2	3	3	1	1	1	2	3	1	3	1	3	3	1	1	2	1	1	83	3
5	Q	2	2	2	3	6	3	1	3	1	2	1	1	1	1	1	2	1	1	2	2	2	1	1	1	43	2
6		2	3	8	13	6	2	1	1	1	1	1	1	1	1	2	3	2	1	1	1	2	1	1	1	57	2
7		1	1	2	1	3	3	1	1	1	1	1	1	1	1	5	8	13	12	3	1	3	1	1	1	67	3
8		1	1	2	1	1	1	1	1	1	1	1	2	2	6	5	3	5	3	10	4	6	3	2	3	66	3
9		8	2	12	27	6	3	1	2	3	3	5	10	4	2	2	2	2	1	3	2	9	6	3	4	122	5
10	Q	10	6	3	17	5	4	2	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	3
11	Q	1	1	0	0	0	0	1	0	1	1	3	1	1	1	2	1	3	1	1	2	1	1	1	1	25	1
12	Q	1	1	0	1	0	0	1	1	0	1	1	1	1	3	1	1	1	1	1	2	1	1	1	1	23	1
13		1	1	1	5	37	18	8	5	8	11	31	10	5	12	10	7	13	10	12	5	7	7	7	5	236	10
14		7	3	3	2	10	12	15	6	3	6	7	6	15	14	5	9	5	6	5	5	8	9	4	10	175	7
15		14	6	17	5	3	34	29	21	7	2	3	3	3	2	2	3	2	2	1	2	3	3	1	2	170	7
16		21	25	12	17	8	12	1	2	1	2	2	3	3	3	3	3	3	3	2	2	3	1	1	1	134	6
17		1	1	5	8	6	2	3	4	3	3	1	1	1	2	3	2	2	3	3	3	1	1	1	1	61	3
18		1	0	1	1	1	1	0	0	1	2	1	2	9	6	6	5	3	7	2	13	8	7	14	21	112	5
19		19	39	6	13	11	33	12	5	9	7	3	4	5	8	7	2	5	3	2	5	10	10	3	3	224	9
20	D	4	5	8	6	10	5	2	12	19	23	53	52	30	8	12	11	9	34	7	5	19	10	9	38	391	16
21	D	41	30	37	50	19	37	37	34	48	39	48	30	15	21	19	14	15	16	14	32	9	7	10	28	650	27
22		25	5	12	26	25	3	1	1	1	2	1	1	3	2	3	4	5	4	3	2	3	2	1	1	136	6
23	Q	1	1	1	1	1	5	2	1	1	2	1	2	3	1	1	2	1	1	1	2	1	5	2	1	40	2
24		1	1	2	8	8	0	1	0	1	5	5	6	3	3	2	3	2	3	3	2	3	3	2	3	70	3
25		3	3	1	0	0	1	1	1	1	0	0	3	1	1	2	2	3	1	1	1	1	1	4	4	36	2
26		1	0	1	1	3	2	2	3	3	1	1	2	1	1	1	2	1	1	1	1	3	1	2	3	38	2
27		4	3	0	1	1	8	1	1	1	0	1	1	1	3	2	1	1	2	1	1	1	1	1	1	38	2
28	D	1	2	3	10	18	21	14	5	4	5	23	41	10	12	8	8	8	14	12	5	8	10	15	11	268	11
29	D	38	61	12	41	12	28	26	32	16	6	15	21	12	13	7	10	9	12	6	10	10	8	9	17	431	18
30	D	42	26	33	48	26	6	32	8	12	13	21	23	22	17	12	8	12	10	7	2	1	1	3	3	388	16
SUMS		291	266	230	362	263	275	229	190	168	179	261	258	174	161	140	130	136	176	121	138	139	114	110	205	4716	
MEANS		10	9	8	12	9	9	8	6	6	6	9	9	6	5	5	4	5	6	4	5	5	4	4	7		7

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 64 GREAT WHALE RIVER		HORIZONTAL COMPONENT IN TEN GAMMA UNITS																								OCTOBER 1967	
DAY	HCUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO		
1		13	37	46	10	16	8	7	7	18	14	16	3	7	4	4	3	1	2	1	3	1	1	1	1	224	9
2		1	1	4	3	3	1	1	1	12	13	3	3	2	3	2	1	1	2	4	8	8	3	1	1	82	3
3		1	1	5	4	11	18	24	8	12	3	2	1	2	3	3	2	1	2	2	7	5	6	3	5	131	5
4		6	1	1	1	1	2	5	1	1	1	1	2	2	1	1	1	1	1	1	2	4	2	3	3	45	2
5		3	2	1	19	10	3	3	10	12	16	2	3	3	2	3	3	2	3	4	10	4	5	2	1	126	5
6		3	5	14	17	27	9	1	5	5	1	2	5	5	3	2	2	1	2	1	1	1	3	3	3	121	5
7		6	18	8	8	1	0	0	2	10	18	12	19	5	2	3	1	2	5	1	2	1	4	2	1	131	5
8		1	0	1	2	1	1	1	1	1	1	4	3	6	11	12	4	2	4	5	5	2	5	8	3	84	4
9	D	5	6	15	4	5	3	5	5	6	28	29	13	3	3	6	3	6	3	5	17	8	5	19	46	248	10
10	D	54	24	21	20	35	6	12	10	17	14	13	42	20	28	24	15	10	13	8	12	12	10	11	6	437	18
11		3	1	3	5	12	13	7	5	3	3	6	10	6	7	8	17	8	2	10	14	3	4	3	8	161	7
12	D	8	41	37	12	55	17	6	22	25	25	11	10	2	3	3	3	4	5	3	3	5	3	5	32	340	14
13		58	48	11	16	5	3	1	1	1	4	4	10	5	5	3	5	3	4	8	5	4	5	3	2	214	9
14		1	1	5	5	5	3	11	21	11	6	8	14	5	4	5	8	4	3	11	9	9	5	8	5	167	7
15		21	32	10	12	4	2	1	1	2	3	2	2	5	2	5	3	3	2	2	1	1	2	1	4	123	5
16		4	5	5	5	4	2	5	2	2	1	2	2	1	1	1	1	2	3	3	1	2	2	1	1	58	2
17		1	2	1	8	11	26	18	14	11	16	24	21	10	6	4	1	3	3	9	5	4	7	8	3	216	9
18		1	3	2	3	4	4	14	11	5	15	6	11	7	5	2	1	1	1	3	3	3	1	2	3	111	5
19		2	9	2	5	13	5	1	1	1	1	2	2	3	3	2	1	2	1	3	2	2	1	1	1	66	3
20	Q	1	6	3	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	33	1
21	Q	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0	1	1	1	1	1	1	1	0	12	1
22		0	0	0	1	1	1	1	0	0	0	1	1	1	1	2	1	1	2	2	6	5	1	2	3	33	1
23		4	8	12	5	5	12	23	17	5	13	4	2	5	3	3	1	1	3	1	3	3	2	2	1	138	6
24	Q	1	1	1	1	3	2	4	12	8	8	10	6	3	5	4	2	2	1	3	2	1	2	1	1	84	4
25	Q	1	2	1	1	1	2	3	5	3	3	3	1	1	2	2	1	1	1	1	3	1	1	1	1	42	2
26	Q	1	1	1	11	12	3	4	1	0	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	50	2
27		1	1	1	1	1	1	1	10	17	32	7	3	3	5	7	3	3	2	7	7	3	1	1	1	119	5
28	D	3	5	3	21	18	21	33	34	14	32	34	48	29	7	10	9	6	6	5	8	10	26	5	7	394	16
29	D	5	8	24	17	3	3	3	4	3	6	28	17	20	37	22	20	12	9	5	4	5	1	2	5	263	11
30		3	3	20	22	35	11	7	7	9	10	5	8	6	3	1	2	3	3	3	5	5	3	3	4	181	8
31		3	2	1	1	1	1	1	1	1	1	3	7	2	3	15	3	3	2	3	2	8	1	1	1	67	3
SUMS		215	274	259	241	304	184	204	220	216	290	246	272	173	165	164	119	92	93	118	153	123	115	106	155	4501	
MEANS		7	9	8	8	10	6	7	7	7	9	8	9	6	5	5	4	3	3	4	5	4	4	3	5		6

PUBLICATIONS OF THE DOMINION OBSERVATORY

HOURLY RANGES

TABLE 65 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

OCTOBER 1967

DAY	HCUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24		
1		18	32	33	10	10	7	4	7	5	6	5	3	4	4	4	3	3	2	2	2	1	1	0	0	166	7
2		1	1	4	5	3	2	1	0	1	3	1	2	1	2	2	3	3	1	5	5	3	1	1	1	52	2
3		1	1	2	3	8	15	14	5	3	2	2	2	2	2	5	1	3	1	1	3	2	1	1	3	83	3
4		2	1	1	1	1	1	5	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	30	1
5		1	1	1	11	6	5	1	3	12	2	1	1	2	3	3	4	2	1	3	4	1	1	1	1	71	3
6		2	5	10	12	17	4	1	1	1	1	2	2	3	3	1	3	2	1	1	1	1	3	1	1	79	3
7		3	18	7	3	1	0	0	1	1	8	6	4	3	3	4	4	4	3	1	1	1	1	1	0	78	3
8		0	0	1	2	2	1	1	1	1	1	3	1	5	10	9	6	4	3	3	1	1	3	3	1	63	3
9	D	2	3	9	2	1	1	1	1	1	10	12	2	1	3	4	3	5	4	3	5	7	6	13	43	142	6
10	D	29	13	23	29	15	3	4	5	10	4	10	10	12	10	9	12	13	15	8	6	5	5	12	3	265	11
11		1	2	3	4	13	6	6	2	2	1	3	3	3	5	6	14	3	1	3	3	1	1	3	3	92	4
12	D	5	25	61	22	25	19	14	8	3	5	7	8	1	2	4	11	5	3	3	3	3	1	1	18	256	11
13		52	30	5	12	5	1	1	1	1	2	3	5	3	4	2	5	3	3	4	3	2	1	3	2	153	6
14		1	1	4	2	2	1	6	10	5	8	1	10	3	5	5	3	5	3	3	3	4	3	2	1	91	4
15		6	28	9	6	1	1	1	1	1	1	2	2	3	1	2	3	2	3	1	1	1	1	1	1	79	3
16		3	2	2	2	2	3	2	1	1	1	1	1	1	1	2	3	3	3	1	1	1	1	1	1	38	2
17		1	1	1	7	11	17	32	5	6	12	10	10	9	8	5	1	3	2	2	3	1	3	5	1	156	7
18		1	2	1	1	5	1	10	10	8	3	4	8	3	3	3	1	1	1	1	1	1	1	2	1	75	3
19		1	14	3	6	22	3	1	1	1	1	1	1	3	1	2	3	3	1	1	1	1	1	1	1	74	3
20	Q	1	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	1
21	Q	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2	1	1	1	1	0	0	0	12	1
22		1	0	0	1	1	1	0	0	0	1	1	1	1	2	5	3	3	1	1	4	2	1	3	2	35	1
23		2	3	9	5	2	5	1	10	5	2	1	1	3	3	2	2	2	1	1	1	2	1	1	1	66	3
24	Q	0	0	1	1	1	1	1	2	7	5	2	2	2	3	3	2	1	1	1	1	1	1	1	1	41	2
25	Q	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	27	1
26	Q	1	1	1	11	11	3	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45	2
27		1	1	1	1	1	1	1	1	8	14	1	2	3	5	8	7	4	3	3	3	3	1	1	1	75	3
28	D	3	3	3	9	14	9	11	14	10	23	41	28	11	8	7	3	12	2	3	4	6	18	5	4	251	10
29	D	3	5	11	13	1	1	1	1	1	2	5	30	28	23	19	17	11	12	10	3	3	2	2	3	207	9
30		1	2	6	8	14	5	5	3	3	3	3	5	2	3	3	3	3	3	3	3	4	1	2	3	91	4
31		1	1	1	1	0	0	1	0	1	1	1	5	2	2	10	3	1	1	1	1	1	1	1	1	38	2
SUMS		145	202	219	192	197	119	129	98	102	126	133	154	119	124	132	125	116	82	74	72	64	65	72	102	2963	
MEANS		5	7	7	6	6	4	4	3	3	4	4	5	4	4	4	4	4	3	2	2	2	2	3		4	

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 66 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

NOVEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24		
1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	3	1	4	3	4	38	2
2		5	5	11	4	9	10	2	8	17	14	5	4	10	3	1	1	1	3	7	3	24	8	5	8	168	7
3	D	14	10	11	3	3	2	2	3	17	9	18	8	8	10	6	5	5	17	14	9	9	15	5	4	207	9
4		3	26	21	16	5	8	10	3	5	10	10	5	11	10	3	4	1	2	2	2	1	3	3	2	166	7
5		2	6	6	17	12	5	28	17	8	18	14	4	14	5	7	3	8	5	4	9	5	3	3	3	206	9
6		4	4	1	2	1	1	1	2	3	4	3	1	2	2	1	1	1	1	2	2	2	1	1	1	44	2
7	Q	1	1	1	7	23	14	8	8	2	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	79	3
8	D	4	34	23	10	3	4	7	6	3	4	5	1	3	3	4	4	4	3	8	14	15	8	11	10	191	8
9		5	3	3	8	19	5	5	3	8	11	7	10	17	12	11	8	5	8	4	7	3	3	2	1	168	7
10		2	6	4	1	1	1	1	1	1	2	1	1	3	2	2	1	1	3	2	3	1	1	3	2	46	2
11		1	1	1	2	4	7	1	1	1	1	1	1	1	3	1	1	1	1	2	5	18	29	17	11	112	5
12	D	5	11	10	5	7	19	26	17	33	37	22	21	23	10	5	9	10	10	15	12	13	5	10	2	337	14
13	D	3	4	14	28	10	4	10	12	14	18	26	23	32	23	12	12	11	9	8	16	4	3	12	8	316	13
14		21	22	4	3	15	32	23	12	8	3	7	14	9	4	8	5	7	8	5	1	3	3	1	1	219	9
15		1	1	1	1	1	10	19	18	4	3	4	3	4	7	5	3	3	6	5	15	3	7	12	10	146	6
16		3	3	3	12	22	16	4	11	14	4	8	5	5	9	5	5	3	3	3	3	1	4	3	3	152	6
17	Q	3	1	1	1	2	5	1	0	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1	27	1
18	Q	1	1	1	1	1	5	9	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	37	2
19	Q	1	1	1	3	8	13	7	1	1	1	1	0	1	1	1	1	1	1	3	1	1	1	0	1	51	2
20	Q	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0	0	1	1	1	1	0	0	0	16	1
21		0	0	0	0	0	1	0	1	1	1	1	1	1	2	2	1	1	1	1	3	3	9	5	12	47	2
22		3	1	1	10	11	8	21	8	32	15	29	13	14	24	9	3	1	3	2	3	2	2	3	1	219	9
23		1	3	3	5	13	6	4	2	5	8	9	11	5	8	5	4	1	2	3	5	4	2	3	6	118	5
24	D	5	45	15	11	10	42	15	13	12	16	21	23	10	3	6	8	3	7	5	6	4	7	5	21	313	13
25		19	10	4	5	5	3	8	2	7	5	7	10	7	12	5	4	3	5	5	7	4	9	4	3	153	6
26		13	11	3	3	4	3	4	5	4	7	8	3	3	3	3	3	1	5	3	3	3	2	3	3	103	4
27		2	2	3	19	19	18	8	10	11	8	5	5	7	2	5	3	2	4	1	4	3	3	5	3	152	6
28		5	14	16	14	18	10	12	14	11	13	14	7	10	5	7	3	5	7	3	4	3	5	12	13	225	9
29		17	4	3	10	3	6	5	17	13	50	36	20	17	11	5	3	2	3	5	3	2	1	1	1	238	10
30		1	2	6	4	5	11	17	12	15	11	12	7	8	10	6	5	4	5	10	16	19	7	27	16	236	10
SUMS		147	234	173	207	236	271	260	211	253	277	278	204	230	186	132	105	89	128	130	163	155	147	161	153	4530	
MEANS		5	8	6	7	8	9	9	7	8	9	9	7	8	6	4	4	3	4	4	5	5	5	5	5		6

HOURLY RANGES

TABLE 67 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

NOVEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS	
		TO 1	TO 2	TO 3	TO 4	TO 5	TO 6	TO 7	TO 8	TO 9	TO 10	TO 11	TO 12	TO 13	TO 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24			
1		1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	2	1	1	3	1	1	1	2	3	29	1	
2		3	10	4	2	10	4	1	3	8	5	3	3	3	4	2	2	2	2	2	2	16	5	8	8	112	5	
3	D	3	7	3	3	1	1	2	1	3	7	5	5	5	10	13	5	9	10	10	4	3	4	1	2	117	5	
4		3	19	33	24	5	3	3	2	2	2	2	4	8	10	5	3	1	2	1	1	1	1	1	2	138	6	
5		3	3	6	27	16	7	15	8	6	4	6	3	5	4	6	3	5	3	2	3	2	1	3	1	142	6	
6		2	1	1	4	2	1	1	1	1	1	2	1	1	3	2	2	1	1	1	1	1	1	1	1	34	1	
7	Q	1	1	3	5	10	14	5	2	1	1	1	2	1	1	3	1	1	1	1	1	1	0	1	1	59	2	
8	D	1	13	17	13	3	3	1	1	1	2	5	2	3	5	5	7	5	2	3	8	8	9	5	4	126	5	
9		3	2	2	2	32	7	3	1	1	4	4	5	8	8	7	4	3	3	2	5	1	1	1	1	110	5	
10		1	5	5	2	1	1	1	1	1	1	1	1	3	2	3	3	2	1	2	1	1	0	1	1	41	2	
11		1	1	1	2	5	2	1	1	1	2	1	1	1	1	3	1	1	1	1	4	10	17	6	3	68	3	
12	D	8	5	7	4	10	14	47	8	10	9	12	8	10	8	5	6	10	6	5	12	12	3	3	3	225	9	
13	D	2	3	5	17	3	2	1	8	11	5	8	14	17	15	5	8	4	5	7	16	3	1	8	5	173	7	
14		24	39	5	1	12	23	28	6	2	3	4	7	7	5	7	5	3	4	2	1	1	1	1	1	192	8	
15		1	0	1	1	1	4	7	6	1	2	3	3	3	2	5	4	2	3	3	5	3	2	6	6	74	3	
16		1	2	4	34	21	5	3	2	2	1	3	3	4	5	4	5	2	1	1	1	1	3	2	2	112	5	
17	Q	1	1	1	1	1	3	1	1	0	1	1	0	1	2	1	1	1	1	1	0	1	0	0	1	22	1	
18	Q	1	1	1	1	3	3	6	1	1	1	1	1	1	2	1	1	1	1	1	0	1	1	1	0	32	1	
19	Q	1	1	1	1	8	8	1	1	1	1	1	0	1	1	1	1	3	1	1	1	1	1	0	1	38	2	
20	Q	1	2	1	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	21	1	
21		1	1	0	0	0	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	4	8	5	38	2	
22		1	1	2	4	21	3	5	23	17	8	10	8	6	9	3	3	1	1	1	1	1	1	1	0	131	5	
23		1	1	2	8	9	3	1	1	1	3	5	6	4	6	8	5	2	1	2	2	1	1	1	3	77	3	
24	D	3	39	11	8	6	24	14	13	6	12	22	9	6	3	5	4	1	2	2	2	3	4	1	20	220	9	
25		20	5	5	3	7	1	4	1	2	3	2	5	4	8	5	3	3	3	3	3	1	4	3	2	1	98	4
26		19	20	3	3	1	1	1	1	1	3	2	3	5	3	2	2	1	6	1	1	1	1	1	1	83	3	
27		1	1	1	28	21	14	12	10	5	5	6	3	5	3	4	4	3	2	3	1	1	2	5	6	146	6	
28		8	20	20	25	37	14	16	19	3	6	7	4	3	5	5	3	3	5	3	3	4	5	6	5	229	10	
29		14	2	2	8	1	3	1	3	7	25	12	11	11	6	2	3	3	3	3	1	1	1	1	1	125	5	
30		1	1	10	2	1	5	16	16	8	11	7	3	5	4	7	5	3	3	4	8	8	4	14	11	157	7	
SUMS		131	208	158	235	250	175	199	143	106	131	139	118	134	137	123	100	79	77	73	89	94	79	92	99	3169		
MEANS		4	7	5	8	8	6	7	5	4	4	5	4	4	5	4	3	3	3	2	3	3	3	3	3		4	

GREAT WHALE MAGNETIC OBSERVATORY 1967

HOURLY RANGES

TABLE 68		GREAT WHALE RIVER																						HORIZONTAL COMPONENT IN TEN GAMMA UNITS																						DECEMBER 1967	
DAY	HOURLY UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS																				
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO																						
1	D	6	8	5	12	15	32	33	26	17	21	32	46	17	7	8	7	6	11	15	31	18	12	84	11	480	20																				
2		24	44	42	12	14	13	8	8	10	8	9	11	5	9	8	3	3	1	1	1	1	1	5	2	243	10																				
3		1	1	0	0	0	1	3	12	8	9	5	7	10	7	9	6	5	7	8	5	7	9	3	7	130	5																				
4		7	6	19	23	9	3	8	5	6	9	2	6	4	2	1	1	1	1	3	2	2	3	7	1	131	5																				
5		1	1	1	15	10	5	1	1	1	1	1	3	3	2	1	2	3	2	5	10	8	19	5	6	107	4																				
6		4	2	3	24	22	28	8	6	12	19	24	23	12	15	22	27	12	14	5	10	6	5	11	23	337	14																				
7		16	20	17	21	16	7	9	26	12	17	33	25	25	30	29	12	14	5	10	8	4	3	5	6	370	15																				
8	D	5	9	5	8	24	33	15	26	21	16	19	19	24	32	21	26	10	8	8	27	29	11	32	23	451	19																				
9		5	11	11	5	3	2	7	5	4	3	1	3	17	4	9	8	3	5	8	6	8	8	6	1	143	6																				
10		3	8	19	4	3	3	3	11	12	11	8	8	5	2	3	3	1	2	1	1	5	1	1	5	123	5																				
11	Q	9	8	3	2	1	5	5	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	51	2																				
12		1	2	5	9	10	7	4	5	8	5	3	5	1	1	1	2	2	3	2	5	3	2	4	4	94	4																				
13	Q	2	1	2	6	3	9	4	7	6	2	2	3	1	1	1	1	1	1	4	1	2	3	2	2	67	3																				
14	Q	1	1	1	3	3	3	1	2	2	4	5	2	1	1	1	1	2	2	2	1	1	1	1	1	43	2																				
15		1	12	12	4	8	12	4	5	5	3	4	3	1	1	2	1	1	1	3	3	4	8	4	3	105	4																				
16		3	3	5	4	4	3	2	1	2	1	5	5	3	1	1	3	3	1	1	1	1	1	4	2	60	3																				
17		3	3	6	5	11	18	17	30	33	30	38	24	19	19	7	3	5	4	3	1	8	1	1	3	292	12																				
18		3	1	2	2	2	5	17	39	35	10	14	15	5	12	15	24	9	8	8	14	4	3	3	6	256	11																				
19	D	3	4	3	37	19	15	10	13	15	15	11	18	11	24	30	20	14	9	14	13	16	18	36	35	403	17																				
20	D	16	6	39	20	21	23	11	29	19	36	34	66	56	30	11	14	11	13	23	11	3	3	4	3	502	21																				
21		7	8	9	10	17	17	12	8	24	12	23	22	13	42	17	8	8	7	4	7	3	3	5	4	290	12																				
22		2	5	13	12	3	19	12	7	10	23	21	21	5	8	4	4	1	5	5	8	5	10	12	23	238	10																				
23		19	80	16	14	20	12	7	9	8	14	10	14	14	8	7	6	10	7	8	6	5	3	1	3	301	13																				
24		4	2	1	1	1	1	5	4	2	3	3	7	3	2	5	5	2	3	1	3	1	1	1	1	62	3																				
25	Q	1	3	1	1	1	5	12	8	1	1	2	1	1	1	1	0	1	1	1	1	1	1	0	0	46	2																				
26		0	5	4	5	8	4	3	4	8	10	3	3	7	7	3	4	3	6	8	8	5	2	1	3	114	5																				
27		4	4	1	2	3	6	5	12	26	6	12	8	7	13	9	6	3	1	1	1	1	3	3	1	138	6																				
28	Q	2	2	5	3	1	1	1	0	1	0	1	1	1	1	1	1	1	1	2	2	4	5	5	10	52	2																				
29		19	16	8	1	10	12	15	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	3	1	102	4																				
30		1	2	3	14	7	8	14	12	5	4	12	7	5	4	5	5	3	3	1	3	1	1	1	4	125	5																				
31	D	6	15	18	18	31	52	23	25	54	84	77	85	36	10	17	8	8	6	5	10	5	5	26	69	693	29																				
SUMS		179	293	279	297	300	364	279	350	370	379	417	463	314	298	251	213	148	140	162	202	162	148	277	264	6549																					
MEANS		6	9	9	10	10	12	9	11	12	12	13	15	10	10	8	7	5	5	5	7	5	5	9	9		9																				

HOURLY RANGES

TABLE 69 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

DECEMBER 1967

DAY	HOUR UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUMS	MEANS
		T0 1	T0 2	T0 3	T0 4	T0 5	T0 6	T0 7	T0 8	T0 9	T0 10	T0 11	T0 12	T0 13	T0 14	T0 15	T0 16	T0 17	T0 18	T0 19	T0 20	T0 21	T0 22	T0 23	T0 24		
1	D	5	6	9	14	19	21	15	5	9	23	20	36	10	6	5	11	8	10	10	13	8	6	37	12	318	13
2		9	52	34	21	12	25	5	5	4	5	4	6	6	8	4	2	2	1	1	1	1	1	3	1	213	9
3		1	1	0	0	0	1	1	4	5	7	1	4	3	5	2	3	3	5	2	1	1	1	3	5	59	2
4		5	8	4	14	11	1	1	2	3	2	2	4	2	1	3	2	2	1	1	1	1	1	3	1	76	3
5		1	1	1	18	13	3	1	1	1	1	1	2	3	2	2	3	3	5	4	7	5	6	3	2	89	4
6		2	1	1	22	24	28	5	3	3	4	12	14	9	12	19	12	8	9	8	4	3	6	8	19	236	10
7		18	5	10	21	12	2	4	21	17	12	19	17	11	16	11	10	7	5	4	5	2	2	2	4	237	10
8	D	4	13	12	4	11	30	34	10	5	8	10	17	17	17	10	12	9	7	4	19	21	4	12	13	303	13
9		5	5	9	2	2	2	3	1	2	1	1	2	12	3	4	4	1	3	5	3	4	4	3	1	82	3
10		2	7	32	5	1	1	2	2	4	4	5	8	4	3	4	3	2	2	1	1	2	1	1	3	100	4
11	Q	12	5	4	1	1	5	3	1	1	2	1	1	1	1	1	1	1	1	1	0	0	0	1	1	46	2
12		1	1	5	10	7	4	3	3	2	2	2	1	1	1	2	3	3	1	2	1	1	3	1	1	61	3
13	Q	1	1	0	4	3	4	1	2	1	1	1	4	1	2	1	1	2	2	2	1	3	2	1	1	42	2
14	Q	1	1	2	3	2	2	1	1	1	2	1	1	1	2	2	1	3	3	3	1	1	1	1	1	38	2
15		1	8	8	3	6	8	3	2	1	1	2	3	1	2	3	3	1	1	1	3	1	5	4	3	74	3
16		1	2	2	3	2	2	1	1	1	1	3	2	1	4	3	3	2	1	1	1	1	1	2	1	42	2
17		2	3	3	4	3	18	19	22	48	48	67	39	22	13	5	5	3	3	3	1	4	1	1	2	339	14
18		2	3	3	2	1	3	5	20	26	5	10	9	3	4	8	8	5	3	7	7	2	2	1	3	142	6
19	D	3	3	5	21	23	12	5	3	4	6	7	12	7	10	18	8	8	6	7	19	9	10	26	29	261	11
20	D	7	6	23	25	17	18	4	7	9	18	10	23	37	15	6	12	12	14	14	7	3	2	4	2	295	12
21		3	3	12	7	9	14	4	4	4	10	17	20	4	28	10	10	8	8	3	4	2	3	3	4	194	8
22		1	3	5	8	3	10	3	4	5	11	7	5	4	8	3	5	2	5	3	3	4	4	16	19	141	6
23		21	74	14	8	44	13	2	2	3	5	5	7	5	7	5	8	5	3	4	3	1	2	2	2	250	10
24		1	1	1	1	1	0	1	3	1	1	3	4	3	2	2	2	3	2	1	1	1	0	1	1	37	2
25	Q	1	1	1	1	1	3	8	3	1	1	2	2	1	1	2	1	1	1	1	1	0	0	0	0	34	1
26		0	5	5	4	7	3	1	1	2	3	1	1	5	3	4	3	4	4	5	2	2	1	1	1	68	3
27		5	4	1	1	1	2	2	3	8	1	3	5	7	4	3	5	1	1	1	1	1	1	1	1	63	3
28	Q	1	1	7	2	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	2	1	10	9	45	2
29		5	6	1	1	5	14	8	1	1	1	1	1	1	1	1	2	1	1	1	1	0	0	2	1	57	2
30		1	1	3	12	8	2	7	3	3	3	6	3	3	5	5	9	7	3	1	1	1	1	2	3	93	4
31	D	6	23	12	23	25	35	48	21	25	103	84	69	28	10	7	8	7	9	5	4	5	3	13	50	623	26
SUMS		128	254	229	265	275	287	201	161	200	292	308	323	216	195	157	156	128	125	105	121	92	73	171	196	4658	
MEANS		4	8	7	9	9	9	6	5	6	9	10	10	7	6	5	5	4	4	3	4	3	2	6	6		6

GREAT WHALE MAGNETIC OBSERVATORY 1967