

This document was produced
by scanning the original publication.

Ce document est le produit d'une
numérisation par balayage
de la publication originale.



PUBLICATIONS OF THE EARTH PHYSICS BRANCH

GSC/CGC CALGARY



ACSP 30677587

VOLUME 43 - NO. 3

record of observations at great whale river magnetic observatory 1969

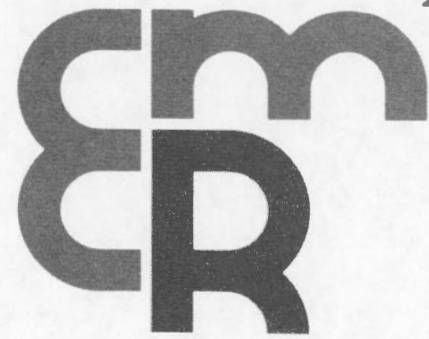
G. JANSEN VAN BEEK and H. R. RENY

CANDOC
QB4
D66
43(3)

DEPARTMENT OF ENERGY, MINES AND RESOURCES

OTTAWA, CANADA 1972

F21000
DEMUR. EPB
42.3



PUBLICATIONS of the EARTH PHYSICS BRANCH

VOLUME 43 - NO. 3

**record of observations at
great whale river magnetic observatory 1969**

G. JANSEN VAN BEEK and H. R. RENY

DEPARTMENT OF ENERGY, MINES AND RESOURCES

OTTAWA, CANADA 1972

©
Information Canada
Ottawa, 1972

Cat. No: M70-43/3

Contents

- 149 Introduction
- 149 Magnetic equipment
- 149 Absolute observations and baseline values
- 149 Magnetic reductions
- 150 Summary of annual mean values
- 150 Reports of Great Whale River magnetic observatory

Tables

- 1–36 Mean hourly value for each hour of the day, and the mean daily value for each day of the month for 1969, for horizontal intensity (H), declination (D) and vertical intensity (Z).
- 37–45 Summary by month, season and year of mean hourly values of H, D, Z for all days and for the international quiet and disturbed days for 1969.
- 46–69 Hourly ranges in 10-gamma units in H and D for 1969.

record of observations at great whale river magnetic observatory 1969

G. JANSEN VAN BEEK and H. R. RENY

Geographic Coordinates: 55.3°N; 77.75°W
Geomagnetic Coordinates: 66.8°N*; 347.2°E*

Officers-in-charge: G. Nordman 1968.5–1969.5
W. Shannon 1969.5–1970.5

Introduction

The Great Whale magnetic observatory was established by the Division of Geomagnetism of the Dominion Observatory (now Earth Physics Branch, Department of Energy, Mines and Resources) in January 1965 at Poste-de-la-Baleine, Province of Quebec. Publication of the regular mean hourly value tables was begun in 1967.

A history of the observatory with pertinent details on observatory buildings, equipment and procedures was given in the "Record of Observations at Great Whale River Magnetic Observatory, 1967" by E.I. Loomer.

Magnetic equipment

Photographic variometer. 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 determined once a month in D and H and on the average three times a month for Z using the Helmholtz coils supplied. Scale values adopted for 1969 are listed with the adopted baselines for this period.

At this time, the Z variometer seemed to develop an instability during the sensitivity determination process. Consequently only the lesser two of the four calibration current settings was used for the sensitivity calculations as these current settings seemed to be more representative of the true sensitivity.

Parallax determinations were made in November and December 1969. Parallax corrections to be added to the times read on the magnetograms are 1.5 minutes for H, D and Z.

Thermostatically controlled electric heaters maintain the temperature in the variometer rooms to within $\pm 1^\circ\text{C}$. The sensitivity of the Ruska temperature trace is $1.3^\circ\text{C}/\text{mm}$. Temperature coefficient calibrations were performed in November and December 1969 which showed the standard Ruska variometer to have a negligible (less than a gamma per $^\circ\text{C}$) sensitivity to temperature changes.

A rapid-run Ruska variograph records D, H and Z. Time scale is 240 mm/hr. Scale values adopted from the monthly determinations are:

Ruska Rapid Run Scale Values

	H γ /mm	D γ /mm	Z γ /mm
January	4.95	1.76	6.17
February	4.95	1.76	6.12
March	4.95	1.75	6.07
April	4.95	1.75	6.02
May	4.95	1.75	5.99
June	4.94	1.75	5.98
July	4.92	1.75	5.93
August	4.91	1.75	5.87
September	4.91	1.75	5.82
October	4.90	1.73	1(0000)- 26(1300) 5.77 thereafter 6.33
November	4.90	1.73	6.34
December	4.89	1.73	6.36

Time marks with an accuracy of ± 1 second are supplied by a crystal-controlled clock to both the standard and rapid-run variographs.

Standby variometer. Traces of X, Y and Z on a strip-chart recorder were provided by a three-component electrical magnetometer. In February 1969, the old chopper bar recorder was replaced by a three-channel analogue recorder. Full-scale chart sensitivity is 2,000 gammas normally with automatic switching to half sensitivity at times of large magnetic disturbances. The chart is provided with hour marks. Chart values are used to interpolate for missing intervals on the Ruska magnetograms. The chart also provides a continuous visual indicator of magnetic field conditions.

Absolute instruments. A proton precession magnetometer is the primary standard of total intensity (F). 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 determinations of D, I and F were made on the average four times a month during magnetically quiet periods.

The method used for calculation of the Ruska D, H and Z baseline values from absolute measurements of D, I and F was discussed in detail in the 1967 report for Great Whale River.

The baselines and scale values adopted for 1969 are in the accompanying tables.

Magnetic reductions

Details of reduction of the magnetic data were given in the 1967 report for Great Whale River.

Microfilm copies of standard-run and rapid-run photographic magnetograms with provisional instrument constants were supplied to World Data Centre A, Washington, on a monthly basis.

The five local quiet days for each month, selected on the basis of the R

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

indices, are listed below. Local quiet days which do not appear also in the list of 10 international quiet days are underlined. The five international quiet and disturbed days are labelled Q and D respectively in Tables 1-36.

5 Local Quiet Days

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

Summary of annual mean values

Year	X*	Y*	Z	D East	I North*	H	F*
	γ	γ	γ	° '	° '	γ	γ
1967.6	9201	-3401	59302	339 43	80 36.4	9809	60,108
1968.5	9246	-3399	59333	339 49	80 34.4	9850	60,145
1969.5	9319	-3405	59379	339 56	80 30.8	9922	60,202

*Values for X, Y, I and F derived from monthly means of D, H and Z.

Reports of Great Whale River magnetic observatory

Record of observations at Great Whale River magnetic observatory 1967, by E.I. Loomer. *Dom. Obs. Pub.*, Vol. XXXVII, No. 9.

Record of observations at Great Whale River magnetic observatory 1968, by G. Jansen van Beek. *Pub. Earth Phys. Branch.*, Vol. 40, No. 5.

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

Great Whale River 1969

D West Baselines

D Scale Values γ /mm

Adopted		Observed		Adopted		Observed	
Jan. 1-6	23 09.5	Jan. 6	23 09.8	Jan. 3	4.85	Jan. 3	4.86
7-21	23 10.0	21	23 15.8				
	to 23 15.5	28	23 12.9				
22-31	23 15.0	29	23 13.7				
	to 23 13.5						
Feb. 1-17	23 12.5	Feb. 9	23 11.8	Feb.	4.81	Feb. 9	4.82
18-20	23 12.5	17	23 13.0			17	4.80
	to 23 09.5	18	23 10.7			18	4.80
25-28	23 09.5	28	23 09.2			28	4.80
Mar. 1-8	23 09.5	Mar. 13	23 10.1	Mar.	4.81	Mar. 13	4.81
9-20	23 10.5	25	23 10.3			25	4.82
21-31	23 11.5	28	23 12.6			28	4.81
		30	23 12.1			30	4.82
Apr. 1-12	23 11.0	Apr. 18	23 10.8	Apr.	4.81	Apr. 3	4.80
13-30	23 10.01	21	23 09.4			21	4.80
		27	(23 07.1)			26	4.77
May 1-7	23 09.5	May 1	23 09.4	May	4.81	May 1	4.79
	to 23 06.5	7	23 06.3			7	4.82
8-31	23 06.5	25	23 07.8			25	4.81
	to 23 10.0	26	23 09.8			26	4.82
June 1-30	23 10.5	June 1	23 10.5	June	4.81	June 1	4.83
	to 23 08.0	18	23 08.7			18	4.81
		22	23 09.5			22	4.81
		28	23 07.4			28	4.81
		30	23 09.1			30	4.81
July 1-11	23 08.5	July 22	23 10.0	July	4.84	July 21	4.84
12-24	23 09.5	24	23 09.9			24	4.84
25-31	23 09.5	29	23 05.7			29	4.84
	to 23 05.5						
Aug. 1-31	23 06.0	Aug. 9	23 08.4	Aug.	4.78	Aug. 6	4.77
	to 23 10.5	16	23 07.0				
		24	23 10.3				
		30	23 11.8				
Sept. 1-22	23 11.0	Sept. 4	23 10.3	Sept.	4.78	Sept. 4	4.79
23-30	23 11.0	12	23 11.3			12	4.79
	to 23 09.0	22	23 11.2			22	4.79
Oct. 1-5	23 09.0	Oct. 5	23 07.8	Oct.	4.78	Oct. 5	4.78
	to 23 08.0	15	23 10.1			15	4.78
6-28	23 08.0	20	23 09.3			20	4.78
	to 23 10.5	28	23 10.6			28	4.78
29-31	23 10.0						
Nov. 1-5	23 09.5	Nov. 5	23 08.5	Nov.	4.78	Nov. 4	4.77
	to 23 08.5	14	23 08.9			14	4.77
6-19	23 08.5	22	23 10.6				
	to 23 10.0	30	23 08.6				
20-30	23 10.0						
Dec. 1-24	23 10.0	Dec. 4	23 10.6	Dec.	4.78	Dec. 3	4.80
25-31	23 08.5	10	23 10.0				
		19	23 09.0				
		29	23 07.8				

Great Whale River 1969

H Baselines γ H Scale Values γ/mm

Adopted		Observed		Adopted		Observed	
Jan. 1-3	9312	Jan. 6	9314	Jan.	13.87	Jan. 3	13.93
4-21	9314	21	9314				
22-28	9314 to 9308	28	9308				
29-30	9308	29	(9303)				
31	9310						
Feb. 1	9310	Feb. 9	9312	Feb.	13.87	Feb. 6	13.80
2-12	9312	17	(9318)				
13-28	9314	18	9313				
		28	9315				
Mar. 1-3	9314	Mar. 13	9310	Mar.	13.87	Mar. 10	13.94
4-8	9312	25	9311				
9-27	9310	28	9310				
28	9312	30	9316				
29	9314						
30-31	9316						
Apr. 1	9316	Apr. 18	9308	Apr.	13.87	Apr. 3	13.84
2-8	9314	21	9309				
9-15	9312	27	9308				
16-27	9310						
28-30	9312						
May 1-7	9312 to 9306	May 1	9313	May	13.87	May 7	13.88
8-13	9304	7	9306				
14-20	9302	25	9303				
21-31	9300	26	9300				
June 1-30	9300	June 1	9298	June	13.87	June 5	13.86
		18	9302				
		22	9296				
		28	9303				
		30	9302				
July 1-21	9300	July 22	9298	July	13.87	July 3	13.88
22-28	9298	24	9296				
29-31	9296	29	9297				
Aug. 1-16	9294 to 9279	Aug. 9	9286	Aug.	13.84	Aug. 6	13.86
17-31	9279 to 9291	16	9279				
		24	9284				
		30	9293				
Sept. 1-22	9292 to 9300	Sept. 4	9291	Sept.	13.84	Sept. 1	13.82
23-30	9300	12	9296				
		22	9300				
Oct. 1-14	9298	Oct. 5	9296	Oct.	13.84	Oct. 4	13.85
15-27	9296	15	9293				
28-31	9294	20	9299				
		28	9293				
Nov. 1-10	9294	Nov. 5	9294	Nov.	13.80	Nov. 4	13.79
11-20	9292	14	9291				
21-24	9294	22	9293				
25-30	9296	30	9297				
Dec. 1-22	9296	Dec. 4	9296	Dec.	13.80	Dec. 3	13.81
23-31	9296 to 9300	10	9294				
		19	9295				
		29	9300				

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

Great Whale River 1969

Z Baselines γ Z Scale Values γ /mm

Adopted		Observed		Adopted		Observed	
Jan. 1-25	59012 to 59015	Jan. 1	59012	Jan. 1-15	14.32	Jan. 3	14.33
26-31	59015 to 59010	21	59015	16-31	14.35	21	14.29
		28	59013				
		29	59010				
Feb. 1-9	59009 to 59003	Feb. 9	59003	Feb. 1-28	14.36	Feb. 6	14.46
10-28	59002 to 58999	17	58999			18	14.29
		18	59005			28	14.33
		28	59000				
Mar. 1-19	58999 to 58996	Mar. 13	58997	Mar. 1-5	14.37	Mar. 10	14.42
20-31	58995 to 58988	25	58992	6-10	14.40	19	14.50
		28	58990	11-15	14.43		
		30	58988	16-19	14.45		
				20-31	14.46		
Apr. 1-17	58988 to 58990	Apr. 18	58991	Apr. 1-17	14.46	Apr. 3	14.46
18-20	58991 to 58997	21	58998	18-22	14.44	18	14.46
21-26	58998 to 58994	27	58994	23-27	14.41		
27-30	58994 to 58999			28-30	14.38		
May 1-25	58999 to 58992	May 1	59001	May 1-2	14.38	May 1	14.42
26-31	58991 to 58993	7	58996	3-9	14.34	7	14.24
		25	58994	10-31	14.32	25	14.33
		26	58991				
June 1-18	58994 to 59002	June 1	58994	June 1-10	14.32	June 1	14.24
19	59002	18	59002	11-16	14.34	5	14.33
20-30	59002 to 59013			17-22	14.38	18	14.33
		22	59002	23-28	14.42	29	14.46
		28	59014	29-30	14.45		
		30	59011				
July 1-24	59013 to 59016	July 22	59018	July 1-10	14.45	July 4	14.55
25-29	59017 to 59021	24	59014	11-26	14.41	11	14.37
30-31	59020	29	59021	27-31	14.38	28	14.37
Aug. 1-8	59019 to 59016	Aug. 9	59016	Aug. 1-5	14.38	Aug. 6	14.37
9-23	59017 to 59028	16	59024	6-31	14.36	16	14.33
24-31	59029 to 59021	24	59029			21	14.33
		30	59020				
Sept. 1-11	59021 to 59026	Sept. 4	59023	Sept. 1-30	14.36	Sept. 1	14.37
12-21	59026 to 59020	12	59026			23	14.42
22-30	59019 to 59018	22	59019				
Oct. 1-30	59018 to 59015	Oct. 5	59018	Oct. 1-15	14.38	Oct. 4	14.33
31	59022	15	59016	16-25	14.42	15	14.42
		20	59014	26-31	14.45	27	14.42
		28	59014				
Nov. 1-5	59013 to 59009	Nov. 5	59009	Nov. 1-15	14.44	Nov. 4	14.55
6-30	59009 to 59004	14	59007	16-30	14.39	14	14.37
		22	59006			30	14.37
		30	59005				
Dec. 1-4	59002 to 58994	Dec. 4	58994	Dec. 1-31	14.37	Dec. 3	14.37
5-18	58994	10	58993			15	14.37
19-31	58994 to 59002	19	58994			24	14.33
		29	59000				

HORIZONTAL INTENSITY

TABLE 1 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

JANUARY 1969

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		422	408	388	408	388	388	353	291	374	325	332	381	408	395	381	401	395	388	395	395	408	408	415	408	386
2		408	401	401	408	415	429	415	408	408	408	401	401	401	395	388	381	395	395	395	395	401	401	401	408	403
3	Q	401	401	401	401	408	408	408	408	408	408	408	408	408	401	395	395	395	395	395	401	401	401	408	408	403
4		410	410	410	410	410	410	410	410	403	403	390	397	403	403	397	397	397	403	403	403	403	410	410	410	405
5		410	410	410	397	383	424	410	410	403	410	403	410	403	403	397	397	397	397	403	403	403	410	410	410	405
6	Q	410	410	410	410	410	410	410	410	410	410	410	410	410	403	397	397	397	397	403	403	403	410	410	410	407
7		410	410	410	410	431	431	424	410	348	320	348	299	188	327	403	397	403	410	424	431	445	445	410	410	390
8		431	431	466	445	431	424	431	383	279	355	431	410	403	397	390	383	383	397	403	410	431	424	436	452	410
9		438	431	459	459	438	438	410	410	417	403	403	403	397	390	383	383	383	390	397	403	417	410	424	424	413
10	Q	424	417	410	410	410	410	410	403	403	410	403	397	390	397	390	383	383	390	403	417	417	410	417	410	405
11		410	410	410	410	417	410	397	397	417	410	410	397	397	397	397	397	397	403	410	410	424	424	417	417	408
12		424	417	410	417	410	410	376	403	362	355	293	313	376	397	369	376	376	383	397	397	397	410	410	410	387
13	Q	417	410	403	410	410	410	410	417	410	390	369	390	410	403	397	397	390	397	397	403	410	410	417	424	404
14		452	452	452	424	390	293	258	230	272	383	327	376	431	410	403	397	397	403	410	410	424	445	521	501	394
15	D	466	480	452	514	445	501	424	410	397	286	341	397	383	397	417	403	410	410	438	487	424	417	431	424	423
16		445	473	445	452	452	431	452	424	397	383	320	383	334	334	410	403	403	397	403	410	410	410	424	459	411
17	D	424	438	397	473	452	161	466	452	341	209	209	403	369	431	417	397	397	410	452	473	459	452	514	528	405
18	D	521	466	459	438	403	410	376	279	341	383	376	168	362	403	383	397	390	438	424	473	424	466	438	438	402
19		494	459	508	480	410	410	390	390	348	251	279	383	390	397	397	403	397	397	403	445	438	424	424	424	406
20		424	417	403	438	459	452	383	355	390	403	403	390	376	410	403	390	417	403	410	417	438	424	424	424	411
21		431	438	438	417	403	369	334	390	403	383	383	410	410	397	397	397	397	403	403	410	410	431	417	410	403
22		410	410	417	431	424	424	410	403	355	341	410	410	410	403	397	397	397	397	410	410	417	417	417	417	406
23		422	415	415	415	422	415	443	429	408	408	408	401	401	401	395	388	388	395	401	408	429	436	422	422	412
24		415	415	408	408	408	408	415	415	415	415	408	408	408	395	381	332	332	395	457	478	519	554	575	547	433
25	D	406	379	413	406	261	198	226	115	205	191	198	240	268	365	337	406	420	490	455	490	510	462	427	441	346
26	D	240	205	462	247	302	358	399	406	406	406	399	323	247	344	365	406	393	379	393	406	427	420	462	434	368
27		427	420	406	393	323	219	268	184	87	115	205	323	365	351	420	413	406	406	413	406	413	420	462	434	345
28		432	425	425	425	404	397	404	404	404	397	397	404	397	391	384	391	391	397	404	397	404	404	404	404	404
29	Q	404	404	404	404	404	404	404	404	404	404	404	404	404	404	397	391	391	391	384	391	391	397	404	411	401
30		411	411	404	404	404	391	404	404	404	363	203	120	377	411	404	404	397	391	391	391	397	404	411	411	380
31		413	406	406	406	413	413	406	386	323	309	316	302	365	351	393	386	399	393	393	413	413	413	427	406	386
MEAN A		421	416	423	419	405	389	391	376	365	351	352	372	378	390	391	393	396	403	410	421	424	426	432	428	399
MEAN Q		412	409	406	407	409	409	409	409	407	405	399	402	405	400	394	392	391	392	399	403	406	407	413	413	404
MEAN D		412	394	437	416	373	326	378	333	338	295	305	306	326	388	384	402	402	425	432	466	449	443	455	453	389

DECLINATION

TABLE 2 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

JANUARY 1969

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		59.7	59.7	62.1	54.8	54.8	54.8	52.4	49.9	57.2	57.2	47.5	59.7	59.7	57.2	47.5	47.5	45.1	45.1	40.3	45.1	49.9	52.4	54.8	54.8	52.9
2		54.8	54.8	54.8	59.7	57.2	52.4	52.4	54.8	54.8	54.8	52.4	52.4	54.8	54.8	54.8	52.4	52.4	52.4	49.9	49.9	54.8	54.8	54.8	54.8	54.1
3	Q	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	57.2	57.2	57.2	57.2	57.2	52.4	49.9	49.9	49.9	49.9	52.4	52.4	54.8	54.8	54.8	54.4
4		54.8	54.8	54.8	52.4	52.4	54.8	54.8	52.4	54.8	59.7	59.7	59.7	59.7	59.7	52.4	49.9	49.9	49.9	49.9	52.4	54.8	54.8	54.8	54.8	54.5
5		54.8	52.4	49.9	49.9	45.1	49.9	52.4	52.4	54.8	54.8	57.2	59.7	57.2	57.2	54.8	54.8	52.4	49.9	49.9	49.9	54.8	54.8	54.8	54.8	53.3
6	Q	52.4	52.4	52.4	52.4	52.4	49.9	52.4	52.4	52.4	54.8	54.8	54.8	54.8	54.8	49.9	47.5	45.1	47.5	49.9	52.4	54.8	54.8	52.4	54.8	52.2
7		53.8	53.8	53.8	56.2	58.7	51.4	53.8	53.8	56.2	63.5	65.9	68.3	68.3	70.8	53.8	51.4	48.9	48.9	48.9	44.1	48.9	48.9	51.4	53.8	55.3
8		58.7	58.7	68.3	53.8	51.4	53.8	53.8	53.8	46.5	58.7	58.7	58.7	58.7	58.7	53.8	53.8	53.8	48.9	48.9	48.9	48.9	48.9	53.8	56.2	54.5
9		53.8	58.7	63.5	63.5	58.7	53.8	53.8	56.2	53.8	56.2	56.2	56.2	56.2	56.2	53.8	48.9	46.5	46.5	46.5	48.9	48.9	51.4	53.8	56.2	54.1
10	Q	57.7	55.2	52.8	52.8	52.8	52.8	52.8	52.8	52.8	55.2	55.2	57.7	55.2	57.7	55.2	50.4	47.9	43.1	45.5	47.9	47.9	50.4	52.8	52.8	52.4
11		52.8	52.8	55.2	52.8	52.8	52.8	52.8	55.2	55.2	60.1	57.7	57.7	62.5	57.7	50.4	47.9	45.5	45.5	43.1	43.1	47.9	47.9	52.8	52.8	52.3
12		54.2	56.7	54.2	51.8	51.8	51.8	51.8	51.8	56.7	61.5	54.2	66.3	68.8	61.5	46.9	37.3	37.3	37.3	39.7	46.9	49.4	51.8	51.8	51.8	51.8
13	Q	51.8	51.8	51.8	51.8	51.8	51.8	51.8	51.8	51.8	51.8	54.2	51.8	54.2	56.7	56.7	51.8	46.9	44.5	44.5	46.9	49.4	51.8	51.8	51.8	51.3
14		61.5	66.3	59.1	54.2	46.9	30.0	27.6	39.7	51.8	56.7	56.7	51.8	56.7	56.7	54.2	54.2	46.9	46.9	49.4	46.9	46.9	49.4	61.5	56.7	51.2
15	D	53.2	45.9	45.9	53.2	53.2	55.7	45.9	50.8	50.8	50.8	55.7	58.1	58.1	55.7	50.8	50.8	45.9	48.4	48.4	50.8	45.9	45.9	50.8	50.8	50.9
16		58.1	60.5	58.1	53.2	31.4	48.4	58.1	55.7	55.7	55.7	55.7	62.9	65.3	53.2	65.3	45.9	43.5	43.5	45.9	48.4	50.8	50.8	53.2	62.9	53.4
17	D	64.3	47.4	52.2	52.2	49.8	52.2	54.7	49.8	54.7	47.4	47.4	57.1	57.1	52.2	59.5	44.9	49.8	47.4	54.7	52.2	52.2	52.2	64.3	66.8	53.4
18	D	66.8	59.5	61.9	57.1	15.8	42.5	49.8	44.9	49.8	54.7	54.7	47.4	54.7	54.7	47.4	49.8	44.9	52.2	49.8	57.1	49.8	54.7	52.2	49.8	50.9
19		64.3	74.1	64.3	52.2	49.8	44.9	44.9	52.2	54.7	49.8	54.7	54.7	59.5	59.5	52.2	52.2	49.8	49.8	44.9	49.8	47.4	47.4	47.4	49.8	52.9
20		48.8	48.8	51.2	70.6	48.8	43.9	39.1	39.1	48.8	51.2	48.8	51.2	51.2	51.2	46.4	43.9	46.4	43.9	39.1	41.5	43.9	43.9	48.8	53.7	47.7
21		51.2	48.8	53.7	48.8	48.8	48.8	43.9	48.8	53.7	51.2	53.7	58.5	58.5	56.1	56.1	48.8	48.8	48.8	46.4	48.8	48.8	51.2	48.8	48.8	50.8
22		48.8	51.2	53.7	48.8	43.9	48.8	48.8	46.4	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	46.4	43.9	46.4	46.4	46.4	46.4	46.4	46.4	47.9
23		49.8	49.8	54.7	54.7	49.8	49.8	42.5	52.2	52.2	54.7	54.7	54.7	54.7	57.1	52.2	49.8	44.9	40.1	42.5	44.9	47.4	47.4	49.8	49.8	50.0
24		49.8	49.8	49.8	47.4	47.4	49.8	52.2	52.2	54.7	54.7	54.7	54.7	57.1	49.8	42.5	42.5	37.7	42.5	52.2	59.5	71.6	64.3	66.8	59.5	52.6
25	D	40.1	47.4	49.8	47.4	30.4	11.0	25.6	35.3	52.2	64.3	66.8	59.5	44.9	37.7	23.1	35.3	59.5	59.5	47.4	57.1	59.5	49.8	49.8	57.1	46.3
26	D	86.2	129.8	59.5	25.6	20.7	47.4	47.4	49.8	49.8	49.8	54.7	54.7	47.4	54.7	47.4	49.8	49.8	44.9	42.5	42.5	47.4	47.4	54.7	49.8	52.2
27		54.7	54.7	54.7	49.8	30.4	28.0	40.1	30.4	40.1	59.5	54.7	59.5	44.9	49.8	54.7	44.9	47.4	44.9	47.4	44.9	47.4	49.8	52.2	54.7	47.5
28		55.7	53.2	60.5	55.7	53.2	53.2	50.8	50.8	50.8	50.8	50.8	50.8	50.8	53.2	55.7	55.7	53.2	50.8	50.8	48.4	45.9	50.8	50.8	53.2	52.4
29	Q	53.2	53.2	55.7	53.2	55.7	50.8	50.8	50.8	50.8	50.8	50.8	50.8	50.8	53.2	55.7	55.7	53.2	50.8	48.4	45.9	48.4	50.8	50.8	50.8	51.7
30		55.7	55.7	53.2	53.2	60.5	50.8	50.8	50.8	50.8	29.0	50.8	50.8	55.7	55.7	58.1	55.7	50.8	48.4	45.9	45.9	48.4	50.8	50.8	50.8	51.2
31		55.7	55.7	50.8	53.2	53.2	50.8	50.8	48.4	45.9	53.2	58.1	53.2	53.2	43.5	43.5	41.1	41.1	41.1	45.9	48.4	50.8	50.8	50.8	53.2	49.7
MEAN A		55.9	57.0	55.4	52.8	47.9	48.1	48.8	49.7	52.2	54.1	55.0	56.2	56.1	55.1	51.5	48.7	47.6	46.9	46.9	48.7	50.6	51.0	53.1	53.8	51.8
MEAN Q		54.0	53.5	53.5	53.0	53.5	52.0	52.5	52.5	52.5	54.0	54.5	54.9	54.9	56.4	54.0	50.6	48.1	46.7	47.7	49.6	51.1	52.5	52.5	53.0	52.4
MEAN D		62.1	66.0	53.9	47.1	34.0	41.8	44.7	46.1	51.5	53.4	55.8	55.3	52.4	51.0	45.6	46.1	50.0	50.5	48.5	51.9	51.0	50.0	54.4	54.9	50.7

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

VERTICAL INTENSITY

TABLE 3 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

JANUARY 1969

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		364	342	342	357	342	342	328	307	328	321	292	335	350	342	328	342	357	364	357	364	371	371	357	357	344
2		357	342	350	321	256	335	350	357	350	342	342	342	342	342	342	350	350	350	350	350	350	350	350	350	342
3	Q	350	342	342	342	350	342	350	342	342	342	342	350	350	350	357	357	350	342	342	357	357	350	350	350	348
4		350	350	350	350	342	342	350	350	335	328	321	321	328	328	342	350	350	357	357	357	357	357	357	357	345
5		357	350	350	342	285	350	357	357	342	342	342	350	350	350	350	350	350	357	357	357	350	350	350	350	347
6	Q	357	350	350	350	342	342	350	350	350	350	350	342	342	342	350	357	357	357	357	357	357	357	357	357	351
7		357	350	342	357	342	342	350	342	292	292	299	292	285	256	321	350	357	364	364	371	378	371	364	364	338
8		357	328	307	350	342	321	335	371	342	350	357	350	350	350	364	364	364	364	371	364	364	378	392	354	
9		385	378	342	350	364	364	350	350	364	357	350	350	342	350	357	364	357	357	357	357	357	357	364	364	358
10	Q	350	342	342	342	350	350	350	350	342	342	335	335	328	321	335	342	357	364	364	364	357	357	357	357	347
11		357	350	357	350	350	350	342	335	314	342	342	342	342	342	342	342	350	357	357	357	364	371	364	364	349
12		364	357	350	342	357	350	357	342	335	350	321	299	321	314	314	342	342	364	364	357	357	357	357	357	344
13	Q	357	350	342	357	350	350	350	350	357	328	307	314	342	350	350	357	357	357	350	350	357	350	357	357	347
14		350	321	342	335	342	400	378	378	357	342	321	328	357	357	357	357	357	357	357	357	371	364	392	342	355
15	D	256	242	256	256	264	342	371	357	357	357	321	335	328	335	357	350	350	357	371	371	371	371	364	371	334
16		365	336	357	336	286	400	350	357	357	343	322	314	286	257	286	336	357	357	343	357	357	357	357	350	339
17	D	257	243	271	336	329	400	264	322	365	386	365	357	329	350	357	343	357	372	357	365	372	372	386	336	341
18	D	293	322	314	278	300	350	415	472	408	350	350	307	350	336	329	357	372	393	372	386	357	393	372	372	356
19		307	264	379	357	329	300	365	357	365	372	357	329	336	343	343	357	365	365	379	379	379	379	379	372	352
20		365	357	329	243	343	343	365	386	365	350	350	336	329	350	357	372	379	372	372	386	372	372	386	386	357
21		365	357	314	357	357	386	372	357	365	343	343	350	365	350	357	357	357	357	365	357	357	357	357	357	357
22		357	357	350	357	357	365	357	350	343	357	357	357	357	357	357	357	357	357	357	365	357	357	365	365	357
23		365	357	357	357	365	336	329	365	365	357	350	350	343	343	343	350	357	372	365	357	365	365	365	365	356
24		357	357	357	357	357	350	350	350	350	350	350	350	343	336	300	322	357	393	415	386	200	286	386	365	347
25	D	314	221	300	322	350	429	458	501	573	501	393	350	300	264	293	343	386	408	400	372	322	343	372	357	370
26	D	479	372	278	300	415	415	372	357	365	357	357	336	293	307	322	357	357	357	372	379	372	379	372	372	360
27		357	357	357	343	343	300	357	451	408	379	329	314	329	300	300	350	365	386	386	393	386	372	372	372	359
28		372	357	329	372	372	357	357	372	365	357	357	357	365	372	357	357	365	365	365	365	372	379	372	372	364
29	Q	372	357	357	357	357	357	365	365	365	357	357	357	357	357	357	357	357	365	372	372	372	372	365	365	362
30		379	379	357	357	293	314	350	357	343	293	314	329	357	372	357	357	357	372	372	365	365	365	365	365	351
31		357	357	357	357	357	357	357	336	314	314	314	286	300	286	314	357	379	379	357	386	386	386	379	372	348
MEAN A		352	337	336	338	338	354	356	364	359	350	339	334	335	333	339	352	359	366	365	366	358	362	366	362	351
MEAN Q		357	348	347	350	350	348	353	351	351	344	338	340	344	344	350	354	355	357	357	360	360	357	357	355	351
MEAN D		320	280	284	298	331	387	376	402	413	390	357	337	320	319	331	350	364	377	374	374	359	372	372	362	352

HORIZONTAL INTENSITY

TABLE 4 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

FEBRUARY 1969

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	Q	406	406	406	406	406	406	406	406	406	406	406	406	393	393	386	379	393	399	406	413	406	413	413	403	
2	D	415	415	415	415	415	422	415	408	346	353	388	388	395	401	415	381	408	422	193	27	297	277	291	325	360
3	D	339	207	436	381	381	318	304	374	221	110	89	62	124	124	311	353	374	395	436	506	526	492	471	422	323
4		415	388	408	401	401	401	374	332	339	346	374	401	388	388	381	381	381	395	408	422	436	464	512	589	405
5		589	471	429	450	408	332	374	360	339	374	360	388	401	395	388	381	381	395	401	415	422	429	415	408	404
6		415	443	367	200	186	270	332	401	360	346	367	422	408	395	388	388	395	401	408	422	429	436	464	499	381
7		408	415	408	408	408	408	388	325	395	395	374	332	367	388	388	388	395	408	415	450	450	436	450	492	404
8		506	478	471	408	374	318	360	374	408	408	395	401	408	401	388	388	381	395	408	429	436	429	422	422	409
9	Q	429	464	457	450	422	415	408	401	401	408	401	401	401	395	381	381	388	395	408	415	422	415	415	422	412
10		464	526	492	464	422	415	401	367	353	332	297	353	408	395	401	381	374	388	401	422	457	589	616	381	421
11	D	388	471	506	436	374	277	228	48	-139	-84	-35	55	124	34	214	235	193	249	360	381	388	429	526	450	254
12		436	464	450	478	464	443	429	401	395	395	395	388	388	388	381	381	381	381	408	408	401	408	436	429	414
13		487	501	438	431	431	431	424	369	369	355	376	417	403	383	362	390	403	403	397	417	424	431	403	438	412
14		410	424	445	383	459	417	410	403	403	397	376	376	369	390	397	397	403	397	410	410	424	438	480	480	412
15	D	508	480	431	258	376	390	327	348	369	334	355	459	424	397	410	397	397	403	459	501	577	563	508	514	424
16		570	508	459	438	417	320	272	286	362	390	403	383	341	383	417	417	424	410	424	403	410	410	424	410	403
17	Q	417	410	424	424	431	424	431	403	397	383	383	397	403	397	390	383	390	397	410	424	417	417	424	410	408
18	Q	410	410	410	417	417	417	417	417	417	417	417	417	410	403	397	390	390	403	424	431	410	410	410	417	412
19		417	424	431	445	452	487	459	445	431	417	410	410	390	369	390	383	390	397	417	410	445	417	417	417	420
20		417	417	410	410	286	362	397	403	410	403	410	390	397	410	397	390	390	397	403	431	431	417	417	424	401
21		466	438	424	403	383	320	140	334	424	417	417	410	410	397	397	383	383	397	397	410	417	417	417	417	392
22	Q	424	424	424	424	424	424	410	417	410	417	417	417	410	403	397	390	390	397	397	410	424	417	424	424	413
23		431	438	445	438	424	286	154	293	410	397	390	355	369	390	410	397	390	390	397	410	417	431	424	431	388
24		424	431	424	424	397	341	397	403	348	390	410	410	410	403	397	383	376	383	390	403	410	417	417	417	400
25		424	417	424	424	438	424	369	383	383	410	403	403	403	403	390	383	383	390	397	410	410	424	417	417	405
26		417	424	424	403	341	362	355	369	299	272	362	397	410	403	410	397	397	403	410	424	438	438	445	431	393
27	D	424	452	417	452	397	424	369	369	390	424	424	424	424	390	299	286	397	542	473	466	445	466	424	431	417
28		431	410	410	410	390	438	452	390	390	390	410	403	383	390	383	397	410	424	410	403	410	459	487	494	416
MEAN A		439	434	432	410	397	382	364	365	358	357	363	374	378	372	381	378	383	398	402	410	428	435	442	437	397
MEAN Q		418	423	424	424	420	418	415	409	406	406	405	408	406	398	391	386	387	397	408	418	418	413	418	418	410
MEAN D		415	405	441	388	388	366	329	309	237	228	244	277	298	269	330	330	354	402	384	376	447	445	444	429	356

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

DECLINATION

TABLE 5 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

FEBRUARY 1969

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	TC 14	TO 15	TO 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TC 23	TO 24	
1	Q	52.7	52.7	52.7	52.7	52.7	50.3	50.3	52.7	52.7	50.3	52.7	55.1	55.1	55.1	55.1	55.1	50.3	47.9	50.3	45.5	50.3	50.3	50.3	50.3	51.8
2	D	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	43.1	45.5	50.3	50.3	55.1	55.1	52.7	52.7	47.9	57.5	69.5	45.5	45.5	26.2	11.8	-2.6	46.2
3	D	11.8	7.0	-2.6	40.7	40.7	33.4	47.9	64.7	52.7	52.7	55.1	59.9	59.9	47.9	38.3	50.3	45.5	50.3	57.5	55.1	59.9	69.5	52.7	47.9	45.8
4		50.3	50.3	55.1	52.7	50.3	50.3	50.3	55.1	52.7	57.5	62.3	62.3	62.3	55.1	52.7	52.7	52.7	45.5	40.7	40.7	45.5	45.5	64.7	69.5	53.2
5		67.1	47.9	59.9	55.1	50.3	47.9	40.7	47.9	52.7	55.1	57.5	59.9	64.7	64.7	59.9	50.3	45.5	45.5	45.5	45.5	50.3	52.7	55.1	50.3	53.0
6		52.7	57.5	64.7	28.6	31.0	40.7	43.1	55.1	64.7	67.1	57.5	57.5	57.5	57.5	55.1	50.3	47.9	45.5	45.5	47.9	50.3	50.3	62.3	64.7	52.3
7		52.7	50.3	50.3	50.3	50.3	52.7	50.3	50.3	55.1	52.7	55.1	50.3	59.9	59.9	50.3	45.5	40.7	40.7	43.1	40.7	45.5	45.5	45.5	50.3	49.5
8		55.1	52.7	55.1	45.5	35.8	35.8	45.5	50.3	50.3	52.7	55.1	52.7	55.1	55.1	52.7	50.3	47.9	40.7	35.8	45.5	47.9	47.9	50.3	52.7	48.7
9	Q	52.7	57.5	55.1	52.7	50.3	55.1	52.7	55.1	55.1	55.1	52.7	55.1	55.1	55.1	55.1	47.9	45.5	43.1	45.5	45.5	47.9	47.9	50.3	50.3	51.6
10		55.1	59.9	62.3	55.1	52.7	52.7	50.3	50.3	50.3	50.3	59.9	59.9	55.1	55.1	55.1	52.7	47.9	45.5	45.5	45.5	45.5	57.5	62.3	31.0	52.4
11	D	-5.0	-12.3	52.7	55.1	47.9	35.8	45.5	11.8	52.7	23.8	11.8	40.7	59.9	57.5	59.9	76.7	71.9	59.9	64.7	50.3	40.7	52.7	59.9	52.7	44.5
12		50.3	59.9	59.9	62.3	59.9	55.1	55.1	55.1	55.1	55.1	55.1	55.1	52.7	52.7	50.3	50.3	50.3	47.9	50.3	50.3	47.9	47.9	50.3	62.3	53.8
13		64.7	57.5	52.7	52.7	55.1	55.1	50.3	47.9	50.3	55.1	55.1	57.5	57.5	59.9	50.3	47.9	47.9	47.9	47.9	50.3	50.3	50.3	47.9	50.3	52.6
14		50.3	50.3	52.7	59.9	55.1	50.3	50.3	50.3	50.3	52.7	50.3	47.9	55.1	55.1	55.1	52.7	50.3	50.3	50.3	47.9	50.3	47.9	57.5	62.3	52.3
15	D	59.9	59.9	50.3	62.3	38.3	47.9	45.5	52.7	59.9	59.9	59.9	55.1	57.5	57.5	52.7	55.1	52.7	47.9	50.3	55.1	55.1	59.9	59.9	64.7	55.0
16		76.7	64.7	55.1	50.3	50.3	38.3	26.2	55.1	57.5	55.1	57.5	55.1	55.1	50.3	55.1	59.9	52.7	47.9	47.9	47.9	50.3	50.3	50.3	50.3	52.5
17	Q	50.3	50.3	50.3	55.1	52.7	47.9	52.7	52.7	55.1	59.9	59.9	59.9	55.1	55.1	55.1	55.1	47.9	45.5	45.5	47.9	50.3	50.3	50.3	50.3	52.3
18	Q	51.3	51.3	51.3	51.3	51.3	51.3	51.3	53.7	53.7	56.1	56.1	56.1	56.1	58.5	56.1	51.3	51.3	48.9	46.5	48.9	51.3	53.7	51.3	51.3	52.5
19		52.3	52.3	54.7	57.1	57.1	52.3	57.1	54.7	57.1	61.9	61.9	61.9	54.7	49.9	57.1	52.3	45.1	45.1	47.5	47.5	49.9	52.3	52.3	52.3	53.6
20		55.7	53.3	55.7	53.3	46.1	50.9	53.3	55.7	58.1	58.1	60.5	65.3	62.9	58.1	55.7	55.7	50.9	43.7	38.8	48.5	48.5	50.9	53.3	53.3	53.6
21		62.9	62.9	55.7	53.3	48.5	41.3	26.8	53.3	58.1	60.5	60.5	60.5	60.5	62.9	60.5	53.3	46.1	46.1	43.7	48.5	50.9	53.3	50.9	53.3	53.1
22	Q	53.3	53.3	53.3	53.3	53.3	53.3	48.5	53.3	53.3	58.1	58.1	60.5	58.1	60.5	60.5	55.7	48.5	43.7	43.7	43.7	48.5	53.3	53.3	53.3	53.1
23		53.3	55.7	58.1	60.5	55.7	34.0	31.6	48.5	62.9	62.9	58.1	62.9	62.9	55.7	58.1	60.5	53.3	50.9	46.1	46.1	48.5	50.9	53.3	53.3	53.5
24		53.3	60.5	58.1	53.3	53.3	41.3	50.9	58.1	58.1	60.5	60.5	62.9	62.9	62.9	62.9	58.1	58.1	48.5	43.7	46.1	48.5	50.9	53.3	53.3	54.8
25		53.3	62.9	62.9	60.5	58.1	53.3	50.9	53.3	53.3	58.1	60.5	58.1	60.5	62.9	60.5	58.1	55.7	53.3	48.5	50.9	50.9	48.5	53.3	53.3	55.9
26		53.3	55.7	55.7	43.7	38.8	43.7	50.9	60.5	62.9	62.9	65.3	67.7	65.3	62.9	62.9	58.1	53.3	55.7	46.1	48.5	53.3	53.3	58.1	53.3	55.5
27	D	53.3	58.1	60.5	53.3	43.7	43.7	53.3	62.9	60.5	62.9	62.9	62.9	65.3	72.5	84.5	77.3	86.9	77.3	55.7	58.1	50.9	53.3	53.3	55.7	61.2
28		55.7	53.3	48.5	53.3	19.6	46.1	53.3	62.9	62.9	62.9	60.5	62.9	62.9	60.5	62.9	58.1	65.3	50.9	48.5	48.5	50.9	53.3	67.7	62.9	55.6
MEAN A		51.6	51.3	53.2	52.6	48.2	46.8	47.7	52.6	55.4	55.8	56.2	57.6	58.7	57.7	56.7	55.1	52.1	49.0	48.0	47.9	49.5	50.9	52.9	51.9	52.5
MEAN Q		52.0	53.0	52.5	53.0	52.0	51.6	51.1	53.5	54.0	55.9	55.9	57.3	55.9	56.9	56.4	53.0	48.7	45.8	46.3	46.3	49.6	51.1	51.1	51.1	52.2
MEAN D		34.0	32.6	42.2	52.3	44.1	42.2	48.5	48.5	53.8	49.0	48.0	53.8	59.5	58.1	57.6	62.4	61.0	58.6	59.5	52.8	50.4	52.3	47.5	43.7	50.5

VERTICAL INTENSITY

TABLE 6 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

FEBRUARY 1969

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	Q	353	353	353	360	353	353	345	353	353	353	353	353	353	353	353	360	360	367	367	381	381	360	353	360	357
2	D	360	353	360	353	353	353	360	353	331	317	317	324	338	331	338	353	345	345	188	216	245	223	274	281	317
3	D	266	345	245	259	317	317	324	417	575	511	389	295	345	281	274	338	360	367	367	324	302	109	381	381	337
4		381	374	381	367	353	367	410	439	374	345	345	367	353	367	367	367	360	360	367	381	374	389	353	238	366
5		152	188	231	317	367	367	389	360	367	374	360	331	353	338	353	360	367	367	374	374	374	381	381	374	342
6		369	362	276	362	333	384	398	391	369	348	333	348	369	355	362	362	362	362	369	376	376	340	384	361	
7		362	362	362	362	362	362	362	348	348	355	333	290	319	326	348	348	355	362	376	391	391	391	391	340	356
8		233	276	290	340	305	319	348	340	355	362	348	355	362	362	362	362	369	384	405	376	376	391	376	369	349
9	Q	369	369	376	376	376	362	355	355	355	348	348	348	355	362	362	362	369	362	362	369	369	369	369	369	363
10		391	391	362	362	355	355	355	369	333	340	297	312	348	355	369	362	369	376	376	376	369	340	168	233	344
11	D	369	297	226	319	391	463	491	549	412	642	592	542	556	470	455	427	376	276	197	218	104	118	175	261	372
12		197	319	340	355	376	362	384	391	376	369	362	362	362	362	362	369	369	369	369	376	384	384	376	290	357
13		305	290	305	312	333	369	405	369	398	391	376	369	369	362	348	333	362	362	369	376	391	405	384	384	361
14		369	369	355	297	348	376	376	376	376	355	333	319	312	326	362	369	369	369	376	384	384	391	398	376	361
15	D	405	355	319	96	319	326	412	391	376	369	348	348	348	348	369	369	362	376	376	369	362	369	369	340	351
16		276	384	376	362	362	391	405	419	398	369	348	348	305	319	348	355	369	369	376	376	369	369	369	369	364
17	Q	369	362	362	362	362	340	362	362	355	348	348	348	362	362	369	369	369	369	369	376	376	369	369	362	363
18	Q	362	362	362	362	362	362	362	362	362	362	362	362	362	369	369	362	362	362	362	369	369	362	362	362	363
19		362	362	369	276	247	312	348	362	376	369	355	348	333	290	326	333	355	369	362	376	376	376	376	362	346
20		362	362	355	369	376	362	362	376	355	348	340	319	319	355	362	362	376	384	376	384	376	376	369	376	363
21		366	359	359	352	352	302	302	359	359	366	359	359	359	359	359	366	373	373	381	373	373	359	359	359	358
22	Q	359	359	359	352	359	359	337	337	345	345	345	352	352	352	359	359	359	359	366	373	366	359	359	359	355
23		359	366	359	352	352	388	373	359	337	352	352	337	330	330	352	366	366	359	366	373	366	373	359	359	358
24		359	359	352	352	345	316	330	359	359	352	352	345	359	359	352	352	352	359	373	359	359	359	359	359	354
25		359	330	337	359	366	359	330	330	330	345	345	345	352	359	366	366	366	366	373	373	373	381	373	373	357
26		366	366	337	337	402	395	373	431	488	395	337	330	345	359	359	366	373	388	388	402	395	388	381	373	378
27	D	373	352	273	337	359	352	416	431	381	352	352	359	366	352	366	352	424	438	373	381	395	402	381	345	371
28		345	345	316	294	337	402	474	488	402	352	352	359	359	352	359	366	359	388	373	366	366	388	388	302	368
MEAN A		339	345	332	332	351	360	375	385	377	373	356	349	355	350	358	361	366	367	360	363	359	352	352	344	357
MEAN Q		362	361	362	362	362	355	352	354	354	351	351	351	357	360	361	362	364	364	365	374	372	364	362	362	360
MEAN D		355	340	284	273	348	362	401	428	415	438	399	373	391	356	361	368	373	361	300	302	282	244	316	322	350

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HORIZONTAL INTENSITY

TABLE 7 GREAT WHALE RIVER		H = 9500 PLUS TABULAR VALUES IN GAMMAS																							MARCH 1969	
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	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1		501	424	403	397	403	403	403	410	410	410	410	403	403	397	397	390	390	397	417	445	431	424	445	473	416
2		445	466	320	306	410	438	438	410	410	403	390	383	334	390	397	390	390	390	403	410	410	410	410	410	399
3	Q	417	417	424	424	417	410	417	417	417	410	410	410	403	403	397	397	383	397	403	403	410	410	410	417	410
4	Q	415	415	415	415	415	422	422	422	422	422	415	415	408	401	395	395	395	401	422	443	519	596	589	492	436
5		429	408	401	401	395	408	401	415	422	422	415	353	360	415	395	388	388	401	408	422	422	429	429	450	408
6		457	443	464	457	471	478	388	339	381	381	242	284	401	401	381	374	395	401	450	450	450	450	450	464	410
7		485	471	277	360	443	311	311	325	374	408	422	422	401	360	346	388	408	422	478	561	589	561	464	421	
8		540	533	457	408	339	408	408	388	381	291	388	367	408	422	401	388	395	401	408	422	443	429	457	415	
9		448	469	552	476	448	413	393	372	212	212	386	406	365	358	365	379	434	434	448	462	455	434	420	407	
10	Q	434	448	448	469	448	434	372	399	344	289	399	413	406	406	399	399	393	393	406	420	406	413	413	413	407
11		420	434	441	386	427	427	295	219	108	129	191	150	233	344	413	427	448	448	476	580	628	538	420	289	370
12	D	309	323	351	261	330	295	122	108	115	164	87	386	434	386	393	379	399	497	490	469	427	420	434	455	335
13		448	379	497	462	434	427	358	351	386	399	393	379	393	399	393	379	393	399	406	434	455	490	510	531	421
14		552	538	538	476	448	406	399	393	399	413	399	386	399	386	386	386	386	406	420	455	497	483	517	566	443
15		635	483	365	504	406	344	351	309	219	74	191	219	302	344	344	358	379	462	510	524	524	524	504	469	389
16		427	427	420	427	198	157	323	240	226	254	101	393	379	399	427	420	413	413	420	420	420	420	434	448	359
17	D	455	282	462	434	413	4	372	413	353	302	309	323	108	275	406	393	386	393	476	448	594	594	413	399	377
18		406	413	434	275	261	351	184	18	212	275	302	379	406	406	399	393	393	399	427	413	441	434	434	427	354
19		420	434	427	399	413	420	399	219	129	365	420	413	406	399	393	379	379	393	406	427	510	552	608	476	408
20		413	406	386	420	386	406	353	212	344	330	309	406	399	386	372	379	399	476	573	580	552	621	621	614	433
21		455	427	462	483	441	406	372	164	302	365	379	393	427	413	379	393	386	393	399	462	441	566	538	462	413
22		448	462	413	171	441	434	406	358	129	94	212	309	351	365	365	365	393	413	469	497	552	559	573	621	392
23	D	594	490	448	434	406	406	386	379	365	406	420	420	393	393	365	358	365	399	517	476	379	358	434	358	415
24	D	358	205	372	309	323	351	261	143	-135	-745	18	191	316	399	393	386	399	399	399	413	406	406	399	399	265
25	D	399	399	406	399	393	323	268	254	295	302	330	386	323	330	337	372	379	399	420	455	441	434	490	462	375
26		469	413	406	399	386	365	365	316	255	399	351	330	365	372	351	351	372	386	386	399	420	455	455	462	386
27	Q	462	413	406	372	351	406	386	379	358	365	386	406	393	386	379	379	393	386	399	413	420	420	413	420	395
28	Q	422	429	436	408	374	304	332	395	408	408	422	415	408	401	381	388	381	401	415	429	422	422	422	429	402
29		431	424	424	424	431	403	293	209	182	175	313	403	397	410	383	383	417	438	438	452	417	459	556	591	394
30		510	461	378	392	232	371	385	378	359	364	392	412	412	399	385	399	399	426	461	475	426	551	489	468	415
31		447	447	308	399	426	426	392	385	343	364	399	399	405	399	399	399	405	426	468	496	468	433	426	433	412
MEAN A		453	425	418	398	391	373	355	314	298	286	329	366	372	385	384	385	395	413	439	457	464	474	471	461	396
MEAN Q		430	425	426	418	401	396	386	402	390	379	407	412	404	400	390	391	389	396	409	422	436	452	451	434	410
MEAN D		423	340	408	368	373	276	282	259	207	86	233	341	315	356	379	377	386	418	461	452	449	442	434	415	353

DECLINATION

TABLE 8 GREAT WHALE RIVER

D = .339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

MARCH 1969

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	TO	TO	TO	TO	TO	TO	TO	TO	TO	TC	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	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		67.7	53.3	53.3	50.9	53.3	53.3	53.3	55.7	55.7	55.7	55.7	58.1	58.1	60.5	62.9	58.1	53.3	50.9	41.3	43.7	48.5	53.3	55.7	67.7	55.0	
2		65.3	53.3	43.7	38.8	55.7	53.3	55.7	58.1	58.1	58.1	58.1	58.1	58.1	58.1	60.5	55.7	48.5	48.5	48.5	50.9	53.3	53.3	53.3	53.3	54.1	
3	Q	53.3	55.7	58.1	55.7	55.7	53.3	55.7	58.1	58.1	58.1	58.1	58.1	62.9	60.5	60.5	55.7	53.3	48.5	48.5	48.5	48.5	53.3	53.3	53.3	55.2	
4	Q	53.3	53.3	55.7	53.3	53.3	53.3	55.7	55.7	55.7	58.1	58.1	58.1	60.5	60.5	58.1	55.7	53.3	48.5	50.9	50.9	60.5	67.7	67.7	65.3	56.8	
5		60.5	58.1	53.3	53.3	53.3	55.7	55.7	58.1	60.5	60.5	60.5	62.9	60.5	67.7	70.1	60.5	53.3	48.5	46.1	48.5	48.5	50.9	50.9	53.3	56.3	
6		58.1	58.1	60.5	62.9	65.3	55.7	53.3	53.3	58.1	62.9	62.9	72.5	67.7	70.1	65.3	55.7	53.3	50.9	53.3	50.9	50.9	50.9	53.3	55.7	58.4	
7		62.9	62.9	50.9	65.3	53.3	26.8	43.7	48.5	65.3	62.9	60.5	65.3	67.7	55.7	38.8	41.3	50.9	53.3	55.7	55.7	62.9	58.1	53.3	60.5	55.1	
8		70.1	58.1	46.1	48.5	29.2	58.1	55.7	55.7	58.1	58.1	58.1	65.3	62.9	67.7	60.5	58.1	53.3	53.3	48.5	48.5	50.9	53.3	58.1	67.7	56.0	
9		57.1	59.5	47.5	49.9	40.3	47.5	52.3	52.3	47.5	45.1	61.9	61.9	66.7	54.7	52.3	49.9	49.9	57.1	52.3	52.3	54.7	47.5	47.5	52.3	52.5	
10	Q	52.3	57.1	57.1	57.1	52.3	57.1	49.9	57.1	57.1	54.7	57.1	59.5	59.5	61.9	61.9	57.1	52.3	52.3	49.9	52.3	49.9	52.3	52.3	52.3	55.1	
11		52.3	52.3	57.1	42.7	54.7	57.1	40.3	52.3	52.3	61.9	73.9	59.5	49.9	57.1	52.3	57.1	52.3	54.7	57.1	76.3	81.1	54.7	25.8	9.0	53.5	
12	D	6.6-15.1	21.0	13.8	42.7	40.3	47.5	45.1	52.3	71.5	59.5	61.9	66.7	61.9	57.1	54.7	52.3	66.7	64.3	57.1	52.3	47.5	52.3	54.7	54.7	47.3	
13		52.3	13.8	54.7	57.1	49.9	54.7	52.3	52.3	57.1	57.1	57.1	57.1	59.5	61.9	61.9	59.5	52.3	42.7	42.7	47.5	52.3	57.1	59.5	61.9	53.1	
14		66.7	66.7	59.5	59.5	52.3	52.3	57.1	57.1	57.1	57.1	57.1	59.5	64.3	66.7	64.3	54.7	47.5	42.7	45.1	49.9	52.3	57.1	52.3	69.1	57.0	
15		66.7	33.0	35.4	42.7	45.1	49.9	52.3	54.7	57.1	66.7	78.7	66.7	61.9	57.1	47.5	42.7	25.8	52.3	57.1	59.5	61.9	66.7	69.1	64.3	54.8	
16		57.1	57.1	57.1	54.7	42.7	-3.0	47.5	49.9	59.5	59.5	52.3	66.7	69.1	66.7	57.1	52.3	47.5	47.5	45.1	47.5	49.9	52.3	54.7	57.1	52.0	
17	D	40.3-24.7	18.6	52.3	42.7	9.0	47.5	59.5	61.9	61.9	57.1	69.1	64.3	61.9	61.9	57.1	71.5	52.3	54.7	42.7	69.1	64.3	49.9	49.9	49.8		
18		52.3	52.3	57.1	25.8	28.2	47.5	33.0	57.1	52.3	59.5	61.9	64.3	66.7	66.7	57.1	54.7	49.9	49.9	42.7	40.3	47.5	54.7	54.7	57.1	51.4	
19		54.7	54.7	57.1	52.3	57.1	52.3	54.7	42.7	59.5	64.3	61.9	64.3	66.7	64.3	61.9	52.3	47.5	47.5	45.1	42.7	49.9	57.1	61.9	33.0	54.4	
20		33.0	18.6	49.9	52.3	52.3	57.1	54.7	45.1	57.1	61.9	54.7	69.1	71.5	71.5	69.1	76.3	66.7	71.5	64.3	61.9	54.7	57.1	71.5	61.9	58.5	
21		46.5	44.1	58.5	60.9	41.7	44.1	48.9-11.3	51.3	60.9	58.5	60.9	68.1	75.3	72.9	60.9	56.1	48.9	41.7	51.3	46.5	58.5	60.9	51.3	51.3	52.4	
22		53.7	53.7	41.7	20.0	51.3	56.1	56.1	51.3	36.8	60.9	56.1	70.5	65.7	65.7	51.3	48.9	41.7	53.7	51.3	60.9	60.9	60.9	72.9	54.5	54.5	
23	D	72.9	65.7	60.9	58.5	51.3	51.3	53.7	53.7	56.1	56.1	58.5	63.3	68.1	65.7	75.3	65.7	46.5	46.5	87.4	56.1	39.3	34.4	-4.0-30.5	52.2	52.2	
24	D-54.5-42.5	3.2	12.8	34.4	32.0	56.1	36.8	106.6	92.2	36.8	70.5	68.1	56.1	56.1	53.7	36.8	39.3	41.7	41.7	44.1	46.5	46.5	46.5	46.5	40.1	40.1	
25	D	46.5	46.5	48.9	51.3	48.9	41.7	46.5	56.1	56.1	58.5	68.1	68.1	68.1	68.1	51.3	44.1	41.7	46.5	51.3	56.1	53.7	56.1	70.5	72.9	54.9	
26		60.9	48.9	53.7	51.3	51.3	51.3	51.3	51.3	48.9	56.1	51.3	53.7	60.9	68.1	53.7	53.7	51.3	41.7	46.5	46.5	51.3	56.1	60.9	65.7	53.6	
27	Q	60.9	51.3	51.3	46.5	48.9	53.7	56.1	56.1	56.1	56.1	58.5	60.9	63.3	65.7	58.5	53.7	46.5	46.5	46.5	48.9	51.3	51.3	51.3	53.6	53.6	
28	Q	53.7	53.7	53.7	48.9	46.5	41.7	56.1	60.9	60.9	60.9	60.9	60.9	63.3	60.9	63.3	53.7	56.1	41.7	41.7	46.5	46.5	48.9	51.3	51.3	53.5	
29		51.3	51.3	51.3	53.7	56.1	51.3	48.9	53.7	56.1	60.9	68.1	63.3	65.7	56.1	65.7	36.8	46.5	51.3	48.9	48.9	46.5	53.7	65.7	56.1	54.5	
30		27.2	51.3	39.3	39.3	39.3	51.3	56.1	56.1	56.1	53.7	56.1	60.9	65.7	63.3	58.5	53.7	51.3	58.5	56.1	53.7	48.9	63.3	60.9	51.3	53.0	
31		53.7	51.3	51.3	46.5	51.3	51.3	56.1	56.1	56.1	56.1	58.5	63.3	68.1	70.5	60.9	56.1	51.3	51.3	56.1	53.7	48.9	51.3	51.3	51.3	55.1	
MEAN A		50.2	43.6	48.6	47.7	48.4	47.0	51.7	51.3	57.5	60.3	59.2	63.0	64.2	63.5	60.1	54.6	50.6	50.1	51.1	50.9	52.7	54.5	54.0	52.9	53.7	
MEAN Q		54.7	54.2	55.2	52.3	51.3	51.8	54.7	57.6	57.6	57.6	58.5	59.5	61.9	61.9	60.5	55.2	52.3	47.5	47.5	48.9	50.8	54.7	55.2	54.7	54.8	
MEAN D		22.3	6.0	30.5	37.7	44.0	34.8	50.2	50.2	66.6	68.0	56.0	66.6	67.1	62.7	60.3	55.0	49.8	50.2	59.9	50.7	51.7	49.8	43.0	38.7	48.8	

VERTICAL INTENSITY

TABLE 9 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

MARCH 1969

HOUR UT DAY	0 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 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 TO 20	20 TO 21	21 TO 22	22 TO 23	23 TO 24	MEAN	
1	338	374	359	359	359	359	359	359	359	359	359	359	366	366	366	359	366	388	402	402	388	366	388	374	368	
2	259	251	374	453	366	352	359	366	374	366	359	345	338	338	345	352	359	374	374	374	374	374	366	366	357	
3	Q 359	359	359	359	345	352	359	366	359	359	359	359	366	359	359	359	366	374	374	374	374	366	359	366	362	
4	Q 359	359	359	359	359	359	359	359	359	359	359	366	374	374	374	366	366	366	374	374	402	381	374	402	369	
5	388	352	352	359	359	359	359	352	352	352	352	338	280	323	352	352	359	359	374	381	374	366	366	374	356	
6	371	371	357	314	343	335	393	386	343	343	328	328	343	364	364	371	386	407	400	357	371	386	393	393	364	
7	371	328	407	371	350	400	429	379	357	357	364	371	357	343	299	328	357	379	364	371	343	393	415	364	367	
8	314	199	299	242	443	371	357	357	371	371	357	343	335	350	364	371	371	371	379	386	386	379	400	386	354	
9	386	379	263	314	371	335	386	371	386	343	328	343	314	314	314	357	386	379	386	386	371	371	371	357	355	
10	Q 364	371	371	357	285	371	364	335	386	335	350	364	364	364	364	364	357	357	357	371	364	364	364	364	359	
11	365	351	300	379	372	358	351	379	379	459	329	206	170	271	322	358	372	365	372	278	206	192	250	213	317	
12	D 423	408	466	596	480	516	589	668	646	639	437	387	372	365	358	372	401	401	365	387	365	372	372	387	449	
13	343	221	343	343	358	372	401	358	358	358	358	351	358	372	372	372	372	372	372	387	387	394	401	401	363	
14	379	343	314	365	343	372	358	365	358	365	358	343	358	358	351	351	365	372	394	387	379	394	408	365	364	
15	221	235	408	314	387	480	466	495	516	538	452	358	257	271	286	329	336	372	372	394	394	387	394	365	376	
16	380	380	373	358	365	496	431	618	640	539	423	380	344	344	358	373	373	373	373	373	380	380	380	380	409	
17	D 351	279	315	358	402	510	431	387	380	394	380	337	387	351	358	373	380	394	416	416	337	329	365	373	375	
18	373	380	358	387	431	445	539	517	503	423	387	344	358	365	373	373	380	402	402	380	387	394	402	394	404	
19	373	365	337	322	344	365	373	452	344	351	365	373	373	373	373	373	380	380	373	380	373	387	221	264	359	
20	257	373	301	322	387	387	402	525	431	424	373	387	380	373	373	373	373	373	366	351	366	301	134	142	353	
21	195	297	347	326	355	383	427	528	434	398	383	362	376	376	383	369	369	376	383	398	405	383	376	398	376	
22	383	347	333	297	362	369	383	420	427	456	347	333	340	340	355	355	369	383	391	420	412	383	398	362	373	
23	D 347	369	369	369	369	369	376	355	347	340	347	355	362	362	369	362	355	383	275	44	58	101	159	239	308	
24	D 340	405	528	434	275	398	622	593	759	709	861	752	485	405	398	398	391	398	398	391	383	383	391	391	479	
25	D 391	398	398	398	405	434	420	600	600	485	355	369	355	347	362	376	391	412	427	427	405	412	398	369	414	
26	376	347	391	391	398	391	369	369	355	369	340	347	362	391	391	398	412	412	398	398	398	412	420	405	385	
27	Q 387	379	379	379	343	336	372	372	358	351	351	358	379	372	379	379	379	379	379	379	379	379	379	372	372	371
28	Q 372	379	365	365	408	329	351	351	351	358	365	372	372	372	372	379	394	401	394	394	394	379	379	375	372	373
29	365	365	372	372	372	394	394	379	401	358	322	351	365	365	394	394	423	437	416	408	394	401	336	220	375	
30	206	285	329	423	365	365	351	379	365	351	358	372	372	365	365	372	379	394	444	423	416	423	387	379	369	
31	379	351	285	322	372	379	379	394	379	358	365	365	365	372	358	365	379	394	416	408	408	408	394	365	373	
MEAN A	346	342	359	365	370	389	403	424	419	405	380	365	352	355	360	367	376	385	384	374	366	366	359	352	373	
MEAN Q	368	370	367	364	348	350	361	357	363	352	357	364	371	368	370	370	373	376	376	378	380	374	370	375	367	
MEAN D	370	372	415	431	386	445	487	521	547	513	476	440	392	366	369	376	383	398	376	333	310	320	337	352	405	

HORIZONTAL INTENSITY

TABLE 10 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

APRIL 1969

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	D	426	440	440	419	447	447	440	412	385	315	315	322	343	412	399	399	385	412	586	745	627	648	544	468	449
2		466	438	417	390	410	410	397	403	403	410	397	369	390	397	390	390	383	397	480	563	771	674	625	535	454
3		445	473	480	369	383	403	397	341	390	410	410	403	376	397	383	376	383	424	459	535	501	501	494	466	425
4		521	487	397	265	334	341	376	293	293	195	258	334	327	397	417	390	403	403	445	487	521	542	466	438	389
5		508	459	431	431	431	320	237	161	195	209	299	403	424	417	403	403	397	424	431	466	487	466	438	459	388
6		473	494	494	459	452	431	431	355	258	403	431	424	410	390	383	376	397	410	459	521	528	577	605	591	448
7		410	445	473	397	424	251	244	348	244	355	438	390	334	341	397	438	438	452	521	605	424	452	438	480	406
8		501	535	487	466	438	424	410	390	390	390	362	410	397	397	403	410	410	410	424	445	473	542	556	445	438
9		436	429	457	436	318	367	339	360	325	193	131	186	263	311	339	360	388	478	540	616	714	506	422	436	390
10	Q	422	429	436	443	436	395	304	297	318	304	284	311	415	408	395	395	395	395	443	512	575	547	547	519	414
11		512	478	457	450	443	415	436	242	200	242	207	235	263	388	422	408	401	415	422	429	429	429	429	429	383
12		422	422	422	436	429	408	381	401	415	395	415	408	422	401	422	422	422	443	443	443	464	596	582	665	445
13	D	658	637	561	506	506	443	214	166	367	339	284	374	339	284	291	353	408	554	748	866	693	707	831	831	498
14		603	506	526	478	422	436	374	436	381	388	388	339	381	408	401	388	408	408	450	506	714	818	804	720	487
15		630	464	443	367	193	277	346	388	159	117	221	159	256	408	395	408	415	464	478	485	457	464	464	450	371
16		455	462	448	386	434	420	393	330	309	358	337	295	399	434	393	393	413	462	490	538	677	774	614	594	450
17	D	517	531	510	455	427	379	275	226	275	316	268	247	219	268	372	406	504	510	573	504	628	580	601	552	423
18		601	469	393	351	406	337	171	178	323	406	406	413	393	420	406	406	406	413	420	455	448	510	573	538	410
19	Q	510	427	427	448	420	420	420	420	420	420	420	413	393	379	393	393	393	406	434	462	469	497	545	490	434
20		524	490	517	455	427	413	330	372	406	420	427	420	399	406	399	399	399	420	441	517	573	621	635	531	456
21	Q	545	483	420	406	406	406	386	393	420	420	420	420	420	413	399	399	406	406	420	427	448	441	483	490	428
22		483	469	448	455	462	462	448	413	330	393	406	372	406	413	406	427	413	406	434	441	434	434	448	448	427
23	Q	441	448	448	434	413	344	323	386	399	434	420	420	399	393	406	413	406	420	434	448	448	434	448	462	418
24		462	483	399	455	399	330	282	420	420	434	434	427	420	420	406	406	393	420	420	427	427	434	448	455	418
25		552	476	406	406	406	309	358	282	420	434	427	413	399	399	393	399	427	434	434	455	462	448	476	490	421
26	Q	462	427	295	406	434	427	399	406	434	434	420	420	399	427	406	393	413	399	448	469	510	517	517	483	431
27		462	365	351	254	219	302	295	275	365	330	289	254	386	393	399	420	427	434	462	483	462	476	455	455	375
28	D	457	457	464	492	478	325	284	367	395	360	297	228	159	200	346	429	526	478	471	471	457	436	443	394	
29		436	429	429	422	436	422	422	429	408	408	395	401	388	374	395	388	401	422	478	568	533	582	610	651	451
30	D	554	450	381	367	325	284	166	332	304	166	291	367	353	311	332	436	478	492	547	568	533	575	554	478	402
MEAN	A	497	467	442	417	405	378	343	341	345	347	350	353	362	380	390	401	415	434	475	515	530	541	537	516	424
MEAN	Q	476	443	405	428	422	398	367	380	398	403	393	397	405	404	400	398	403	405	436	464	490	487	508	489	425
MEAN	D	523	503	471	448	437	376	276	301	345	299	291	308	283	295	348	405	460	489	585	631	588	589	595	554	433

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

DECLINATION

TABLE 11 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

APRIL 1969

HOUR UT	0 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	MEAN	
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	D	51.8	51.8	51.8	56.6	47.0	49.4	56.6	51.8	61.4	61.4	61.4	66.2	80.6	71.0	66.2	56.6	61.4	61.4	85.4	104.7	78.2	61.4	54.2	56.6	62.7
2		51.8	51.8	47.0	37.3	49.4	51.8	54.2	56.6	56.6	56.6	56.6	61.4	66.2	66.2	63.8	61.4	56.6	51.8	49.4	61.4	107.1	73.4	68.6	18.1	57.3
3		-1.1	27.7	49.4	37.3	54.2	51.8	56.6	56.6	56.6	59.0	61.4	66.2	66.2	71.0	68.6	68.6	61.4	59.0	56.6	73.4	54.2	56.6	61.4	56.6	55.4
4		68.6	56.6	44.6	32.5	34.9	42.2	51.8	51.8	59.0	63.8	66.2	66.2	63.8	66.2	71.0	66.2	54.2	51.8	51.8	51.8	56.6	56.6	54.2	49.4	55.5
5		61.4	59.0	51.8	51.8	56.6	37.3	34.9	54.2	51.8	51.8	61.4	61.4	66.2	66.2	66.2	56.6	56.6	49.4	47.0	47.0	51.8	51.8	51.8	56.6	54.2
6		68.6	61.4	51.8	51.8	47.0	47.0	56.6	54.2	44.6	56.6	61.4	61.4	66.2	68.6	63.8	56.6	47.0	49.4	51.8	59.0	56.6	56.6	68.6	56.6	56.8
7		13.3	32.5	47.0	32.5	44.6	51.8	51.8	56.6	56.6	63.8	61.4	61.4	63.8	61.4	56.6	66.2	66.2	56.6	71.0	80.6	49.4	51.8	51.8	56.6	54.4
8		73.4	56.6	56.6	39.8	49.4	56.6	56.6	56.6	56.6	56.6	61.4	66.2	61.4	61.4	56.6	51.8	49.4	49.4	51.8	51.8	51.8	51.8	56.6	54.2	56.2
9		51.8	51.8	51.8	49.4	37.3	49.4	56.6	56.6	61.4	63.8	63.8	54.2	61.4	56.6	47.0	42.2	32.5	44.6	59.0	71.0	87.9	56.6	47.0	49.4	54.3
10	Q	51.8	51.8	54.2	51.8	51.8	49.4	54.2	56.6	63.8	63.8	66.2	66.2	66.2	66.2	59.0	56.6	56.6	44.6	47.0	54.2	61.4	54.2	56.6	59.0	56.8
11		63.8	61.4	56.6	51.8	47.0	47.0	51.8	34.9	54.2	56.6	66.2	71.0	73.4	68.6	61.4	51.8	47.0	47.0	44.6	47.0	51.8	51.8	51.8	51.8	54.6
12		51.8	51.8	51.8	51.8	54.2	54.2	56.6	59.0	56.6	56.6	59.0	63.8	63.8	63.8	59.0	51.8	51.8	51.8	47.0	47.0	51.8	66.2	68.6	71.0	56.7
13	D	21.5	55.2	43.2	55.2	52.8	43.2	14.3	26.3	62.4	72.0	81.6	81.6	76.8	76.8	67.2	62.4	60.0	112.9	124.9	115.3	64.8	81.6	62.4	52.8	65.3
14		33.5	4.7	48.0	55.2	52.8	50.4	57.6	57.6	57.6	62.4	64.8	67.2	69.6	64.8	62.4	57.6	48.0	43.2	48.0	52.8	86.4	98.5	72.0	57.6	57.2
15		57.6	33.5	26.3	31.1	11.9	33.5	50.4	57.6	45.6	57.6	76.8	76.8	72.0	76.8	67.2	55.2	52.8	48.0	48.0	48.0	48.0	52.8	52.8	52.8	51.4
16		52.8	52.8	48.0	35.9	28.7	23.9	43.2	60.0	64.8	69.6	72.0	74.4	67.2	67.2	64.8	55.2	48.0	57.6	45.6	55.2	74.4	72.0	62.4	52.8	56.2
17	D	57.6	16.7	45.6	50.4	48.0	33.5	48.0	55.2	50.4	62.4	64.8	69.6	67.2	64.8	64.8	76.8	74.4	64.8	72.0	57.6	67.2	67.2	69.6	62.4	58.8
18		48.0	14.3	26.3	33.5	48.0	50.4	16.7	21.5	55.2	62.4	67.2	72.0	72.0	74.4	67.2	62.4	55.2	55.2	52.8	55.2	55.2	62.4	74.4	74.4	53.2
19	Q	62.4	45.6	50.4	55.2	52.8	52.8	55.2	57.6	57.6	57.6	62.4	67.2	69.6	67.2	60.0	55.2	48.0	45.6	48.0	48.0	52.8	60.0	62.4	60.0	56.4
20		62.4	62.4	60.0	57.6	55.2	52.8	43.2	52.8	57.6	60.0	62.4	67.2	67.2	64.8	62.4	57.6	52.8	50.4	48.0	55.2	60.0	67.2	64.8	57.6	58.4
21	Q	52.8	57.6	57.6	52.8	52.8	55.2	52.8	55.2	52.8	55.2	57.6	62.4	62.4	62.4	60.0	57.6	50.4	45.6	40.8	43.2	43.2	48.0	57.6	60.0	54.0
22		62.4	57.6	55.2	55.2	57.6	57.6	57.6	62.4	57.6	57.6	62.4	57.6	62.4	62.4	62.4	62.4	57.6	48.0	45.6	43.2	43.2	48.0	52.8	55.2	55.2
23	Q	55.2	60.0	57.6	57.6	55.2	48.0	48.0	57.6	57.6	62.4	62.4	64.8	62.4	57.6	57.6	52.8	52.8	50.4	45.6	50.4	52.8	48.0	52.8	57.6	55.3
24		57.6	57.6	57.6	55.2	48.0	57.6	43.2	62.4	62.4	62.4	64.8	67.2	69.6	69.6	62.4	57.6	57.6	48.0	43.2	43.2	43.2	48.0	52.8	60.0	56.3
25		57.6	64.8	52.8	52.8	55.2	40.8	55.2	45.6	62.4	64.8	64.8	64.8	62.4	62.4	57.6	48.0	43.2	43.2	45.6	48.0	52.8	52.8	60.0	62.4	55.0
26	Q	62.4	50.4	31.1	52.8	55.2	55.2	52.8	55.2	57.6	60.0	62.4	62.4	62.4	62.4	57.6	57.6	48.0	43.2	50.4	52.8	55.2	60.0	62.4	57.6	55.3
27		62.4	43.2	40.8	43.2	35.9	48.0	48.0	52.8	60.0	62.4	62.4	55.2	64.8	64.8	55.2	48.0	43.2	50.4	50.4	52.8	52.8	55.2	52.8	52.8	52.4
28	D	52.8	52.8	55.2	57.6	28.7	33.5	33.5	67.2	91.3	86.4	81.6	84.0	86.4	69.6	38.3	52.8	60.0	43.2	40.8	48.0	50.4	52.8	52.8	52.8	57.2
29		52.8	52.8	52.8	52.8	55.2	57.6	57.6	57.6	60.0	62.4	67.2	67.2	67.2	64.8	57.6	55.2	43.2	43.2	50.4	64.8	57.6	60.0	60.0	40.8	56.7
30	D	57.6	40.8	26.3	28.7	38.3	33.5	57.6	55.2	60.0	40.8	72.0	76.8	72.0	62.4	62.4	62.4	62.4	67.2	76.8	79.2	67.2	67.2	72.0	57.6	58.2
MEAN A		52.5	47.9	48.3	47.6	46.8	47.2	49.1	53.5	58.4	61.0	65.0	66.6	67.9	66.1	61.0	57.4	53.0	52.5	54.5	58.7	59.7	60.2	59.7	55.4	56.3
MEAN Q		56.9	53.1	50.2	54.0	53.5	52.1	52.6	56.4	57.9	59.8	62.2	64.6	64.6	63.2	58.8	55.9	51.1	45.8	46.3	49.7	53.1	54.0	58.4	58.8	55.5
MEAN D		48.3	43.4	44.4	49.7	43.0	38.6	42.0	51.1	65.1	64.6	72.3	75.7	76.6	68.9	59.8	62.2	63.6	69.9	80.0	81.0	65.6	66.0	62.2	56.4	60.4

VERTICAL INTENSITY

TABLE 12 GREAT WHALE RIVER

Z = 59COC PLUS TABULAR VALUES IN GAMMAS

APRIL 1969

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	D	365	365	372	278	264	379	423	394	394	437	408	351	307	358	365	372	379	401	336	148	293	264	170	379	342
2		379	343	336	379	379	387	379	372	365	351	365	351	365	365	365	372	379	401	437	401	199	293	177	119	344
3		235	416	307	351	329	322	387	408	379	372	372	379	379	379	372	365	379	394	379	358	365	379	394	394	366
4		365	213	365	510	466	452	416	452	427	416	379	358	351	365	372	379	365	365	379	401	387	387	401	379	390
5		351	379	394	379	343	343	510	473	466	416	372	351	365	365	372	372	387	416	408	408	401	408	387	394	394
6		372	379	314	314	358	372	365	430	408	365	365	372	379	379	379	379	372	379	387	408	394	379	329	322	371
7		394	307	358	430	423	582	560	510	394	401	379	365	358	336	343	365	365	379	394	358	379	379	394	387	397
8		322	351	314	257	343	365	372	372	365	351	358	372	372	365	358	365	365	372	379	387	394	394	394	394	362
9		372	379	379	351	293	387	394	394	408	394	300	257	220	235	307	351	379	423	408	365	278	379	379	372	350
10	Q	365	372	372	351	351	372	394	444	401	372	351	314	336	358	365	379	394	430	459	452	423	430	423	408	388
11		365	343	365	343	358	365	394	452	495	423	379	351	285	314	351	365	379	387	387	394	387	379	372	372	375
12		365	365	365	365	365	379	379	351	365	351	351	351	358	365	365	365	372	379	379	379	387	394	394	278	365
13	D	105	285	278	336	387	481	676	502	379	379	379	351	322	307	278	329	379	416	249	61	-18	3	3	47	288
14		126	387	358	365	365	379	394	387	379	358	351	351	343	351	365	365	365	372	379	401	351	264	257	314	347
15		257	257	394	437	481	459	416	466	416	401	365	394	322	343	343	365	379	379	401	416	394	401	394	387	386
16		379	329	322	314	293	322	437	546	459	365	358	336	300	365	343	358	365	394	408	401	322	278	379	322	362
17	D	170	336	336	351	372	502	481	596	546	444	423	379	293	293	336	365	358	372	365	365	379	336	300	343	377
18		242	234	364	437	408	531	494	494	401	357	364	379	372	379	372	364	372	372	372	379	393	408	350	357	383
19	Q	317	331	382	382	367	367	367	367	367	367	375	375	375	367	353	360	367	367	382	389	404	425	411	396	373
20		343	314	328	364	379	379	393	350	350	371	379	386	379	371	371	379	379	379	386	393	386	335	299	256	360
21	Q	330	373	373	366	373	373	381	359	359	359	366	373	373	373	373	366	366	359	352	359	366	373	386	402	368
22		386	379	357	364	364	371	386	415	415	343	350	350	335	350	350	350	357	357	357	364	364	371	386	379	367
23	Q	371	363	356	363	371	399	385	349	327	356	363	356	363	342	349	356	356	371	371	371	378	378	385	385	365
24		385	306	306	320	421	443	356	356	356	363	363	363	363	356	349	349	356	363	356	356	363	371	378	385	362
25		291	320	349	371	385	414	443	356	342	356	363	356	356	349	356	363	363	371	378	385	378	385	385	371	366
26	Q	371	327	356	371	356	356	342	342	349	356	356	349	342	342	356	363	371	363	378	414	436	428	407	385	367
27		378	342	371	342	399	385	378	356	356	363	399	342	342	349	349	349	363	371	371	385	385	371	362	356	365
28	D	356	356	356	356	384	686	636	650	622	593	586	564	391	471	370	363	363	370	399	384	384	384	377	370	449
29		370	370	377	370	356	370	370	370	370	370	370	370	370	370	363	356	356	356	370	384	406	377	370	284	358
30	D	276	341	442	442	456	614	442	442	506	528	384	348	348	348	356	377	391	391	399	370	377	370	356	384	404
MEAN A		323	339	355	365	373	418	425	425	406	389	376	363	346	353	355	364	371	382	381	369	357	357	344	340	370
MEAN Q		351	354	368	367	364	374	374	372	361	362	362	354	358	356	359	365	371	378	388	397	401	407	402	395	373
MEAN D		254	337	357	352	373	533	531	517	489	476	436	399	332	355	341	361	374	390	350	266	283	271	241	305	372

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HORIZONTAL INTENSITY

TABLE 13 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

MAY 1969

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		499	443	422	408	277	339	381	249	263	263	388	395	408	408	408	408	443	464	471	492	526	526	492	457	410
2	D	462	469	434	330	261	289	393	386	358	205	358	441	379	358	379	393	427	434	566	587	621	614	538	510	425
3		455	420	406	386	261	-93	-37	226	164	178	205	212	351	406	379	393	434	434	476	462	531	545	510	545	344
4		474	460	446	397	252	384	418	404	349	370	335	377	397	404	404	404	411	425	453	474	481	474	495	515	417
5		557	481	481	425	432	432	418	363	317	397	418	377	349	342	404	425	418	439	453	522	495	515	543	571	443
6		493	458	409	368	423	298	187	271	437	437	409	395	382	409	416	416	416	437	444	458	458	500	506	500	414
7	Q	562	520	493	451	416	389	389	285	340	340	430	423	430	423	416	423	430	430	437	437	437	437	437	444	426
8		449	477	477	442	373	310	296	352	407	421	421	421	421	421	400	449	449	442	456	442	449	456	518	539	429
9		477	456	449	331	283	317	373	393	144	227	338	428	407	442	428	428	428	442	449	470	456	574	726	532	417
10		484	449	456	276	172	317	387	380	387	428	428	414	435	414	421	414	428	442	470	470	456	442	435	442	410
11	Q	456	456	435	407	387	317	331	352	345	234	359	400	428	414	414	407	421	435	456	470	477	491	470	456	409
12		449	463	463	456	435	414	407	393	345	400	400	421	428	428	428	414	428	435	463	491	477	518	650	636	452
13	D	539	477	421	387	303	310	241	151	331	317	68	12	-9	234	345	380	470	636	636	768	678	602	546	560	392
14	D	544	246	350	385	315	204	239	357	343	246	170	336	398	385	371	385	419	440	447	627	752	731	530	516	406
15	D	655	496	391	163	391	371	253	190	-52	-468	-240	-115	-295	-323	-59	135	260	496	620	551	509	676	572	440	234
16	D	197	468	385	204	239	267	287	364	398	142	142	135	183	391	412	419	426	447	482	482	530	600	558	544	363
17		516	489	385	343	336	274	274	371	287	246	281	239	336	391	419	426	426	440	461	475	496	572	634	579	404
18		461	482	468	412	385	398	391	357	322	218	114	357	433	412	391	412	419	440	489	537	496	475	544	502	413
19		516	475	454	454	371	371	371	371	378	433	426	385	343	364	412	440	461	461	447	496	496	461	496	489	432
20		516	433	454	419	405	308	239	343	315	405	440	412	426	405	385	419	433	440	433	468	509	509	502	551	424
21		542	466	383	285	306	285	181	265	251	334	98	-6	168	355	334	403	473	466	466	466	563	549	618	577	368
22		507	466	431	313	306	417	383	348	348	258	64	-6	133	306	369	410	473	459	473	466	466	459	459	445	365
23		473	487	417	355	355	396	396	251	147	272	181	313	327	431	424	445	452	466	452	480	445	452	473	480	390
24		466	452	452	438	396	272	334	396	369	383	410	424	410	396	410	431	466	459	452	507	480	507	549	604	436
25		452	487	320	313	403	403	396	403	424	417	417	424	417	417	410	417	424	438	438	452	487	528	549	507	431
26	Q	480	466	396	362	410	417	424	424	424	424	383	362	410	417	417	417	424	438	452	459	466	466	494	459	429
27	Q	466	459	459	445	417	417	424	424	396	383	396	389	410	417	417	431	431	438	438	445	445	445	452	459	429
28		459	452	452	452	438	369	334	389	251	223	174	341	403	417	410	431	445	466	487	494	494	473	487	438	407
29	Q	445	452	445	445	438	438	424	403	355	383	389	383	396	410	410	396	424	438	487	494	521	494	528	598	441
30		528	521	494	480	410	334	396	389	299	237	376	327	292	396	410	376	383	466	494	500	500	500	556	563	426
31		507	514	445	410	251	8	306	299	195	272	396	383	334	369	410	445	459	438	424	500	604	708	646	660	416
MEAN A		487	462	431	379	350	322	330	340	313	291	296	316	333	370	387	406	429	453	473	498	510	526	533	520	406
MEAN Q		482	471	446	422	414	396	398	378	372	353	391	391	415	416	415	415	426	436	454	461	469	466	476	483	427
MEAN D		479	431	396	294	302	288	283	289	276	88	99	162	131	209	289	342	400	491	550	603	618	645	549	514	364

DECLINATION

TABLE 14 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

MAY 1969

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
DAY	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	58.1	41.3	53.3	41.3	31.6	53.3	58.1	43.7	48.5	48.5	67.7	72.5	70.1	67.7	65.3	62.9	55.7	53.3	53.3	55.7	58.1	55.7	58.1	53.3	55.3
2	D 56.7	54.3	47.1	27.8	27.8	49.5	59.1	59.1	54.3	37.4	59.1	68.7	68.7	68.7	54.3	59.1	63.9	35.0	95.2	73.5	73.5	71.1	66.3	61.5	58.0
3	62.5	60.1	57.7	50.5	43.3-28.9	50.5	52.9	45.7	52.9	74.5	74.5	67.3	69.7	55.3	57.7	57.7	48.1	50.5	50.5	60.1	67.3	62.5	69.7	54.7	
4	62.5	60.1	60.1	43.3	14.4	52.9	60.1	60.1	55.3	62.5	64.9	72.1	74.5	69.7	69.7	62.5	60.1	50.5	52.9	55.3	57.7	55.3	57.7	64.9	58.3
5	72.1	60.1	57.7	52.9	55.3	60.1	60.1	55.3	57.7	64.9	69.7	69.7	69.7	69.7	60.1	64.9	55.3	55.3	52.9	60.1	60.1	60.1	62.5	69.7	61.5
6	61.1	61.1	53.9	32.2	51.5	27.4	15.4	51.5	65.9	65.9	70.7	70.7	70.7	70.7	65.9	65.9	58.7	61.1	56.3	56.3	53.9	56.3	61.1	61.1	56.9
7	Q 73.1	63.5	63.5	51.5	53.9	53.9	56.3	49.1	61.1	63.5	73.1	75.5	75.5	70.7	65.9	61.1	56.3	51.5	51.5	51.5	51.5	51.5	51.5	53.9	59.6
8	56.3	61.1	58.7	58.7	44.3	51.5	53.9	63.5	63.5	65.9	68.3	68.3	70.7	68.3	68.3	58.7	53.9	58.7	49.1	49.1	51.5	56.3	65.9	75.5	60.0
9	63.5	58.7	58.7	53.9	44.3	53.9	58.7	58.7	32.2	53.9	70.7	73.1	73.1	65.9	61.1	56.3	46.7	46.7	46.7	53.9	51.5	68.3	87.5	63.5	58.4
10	61.1	56.3	53.9	46.7	25.0	37.0	56.3	63.5	63.5	73.1	75.5	77.9	70.7	65.9	56.3	51.5	46.7	53.9	56.3	56.3	56.3	53.9	56.3	56.3	57.1
11	Q 55.3	55.3	52.9	55.3	50.5	40.8	52.9	52.9	55.3	45.7	60.1	69.7	67.3	62.5	57.7	50.5	45.7	45.7	43.3	50.5	55.3	60.1	60.1	60.1	54.4
12	60.1	60.1	62.5	57.7	57.7	60.1	55.3	55.3	50.5	57.7	64.9	72.1	74.5	69.7	62.5	55.3	50.5	48.1	43.3	52.9	45.7	64.9	76.9	67.3	59.4
13	D 52.9	36.0	31.2	24.0	36.0	40.8	31.2	50.5	60.1	67.3	50.5	67.3	74.5	57.7	55.3	48.1	60.1	113.0	74.5	76.9	38.4	48.1	28.8	12.0	51.5
14	D 9.6-16.9	19.2	36.0	43.3	16.8	38.4	60.1	60.1	55.3	60.1	74.5	72.1	69.7	67.3	50.5	45.7	45.7	50.5	81.7	72.1	60.1	12.0-28.9	44.0		44.0
15	D-24.1	14.4-26.5-28.9	43.3	36.0	48.1	72.1	16.8	21.6	7.2	84.1	24.0	50.5	139.5	165.9	153.9	214.0	180.3	84.1	52.9	36.0	7.2	4.8			57.4
16	D-40.9	9.6	16.8	33.6	19.2	26.4	38.4	45.7	64.9	43.3	26.4	45.7	43.3	69.7	72.1	64.9	62.5	69.7	64.9	60.1	69.7	76.9	69.7	64.9	46.6
17	67.3	60.1	40.8	33.6	48.1	50.5	50.5	55.3	50.5	55.3	74.5	88.9	86.5	79.3	69.7	67.3	60.1	55.3	52.9	55.3	55.3	62.5	74.5	67.3	60.9
18	1.4	35.0	49.5	44.7	44.7	49.5	54.3	54.3	49.5	49.5	49.5	71.1	71.1	71.1	66.3	59.1	51.9	56.7	51.9	56.7	54.3	51.9	61.5	66.3	53.0
19	66.3	59.1	54.3	49.5	44.7	51.9	54.3	51.9	56.7	63.9	59.1	68.7	59.1	63.9	63.9	51.9	54.3	44.7	39.8	49.5	54.3	49.5	54.3	56.7	55.1
20	61.5	37.4	42.3	54.3	47.1	44.7	27.8	47.1	54.3	66.3	71.1	73.5	73.5	63.9	63.9	54.3	49.5	47.1	44.7	44.7	59.1	61.5	63.9	68.7	55.1
21	68.7	54.3	49.5	49.5	44.7	49.5	44.7	47.1	56.7	59.1	44.7	47.1	63.9	71.1	51.9	51.9	51.9	51.9	49.5	51.9	68.7	71.1	83.1	63.9	56.1
22	56.7	49.5	39.8	3.8	42.3	54.3	54.3	54.3	56.7	54.3	39.8	61.5	61.5	63.9	54.3	56.7	54.3	49.5	51.9	49.5	47.1	49.5	54.3	54.3	50.6
23	59.1	59.1	49.5	39.8	49.5	54.3	54.3	37.4	30.2	59.1	49.5	68.7	68.7	66.3	54.3	59.1	47.1	44.7	42.3	51.9	47.1	51.9	56.7	59.1	52.5
24	54.3	51.9	51.9	51.9	42.3	51.9	39.8	59.1	56.7	63.9	61.5	68.7	63.9	59.1	59.1	44.7	44.7	44.7	47.1	59.1	54.3	59.1	68.7	73.5	55.5
25	12.4	46.1	43.7	43.7	55.7	50.9	50.9	55.7	55.7	60.5	67.7	70.1	67.7	65.3	55.7	48.5	46.1	48.5	38.8	43.7	53.3	65.3	72.5	65.3	53.5
26	Q 58.1	53.3	38.8	41.3	50.9	53.3	53.3	55.7	58.1	58.1	60.5	62.9	70.1	65.3	60.5	53.3	46.1	43.7	43.7	46.1	48.5	58.1	62.9	55.7	54.1
27	Q 55.7	55.7	53.3	53.3	48.5	50.9	53.3	55.7	55.7	58.1	65.3	67.7	67.7	62.9	53.3	48.5	48.5	43.7	43.7	48.5	48.5	53.3	50.9	53.3	54.0
28	55.7	53.3	53.3	53.3	50.9	43.7	48.5	50.9	48.5	58.1	62.9	77.3	67.7	58.1	53.3	48.5	43.7	38.8	46.1	50.9	53.3	53.3	58.1	58.1	53.6
29	Q 58.1	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	60.5	67.7	67.7	72.5	67.7	62.9	53.3	46.1	43.7	50.9	53.3	58.1	60.5	60.5	70.1	57.5
30	62.9	58.1	58.1	53.3	48.5	43.7	53.3	53.3	50.9	55.7	74.9	74.9	72.5	67.7	62.9	62.9	50.9	36.4	50.9	50.9	53.3	53.3	62.9	65.3	57.4
31	55.7	58.1	58.1	48.5	34.0	24.4	50.9	48.5	50.9	58.1	74.9	77.3	67.7	67.7	65.3	55.7	60.5	53.3	48.5	58.1	72.5	89.4	74.5	74.9	59.5
MEAN A	49.5	49.0	47.0	42.3	43.4	43.8	49.5	54.0	52.9	56.8	60.9	70.4	67.8	66.5	63.7	59.7	55.8	56.5	55.6	56.1	56.0	59.1	59.5	56.8	55.5
MEAN Q	60.1	56.2	52.4	50.9	51.4	50.4	53.8	53.3	56.7	57.2	65.3	68.7	70.6	65.8	60.1	53.3	48.5	45.6	46.6	50.0	52.4	56.7	57.2	58.6	55.9
MEAN D	10.8	19.5	17.6	18.5	33.9	33.9	43.1	57.5	51.2	45.0	40.6	68.1	56.5	63.3	77.7	77.7	77.2	95.5	93.1	75.3	61.3	58.4	36.8	22.9	51.5

VERTICAL INTENSITY

TABLE 15 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

MAY 1969

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		349	313	371	400	500	436	392	443	365	371	357	364	371	364	364	371	385	392	400	407	392	392	385	378	387
2	D	385	357	299	342	407	378	371	371	400	400	349	378	371	364	335	357	378	392	407	450	371	328	342	400	372
3		377	356	327	348	420	327	456	528	477	348	320	262	298	327	334	384	399	391	413	399	391	377	384	356	375
4		370	363	356	377	255	363	356	356	341	348	334	334	356	356	363	370	384	399	399	406	391	377	391	377	363
5		298	348	334	363	370	370	363	363	341	348	363	356	327	320	356	384	377	377	384	399	406	377	384	334	360
6		384	377	356	277	420	578	506	370	363	370	370	363	356	363	370	370	377	377	391	413	399	399	399	377	388
7	Q	327	384	327	348	384	384	427	456	427	399	370	370	377	384	377	370	370	370	370	370	377	377	370	377	379
8		384	356	305	291	356	399	406	363	370	370	370	370	363	370	370	356	363	370	370	370	384	384	406	399	368
9		391	384	370	384	341	406	399	406	499	391	341	356	334	356	363	370	370	363	377	384	413	420	320	384	380
10		376	369	362	376	326	398	455	455	462	355	355	355	376	369	369	369	384	405	419	412	405	384	384	369	387
11	Q	369	369	355	369	427	355	369	419	427	391	341	348	362	355	362	362	376	384	398	412	412	391	384	376	380
12		376	355	355	355	362	355	362	376	362	355	341	348	362	362	362	355	355	355	369	398	412	405	384	326	365
13	D	348	412	398	376	384	455	620	591	555	577	534	427	419	291	312	355	412	326	326	255	112	133	162	212	375
14	D	212	520	541	405	491	613	577	505	520	570	434	341	369	362	362	369	369	384	398	312	83	-17	-17	61	365
15	D	40	119	398	598	591	591	677	491	842	233	398	505	670	649	749	555	470	233	69	11	-125	-60	97	312	380
16	D	587	394	501	673	666	616	544	602	466	637	544	451	466	423	408	408	394	401	401	451	509	437	423	408	492
17		401	372	351	437	487	509	523	494	559	559	451	444	344	330	358	387	394	387	394	408	415	380	236	251	411
18		251	444	344	358	437	437	509	559	523	573	480	365	380	387	380	365	365	380	408	466	408	394	394	394	417
19		372	358	365	380	394	394	408	394	380	380	380	351	365	344	365	394	423	394	387	415	423	401	401	394	386
20		351	301	308	387	372	473	487	365	372	351	380	365	358	358	344	344	358	365	380	394	408	430	415	394	378
21		351	380	437	466	466	573	530	537	494	480	609	322	272	322	337	344	372	380	380	380	394	451	394	387	419
22		372	337	387	430	423	380	401	423	408	430	437	358	236	287	315	387	387	365	372	408	394	387	380	380	378
23		387	344	322	380	430	408	444	437	365	451	451	308	279	351	351	365	365	387	380	372	380	387	394	387	380
24		372	365	365	365	423	466	451	437	423	380	365	365	365	344	358	372	372	380	372	401	408	423	394	301	386
25		380	380	430	408	365	372	372	365	372	365	358	365	358	365	365	365	365	365	387	387	408	430	394	394	380
26	Q	372	351	322	322	344	351	351	365	365	365	344	322	351	358	365	365	372	380	380	394	394	394	372	380	362
27	Q	380	380	358	365	365	365	365	365	358	351	351	344	344	351	365	351	351	351	351	365	365	365	372	380	361
28		380	372	365	344	365	437	380	473	451	437	387	315	337	365	351	372	387	380	380	372	380	387	387	387	383
29	Q	380	372	358	365	372	372	351	344	344	351	351	337	351	358	358	365	372	380	394	401	394	394	394	358	366
30		380	387	365	337	337	387	358	394	458	415	351	322	287	344	358	365	394	380	372	372	372	387	365	344	368
31		380	322	272	315	487	559	430	437	444	408	358	351	308	322	358	365	380	380	365	380	380	337	365	301	375
MEAN A		358	363	365	385	412	436	440	435	437	412	393	361	358	361	370	374	381	373	373	379	363	356	350	351	383
MEAN Q		366	371	344	354	378	366	373	390	384	371	351	347	354	360	366	361	367	371	376	387	390	384	378	374	369
MEAN D		314	360	427	479	508	531	558	512	556	483	452	420	459	418	433	409	405	347	320	296	190	164	201	279	397

HORIZONTAL INTENSITY

TABLE 16 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

JUNE 1969

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		549	473	334	334	403	334	369	410	403	410	403	396	403	417	424	431	431	452	480	549	563	473	445	438	430
2		445	445	445	396	272	285	341	272	306	410	431	396	383	403	403	396	403	424	445	473	507	487	514	535	409
3		542	521	487	473	445	431	424	417	403	424	417	431	431	417	403	403	410	424	438	445	487	514	598	653	460
4		556	507	507	410	327	396	396	355	244	410	417	369	369	403	417	424	431	466	466	507	535	473	466	487	431
5		507	500	452	459	445	396	376	424	431	362	355	417	431	410	410	417	431	438	438	459	487	487	487	487	438
6	Q	459	452	466	438	403	396	362	424	424	424	424	417	424	410	417	396	417	424	438	487	521	563	591	639	451
7		598	514	466	494	341	403	424	438	438	376	272	174	313	403	417	410	438	452	466	473	480	494	500	549	431
8		563	500	452	438	410	389	389	410	417	417	362	403	452	445	410	431	466	480	500	632	667	785	660	618	487
9		556	556	445	334	369	383	383	410	424	417	383	334	348	369	403	396	396	521	736	826	778	695	702	632	491
10		521	473	410	466	452	383	272	258	320	237	292	424	389	410	424	424	431	438	452	459	473	480	445	452	408
11		459	487	480	438	431	334	320	348	265	285	438	445	431	424	424	424	438	452	466	452	459	459	542	570	428
12	D	542	521	494	410	376	251	251	348	237	216	285	403	410	424	410	417	424	466	549	570	563	598	591	528	428
13	D	487	487	466	369	272	202	376	376	403	383	383	403	341	348	383	410	424	480	598	792	813	667	598	625	462
14	D	549	494	389	320	223	244	299	320	272	459	459	452	258	91	362	424	424	445	445	445	473	591	625	514	399
15		480	459	452	320	369	438	403	424	313	403	403	251	154	216	362	417	438	445	473	542	577	487	480	459	407
16	D	445	507	438	348	376	327	147	244	292	140	355	389	431	403	348	362	431	438	480	549	514	549	577	591	403
17	D	556	355	188	306	424	438	341	57	348	410	285	369	445	431	431	403	438	459	507	521	466	466	459	445	398
18	Q	473	473	445	410	424	396	431	431	421	438	438	438	431	410	403	410	410	438	459	473	473	473	459	445	438
19		438	431	438	452	438	438	424	383	327	265	383	431	431	417	417	417	445	466	466	480	480	494	514	494	432
20		494	417	410	424	147	126	292	348	112	181	195	292	355	438	438	445	445	459	459	459	459	466	473	480	367
21		487	487	445	452	417	320	161	251	389	369	251	306	369	376	417	459	459	452	459	466	473	459	445	459	401
22	Q	452	459	452	445	431	431	431	431	431	424	417	417	438	431	417	431	438	445	459	466	480	473	466	442	442
23		459	466	452	452	445	438	438	424	403	396	431	424	417	424	431	452	480	514	542	570	639	653	598	475	475
24		556	507	341	327	424	292	174	292	244	334	383	376	369	417	403	452	459	487	535	535	507	549	639	584	424
25		473	466	494	473	459	466	431	327	403	389	396	403	389	396	424	431	431	480	535	618	625	598	598	611	472
26		563	535	494	452	410	403	445	445	445	396	403	348	355	362	369	417	438	431	438	466	487	500	500	507	442
27		473	473	466	389	438	438	362	383	417	417	383	341	383	424	410	410	431	445	452	459	494	535	598	535	440
28	Q	507	507	494	459	445	445	438	431	424	424	424	431	424	424	417	424	424	438	452	452	466	494	459	445	448
29	Q	445	459	459	459	473	459	438	417	376	383	403	403	424	431	438	424	431	438	452	466	494	494	480	494	443
30		500	466	487	480	473	410	334	348	369	452	452	431	424	417	410	417	410	417	438	466	480	494	507	507	441
MEAN A		504	480	441	414	392	370	356	362	358	369	376	384	388	393	408	419	432	452	483	517	528	531	536	528	434
MEAN Q		467	470	463	442	435	426	420	427	417	419	421	421	428	421	419	417	424	435	449	467	484	500	492	498	444
MEAN D		516	473	395	351	334	292	283	269	310	322	353	403	377	340	387	403	428	457	516	575	566	574	570	541	418

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

DECLINATION

TABLE 17 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

JUNE 1969

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
DAY	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	59.5	45.1	11.4	33.0	42.7	37.8	49.9	54.7	57.1	61.9	64.3	66.7	66.7	66.7	61.9	57.1	49.9	49.9	52.3	61.9	61.9	57.1	54.7	52.3	53.2
2	54.7	52.3	52.3	40.3	40.3	47.5	49.9	37.8	45.1	61.9	66.7	66.7	66.7	66.7	61.9	57.1	47.5	42.7	45.1	42.7	47.5	47.5	57.1	61.9	52.5
3	57.1	59.5	49.9	49.9	45.1	47.5	49.9	52.3	57.1	61.9	66.7	71.5	69.1	69.1	66.7	54.7	47.5	42.7	37.8	37.8	42.7	49.9	64.3	69.1	55.0
4	66.7	59.5	57.1	49.9	37.8	45.1	42.7	42.7	35.4	61.9	69.1	71.5	73.9	71.5	61.9	57.1	47.5	42.7	37.8	42.7	52.3	52.3	54.7	57.1	53.8
5	54.7	49.9	45.1	52.3	52.3	49.9	52.3	54.7	54.7	59.5	71.5	69.1	66.7	66.7	61.9	54.7	42.7	40.3	42.7	42.7	47.5	52.3	57.1	57.1	54.1
6	Q 53.3	53.3	53.3	50.9	48.5	48.5	48.5	55.7	58.1	62.9	72.5	72.5	70.1	62.9	55.7	53.3	43.7	36.4	41.3	50.9	53.3	62.9	70.1	72.5	56.3
7	62.9	53.3	43.7	48.5	22.0	46.1	53.3	60.5	60.5	60.5	72.5	74.9	77.3	67.7	65.3	58.1	46.1	46.1	46.1	50.9	50.9	58.1	60.5	65.3	56.3
8	58.1	43.7	46.1	48.5	48.5	43.7	55.7	62.9	67.7	62.9	82.1	72.5	72.5	60.5	58.1	53.3	50.9	58.1	41.3	62.9	72.5	74.9	67.7	62.9	59.5
9	60.5	48.5	19.6	-2.0	41.3	46.1	55.7	60.5	62.9	62.9	67.7	74.9	77.3	74.9	62.9	65.3	67.7	77.3	15.8	91.8	62.9	74.9	70.1	50.9	62.1
10	62.9	43.7	19.6	38.8	41.3	46.1	36.4	46.1	55.7	58.1	72.5	77.3	70.1	62.9	62.9	55.7	58.1	48.5	43.7	46.1	50.9	53.3	50.9	50.9	52.2
11	53.3	58.1	58.1	50.9	50.9	24.4	48.5	48.5	36.4	53.3	70.1	72.5	70.1	67.7	62.9	55.7	50.9	48.5	48.5	43.7	43.7	48.5	53.3	70.1	53.7
12	D 62.9	43.7	36.4	29.2	34.0	31.6	41.3	43.7	29.2	46.1	67.7	72.5	67.7	67.7	62.9	53.3	46.1	58.1	74.9	60.5	72.5	77.3	79.7	62.9	55.1
13	D 55.7	43.7	34.0	48.5	17.2	41.3	46.1	50.9	58.1	62.9	70.1	72.5	72.5	65.3	62.9	48.5	53.3	55.7	65.3	91.8	72.5	62.9	60.5	70.1	57.6
14	D 58.1	53.3	31.6	10.0	7.6	14.8	29.2	38.8	34.0	55.7	70.1	74.9	67.7	72.5	72.5	55.7	50.9	36.4	34.0	38.8	53.3	74.9	82.1	60.5	49.1
15	58.1	58.1	48.5	38.8	34.0	48.5	50.9	53.3	43.7	58.1	62.9	67.7	55.7	62.9	60.5	55.7	50.9	55.7	55.7	62.9	65.3	53.3	58.1	58.1	54.9
16	D 53.3	55.7	41.3	70.1	43.7	34.0	29.2	48.5	48.5	19.6	72.5	74.9	79.7	77.3	60.5	48.5	50.9	43.7	43.7	58.1	48.5	58.1	65.3	70.1	54.0
17	D 58.1	14.8	2.8	34.0	55.7	53.3	43.7	41.3	55.7	65.3	65.3	70.1	79.7	70.1	65.3	55.7	48.5	55.7	72.5	48.5	38.8	46.1	48.5	50.9	51.7
18	Q 58.1	55.7	53.3	48.5	53.3	48.5	53.3	53.3	55.7	60.5	65.3	67.7	67.7	62.9	60.5	53.3	48.5	43.7	36.4	38.8	48.5	53.3	53.3	53.3	53.9
19	53.3	53.3	53.3	53.3	50.9	53.3	53.3	48.5	48.5	38.8	67.7	72.5	67.7	65.3	60.5	53.3	46.1	48.5	48.5	50.9	55.7	58.1	65.3	65.3	55.5
20	63.9	13.4	47.1	54.3	3.8	3.8	47.1	54.3	3.8	35.0	63.9	68.7	75.9	71.1	59.1	54.3	49.5	49.5	49.5	51.9	51.9	54.3	59.1	59.1	47.7
21	61.5	59.1	51.9	54.3	51.9	39.8	32.6	51.9	59.1	59.1	56.7	59.1	63.9	56.7	59.1	56.7	51.9	44.7	51.9	47.1	54.3	54.3	54.3	59.1	53.8
22	Q 56.7	59.1	56.7	54.3	54.3	54.3	54.3	54.3	54.3	59.1	63.9	71.1	71.1	68.7	63.9	56.7	49.5	44.7	44.7	49.5	56.7	61.5	61.5	59.1	57.5
23	54.3	54.3	54.3	56.7	56.7	54.3	54.3	54.3	56.7	54.3	59.1	63.9	66.3	66.3	59.1	59.1	49.5	42.3	51.9	59.1	63.9	71.1	68.7	61.5	58.0
24	54.3	47.1	11.0	23.0	42.3	23.0	25.4	47.1	56.7	66.3	73.5	75.9	71.1	68.7	66.3	49.5	63.9	59.1	61.5	61.5	56.7	61.5	80.7	66.3	54.7
25	56.7	54.3	59.1	54.3	54.3	51.9	54.3	44.7	56.7	63.9	68.7	73.5	73.5	68.7	59.1	56.7	63.9	63.9	51.9	80.7	68.7	71.1	66.3	59.1	61.5
26	56.7	49.5	49.5	49.5	49.5	49.5	56.7	59.1	61.5	61.5	63.9	63.9	68.7	66.3	54.3	49.5	51.9	47.1	49.5	54.3	56.7	59.1	61.5	59.1	56.2
27	59.1	59.1	54.3	42.3	54.3	56.7	54.3	54.3	59.1	63.9	63.9	66.3	73.5	68.7	63.9	56.7	51.9	54.3	51.9	49.5	54.3	59.1	73.5	63.9	58.7
28	Q 61.5	61.5	59.1	54.3	56.7	56.7	59.1	56.7	56.7	63.9	63.9	71.1	71.1	71.1	68.7	59.1	54.3	49.5	47.1	44.7	44.7	54.3	54.3	54.3	58.1
29	Q 56.7	56.7	56.7	59.1	59.1	56.7	54.3	54.3	51.9	54.3	63.9	68.7	73.5	68.7	63.9	54.3	49.5	44.7	42.3	42.3	49.5	54.3	59.1	61.5	56.5
30	61.5	59.1	59.1	59.1	59.1	49.5	47.1	49.5	54.3	63.9	71.1	73.5	75.9	73.5	68.7	56.7	47.1	39.8	37.4	44.7	49.5	54.3	59.1	59.1	57.2
MEAN A	58.1	50.6	43.9	45.1	43.6	43.5	47.6	51.2	51.2	57.3	67.7	70.6	70.8	67.7	62.5	55.2	51.0	49.0	50.8	53.6	54.9	59.0	62.4	60.8	55.3
MEAN Q	57.2	57.2	55.8	53.4	54.4	52.9	53.9	54.8	55.3	60.1	65.9	70.2	70.7	66.9	62.5	55.3	49.1	43.8	42.3	45.2	50.5	57.2	59.7	60.1	56.4
MEAN D	57.6	42.2	29.2	38.4	31.6	35.0	37.9	44.6	45.1	49.9	69.2	73.0	73.5	70.6	64.8	52.3	49.9	49.9	58.1	59.5	57.1	63.9	67.2	62.9	53.5

VERTICAL INTENSITY

TABLE 18 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

JUNE 1969

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		325	333	469	454	383	411	383	368	361	361	368	361	368	383	383	375	375	375	411	426	411	404	390	383	386
2		383	368	368	325	275	368	390	461	383	354	368	361	347	354	368	368	375	390	418	411	397	383	411	397	376
3		368	361	340	333	368	368	368	368	368	368	361	368	368	368	361	368	368	383	411	383	390	397	375	340	369
4		383	361	347	297	383	368	390	433	397	354	361	333	304	340	368	383	411	404	397	397	411	426	426	397	378
5		361	325	375	368	368	361	347	347	368	361	340	347	361	354	354	354	361	361	368	383	383	404	404	397	365
6	Q	368	368	354	347	347	333	333	347	354	361	354	354	361	361	361	368	375	368	383	404	411	382	347	363	
7		318	290	290	318	383	440	390	368	390	411	469	333	304	325	347	368	368	375	404	397	383	390	390	383	368
8		318	354	375	361	354	404	497	454	454	447	383	325	340	354	340	347	361	383	404	383	347	268	325	368	373
9		354	304	325	433	404	426	383	368	361	354	340	311	282	290	318	354	368	426	311	182	96	196	239	333	323
10		361	340	282	354	354	411	497	476	533	497	390	347	347	325	361	368	375	390	397	368	368	390	383	383	387
11		387	359	351	359	359	445	394	394	452	351	380	380	373	359	366	366	366	359	366	373	373	380	387	380	377
12	D	359	280	402	380	416	523	516	516	588	445	359	359	380	366	366	373	387	402	409	416	409	394	372	380	408
13	D	373	359	373	344	509	531	437	416	402	402	366	359	351	323	337	359	387	402	445	337	194	165	115	215	354
14	D	301	337	394	473	466	516	602	602	387	416	409	394	416	416	359	366	387	387	373	373	387	445	394	380	416
15		387	373	359	330	330	359	380	394	430	366	359	366	337	301	294	359	373	373	416	466	445	402	387	380	373
16	D	373	337	330	402	402	516	559	409	574	437	351	337	359	366	366	330	373	394	416	430	416	402	387	315	399
17	D	288	431	403	403	360	360	496	424	324	345	417	367	381	381	367	374	367	388	446	453	424	374	360	388	388
18	Q	395	352	345	352	367	367	367	367	360	374	374	374	374	374	367	367	374	381	388	374	374	374	367	360	369
19		367	367	367	374	367	360	352	388	352	316	316	352	360	352	360	360	360	360	367	374	374	388	388	403	363
20		381	381	388	352	360	510	475	410	453	446	367	280	309	345	352	360	360	367	374	374	374	374	374	381	381
21		386	350	357	372	365	386	365	408	365	372	343	300	300	314	350	372	372	365	372	379	386	393	400	393	365
22	Q	386	386	379	365	372	365	365	365	365	365	365	350	357	365	365	365	372	365	365	372	379	393	393	379	370
23		373	380	373	366	366	358	366	366	366	344	337	351	358	358	358	366	380	409	409	402	416	394	337	416	373
24		265	358	366	409	409	495	474	387	358	337	351	337	308	358	366	387	394	423	438	409	366	373	265	337	374
25		378	378	342	342	371	371	399	385	363	363	363	363	356	356	356	371	392	414	443	407	363	327	363	363	372
26		385	298	320	363	356	349	349	363	385	371	363	349	349	356	327	371	385	371	392	399	407	414	399	385	367
27		392	385	291	342	371	371	378	356	356	371	356	313	334	371	371	371	371	385	385	378	385	414	421	399	369
28	Q	394	358	358	365	365	373	373	373	373	387	380	373	373	380	373	373	373	380	387	394	401	401	401	387	379
29	Q	380	380	380	366	315	359	373	373	359	359	352	359	359	373	373	373	380	388	395	402	409	417	402	409	377
30		402	402	388	359	359	373	359	344	344	388	388	388	388	388	380	380	395	395	388	395	395	402	417	402	384
MEAN A		363	355	360	367	373	406	412	401	397	381	368	350	350	355	357	366	376	386	395	387	376	376	369	373	375
MEAN Q		385	369	363	359	353	359	362	365	362	369	365	362	365	371	368	368	373	378	381	385	394	399	389	376	372
MEAN D		339	349	380	400	430	489	522	473	455	409	380	363	377	370	359	360	380	395	418	402	366	356	326	336	393

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HORIZONTAL INTENSITY

TABLE 19 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

JULY 1969

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	D	494	507	507	480	473	438	376	147	279	383	431	389	362	389	410	403	431	480	535	632	591	521	591	577	451
2		528	507	500	348	348	341	369	348	410	396	424	424	424	417	417	424	431	445	459	473	459	494	507	466	432
3		459	466	480	452	431	417	424	438	445	438	431	431	410	417	410	410	417	431	452	466	466	473	480	500	444
4	Q	487	459	452	452	452	452	445	438	445	452	438	438	424	424	424	424	424	438	452	459	480	494	494	494	452
5	Q	473	480	487	480	438	424	410	417	424	424	438	424	410	410	410	403	410	431	459	473	487	487	480	473	444
6		473	473	473	466	466	445	445	424	438	438	445	445	431	410	396	403	438	466	466	466	466	466	480	480	450
7		473	473	480	473	459	438	459	445	424	424	403	403	417	410	410	424	424	445	452	473	507	521	556	549	456
8		514	494	494	466	452	438	452	445	438	424	424	424	424	410	417	431	438	452	466	473	494	507	570	591	464
9		584	528	528	459	424	410	410	389	258	376	403	417	417	424	424	431	445	473	521	584	604	542	535	521	463
10		507	494	459	369	410	424	410	424	383	299	244	327	410	396	383	410	445	459	473	480	480	487	528	611	430
11		535	494	424	452	452	445	452	431	403	445	438	431	431	431	424	417	431	466	487	507	563	570	556	563	469
12		528	466	494	452	389	369	320	369	320	279	383	452	459	452	424	438	445	459	473	466	487	639	743	542	452
13	D	480	494	438	452	355	313	299	362	362	181	320	396	452	459	459	452	445	438	521	625	708	618	507	500	443
14	D	494	480	452	355	147	389	369	299	147	209	452	452	396	424	438	431	417	452	452	494	500	535	514	473	407
15		452	466	431	424	438	438	424	424	327	362	403	396	466	445	424	410	396	431	452	466	466	494	507	507	436
16		500	500	459	285	320	389	341	389	452	438	223	272	403	438	438	410	424	459	480	494	521	528	500	473	422
17		473	507	466	473	403	327	396	424	417	438	438	438	438	424	424	424	417	431	452	459	459	473	487	480	440
18		466	459	452	445	445	445	431	376	383	376	341	320	438	431	445	452	452	466	480	466	466	473	480	480	435
19	Q	466	452	452	452	445	417	327	320	383	403	424	452	445	438	431	431	438	438	452	466	473	466	466	466	433
20	Q	466	466	466	473	445	396	410	438	452	459	452	445	452	452	438	438	438	445	466	480	473	494	500	500	456
21		500	487	473	459	445	452	452	459	459	459	452	452	438	424	417	417	431	445	487	556	556	521	549	584	474
22		547	540	498	478	464	353	242	297	311	374	436	450	429	429	422	422	436	464	485	505	540	547	589	533	450
23		492	464	492	478	471	436	443	443	443	436	422	408	422	436	436	436	464	505	492	464	478	533	582	463	463
24		505	464	443	443	443	422	374	332	408	443	436	429	429	422	422	436	443	450	464	457	478	485	471	471	440
25		464	478	443	429	387	401	318	381	457	436	450	450	443	443	443	450	450	450	450	450	464	478	505	478	442
26	D	492	498	471	401	346	415	478	464	457	450	443	443	422	387	381	443	443	450	464	478	478	561	651	561	461
27	D	401	519	381	117	263	283	394	-15	48	249	297	339	367	415	443	443	443	478	554	630	533	505	450	464	375
28		478	485	464	443	422	422	367	263	249	394	450	443	429	429	436	429	436	450	457	457	450	457	464	457	426
29	Q	455	448	448	441	434	441	441	392	427	434	434	434	427	434	427	427	427	441	469	496	476	455	455	462	443
30		490	496	469	462	462	455	469	455	455	448	448	441	427	427	420	441	427	462	490	594	580	503	503	580	475
31		545	503	469	455	399	420	427	434	434	434	420	413	434	406	420	406	420	434	455	469	476	490	476	476	446
MEAN A		491	485	466	429	411	408	400	376	379	394	408	415	425	424	423	426	432	451	475	500	505	508	520	513	444
MEAN Q		469	461	461	459	443	426	407	401	426	434	437	439	432	432	426	425	428	439	459	475	477	479	479	479	445
MEAN D		472	500	450	361	317	368	383	251	258	294	389	404	400	415	426	434	436	459	505	572	562	548	542	515	428

DECLINATION

TABLE 20 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

JULY 1969

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	D	60.3	62.7	60.3	48.2	57.8	53.0	50.6	43.3	84.5	69.9	79.6	79.6	79.6	86.9	69.9	65.1	53.0	55.4	57.8	79.6	62.7	55.4	67.5	72.4	64.8
2		60.3	55.4	55.4	40.9	43.3	45.7	55.4	50.6	55.4	62.7	69.9	77.2	77.2	72.4	65.1	57.8	50.6	45.7	45.7	45.7	50.6	55.4	60.3	57.8	56.5
3		57.8	57.8	57.8	55.4	55.4	55.4	55.4	57.8	60.3	65.1	69.9	74.8	74.8	69.9	62.7	55.4	45.7	45.7	45.7	45.7	48.2	53.0	57.8	62.7	57.9
4	Q	65.1	57.8	55.4	55.4	55.4	55.4	57.8	57.8	62.7	67.5	69.9	74.8	77.2	72.4	67.5	60.3	50.6	43.3	43.3	45.7	48.2	53.0	60.3	62.7	59.2
5	Q	60.3	60.3	57.8	55.4	50.6	53.0	57.8	55.4	60.3	67.5	72.4	72.4	74.8	69.9	65.1	60.3	50.6	45.7	43.3	43.3	48.2	50.6	53.0	57.8	57.7
6		57.8	60.3	57.8	57.8	60.3	60.3	57.8	60.3	65.1	69.9	72.4	74.8	74.8	77.2	72.4	60.3	45.7	43.3	50.6	45.7	48.2	50.6	53.0	55.4	59.7
7		55.4	55.4	55.4	55.4	53.0	53.0	60.3	60.3	62.7	67.5	69.9	72.4	69.9	72.4	69.9	53.0	55.4	45.7	38.5	40.9	48.2	55.4	65.1	65.1	58.3
8		60.3	60.3	62.7	57.8	53.0	48.2	60.3	60.3	62.7	67.5	72.4	74.8	77.2	77.2	69.9	60.3	55.4	55.4	57.8	55.4	57.8	57.8	65.1	69.9	62.5
9		62.7	43.3	57.8	40.9	48.2	45.7	50.6	55.4	40.9	65.1	72.4	74.8	72.4	67.5	55.4	55.4	50.6	50.6	60.3	67.5	67.5	62.7	62.7	65.1	58.1
10		65.1	55.4	28.8	40.9	48.2	50.6	55.4	60.3	57.8	60.3	60.3	77.2	82.0	79.6	74.8	55.4	53.0	48.2	45.7	45.7	50.6	53.0	60.3	69.9	57.4
11		67.5	57.8	43.3	48.2	55.4	55.4	55.4	57.8	55.4	65.1	72.4	77.2	77.2	72.4	65.1	57.8	50.6	48.2	53.0	55.4	67.5	67.5	65.1	67.5	60.8
12		44.7	35.1	44.7	27.8	27.8	35.1	47.2	49.6	52.0	59.3	68.9	71.4	68.9	66.5	56.8	52.0	49.6	44.7	44.7	52.0	49.6	64.1	90.7	66.5	52.9
13	D	54.4	59.3	44.7	47.2	37.5	49.6	47.2	56.8	52.0	42.3	68.9	81.0	73.8	68.9	66.5	59.3	54.4	52.0	64.1	81.0	93.1	68.9	61.7	61.7	60.3
14	D	64.1	64.1	49.6	47.2	10.9	47.2	49.6	42.3	30.2	49.6	71.4	71.4	68.9	71.4	68.9	59.3	54.4	52.0	44.7	44.7	52.0	61.7	61.7	59.3	54.0
15		59.3	56.8	59.3	56.8	52.0	52.0	54.4	52.0	44.7	52.0	64.1	68.9	73.8	66.5	64.1	56.8	52.0	44.7	39.9	39.9	42.3	54.4	59.3	61.7	55.3
16		61.7	59.3	52.0	49.6	47.2	54.4	54.4	54.4	59.3	61.7	52.0	59.3	73.8	71.4	61.7	56.8	54.4	39.9	54.4	52.0	59.3	59.3	56.8	56.8	56.7
17		56.8	61.7	56.8	52.0	44.7	39.9	47.2	54.4	56.8	61.7	64.1	66.5	66.5	66.5	61.7	56.8	54.4	49.6	49.6	49.6	54.4	59.3	59.3	59.3	56.2
18		56.8	54.4	52.0	54.4	54.4	54.4	54.4	52.0	52.0	52.0	64.1	73.8	73.8	66.5	59.3	54.4	54.4	52.0	49.6	52.0	52.0	54.4	59.3	59.3	56.7
19	Q	56.8	56.8	56.8	54.4	54.4	47.2	42.3	42.3	42.3	49.6	54.4	61.7	71.4	73.8	68.9	64.1	56.8	49.6	47.2	49.6	49.6	52.0	54.4	56.8	55.3
20	Q	56.8	56.8	56.8	59.3	54.4	47.2	52.0	56.8	59.3	64.1	64.1	68.9	73.8	71.4	66.5	61.7	52.0	47.2	49.6	49.6	52.0	54.4	56.8	59.3	57.9
21		59.3	61.7	59.3	56.8	56.8	56.8	56.8	59.3	61.7	64.1	71.4	73.8	73.8	73.8	68.9	59.3	56.8	52.0	49.6	61.7	64.1	64.1	66.5	64.1	62.2
22		61.7	61.7	59.3	54.4	52.0	39.9	44.7	49.6	59.3	68.9	73.8	73.8	68.9	68.9	59.3	49.6	49.6	49.6	54.4	59.3	61.7	64.1	71.4	59.3	59.0
23		54.4	54.4	54.4	56.8	56.8	54.4	56.8	59.3	59.3	61.7	64.1	68.9	71.4	68.9	64.1	59.3	56.8	56.8	61.7	56.8	52.0	54.4	61.7	68.9	59.8
24		54.4	54.4	52.0	54.4	54.4	49.6	49.6	49.6	54.4	61.7	64.1	64.1	64.1	64.1	64.1	56.8	52.0	44.7	47.2	52.0	49.6	52.0	54.4	52.0	54.9
25		55.4	55.4	43.3	45.7	40.9	48.2	50.6	57.8	62.7	65.1	65.1	65.1	62.7	62.7	62.7	57.8	53.0	50.6	50.6	50.6	50.6	55.4	60.3	60.3	55.5
26	D	58.8	58.8	51.6	44.3	44.3	51.6	63.7	63.7	63.7	66.1	66.1	70.9	75.8	83.0	61.3	54.0	49.2	46.7	46.7	46.7	46.7	56.4	70.5	27.4	57.0
27	D	-8.9	.8	29.8	-11.3	44.3	49.2	54.0	12.9	61.3	58.8	73.4	80.6	75.8	56.4	56.4	51.6	46.7	54.0	66.1	83.0	66.1	58.8	54.0	54.0	48.7
28		62.3	57.4	55.0	52.6	47.7	57.4	52.6	42.9	52.6	67.1	69.5	69.5	67.1	67.1	62.3	57.4	52.6	47.7	47.7	50.2	50.2	52.6	55.0	52.6	56.2
29	Q	56.0	56.0	56.0	56.0	58.4	60.8	60.8	56.0	60.8	63.3	68.1	68.1	68.1	68.1	60.8	56.0	51.2	48.7	48.7	53.6	53.6	53.6	53.6	56.0	58.0
30		63.3	63.3	56.0	58.4	58.4	60.8	60.8	60.8	65.7	70.5	75.4	77.8	77.8	77.8	72.9	68.1	60.8	60.8	58.4	68.1	63.3	60.8	65.7	72.9	65.8
31		75.4	68.1	63.3	58.4	56.0	58.4	60.8	60.8	63.3	65.7	70.5	75.4	75.4	70.5	68.1	56.0	51.2	51.2	53.6	53.6	58.4	63.3	63.3	68.1	62.9
MEAN A		57.3	55.6	53.1	49.4	49.5	51.3	54.1	53.5	57.9	62.6	68.5	72.6	73.1	70.9	64.6	57.3	51.9	49.1	50.9	54.0	55.6	57.5	61.5	60.7	58.0
MEAN Q		59.0	57.6	56.6	56.1	54.7	52.7	54.2	53.7	58.5	63.4	67.2	71.1	73.5	70.1	64.8	59.0	50.8	46.4	46.9	48.4	50.8	53.2	56.1	58.5	57.6
MEAN D		45.7	49.1	47.2	35.1	39.0	50.1	53.0	43.8	58.3	57.4	71.9	76.7	74.8	73.3	64.6	57.8	51.5	52.0	55.9	67.0	64.1	60.3	63.2	54.9	57.0

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

VERTICAL INTENSITY

TABLE 21 GREAT WHALE RIVER		Z = 59000 PLUS TABULAR VALUES IN GAMMAS																							JULY 1969	
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
DAY		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	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	D	388	380	301	337	359	424	402	402	417	373	373	366	337	352	344	359	373	395	417	402	355	388	373	315	372
2		243	380	366	243	366	460	453	417	380	388	388	388	388	388	380	388	388	388	395	395	402	417	395	388	382
3		380	388	359	359	373	373	366	373	388	388	380	373	380	380	388	380	380	388	388	395	395	395	402	395	382
4	Q	388	380	388	373	373	373	380	373	373	380	380	373	373	373	380	380	380	380	373	388	402	409	431	417	384
5	Q	402	388	388	373	395	402	366	359	366	366	359	366	359	366	373	373	380	380	373	373	373	373	388	395	377
6		395	388	380	373	366	373	366	352	359	359	366	366	366	359	366	373	380	388	388	380	373	373	373	366	372
7		373	373	366	344	359	337	359	373	373	359	352	344	344	352	359	366	359	373	380	366	366	388	409	409	366
8		409	388	373	373	373	294	366	373	380	373	366	359	359	366	366	366	359	359	373	402	409	409	405	402	375
9		366	265	294	344	402	431	380	446	395	359	344	352	352	359	359	373	388	402	431	467	402	417	402	395	380
10		402	373	287	402	373	388	366	366	380	395	344	315	330	344	344	352	359	359	359	366	373	388	402	366	364
11		391	355	340	369	376	376	376	369	355	376	369	362	362	369	376	383	383	391	405	434	456	434	427	419	386
12		311	419	362	369	419	441	492	448	484	405	333	355	376	376	376	376	383	383	391	405	412	304	362	390	
13	D	376	383	347	347	456	535	484	448	506	556	362	319	369	383	376	369	376	383	405	463	441	405	405	405	413
14	D	383	347	369	477	391	376	419	484	362	362	347	376	347	333	369	362	369	391	405	419	463	427	383	376	389
15		376	362	347	347	362	369	369	376	405	376	369	362	376	398	391	376	369	383	391	398	398	405	419	412	381
16		398	376	376	383	326	362	347	369	376	369	376	304	355	369	376	376	383	391	405	441	398	391	391	376	376
17		369	362	355	362	398	355	355	362	369	369	376	383	376	376	376	383	383	391	398	398	405	405	398	383	379
18		362	369	369	369	369	369	362	333	326	319	304	261	311	340	340	362	362	369	376	391	398	391	391	391	356
19	Q	383	376	376	369	369	362	333	347	333	347	362	369	362	376	376	376	369	376	376	383	383	376	376	376	368
20	Q	376	376	376	369	355	333	340	355	369	369	369	362	355	355	355	355	362	362	362	376	391	391	382	376	365
21		391	391	376	369	355	362	369	362	362	369	369	369	362	355	355	369	376	391	448	448	419	405	405	347	380
22		412	383	383	369	362	319	355	463	398	347	347	362	355	362	369	355	369	376	383	391	398	391	405	391	377
23		383	376	362	347	376	369	369	376	376	376	369	369	369	362	369	369	369	391	419	405	383	383	398	383	377
24		391	383	376	369	369	355	355	297	347	369	369	362	362	362	362	369	362	362	376	391	391	376	369	376	367
25		376	369	326	347	398	412	448	347	369	376	376	369	369	376	376	376	376	376	376	376	376	376	391	405	378
26	D	391	369	362	362	405	376	376	376	376	369	362	369	362	355	333	319	340	333	340	355	362	383	326	218	355
27	D	275	440	548	706	620	562	620	620	526	526	433	340	347	340	376	390	404	411	419	383	383	397	390	383	452
28		386	371	379	379	393	414	436	479	400	350	386	386	379	379	379	379	371	371	371	379	386	393	393	386	388
29	Q	379	379	371	371	379	371	371	350	364	371	371	379	371	379	379	371	364	364	364	379	379	371	371	379	372
30		393	379	379	386	379	379	371	379	379	379	379	371	364	357	357	350	364	379	422	436	422	407	407	350	382
31		314	335	379	364	386	407	386	371	379	364	364	364	371	379	371	379	379	393	393	407	422	393	393	407	379
MEAN A		373	374	366	376	386	389	392	392	386	380	366	358	361	365	367	370	373	380	390	399	397	396	391	379	379
MEAN Q		386	380	380	371	374	368	358	357	361	367	368	370	364	370	373	371	371	373	370	380	386	384	390	389	373
MEAN D		363	384	385	446	446	455	460	466	437	437	375	354	352	352	360	360	373	383	397	404	401	400	375	339	396

HORIZONTAL INTENSITY

TABLE 22 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

AUGUST 1969

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	Q	465	451	444	444	438	424	375	417	431	424	396	396	417	417	410	417	424	438	451	458	458	458	458	458	432
2		458	451	451	451	444	438	444	444	444	438	431	431	417	424	403	424	431	444	458	493	500	500	500	479	450
3	D	463	477	498	456	463	449	449	436	408	311	366	373	380	401	408	415	436	477	505	609	678	754	823	692	489
4		574	512	470	353	346	346	346	408	422	269	48	242	394	422	415	422	429	470	505	526	519	512	484	442	411
5		440	454	427	323	364	219	385	447	427	420	420	357	316	385	420	420	440	454	461	461	475	454	447	454	411
6		461	489	399	461	427	316	337	434	447	440	427	406	427	420	427	427	434	440	447	461	482	475	454	454	433
7		452	452	459	452	438	376	217	231	328	445	438	432	418	411	418	425	438	459	487	494	535	618	639	584	444
8		535	522	480	452	445	438	438	397	217	259	335	196	307	404	425	445	445	473	487	494	480	535	494	535	427
9		540	513	381	236	374	436	416	381	291	409	430	416	395	395	409	430	443	450	478	471	471	464	499	520	427
10		478	450	360	353	374	340	312	284	250	236	340	409	395	395	395	416	416	430	436	443	443	450	450	443	387
11	Q	441	441	434	434	434	434	434	441	441	434	428	428	421	421	407	428	421	448	455	462	476	469	455	462	440
12	D	469	476	393	448	421	213	289	365	227	351	338	33	275	393	414	414	434	448	511	497	483	476	469	462	387
13		453	439	426	384	349	301	343	405	197	204	384	419	412	419	419	405	412	426	446	481	516	529	509	453	405
14		453	446	439	446	432	412	356	204	308	280	170	273	356	315	349	398	426	446	474	474	467	474	453	446	387
15		444	444	437	437	437	410	375	368	403	430	424	424	424	417	417	417	430	451	458	458	451	458	451	437	429
16		436	436	443	443	436	436	429	429	436	409	423	416	423	423	423	429	436	457	478	485	499	506	506	471	446
17		465	396	382	430	382	361	354	278	327	368	424	430	417	417	410	410	417	437	458	493	514	493	472	465	417
18		486	486	430	451	451	444	437	437	430	417	424	437	417	382	368	403	430	437	444	451	451	444	451	458	436
19	D	479	465	403	458	479	361	264	320	382	306	313	396	389	410	410	410	403	451	576	680	790	687	534	514	453
20		467	446	349	280	329	329	225	86	239	253	336	419	398	384	405	419	419	432	439	446	467	467	481	474	375
21		474	474	453	391	211	384	446	432	426	426	419	405	391	384	391	405	419	426	467	495	439	446	446	467	422
22		453	460	460	453	426	446	432	439	432	426	419	405	398	412	412	419	426	439	439	446	495	460	446	460	438
23		518	476	462	434	365	386	434	407	331	365	324	255	351	393	400	428	448	462	476	490	511	490	469	490	424
24		538	497	421	372	379	428	434	448	414	428	372	358	393	428	421	421	428	441	441	476	462	469	455	483	434
25	Q	469	441	441	462	441	407	434	434	441	434	421	421	421	421	414	407	414	428	448	462	462	448	441	441	436
26	D	443	450	443	443	436	450	395	402	409	353	84	263	367	416	436	423	436	450	464	478	506	547	520	589	425
27	D	637	526	298	229	-20	353	464	450	333	180	160	319	402	402	409	430	450	443	464	485	478	478	450	478	387
28		487	480	459	466	390	272	328	349	383	418	438	432	418	397	397	397	418	445	480	480	487	473	459	438	425
29	Q	438	438	452	438	425	452	432	438	432	432	425	418	411	404	397	390	411	432	452	445	452	452	445	445	432
30	Q	447	447	447	447	454	447	344	316	447	447	434	427	427	392	413	420	427	440	461	468	475	461	454	454	433
31		455	462	455	455	448	448	428	289	282	372	414	435	428	421	414	407	407	421	441	476	476	504	538	525	433
MEAN A		478	465	429	413	394	386	381	375	367	367	361	370	394	404	408	417	427	445	467	485	497	499	489	483	425
MEAN Q		452	444	444	445	438	433	404	409	438	434	420	418	419	411	408	412	419	437	454	459	465	458	451	452	434
MEAN D		498	479	407	407	356	365	372	395	352	300	252	277	363	404	415	418	432	454	504	550	587	588	559	547	428

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

DECLINATICN

TABLE 23 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

AUGUST 1969

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	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	62.3	57.5	55.1	52.8	52.8	55.1	50.4	55.1	57.5	59.9	67.1	69.5	69.5	67.1	59.9	52.8	45.6	40.8	38.4	40.8	43.2	50.4	52.8	57.5	54.7
2		57.5	55.1	55.1	55.1	55.1	55.1	55.1	57.5	59.9	62.3	69.5	74.3	76.7	74.3	71.9	55.1	45.6	40.8	40.8	48.0	50.4	57.5	62.3	59.9	58.1
3	D	55.1	57.5	57.5	48.0	55.1	59.9	59.9	59.9	57.5	62.3	74.3	76.7	74.3	74.3	67.1	55.1	50.4	48.0	55.1	62.3	76.7	86.2	71.9	52.8	62.4
4		50.4	50.4	40.8	45.6	48.0	48.0	55.1	59.9	57.5	52.8	40.8	76.7	86.2	81.4	71.9	59.9	57.5	57.5	62.3	62.3	67.1	74.3	62.3	57.5	59.4
5		57.5	57.5	55.1	24.1	31.2	36.0	57.5	59.9	59.9	64.7	64.7	64.7	62.3	62.3	64.7	59.9	52.8	48.0	45.6	50.4	57.5	57.5	57.5	59.9	54.6
6		59.9	62.3	64.7	55.1	52.8	48.0	50.4	59.9	62.3	67.1	69.5	71.9	74.3	71.9	64.7	59.9	48.0	45.6	48.0	50.4	52.8	55.1	55.1	57.5	58.6
7		56.5	56.5	56.5	56.5	51.8	49.4	47.0	42.2	47.0	66.1	70.9	70.9	68.5	66.1	58.9	49.4	47.0	44.6	49.4	49.4	58.9	75.7	80.4	68.5	57.8
8		63.7	63.7	58.9	56.5	54.1	56.5	56.5	51.8	42.2	54.1	70.9	70.9	68.5	70.9	58.9	51.8	51.8	47.0	47.0	47.0	54.1	70.9	63.7	68.5	58.3
9		73.3	66.1	35.0	51.8	54.1	56.5	56.5	54.1	49.4	63.7	70.9	68.5	68.5	66.1	54.1	47.0	49.4	44.6	51.8	54.1	58.9	61.3	66.1	73.3	58.1
10		61.3	56.5	49.4	49.4	25.5	32.6	44.6	49.4	58.9	47.0	61.3	78.0	75.7	66.1	54.1	49.4	44.6	49.4	49.4	54.1	58.9	58.9	58.9	58.9	53.8
11	Q	58.9	56.5	56.5	56.5	56.5	58.9	58.9	61.3	61.3	61.3	66.1	68.5	73.3	70.9	61.3	56.5	49.4	47.0	44.6	47.0	54.1	56.5	56.5	58.9	58.2
12	D	61.3	58.9	51.8	42.2	56.5	44.6	51.8	61.3	49.4	66.1	70.9	51.8	56.5	66.1	56.5	56.5	56.5	58.9	49.4	47.0	54.1	56.5	63.7	63.7	56.3
13		56.5	54.1	56.5	49.4	44.6	51.8	51.8	58.9	37.4	37.4	68.5	75.7	78.0	70.9	61.3	54.1	49.4	44.6	49.4	54.1	63.7	73.3	68.5	61.3	57.1
14		57.9	60.3	53.1	55.5	46.0	48.4	43.6	43.6	50.8	67.5	77.0	81.8	72.3	57.9	57.9	55.5	50.8	50.8	50.8	50.8	53.1	57.9	57.9	55.5	56.5
15		53.1	53.1	53.1	53.1	53.1	53.1	53.1	53.1	57.9	62.7	65.1	67.5	65.1	65.1	57.9	53.1	50.8	48.4	48.4	46.0	48.4	53.1	55.5	55.5	55.2
16		53.1	53.1	55.5	55.5	55.5	55.5	55.5	57.9	55.5	57.9	60.3	67.5	72.3	67.5	62.7	55.5	43.6	38.8	43.6	50.8	55.5	62.7	65.1	62.7	56.8
17		60.3	46.0	34.0	31.6	43.6	53.1	48.4	53.1	57.9	57.9	69.9	74.7	74.7	69.9	65.1	55.5	48.4	48.4	48.4	55.5	57.9	57.9	60.3	60.3	55.5
18		60.3	62.7	53.1	57.9	57.9	57.9	57.9	60.3	60.3	62.7	67.5	72.3	74.7	74.7	57.9	48.4	48.4	46.0	48.4	48.4	50.8	53.1	57.9	60.3	58.3
19	D	62.7	57.9	48.4	62.7	57.9	48.4	53.1	60.3	62.7	69.9	67.5	77.0	74.7	72.3	62.7	60.3	55.5	48.4	77.0	91.4	91.4	77.0	48.4	72.3	65.0
20		64.1	59.3	40.2	30.6	42.6	54.5	40.2	33.0	42.6	64.1	71.3	78.4	78.4	71.3	61.7	56.9	52.1	47.4	49.8	54.5	59.3	61.7	66.5	64.1	56.0
21		61.7	54.5	54.5	47.4	6.7	47.4	56.9	59.3	59.3	61.7	64.1	66.5	66.5	61.7	54.5	52.1	47.4	37.8	47.4	56.9	52.1	54.5	54.5	56.9	53.4
22		56.9	54.5	56.9	56.9	52.1	56.9	56.9	59.3	61.7	61.7	61.7	66.5	64.1	61.7	59.3	54.5	52.1	45.0	47.4	49.8	54.5	56.9	52.1	54.5	56.4
23		56.9	52.1	52.1	47.4	49.8	61.7	56.9	64.1	66.5	71.3	66.5	76.0	68.9	66.5	54.5	52.1	49.8	54.5	54.5	61.7	68.9	68.9	61.7	61.7	60.2
24		71.3	47.4	33.0	33.0	49.8	56.9	59.3	59.3	61.7	61.7	61.7	71.3	76.0	68.9	56.9	52.1	47.4	47.4	45.0	49.8	52.1	54.5	54.5	56.9	55.3
25	Q	66.5	66.5	59.3	49.8	49.8	52.1	59.3	59.3	61.7	61.7	64.1	66.5	66.5	64.1	61.7	54.5	47.4	42.6	45.0	47.4	54.5	56.9	56.9	56.9	57.1
26	D	54.5	54.5	54.5	56.9	54.5	59.3	56.9	61.7	66.5	61.7	47.4	61.7	59.3	59.3	56.9	56.9	52.1	47.4	47.4	49.8	54.5	59.3	64.1	64.1	56.7
27	D	63.1	27.2	24.8	5.7	3.3	46.4	65.5	65.5	67.9	39.2	67.9	67.9	65.5	63.1	55.9	51.1	44.0	41.6	53.5	55.9	58.3	60.7	60.7	65.5	50.8
28		67.9	58.3	41.6	34.4	44.0	44.0	48.8	55.9	58.3	63.1	67.9	70.3	72.7	67.9	60.7	51.1	46.4	46.4	53.5	51.1	55.9	55.9	58.3	58.3	55.5
29	Q	55.9	55.9	53.5	53.5	55.9	55.9	58.3	58.3	60.7	63.1	65.5	70.3	70.3	72.7	65.5	53.5	44.0	41.6	41.6	44.0	51.1	53.5	55.9	55.9	56.5
30	Q	55.9	55.9	55.9	58.3	58.3	55.9	46.4	48.8	63.1	63.1	65.5	67.9	70.3	67.9	60.7	51.1	46.4	41.6	46.4	48.8	51.1	53.5	53.5	55.9	55.9
31		55.9	55.9	55.9	55.9	55.9	58.3	55.9	51.1	48.8	63.1	70.3	72.7	70.3	67.9	60.7	53.5	48.8	36.8	39.2	46.4	48.8	55.9	63.1	63.1	56.4
MEAN A		59.8	55.7	50.7	48.0	47.6	52.2	53.8	56.0	56.9	60.6	66.0	70.8	70.8	68.0	60.6	54.1	49.1	46.0	49.0	52.4	57.1	60.9	60.2	60.6	57.0
MEAN Q		59.9	58.5	56.1	54.2	54.7	55.6	54.7	56.6	60.9	61.8	65.6	68.5	69.9	68.5	61.8	53.7	46.5	42.7	43.2	45.6	50.8	54.2	55.1	57.0	56.5
MEAN D		59.4	51.2	47.4	43.1	45.5	51.7	57.4	61.7	60.8	59.8	65.6	67.0	66.0	67.0	59.8	56.0	51.7	48.8	56.5	61.3	67.0	68.0	61.7	63.7	58.3

VERTICAL INTENSITY

TABLE 24 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

AUGUST 1969

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	Q	390	376	368	368	361	361	368	347	354	354	332	340	347	361	376	376	383	383	383	383	390	383	376	376	368
2		376	368	368	368	368	361	361	361	368	368	368	368	361	361	368	361	361	361	354	368	383	411	404	376	370
3	D	368	368	347	311	332	368	361	376	383	397	354	347	332	340	347	354	376	390	419	390	340	253	167	181	342
4		275	289	361	383	411	476	411	376	383	483	455	347	347	347	354	361	376	397	390	419	397	376	354	368	381
5		368	376	347	311	332	534	383	383	368	368	368	347	318	354	376	383	390	404	404	411	404	390	382	383	378
6		382	361	318	382	382	440	346	353	375	389	382	368	368	368	368	368	368	368	375	389	389	382	375	375	374
7		375	368	361	361	389	418	404	411	346	368	361	361	353	361	368	382	389	397	404	404	447	461	389	375	385
8		382	353	368	361	368	361	361	411	389	346	339	346	274	325	353	375	375	382	389	389	389	411	404	346	367
9		332	332	375	411	353	361	375	397	375	346	353	361	353	346	353	368	382	389	404	418	397	389	397	382	373
10		375	361	339	318	361	411	397	404	447	432	368	368	339	332	339	361	375	389	389	382	389	389	382	375	376
11	Q	368	368	368	368	375	375	368	368	368	375	375	368	361	368	368	368	368	375	382	389	382	382	368	375	372
12	D	375	318	253	361	461	468	447	397	519	361	346	368	260	353	382	389	404	461	418	389	375	375	397	389	386
13		375	368	346	303	353	339	368	375	454	346	353	368	368	368	382	397	397	397	397	411	425	447	382	382	379
14		382	375	368	368	361	375	454	432	375	375	411	353	332	318	332	361	368	382	404	411	404	382	375	375	378
15		382	382	375	375	375	389	382	368	368	375	375	382	382	382	375	375	375	375	375	382	375	375	389	382	378
16		375	375	375	368	368	360	353	353	353	339	346	332	360	360	368	382	389	382	396	404	411	425	411	396	374
17		382	375	411	404	411	425	439	425	382	332	353	382	375	375	382	382	389	389	404	418	404	396	418	404	394
18		382	339	310	368	389	382	382	382	382	375	375	368	360	353	339	368	375	375	382	389	389	382	382	382	371
19	D	375	317	274	267	332	490	497	418	404	418	368	346	332	353	368	382	404	432	418	310	95	138	210	375	347
20		372	357	314	429	530	508	537	436	393	386	336	372	379	379	379	393	400	393	393	400	408	408	415	386	404
21		400	372	329	350	343	379	386	393	386	386	386	386	386	379	379	379	386	393	400	400	408	400	386	386	383
22		393	386	372	379	372	379	379	386	379	379	379	364	350	357	379	386	393	393	400	400	400	408	393	379	383
23		336	314	336	386	415	372	372	422	379	379	364	271	415	321	357	386	400	400	393	393	408	393	386	379	374
24		300	293	343	278	372	372	379	386	372	364	350	314	321	336	350	364	372	379	386	400	408	393	386	379	358
25	Q	357	264	278	350	336	379	372	372	379	386	386	386	386	386	386	386	393	386	386	386	386	393	386	379	370
26	D	379	372	379	372	364	364	364	343	350	357	350	285	285	343	357	372	372	372	379	386	393	393	415	329	361
27	D	324	266	374	467	740	467	403	381	496	575	424	316	338	367	381	410	403	424	431	431	417	402	410	419	
28		395	338	331	316	438	525	410	395	367	367	381	388	388	381	388	395	410	431	453	424	417	417	410	398	
29	Q	395	381	388	381	352	374	374	374	374	381	381	381	381	374	367	367	367	374	381	388	388	388	381	381	378
30	Q	381	381	381	374	367	367	338	381	374	381	381	381	381	381	381	388	388	388	395	395	403	403	388	381	382
31		381	381	381	381	381	374	381	367	331	331	352	374	374	381	381	381	388	388	388	395	395	417	431	431	382
MEAN A		369	351	350	362	390	405	392	386	386	382	369	356	352	359	367	376	384	391	395	396	388	386	379	375	377
MEAN Q		378	354	357	368	358	371	364	368	370	375	371	371	371	374	375	377	380	381	385	388	390	390	380	378	374
MEAN D		364	328	325	355	446	432	414	383	420	422	368	333	310	351	367	381	391	411	412	381	327	315	318	337	371

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HORIZONTAL INTENSITY

TABLE 25 GREAT WHALE RIVER

H = 950C PLUS TABULAR VALUES IN GAMMAS

SEPTEMBER 1969

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	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	463	442	449	449	429	442	436	429	456	456	442	436	429	408	401	401	401	408	422	442	456	456	449	449	436
2	Q	449	456	456	463	436	449	429	429	449	449	442	429	422	415	415	422	436	449	463	463	463	456	456	443	443
3		456	456	456	456	456	456	449	449	442	442	436	408	408	415	415	415	429	442	463	477	477	449	463	470	445
4		484	505	519	449	470	442	449	456	449	442	436	429	422	415	415	422	436	456	477	498	505	498	456	449	457
5		444	444	451	458	458	458	444	396	403	389	403	417	375	299	223	216	500	500	507	631	659	714	631	500	455
6	D	417	451	403	195	348	278	126	313	382	334	182	188	389	403	410	424	451	458	465	479	521	597	514	444	382
7		444	444	458	458	444	403	410	341	50	71	313	327	368	403	424	417	444	472	500	583	645	590	624	659	429
8		548	500	292	271	306	348	299	154	-19	78	341	431	451	410	410	451	458	465	479	472	465	458	451	451	374
9		451	458	417	444	444	375	223	320	438	424	424	417	382	375	389	417	465	451	451	458	451	486	479	486	422
10		433	398	440	391	398	446	446	453	440	440	433	426	419	405	398	419	446	467	467	467	502	488	453	446	438
11		495	370	391	377	405	350	301	260	156	211	363	419	433	433	453	446	440	453	488	509	474	453	446	453	399
12		481	495	481	446	350	308	370	446	433	419	426	433	446	419	412	412	419	446	460	460	453	453	453	446	432
13	Q	446	446	453	446	384	412	433	440	426	384	412	412	419	426	419	412	426	440	453	460	467	460	453	460	433
14		460	474	460	426	440	453	446	446	433	377	384	412	419	419	419	419	433	440	467	536	661	730	709	571	476
15		490	414	269	359	379	379	359	289	282	227	227	269	289	365	386	372	476	552	442	448	435	435	462	490	379
16		428	490	414	241	338	289	269	317	317	400	400	428	414	428	421	421	435	442	455	455	462	462	455	455	401
17		462	469	469	469	462	462	462	455	455	421	428	255	338	407	421	435	442	462	525	504	511	538	552	497	454
18	D	490	462	428	428	462	365	414	428	386	400	455	421	435	414	400	448	455	455	552	497	601	566	580	608	465
19		587	518	490	462	324	269	407	462	435	393	428	442	435	428	428	428	435	442	448	455	455	462	476	469	441
20		471	464	457	430	450	354	257	250	243	326	423	437	437	437	423	430	457	492	485	464	464	471	457	457	418
21		478	492	499	485	437	423	444	423	402	450	457	444	444	430	430	423	437	450	457	471	478	464	464	485	453
22	Q	492	464	492	499	457	471	326	319	388	430	416	437	444	430	423	423	430	444	457	457	457	457	450	457	438
23		457	464	478	485	464	444	444	464	457	450	444	444	437	402	409	423	430	450	471	520	603	596	582	527	473
24		471	485	471	450	354	381	395	416	423	409	402	409	423	423	416	423	423	437	450	464	464	457	457	457	432
25		471	457	492	367	257	409	319	367	464	444	444	430	437	423	402	395	444	444	450	471	506	478	471	478	430
26	Q	457	457	444	444	450	450	402	298	340	340	416	450	444	423	416	416	416	430	444	450	464	450	457	457	426
27		457	450	450	450	457	457	457	457	450	450	450	444	444	430	416	423	430	437	444	471	478	499	568	603	461
28	D	561	561	554	499	464	464	471	450	402	326	416	28	-41	277	388	430	423	471	499	513	554	644	707	568	443
29	D	499	540	547	381	430	450	381	388	222	-255	-338	111	492	347	312	402	492	471	527	603	534	568	423	-82	352
30	D	305	312	291	236	388	319	354	298	125	-415	-145	84	-158	125	402	374	416	499	575	610	589	464	450	450	290
MEAN A		468	461	446	414	411	400	381	381	357	324	359	371	383	395	403	412	440	457	474	493	509	510	502	471	426
MEAN Q		462	453	459	460	431	445	405	383	408	412	427	435	433	422	415	413	419	431	445	455	462	458	453	456	435
MEAN D		454	465	445	348	418	376	349	376	304	78	114	167	223	313	382	416	447	471	524	540	560	568	535	398	386

DECLINATION

TABLE 26 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

SEPTEMBER 1969

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	TC 15	TC 16	TO 17	TO 18	TO 19	TO 20	TO 21	TO 22	TO 23	TO 24		
1	Q	60.2	55.4	55.4	53.0	50.6	55.4	55.4	60.2	57.8	60.2	62.6	67.4	69.8	69.8	65.0	57.8	48.3	41.1	41.1	45.9	48.3	53.0	55.4	55.4	56.0	
2	Q	55.4	55.4	55.4	55.4	48.3	53.0	55.4	60.2	62.6	65.0	65.0	65.0	65.0	60.2	55.4	50.6	43.5	41.1	41.1	45.9	48.3	53.0	55.4	55.4	54.6	
3		55.4	55.4	55.4	55.4	55.4	57.8	57.8	57.8	60.2	60.2	62.6	65.0	62.6	65.0	57.8	50.6	43.5	38.7	41.1	45.9	50.6	53.0	55.4	57.8	55.0	
4		55.4	55.4	50.6	48.3	55.4	55.4	60.2	62.6	62.6	65.0	67.4	69.8	69.8	65.0	57.8	53.0	48.3	43.5	45.9	53.0	55.4	57.8	55.4	55.4	57.0	
5		53.0	53.0	53.0	55.4	57.8	57.8	57.8	60.2	62.6	65.0	69.8	72.2	62.6	57.8	50.6	33.9	31.5	50.6	55.4	84.1	88.9	79.3	48.3	10.0	57.1	
6	D	43.5	53.0	38.7	14.8	45.9	43.5	24.3	65.0	62.6	67.4	57.8	55.4	69.8	60.2	55.4	55.4	45.9	50.6	50.6	55.4	62.6	74.5	69.8	55.4	53.2	
7		55.4	57.8	62.6	53.0	55.4	50.6	57.8	50.6	31.5	50.6	72.2	65.0	65.0	57.8	55.4	53.0	53.0	55.4	60.2	74.5	86.5	74.5	79.3	69.8	60.3	
8		62.6	48.3	31.5	11.5	29.1	36.3	33.9	45.9	55.4	86.5	79.3	76.9	67.4	67.4	53.0	48.3	45.9	48.3	50.6	55.4	57.8	57.8	57.8	57.8	51.7	
9		55.4	57.8	57.8	53.0	57.8	55.4	53.0	55.4	65.0	65.0	65.0	65.0	65.0	57.8	45.9	41.1	53.0	41.1	43.5	53.0	57.8	62.6	65.0	67.4	56.6	
10		53.0	48.3	50.6	29.1	41.1	53.0	57.8	60.2	60.2	60.2	60.2	60.2	62.6	60.2	50.6	43.5	41.1	48.3	45.9	50.6	57.8	60.2	57.8	55.4	52.8	
11		55.4	43.5	24.3	33.9	50.6	50.6	53.0	62.6	53.0	72.2	69.8	69.8	67.4	60.2	57.8	53.0	50.6	48.3	55.4	60.2	57.8	57.8	57.8	60.2	55.2	
12		62.6	65.0	60.2	53.0	41.1	43.5	50.6	60.2	62.6	60.2	62.6	65.0	65.0	65.0	57.8	50.6	48.3	45.9	48.3	50.6	53.0	57.8	57.8	55.4	55.9	
13	Q	55.4	55.4	55.4	55.4	48.3	57.8	57.8	60.2	60.2	57.8	62.6	60.2	60.2	60.2	53.0	48.3	45.9	41.1	41.1	48.3	53.0	57.8	57.8	57.8	54.6	
14		57.8	62.6	65.0	50.6	50.6	53.0	55.4	60.2	60.2	57.8	60.2	62.6	65.0	60.2	50.6	50.6	45.9	43.5	45.9	55.4	74.5	88.9	72.2	36.3	57.7	
15		12.4	26.7	24.3	48.3	45.9	50.6	55.4	48.3	72.2	79.3	91.3	86.5	81.7	69.8	60.2	57.8	62.6	69.8	38.7	45.9	48.3	55.4	62.6	65.0	56.6	
16		62.6	62.6	38.7	-6.7	43.5	53.0	55.4	62.6	62.6	67.4	69.8	72.2	67.4	62.6	55.4	53.0	48.3	45.9	48.3	50.6	53.0	53.0	55.4	53.0	53.7	
17		53.0	55.4	55.4	55.4	55.4	55.4	57.8	60.2	60.2	60.2	60.2	62.6	67.4	67.4	57.8	53.0	43.5	48.3	57.8	50.6	48.3	55.4	62.6	57.8	56.7	
18	D	55.4	43.5	10.0	41.1	45.9	48.3	48.3	57.8	69.8	72.2	67.4	65.0	65.0	60.2	50.6	50.6	57.8	67.4	67.4	55.4	65.0	60.2	65.0	62.6	56.3	
19		65.0	53.0	53.0	50.6	36.3	24.3	50.6	60.2	62.6	62.6	60.2	65.0	65.0	62.6	55.4	53.0	50.6	48.3	50.6	50.6	50.6	50.6	53.0	55.4	60.2	54.1
20		55.4	57.8	60.2	50.6	55.4	31.5	45.9	50.6	53.0	55.4	65.0	65.0	65.0	57.8	50.6	55.4	50.6	60.2	53.0	48.3	50.6	55.4	55.4	55.4	54.3	
21		57.8	60.2	60.2	48.3	53.0	50.6	53.0	57.8	57.8	60.2	60.2	62.6	65.0	62.6	60.2	55.4	48.3	50.6	50.6	55.4	55.4	55.4	55.4	60.2	56.5	
22	Q	60.2	55.4	60.2	60.2	55.4	50.6	50.6	53.0	55.4	62.6	65.0	65.0	65.0	62.6	57.8	55.4	53.0	53.0	53.0	55.4	55.4	55.4	55.4	55.4	57.1	
23		53.0	55.4	55.4	57.8	55.4	57.8	57.8	62.6	62.6	62.6	62.6	65.0	67.4	65.0	48.3	45.9	43.5	50.6	50.6	55.4	69.8	65.0	69.8	65.0	58.5	
24		63.6	61.2	58.8	56.4	46.9	44.5	58.8	63.6	66.0	61.2	61.2	66.0	68.4	66.0	61.2	56.4	51.6	49.3	49.3	51.6	56.4	56.4	56.4	58.8	57.9	
25		56.4	58.8	58.8	66.0	58.8	51.6	42.1	49.3	66.0	63.6	63.6	66.0	66.0	68.4	66.0	54.0	46.9	42.1	46.9	54.0	56.4	58.8	56.4	56.4	57.2	
26	Q	56.4	56.4	56.4	58.8	61.2	56.4	51.6	39.7	63.6	58.8	61.2	63.6	66.0	63.6	58.8	51.6	49.3	46.9	46.9	49.3	54.0	56.4	56.4	56.4	55.8	
27		56.4	56.4	56.4	56.4	58.8	58.8	58.8	58.8	58.8	61.2	61.2	63.6	66.0	63.6	61.2	58.8	51.6	46.9	46.9	51.6	56.4	54.0	58.8	63.6	57.7	
28	D	59.8	62.2	62.2	57.4	55.0	59.8	62.2	67.0	62.2	64.6	69.4	59.8	31.1	59.8	57.4	57.4	47.9	52.6	57.4	52.6	62.2	78.9	86.1	76.5	60.9	
29	D	67.0	74.2	64.6	40.7	33.5	28.7	28.7	50.3	62.2	14.3	26.3	76.5	78.9	78.9	71.8	47.9	57.4	59.8	67.0	78.9	59.8	55.0	47.9	21.4	50.8	
30	D	-7.1	4.8	-7.1	38.3	40.7	33.5	40.7	47.9	64.6	9.6	.1	31.1	-9.5	55.0	64.6	57.4	55.0	62.2	86.1	71.8	67.0	55.0	55.0	57.4	40.6	
MEAN A		53.6	53.7	49.5	46.0	49.6	49.3	51.6	57.0	60.5	59.3	62.0	65.2	63.1	63.1	56.8	51.8	48.7	49.7	51.2	55.2	58.7	60.4	60.0	54.4	55.4	
MEAN Q		57.5	55.6	56.6	56.6	52.8	54.7	54.2	54.7	59.9	60.9	63.3	64.2	65.2	63.3	58.0	52.8	48.0	44.6	44.6	48.9	51.8	55.1	56.1	56.1	55.6	
MEAN D		43.7	47.5	33.7	38.5	44.2	42.8	40.8	57.6	64.3	39.9	44.2	57.6	47.1	62.8	60.0	53.8	52.8	58.5	65.7	62.8	63.3	64.7	64.7	46.1	52.4	

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

VERTICAL INTENSITY

TABLE 27 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

SEPTEMBER 1969

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	Q	410	381	381	374	359	367	374	359	367	388	395	395	388	388	381	381	381	381	381	381	381	381	374	374	380
2	Q	374	374	374	381	352	367	352	352	359	374	374	374	374	381	381	381	381	374	374	374	374	374	367	367	371
3		374	374	374	374	374	374	374	374	374	374	374	359	345	359	367	374	381	381	374	381	395	395	381	388	375
4		388	352	331	316	367	374	374	381	388	381	374	374	374	381	381	388	395	395	395	410	424	424	403	381	381
5		367	374	374	374	381	381	374	374	345	331	331	338	324	338	395	324	395	381	395	438	438	374	230	237	359
6	D	331	345	359	388	381	525	561	431	374	374	431	345	352	367	388	388	403	403	410	424	424	417	388	388	400
7		381	374	352	381	374	410	381	453	438	388	338	345	338	359	381	403	410	410	424	453	431	424	316	352	388
8		355	319	355	441	535	585	592	621	621	614	420	377	398	377	391	398	406	420	413	413	406	406	398	406	444
9		398	377	370	377	398	449	607	463	391	384	384	391	377	362	370	384	427	413	413	406	406	420	434	406	409
10		305	341	370	398	377	391	391	398	398	391	391	398	391	391	398	398	398	406	420	420	420	427	434	406	393
11		384	391	370	377	391	499	456	492	520	398	355	362	362	391	398	391	398	406	420	441	434	427	413	398	412
12		384	355	384	391	298	441	370	391	384	384	384	384	391	391	398	398	398	398	406	406	398	398	391	391	388
13	Q	384	391	391	370	362	377	384	384	377	348	362	362	362	377	391	398	398	406	406	406	398	391	391	391	384
14		391	377	298	283	362	377	377	391	377	355	348	355	362	362	362	384	384	391	406	406	348	276	219	68	344
15		233	413	614	485	413	441	520	470	463	485	348	312	283	291	334	377	391	348	456	449	427	420	406	384	407
16		312	319	413	492	427	470	470	449	420	362	370	370	362	391	391	406	406	413	413	406	398	398	398	391	402
17		391	398	398	398	391	398	398	391	391	384	391	312	298	362	370	377	377	384	398	434	413	406	370	377	384
18	D	373	366	416	409	409	373	416	387	380	366	387	380	402	387	380	402	416	466	437	423	402	387	366	366	396
19		358	258	287	330	567	509	409	394	387	373	373	380	387	387	387	394	394	394	394	394	394	394	402	394	389
20		402	402	387	315	337	366	466	473	495	337	344	366	366	373	373	402	416	437	402	394	387	394	394	394	393
21		394	366	344	344	466	394	387	380	373	387	387	380	387	387	394	394	394	402	402	402	394	394	405	416	391
22	Q	416	402	366	358	373	387	445	380	351	366	351	358	380	387	387	394	394	394	402	394	394	394	387	387	385
23		383	383	383	390	390	383	376	376	376	376	376	376	376	383	369	376	390	405	419	419	405	261	326	376	378
24		390	376	354	376	354	354	390	405	376	369	340	354	369	383	390	390	390	390	398	390	390	390	390	390	379
25		383	362	376	304	240	390	412	369	412	398	390	383	383	383	390	405	419	390	390	398	419	426	405	412	385
26	Q	398	390	383	354	369	376	383	340	340	362	362	383	390	390	390	390	390	390	390	390	398	390	390	390	380
27		383	383	383	383	383	383	383	383	383	383	383	383	390	390	383	383	383	383	383	390	398	412	419	432	391
28	D	311	283	362	383	383	376	383	376	376	347	362	247	268	261	326	369	376	405	405	412	405	247	290	405	348
29	D	326	354	354	204	376	448	419	491	771	548	491	398	333	369	376	419	412	412	455	419	390	383	189	240	399
30	D	333	419	570	570	556	570	469	512	749	735	713	800	807	512	419	398	448	462	354	333	340	419	412	405	513
MEAN A		367	367	382	377	392	418	423	415	425	402	388	378	377	375	381	389	398	402	404	407	402	389	369	369	392
MEAN Q		396	388	379	367	363	375	388	363	359	367	369	375	379	385	386	389	389	389	390	389	389	386	382	382	380
MEAN D		335	353	412	391	421	458	450	440	530	474	477	434	432	379	378	395	411	429	412	402	392	371	329	361	411

HORIZONTAL INTENSITY

TABLE 28 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

OCTOBER 1969

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	D	462	359	490	442	359	352	151	172	151	172	227	227	303	435	435	421	469	462	448	448	518	525	504	462	375
2	D	435	379	469	455	407	40	-1	-43	-188	-147	13	123	241	372	324	414	511	497	511	462	462	483	483	483	299
3	D	476	338	255	220	310	269	269	303	359	331	379	352	269	234	269	379	442	483	490	469	455	448	462	455	363
4		455	421	455	455	379	192	365	379	428	365	407	421	428	435	428	435	428	442	455	455	448	448	465	469	419
5		462	476	455	448	414	331	359	428	331	338	372	421	448	442	448	435	435	442	469	462	497	476	448	455	429
6	D	448	455	379	359	372	379	296	262	372	400	393	386	435	428	421	448	462	497	566	552	545	497	448	442	427
7		448	455	448	359	428	400	324	310	414	428	442	448	448	435	428	428	421	428	442	442	469	469	455	448	427
8	Q	448	448	448	448	448	455	442	442	400	448	455	448	442	435	428	428	428	442	455	462	469	469	465	476	447
9		462	448	448	455	448	428	393	407	455	448	448	448	442	442	435	421	435	442	462	490	518	552	465	462	453
10	D	455	490	303	331	303	372	345	455	331	310	165	179	352	455	442	421	428	442	504	580	621	580	483	469	409
11		469	462	462	462	414	296	199	275	338	365	352	435	414	372	428	435	455	448	455	455	476	497	476	455	412
12		462	421	365	462	455	448	379	199	262	310	324	372	352	296	352	407	435	455	462	435	442	462	455	455	395
13		448	448	448	462	442	386	407	345	455	435	324	282	407	435	428	421	421	435	455	462	455	448	455	455	423
14	Q	455	455	455	469	476	455	462	455	455	455	455	448	448	435	421	421	428	442	455	462	469	462	455	455	452
15	Q	453	453	446	453	474	391	322	370	412	426	440	446	433	433	426	426	426	433	440	453	453	467	460	460	433
16		453	460	467	474	440	405	322	405	467	460	453	453	446	440	426	419	426	453	481	523	509	530	502	481	454
17		509	502	453	453	446	398	405	419	433	446	446	453	446	440	433	426	433	440	453	467	495	523	550	578	460
18		523	467	398	446	467	433	357	287	322	350	357	474	467	453	440	426	426	433	440	446	453	460	453	460	427
19		474	488	523	530	536	488	433	363	246	405	433	419	350	398	460	453	446	453	453	460	460	467	467	474	445
20		474	488	481	460	453	460	474	453	446	446	446	446	440	433	419	426	426	433	446	453	460	474	453	453	452
21		460	467	474	460	460	460	453	398	260	246	412	453	453	440	426	405	426	433	460	467	453	467	460	446	431
22		453	460	474	460	433	301	433	460	460	398	426	440	440	433	446	433	426	433	453	467	446	453	446	453	439
23		446	460	460	460	460	405	384	446	453	453	453	453	446	440	433	426	433	446	453	460	453	460	453	446	444
24		460	433	460	391	294	232	287	225	260	308	446	391	377	446	446	440	446	453	460	446	446	467	453	467	397
25		474	481	467	460	426	239	412	453	446	446	440	440	446	440	433	433	433	440	440	446	474	460	460	446	439
26	Q	446	446	446	446	446	440	329	260	357	446	446	446	440	440	426	419	419	426	440	446	460	453	453	453	426
27		453	460	467	474	481	467	453	440	419	405	433	446	433	419	440	433	426	433	433	467	523	509	523	550	458
28		486	500	472	458	486	458	424	389	356	424	451	451	444	424	417	410	403	410	444	458	500	514	465	451	447
29		438	444	458	438	444	438	444	451	438	444	451	444	444	438	424	410	410	417	438	451	451	451	451	444	440
30	Q	444	444	444	444	444	444	417	424	451	444	444	451	444	438	424	410	417	424	438	444	451	451	451	451	439
31		458	458	465	431	361	355	341	327	237	327	361	341	375	410	438	438	424	410	410	424	444	451	465	451	400
MEAN A		461	451	443	438	426	375	357	354	357	372	390	401	411	420	421	424	433	442	459	465	477	480	468	465	425
MEAN Q		450	450	448	452	458	437	394	390	415	444	448	448	441	436	425	421	423	433	445	454	461	461	458	459	440
MEAN D		455	404	379	361	350	282	212	230	205	213	235	253	320	385	378	417	462	476	507	502	520	507	476	462	375

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

DECLINATION

TABLE 29 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

OCTOBER 1969

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	D	55.0	43.1	69.4	47.9	24.0	38.3	26.3	16.8	93.3	67.0	57.4	52.6	50.3	59.8	57.4	62.2	74.2	57.4	50.3	50.3	59.8	67.0	64.6	57.4	54.2
2	D	56.0	25.0	51.3	53.6	53.6	-1.3	22.6	48.9	63.2	58.4	36.9	51.3	56.0	51.3	68.0	94.3	77.5	56.0	60.8	56.0	53.6	60.8	60.8	60.8	53.1
3	D	65.6	48.9	27.3	25.0	44.1	34.5	48.9	51.3	60.8	56.0	56.0	53.6	46.5	34.5	51.3	56.0	48.9	53.6	58.4	58.4	58.4	56.0	58.4	58.4	50.5
4		58.4	70.4	63.2	63.2	48.9	41.7	53.6	63.2	60.8	60.8	60.8	60.8	58.4	60.8	60.8	58.4	58.4	63.2	58.4	51.3	51.3	53.6	58.4	60.8	58.3
5		75.2	63.2	58.4	58.4	53.6	41.7	48.9	60.8	58.4	60.8	68.0	63.2	65.6	60.8	60.8	58.4	51.3	51.3	56.0	51.3	56.0	56.0	56.0	58.4	58.0
6	D	58.4	63.2	63.2	29.7	51.3	46.5	51.3	63.2	65.6	65.6	58.4	63.2	60.8	60.8	60.8	58.4	70.4	68.0	65.6	58.4	58.4	53.6	53.6	58.4	58.6
7		58.4	56.0	53.6	15.7	53.6	58.4	46.5	56.0	60.8	63.2	60.8	63.2	63.2	65.6	63.2	60.8	56.0	51.3	48.9	48.9	51.3	53.6	56.0	56.0	53.7
8	Q	58.4	56.0	56.0	56.0	58.4	58.4	58.4	58.4	56.0	63.2	60.8	63.2	63.2	65.6	58.4	58.4	51.3	51.3	51.3	51.3	53.6	56.0	58.4	60.8	57.6
9		58.4	58.4	56.0	58.4	58.4	58.4	56.0	58.4	60.8	60.8	60.8	60.8	63.2	63.2	63.2	58.4	58.4	53.6	53.6	53.6	56.0	63.2	58.4	58.4	58.7
10	D	55.0	59.8	50.3	71.8	35.9	47.9	57.4	59.8	69.4	74.2	59.8	55.0	55.0	59.8	62.2	52.6	47.9	45.5	57.4	71.8	74.2	71.8	62.2	62.2	59.1
11		57.4	59.8	52.6	52.6	52.6	38.3	57.4	52.6	67.0	71.8	67.0	64.6	62.2	47.9	45.5	52.6	52.6	47.9	47.9	52.6	57.4	62.2	62.2	57.4	55.9
12		59.8	47.9	33.5	57.4	59.8	59.8	57.4	45.5	59.8	62.2	67.0	59.8	45.5	40.7	45.5	43.1	40.7	45.5	50.3	50.3	55.0	59.8	59.8	57.4	52.6
13		57.4	57.4	57.4	57.4	52.6	38.3	57.4	50.3	62.2	64.6	59.8	55.0	59.8	59.8	62.2	57.4	50.3	43.1	47.9	47.9	47.9	55.0	59.8	59.8	55.0
14	Q	59.8	59.8	59.8	62.2	59.8	59.8	59.8	59.8	62.2	62.2	62.2	62.2	64.6	64.6	67.0	57.4	55.0	50.3	50.3	52.6	57.4	57.4	59.8	57.4	59.3
15	Q	59.8	57.4	59.8	62.2	52.6	45.5	52.6	62.2	67.0	69.4	67.0	62.2	64.6	62.2	59.8	55.0	52.6	47.9	47.9	50.3	55.0	57.4	57.4	57.4	57.7
16		57.4	57.4	59.8	57.4	52.6	52.6	52.6	57.4	64.6	64.6	64.6	62.2	64.6	64.6	62.2	62.2	55.0	45.5	50.3	57.4	62.2	62.2	62.2	57.4	58.7
17		62.2	59.8	57.4	57.4	57.4	57.4	59.8	59.8	59.8	59.8	59.8	62.2	62.2	64.6	62.2	59.8	55.0	50.3	52.6	52.6	57.4	62.2	64.6	59.8	59.0
18		64.6	59.8	52.6	62.2	59.8	57.4	52.6	52.6	67.0	67.0	67.0	62.2	62.2	64.6	62.2	59.8	55.0	52.6	52.6	52.6	55.0	57.4	57.4	57.4	58.9
19		58.8	58.8	61.2	63.6	56.4	58.8	61.2	56.4	58.8	61.2	66.0	68.4	61.2	51.6	58.8	58.8	56.4	54.0	51.6	54.0	56.4	56.4	56.4	58.8	58.5
20		61.2	63.6	58.8	54.0	58.8	51.6	58.8	58.8	61.2	61.2	61.2	61.2	61.2	61.2	63.6	61.2	56.4	54.0	54.0	56.4	56.4	58.8	56.4	56.4	58.6
21		56.4	58.8	58.8	58.8	58.8	56.4	56.4	58.8	56.4	58.8	63.6	63.6	66.0	66.0	66.0	63.6	51.6	51.6	49.3	54.0	54.0	54.0	56.4	56.4	58.1
22		56.4	56.4	51.6	51.6	46.9	39.7	54.0	58.8	61.2	58.8	58.8	61.2	61.2	63.6	61.2	56.4	51.6	51.6	51.6	54.0	54.0	54.0	54.0	54.0	55.1
23		56.4	56.4	56.4	58.8	56.4	46.9	44.5	58.8	61.2	61.2	58.8	61.2	63.6	63.6	63.6	58.8	56.4	54.0	51.6	51.6	56.4	56.4	54.0	56.4	56.8
24		56.4	66.0	82.7	49.3	34.9	39.7	46.9	46.9	63.6	77.9	61.2	63.6	56.4	56.4	61.2	58.8	54.0	54.0	56.4	56.4	54.0	56.4	56.4	56.4	56.9
25		56.4	56.4	56.4	56.4	54.0	42.1	56.4	61.2	61.2	58.8	58.8	61.2	61.2	61.2	61.2	58.8	54.0	54.0	51.6	51.6	54.0	54.0	54.0	56.4	56.3
26	Q	56.4	56.4	56.4	56.4	58.8	61.2	46.9	51.6	61.2	63.6	61.2	61.2	61.2	61.2	61.2	58.8	54.0	51.6	49.3	51.6	51.6	54.0	54.0	56.4	56.5
27		56.4	56.4	58.8	61.2	61.2	56.4	56.4	61.2	61.2	58.8	56.4	61.2	66.0	63.6	61.2	63.6	58.8	51.6	49.3	49.3	54.0	54.0	56.4	63.6	58.2
28		58.8	63.6	58.8	56.4	51.6	58.8	56.4	58.8	58.8	58.8	58.8	58.8	61.2	66.0	63.6	61.2	54.0	46.9	49.3	49.3	54.0	54.0	51.6	54.0	56.8
29		56.4	56.4	58.8	68.4	46.9	54.0	56.4	58.8	58.8	58.8	61.2	61.2	61.2	63.6	63.6	61.2	56.4	51.6	51.6	51.6	51.6	54.0	54.0	56.4	57.2
30	Q	56.4	56.4	56.4	56.4	56.4	56.4	54.0	56.4	61.2	61.2	61.2	61.2	61.2	63.6	61.2	58.8	54.0	51.6	49.3	49.3	51.6	54.0	56.4	56.4	56.7
31		56.4	58.8	56.4	63.6	46.9	54.0	54.0	58.8	44.5	66.0	63.6	46.9	51.6	56.4	56.4	51.6	49.3	46.9	44.5	49.3	54.0	56.4	56.4	56.4	54.1
MEAN A		58.7	57.0	56.6	53.9	52.2	48.7	52.3	55.6	62.2	63.1	60.8	60.3	60.0	59.6	60.5	59.3	55.4	51.9	52.2	53.1	55.6	57.5	57.6	57.9	56.8
MEAN Q		58.2	57.2	57.7	58.7	57.2	56.3	54.4	57.7	61.5	63.9	62.5	62.0	63.0	63.4	61.5	57.7	53.4	50.5	49.6	51.0	53.9	55.8	57.2	57.7	57.6
MEAN D		58.0	48.0	52.3	45.6	41.8	33.2	41.3	48.0	70.4	64.2	53.7	55.2	53.7	53.2	59.9	64.7	63.8	56.1	58.5	59.0	60.9	61.8	59.9	59.5	55.1

VERTICAL INTENSITY

TABLE 30 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

OCTOBER 1969

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	D	398	391	312	384	470	499	578	484	477	420	326	319	369	384	391	427	427	427	434	434	448	441	427	427	421
2	D	362	269	369	369	420	549	527	643	714	578	484	463	369	355	420	563	520	441	427	434	427	441	420	391	456
3	D	398	391	269	362	441	484	434	427	391	391	362	326	333	341	369	405	427	420	434	434	412	412	412	405	395
4		405	369	384	405	448	427	405	398	391	369	384	355	377	391	405	412	412	420	427	420	412	405	412	412	402
5		369	405	405	398	420	420	391	391	391	355	312	326	391	391	398	405	412	412	420	427	427	427	412	398	396
6	D	398	391	398	362	427	412	492	484	420	405	377	384	384	384	398	434	434	441	441	441	463	456	427	405	419
7		398	391	391	405	405	427	463	448	405	391	391	384	398	398	398	398	398	405	412	412	420	427	420	405	408
8	Q	398	391	398	398	398	398	391	384	369	384	391	391	391	398	398	398	398	405	412	427	420	412	420	427	400
9		420	398	391	398	384	362	384	377	391	391	391	391	398	398	405	405	412	405	405	405	420	420	405	391	398
10	D	384	377	312	211	261	391	477	427	463	527	492	405	333	377	384	398	420	434	448	441	362	377	398	405	396
11		355	305	355	377	420	470	470	484	398	369	369	348	348	355	355	405	398	412	412	412	427	434	405	405	395
12		405	305	384	391	391	384	405	506	420	355	333	297	290	290	333	369	405	398	412	427	420	405	398	398	380
13		398	398	398	384	362	362	384	398	398	391	348	333	355	377	391	398	412	412	420	420	412	405	398	398	390
14	Q	398	398	398	384	398	398	398	391	391	391	398	398	398	398	398	398	398	398	412	420	420	412	398	398	399
15	Q	391	391	398	398	369	412	441	391	384	369	369	369	369	384	391	398	405	405	405	405	405	405	398	398	394
16		399	406	392	370	406	421	442	392	399	399	392	392	392	399	392	399	406	421	442	442	450	450	428	414	410
17		385	385	399	399	399	399	392	392	385	385	378	392	392	392	392	392	392	392	392	399	421	399	233	248	381
18		349	370	399	356	385	414	471	414	399	414	356	370	399	406	406	406	406	406	406	406	399	399	392	392	397
19		399	363	327	305	363	399	414	478	450	370	370	363	341	356	406	406	406	406	421	406	414	406	414	406	391
20		392	385	399	370	356	370	392	399	399	392	392	399	399	399	399	399	399	399	406	406	414	421	406	399	396
21		399	406	399	406	399	406	392	399	421	363	349	385	399	399	399	406	406	421	414	406	406	406	414	399	400
22		392	399	378	406	378	370	399	406	399	378	378	378	392	406	406	406	406	421	421	406	399	406	399	399	396
23		399	399	406	392	378	378	392	406	406	399	399	399	399	399	406	406	406	406	406	421	435	406	399	401	401
24		399	406	341	298	349	457	435	514	414	442	428	378	349	385	399	399	406	399	406	406	399	399	406	399	401
25		399	399	414	406	414	392	392	399	392	392	385	392	399	399	399	392	399	399	399	406	414	421	406	406	401
26	Q	393	393	393	400	378	378	371	357	357	393	393	393	400	400	400	400	407	407	407	407	407	400	400	400	393
27		400	400	400	378	385	400	400	400	393	371	378	400	400	393	400	400	407	407	407	414	422	443	451	458	404
28		436	378	335	313	385	393	422	422	378	385	407	400	407	407	414	414	422	422	422	422	443	451	429	414	405
29		407	407	407	320	364	407	400	400	393	400	400	400	407	407	414	414	414	414	414	422	422	414	422	407	403
30	Q	400	400	400	400	400	400	385	378	393	400	400	400	407	407	414	414	414	414	407	407	407	407	400	400	402
31		397	397	382	339	332	390	397	448	375	339	346	310	310	368	382	390	390	397	404	411	411	404	419	404	381
MEAN A		394	383	378	371	390	412	423	427	411	397	383	375	377	385	395	408	412	412	416	417	417	417	406	400	400
MEAN Q		396	394	397	396	389	397	397	380	379	387	389	390	393	397	400	402	405	406	409	413	412	407	403	405	398
MEAN D		388	364	332	338	404	467	502	493	493	464	408	379	358	368	392	446	446	433	437	437	423	425	417	407	417

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HORIZONTAL INTENSITY

TABLE 31 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

NOVEMBER 1969

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	Q	470	470	450	422	436	443	450	450	450	450	443	443	443	436	422	422	415	422	429	436	443	450	450	456	441	
2		491	546	484	456	456	436	429	415	346	346	436	450	450	436	422	394	477	491	484	498	456	456	484	512	452	
3	D	567	525	463	443	360	174	243	105	187	339	456	456	436	443	436	456	456	436	450	443	505	477	470	463	408	
4		456	450	456	415	429	436	381	339	346	332	318	401	450	443	429	415	408	415	429	436	443	443	450	470	416	
5		491	470	450	463	463	450	429	408	443	429	450	450	443	443	429	422	443	443	443	443	443	450	450	456	446	
6	Q	456	456	456	456	463	450	450	450	456	456	456	450	450	443	436	429	429	436	443	450	463	456	456	463	450	
7		470	470	470	484	415	312	312	298	243	243	312	374	387	415	443	436	443	450	450	463	477	519	512	477	411	
8		463	450	415	360	298	318	167	318	408	408	436	443	450	443	415	422	436	456	498	574	629	670	594	539	442	
9	D	512	470	456	470	346	222	91	201	187	208	277	153	408	422	353	463	463	456	498	443	443	456	456	456	371	
10	D	456	450	450	408	443	539	132	339	415	339	394	456	305	332	408	450	463	463	470	539	546	477	456	450	424	
11		475	468	461	441	392	379	385	365	385	406	420	441	461	441	420	413	434	441	448	461	454	454	461	468	432	
12		482	461	461	448	385	365	441	448	434	399	413	448	454	441	427	427	427	434	434	441	441	454	454	454	436	
13		454	475	475	454	448	448	441	420	358	406	441	441	441	441	434	434	434	441	427	448	448	468	468	461	442	
14	Q	461	468	489	489	482	454	448	441	441	441	441	441	441	427	420	413	420	427	434	441	448	454	454	454	447	
15	Q	448	448	448	448	448	448	448	448	448	448	448	441	441	441	427	420	420	434	441	441	454	454	454	454	443	
16		454	454	454	454	454	454	454	454	448	454	448	441	441	427	420	427	427	427	441	448	454	454	454	454	447	
17		454	454	454	454	454	454	448	448	448	448	448	448	441	434	427	420	427	441	441	454	454	454	461	454	447	
18		454	454	461	468	454	454	448	448	441	441	441	441	441	448	434	427	427	427	441	448	448	448	454	461	446	
19		461	468	461	454	454	441	372	365	434	448	448	448	441	434	434	441	441	454	461	482	482	482	475	510	450	
20		496	489	468	482	468	454	441	448	441	434	448	448	448	441	427	427	427	434	441	441	441	448	448	448	449	
21	Q	450	450	450	450	450	450	450	450	450	450	450	450	450	443	443	436	436	443	443	443	450	450	450	456	456	447
22		456	456	456	463	470	463	450	512	484	456	456	450	443	443	436	436	436	436	450	450	470	470	477	463	463	459
23		463	463	450	450	450	450	450	450	450	450	450	450	443	443	436	429	429	429	429	429	456	463	470	463	456	449
24		456	463	463	456	443	450	443	450	436	408	415	443	456	443	443	436	436	436	443	443	456	456	463	470	463	447
25		472	472	458	452	452	445	389	334	369	458	452	417	438	445	438	424	417	452	438	452	465	479	500	583	446	
26		596	555	479	479	458	417	417	452	458	452	445	445	445	445	431	417	424	431	472	500	507	472	452	458	463	
27	D	458	452	452	431	224	-45	162	231	231	38	72	362	286	348	403	431	493	465	500	521	500	465	500	486	353	
28		500	500	507	479	445	410	376	279	341	410	452	445	438	438	431	431	424	431	445	445	465	534	555	472	444	
29		458	458	438	452	445	431	286	189	334	417	424	458	424	403	465	438	424	458	527	521	548	555	527	534	442	
30	D	479	403	479	403	452	403	307	314	224	341	465	458	445	445	438	424	472	479	472	479	465	452	445	458	425	
MEAN A		475	469	461	449	428	400	371	375	385	392	415	430	431	431	427	428	437	443	454	466	472	475	473	473	436	
MEAN Q		457	458	458	453	456	449	449	447	449	449	447	445	443	438	428	424	425	432	438	443	451	453	454	457	446	
MEAN D		494	460	460	431	365	258	187	238	249	253	333	377	376	398	408	445	470	460	478	485	492	465	465	463	396	

DECLINATION

TABLE 32 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

NOVEMBER 1969

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	
DAY	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	59.8	62.2	55.0	55.0	55.0	57.4	57.4	57.4	57.4	59.8	59.8	62.2	62.2	64.6	64.6	62.2	57.4	52.6	50.3	52.6	52.6	55.0	57.4	55.0	57.7
2		64.6	59.8	62.2	57.4	57.4	57.4	57.4	57.4	52.6	52.6	59.8	62.2	64.6	67.0	59.8	69.4	69.4	59.8	57.4	62.2	52.6	55.0	59.8	57.4	59.8
3	D	62.2	55.0	47.9	55.0	40.7	19.2	52.6	40.7	62.2	59.8	62.2	62.2	64.6	62.2	67.0	67.0	59.8	55.0	55.0	52.6	59.8	62.2	57.4	57.4	55.8
4		57.4	57.4	62.2	67.0	57.4	57.4	55.0	47.9	52.6	57.4	52.6	59.8	62.2	67.0	67.0	59.8	57.4	55.0	52.6	52.6	55.0	55.0	59.8	58.1	58.1
5		63.2	63.2	58.4	60.8	51.3	58.4	58.4	60.8	60.8	58.4	60.8	60.8	65.6	63.2	63.2	53.6	56.0	56.0	53.6	53.6	56.0	58.4	58.4	58.4	58.8
6	Q	58.4	60.8	60.8	60.8	63.2	56.0	56.0	56.0	58.4	60.8	60.8	60.8	60.8	63.2	60.8	58.4	56.0	53.6	53.6	53.6	53.6	56.0	56.0	58.4	58.2
7		57.4	55.0	64.6	52.6	52.6	52.6	52.6	57.4	57.4	47.9	62.2	64.6	50.3	62.2	62.2	59.8	50.3	52.6	52.6	57.4	57.4	62.2	64.6	59.8	57.0
8		57.4	62.2	52.6	50.3	57.4	47.9	28.7	45.5	55.0	57.4	59.8	57.4	64.6	67.0	69.4	47.9	55.0	57.4	52.6	57.4	69.4	81.3	76.5	71.8	58.4
9	D	69.4	59.8	57.4	55.0	47.9	40.7	-2.3	21.6	71.8	81.3	62.2	62.2	71.8	62.2	71.8	62.2	45.5	52.6	52.6	47.9	55.0	57.4	55.0	57.4	54.9
10	D	59.8	59.8	59.8	71.8	43.1	33.5-64.5	43.1	55.0	62.2	64.6	74.2	69.4	43.1	50.3	57.4	62.2	62.2	57.4	62.2	67.0	57.4	57.4	59.8	52.8	52.8
11		64.6	64.6	64.6	57.4	45.5	52.6	52.6	52.6	52.6	57.4	62.2	62.2	64.6	64.6	52.6	52.6	52.6	50.3	55.0	57.4	57.4	57.4	57.4	57.4	57.2
12		64.6	74.2	59.8	57.4	38.3	40.7	57.4	57.4	59.8	57.4	59.8	67.0	62.2	64.6	64.6	59.8	59.8	55.0	50.3	50.3	52.6	57.4	57.4	57.4	57.7
13		57.4	59.8	62.2	59.8	57.4	57.4	57.4	57.4	55.0	62.2	69.4	67.0	64.6	62.2	59.8	57.4	52.6	50.3	45.5	50.3	52.6	55.0	57.4	57.4	57.8
14	Q	58.8	61.2	63.6	61.2	58.8	54.0	56.4	56.4	58.8	56.4	58.8	58.8	61.2	61.2	58.8	56.4	54.0	51.6	51.6	51.6	51.6	54.0	54.0	56.4	56.9
15	Q	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	58.8	58.8	58.8	61.2	61.2	56.4	54.0	51.6	51.6	51.6	51.6	51.6	54.0	56.4	56.4	56.1
16		58.8	58.8	58.8	58.8	58.8	58.8	56.4	56.4	56.4	56.4	58.8	61.2	61.2	63.6	61.2	58.8	56.4	51.6	49.3	51.6	54.0	56.4	56.4	58.8	57.4
17		58.8	58.8	61.2	58.8	58.8	58.8	58.8	58.8	58.8	58.8	61.2	61.2	61.2	61.2	63.6	61.2	61.2	56.4	51.6	54.0	54.0	54.0	56.4	58.8	58.6
18		58.8	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	63.6	61.2	63.6	63.6	63.6	61.2	56.4	51.6	51.6	51.6	54.0	56.4	56.4	56.4	59.2
19		58.8	63.6	58.8	58.8	61.2	58.8	46.9	56.4	61.2	63.6	63.6	61.2	58.8	56.4	58.8	56.4	54.0	54.0	51.6	56.4	56.4	56.4	58.8	63.6	58.1
20		58.8	46.9	46.9	61.2	58.8	56.4	58.8	58.8	61.2	61.2	61.2	58.8	58.8	61.2	61.2	56.4	54.0	54.0	54.0	54.0	56.4	56.4	56.4	56.4	57.0
21	Q	56.4	56.4	58.8	58.8	56.4	58.8	56.4	58.8	58.8	58.8	61.2	61.2	58.8	58.8	58.8	51.6	51.6	54.0	54.0	56.4	56.4	56.4	56.4	58.8	57.2
22		58.3	58.3	58.3	67.9	44.0	55.9	48.8	60.7	63.1	63.1	63.1	63.1	65.5	60.7	55.9	55.9	55.9	55.9	55.9	53.5	58.3	53.5	55.9	58.3	58.2
23		60.7	60.7	60.7	58.3	58.3	58.3	58.3	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	55.9	53.5	46.4	51.1	51.1	53.5	58.3	58.3	57.9
24		58.3	60.7	58.3	60.7	55.9	55.9	55.9	58.3	60.7	58.3	63.1	60.7	60.7	65.5	55.9	58.3	53.5	53.5	53.5	53.5	53.5	53.5	53.5	55.9	57.5
25		58.3	60.7	55.9	55.9	55.9	55.9	51.1	48.8	60.7	60.7	60.7	58.3	55.9	60.7	58.3	58.3	51.1	48.8	46.4	48.8	51.1	55.9	53.5	65.5	55.7
26		67.9	67.9	60.7	46.4	55.9	39.2	55.9	58.3	58.3	58.3	60.7	60.7	60.7	63.1	65.5	55.9	41.6	46.4	51.1	53.5	53.5	55.9	58.3	56.5	56.5
27	D	60.7	60.7	58.3	51.1	5.7	3.3	32.0	53.5	51.1	58.3	29.6	60.7	55.9	39.2	53.5	65.5	60.7	55.9	58.3	55.9	55.9	55.9	60.7	70.3	50.5
28		65.5	67.9	65.5	63.1	65.5	60.7	51.1	32.0	55.9	58.3	60.7	60.7	60.7	60.7	63.1	63.1	55.9	55.9	53.5	53.5	51.1	63.1	70.3	55.9	58.9
29		60.7	60.7	65.5	60.7	58.3	55.9	41.6	5.7	51.1	60.7	65.5	60.7	65.5	55.9	65.5	60.7	55.9	53.5	60.7	58.3	60.7	65.5	60.7	65.5	57.3
30	D	65.5	77.4	46.4	32.0	55.9	48.8	44.0	51.1	46.4	46.4	60.7	60.7	60.7	63.1	60.7	63.1	58.3	51.1	46.4	55.9	55.9	53.5	55.9	60.7	55.0
MEAN A		60.6	61.1	58.8	57.7	53.1	51.0	47.0	51.6	57.7	59.1	60.3	61.7	61.7	61.1	61.8	59.5	56.1	53.7	52.3	53.9	55.5	57.4	58.3	59.4	57.1
MEAN Q		58.0	59.4	58.9	58.5	58.0	56.5	56.5	57.0	58.0	58.5	59.9	60.4	60.4	61.8	60.8	57.0	54.6	52.7	52.2	53.2	53.2	55.1	56.1	57.0	57.2
MEAN D		63.5	62.6	54.0	53.0	38.7	29.1	12.4	42.0	57.3	61.6	55.9	64.0	64.5	54.0	60.6	63.0	57.3	55.4	54.0	54.9	58.7	57.3	57.3	61.1	53.8

VERTICAL INTENSITY

TABLE 33 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

NOVEMBER 1969

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	Q	401	394	394	415	394	394	394	401	394	394	394	394	401	401	401	401	401	394	401	401	401	401	401	401	398
2		401	386	408	401	379	394	386	386	365	358	372	394	401	401	408	415	459	459	444	444	423	415	423	350	403
3	D	358	358	365	386	495	574	459	488	488	408	401	401	401	408	401	401	408	408	408	415	430	408	408	408	420
4		408	401	386	329	358	386	394	379	358	358	278	321	386	408	408	401	394	401	408	415	423	415	415	401	385
5		437	430	401	386	372	394	394	372	372	379	394	401	394	394	394	394	401	394	394	394	401	394	394	394	395
6	Q	390	397	397	390	382	382	382	382	390	390	390	390	390	390	390	390	397	397	397	397	397	397	390	390	391
7		397	339	289	368	419	375	419	455	491	397	390	339	303	325	361	382	390	397	411	411	426	433	426	390	389
8		375	397	361	368	296	397	419	390	375	354	361	375	397	404	397	397	411	433	440	447	390	382	411	289	386
9	D	368	397	390	397	368	570	664	563	556	570	491	310	339	390	426	440	455	426	411	426	411	411	404	411	441
10	D	411	397	404	339	332	332	361	484	455	462	397	426	361	325	361	397	419	419	433	419	332	404	411	411	395
11		411	390	397	411	382	397	404	397	404	375	368	390	404	404	404	411	404	397	404	411	404	404	404	411	400
12		375	368	397	397	368	382	397	397	397	390	382	397	404	411	419	411	411	411	404	404	404	404	404	411	398
13		411	411	411	411	404	397	390	382	368	361	397	397	397	397	397	397	404	411	404	404	397	404	411	404	399
14	Q	404	411	411	390	404	404	397	397	397	397	397	397	404	404	404	404	404	404	404	404	404	404	404	404	402
15	Q	397	397	397	397	397	397	397	397	390	390	397	397	397	404	404	397	404	397	397	397	397	397	397	397	397
16		396	396	396	396	396	396	396	396	388	381	388	396	396	396	403	396	396	396	403	403	396	396	396	396	395
17		396	396	388	396	388	396	396	388	388	388	388	388	396	396	396	396	396	396	396	396	396	403	403	403	394
18		396	396	403	396	396	388	388	388	381	381	374	381	381	388	396	396	396	403	417	403	403	396	396	396	393
19		403	403	396	396	396	396	381	381	367	388	381	381	381	381	381	374	388	410	417	424	424	424	410	381	394
20		381	360	331	381	381	396	388	396	388	381	381	388	396	396	388	388	396	396	396	396	396	396	396	396	387
21	Q	396	396	396	396	388	388	388	388	388	388	388	388	388	396	396	396	396	403	403	403	403	403	403	396	395
22		396	396	396	324	381	396	316	381	424	417	403	396	388	388	388	388	388	396	396	396	396	417	417	410	393
23		410	403	396	396	396	396	396	396	396	396	388	388	388	396	396	396	396	403	417	424	424	417	417	403	402
24		403	396	367	396	388	388	381	396	388	374	360	388	388	388	388	388	396	410	417	417	417	424	424	417	396
25		420	405	405	398	398	398	434	405	369	391	398	376	376	391	391	398	413	413	413	413	413	413	427	442	405
26		428	348	226	384	348	363	406	406	406	406	399	399	399	406	406	406	413	420	456	449	428	420	406	406	397
27	D	406	406	406	420	471	370	499	564	557	607	471	327	348	348	370	406	399	406	406	399	399	406	420	392	425
28		413	413	384	377	348	377	435	392	392	392	399	399	392	399	399	399	406	406	406	413	420	399	420	413	400
29		413	406	363	392	406	399	449	435	363	363	384	392	384	399	399	406	406	406	399	406	392	392	435	377	398
30	D	363	233	276	262	420	449	528	514	456	442	406	420	406	413	413	428	413	413	428	428	420	420	413	413	407
MEAN A		399	387	378	383	388	402	415	416	408	403	391	385	386	391	396	400	405	407	411	412	406	407	409	397	399
MEAN Q		397	399	399	397	393	393	392	393	392	392	393	393	396	399	399	397	400	399	400	400	400	400	399	397	397
MEAN D		381	358	368	361	417	459	502	522	502	498	433	377	371	377	394	414	419	414	417	417	398	410	411	407	418

HORIZONTAL INTENSITY

TABLE 34 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

DECEMBER 1969

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		452	445	445	445	438	438	431	431	417	403	417	410	438	445	431	424	424	431	431	445	458	452	452	458	436
2		452	452	452	452	445	438	424	396	362	431	445	438	438	438	438	438	438	438	445	445	452	452	452	445	437
3		452	452	452	452	452	445	452	452	452	452	452	452	452	438	438	424	431	431	438	445	465	486	500	541	454
4		507	472	465	472	486	465	458	452	452	438	438	431	445	417	410	438	431	445	458	465	452	458	458	458	453
5	D	458	452	452	452	445	389	334	369	458	410	314	265	334	417	417	445	445	431	493	534	541	569	500	527	435
6	D	576	541	555	493	314	169	327	369	362	376	458	452	431	431	396	431	438	424	438	465	458	465	479	479	430
7		458	465	445	445	445	438	424	438	431	431	445	445	445	445	438	438	431	438	438	445	452	452	445	445	442
8		452	458	465	472	458	445	452	452	438	445	445	445	445	431	431	431	431	438	445	452	458	458	458	458	449
9	D	465	472	417	445	458	458	445	452	452	452	452	445	438	438	438	438	438	452	452	458	472	472	472	472	452
10		458	452	452	452	445	452	452	452	445	445	452	452	452	445	445	438	438	445	445	465	479	534	534	500	459
11		527	527	479	458	445	410	369	286	403	445	438	458	452	445	445	445	438	438	438	452	465	465	465	472	444
12		500	507	514	486	500	438	389	403	465	445	445	438	445	452	445	438	431	431	438	452	458	458	458	458	454
13	Q	465	465	479	472	465	465	438	424	458	458	458	452	452	445	438	431	431	438	445	452	458	465	465	465	454
14		465	465	465	465	465	458	458	458	458	458	458	452	452	452	445	431	438	445	452	458	458	465	472	472	457
15		465	465	472	472	472	465	458	458	452	438	417	445	458	458	445	438	431	431	438	458	472	486	514	576	462
16	D	555	534	534	493	472	458	431	231	417	383	452	438	472	458	445	403	403	445	452	465	458	465	465	458	449
17		465	479	452	458	452	452	452	452	445	445	438	438	452	445	438	431	431	431	431	452	458	452	452	458	448
18		465	458	452	452	452	452	452	452	445	452	445	445	452	445	445	438	431	438	445	452	452	458	465	472	451
19		472	465	458	472	465	452	458	458	452	445	445	452	445	452	445	438	438	438	445	458	458	465	465	472	455
20	Q	465	472	465	465	465	458	458	458	458	458	458	458	452	452	445	445	438	445	445	452	458	458	458	458	456
21	Q	472	472	493	493	493	465	458	458	458	458	458	452	452	452	445	431	431	438	445	452	458	458	465	465	459
22		472	458	458	458	458	458	417	320	403	452	452	438	438	445	465	438	445	445	445	458	465	458	458	458	444
23	D	458	458	465	472	458	431	376	348	362	224	279	383	438	424	431	472	452	458	486	507	479	472	527	479	431
24		495	391	440	516	481	474	460	433	447	433	433	426	350	419	433	433	440	454	460	454	474	488	474	467	449
25		460	460	467	447	336	316	357	405	378	350	447	447	447	426	460	467	447	454	454	454	454	467	474	474	431
26		460	467	467	460	440	391	385	295	364	426	419	447	454	447	440	433	433	440	460	454	474	460	509	516	439
27		559	511	469	490	352	387	421	393	428	324	345	311	442	449	442	442	435	442	449	449	449	449	456	456	431
28		456	456	456	456	456	456	456	456	456	449	442	449	456	449	442	435	442	435	449	449	456	456	456	462	451
29		469	462	462	462	462	462	456	456	428	387	393	435	456	456	442	442	435	435	449	449	449	449	456	462	447
30	Q	462	462	462	462	428	456	462	462	456	456	449	456	456	456	449	442	442	442	442	449	456	456	462	462	453
31	Q	462	462	462	462	462	462	462	456	456	456	449	449	449	456	449	442	442	442	442	449	456	456	462	462	455
MEAN A		477	470	467	466	447	433	429	413	431	423	430	432	441	443	439	437	435	440	448	458	463	468	472	475	447
MEAN Q		466	467	472	471	463	461	456	452	457	457	454	453	452	452	445	438	437	441	445	452	457	459	463	464	456
MEAN D		503	492	485	471	429	381	382	354	410	369	391	396	423	434	425	438	435	442	464	486	482	489	489	483	440

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

DECLINATION

TABLE 35 GREAT WHALE RIVER

D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

DECEMBER 1969

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		61.2	61.2	58.8	56.4	56.4	56.4	58.8	56.4	56.4	56.4	63.6	61.2	66.0	58.8	58.8	51.6	46.9	44.5	49.3	49.3	54.0	56.4	56.4	58.8	56.4
2		56.4	58.8	58.8	61.2	56.4	56.4	54.0	56.4	51.6	61.2	61.2	61.2	61.2	61.2	66.0	61.2	56.4	51.6	51.6	51.6	51.6	54.0	54.0	58.8	57.3
3		61.2	61.2	61.2	61.2	58.8	58.8	58.8	58.8	58.8	61.2	61.2	61.2	61.2	61.2	63.6	61.2	56.4	54.0	54.0	54.0	54.0	54.0	54.0	58.8	59.1
4		68.4	66.0	63.6	61.2	56.4	61.2	58.8	61.2	61.2	61.2	61.2	56.4	63.6	66.0	46.9	56.4	51.6	54.0	54.0	54.0	54.0	56.4	58.8	58.8	59.1
5	D	61.2	61.2	61.2	61.2	61.2	63.6	46.9	54.0	61.2	66.0	56.4	68.4	37.3	51.6	49.3	46.9	56.4	44.5	49.3	56.4	61.2	75.5	61.2	56.4	57.0
6	D	70.8	75.5	66.0	58.8	42.1	3.8	49.3	54.0	61.2	63.6	66.0	63.6	61.2	63.6	51.6	46.9	46.9	51.6	54.0	56.4	54.0	56.4	56.4	63.6	55.7
7		61.2	61.2	58.8	58.8	58.8	56.4	56.4	56.4	61.2	58.8	56.4	61.2	61.2	61.2	58.8	56.4	54.0	54.0	51.6	54.0	56.4	56.4	58.8	58.8	57.8
8		61.2	63.6	68.4	61.2	56.4	49.3	54.0	58.8	61.2	61.2	61.2	61.2	61.2	61.2	61.2	58.8	54.0	56.4	54.0	54.0	56.4	58.8	58.8	61.2	58.9
9	D	66.0	61.2	70.8	56.4	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	58.8	54.0	54.0	54.0	56.4	56.4	56.4	58.8	61.2	59.9
10		61.2	61.2	58.8	58.8	58.8	56.4	56.4	56.4	58.8	61.2	61.2	61.2	61.2	61.2	61.2	58.8	56.4	54.0	51.6	54.0	51.6	61.2	70.8	49.3	58.4
11		70.8	75.5	68.4	61.2	56.4	77.9	63.6	51.6	66.0	66.0	66.0	61.2	61.2	63.6	61.2	56.4	56.4	51.6	49.3	51.6	54.0	56.4	58.8	61.2	61.1
12		66.0	70.8	68.4	75.5	56.4	61.2	56.4	56.4	63.6	63.6	63.6	63.6	61.2	63.6	61.2	58.8	56.4	54.0	51.6	54.0	56.4	56.4	58.8	61.2	60.8
13	Q	63.6	63.6	66.0	63.6	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	63.6	66.0	63.6	61.2	56.4	56.4	54.0	54.0	54.0	56.4	58.8	61.2	60.5
14		61.2	61.2	61.2	61.2	61.2	61.2	61.2	58.8	61.2	61.2	61.2	61.2	61.2	63.6	63.6	58.8	51.6	51.6	49.3	51.6	54.0	56.4	58.8	58.8	58.8
15		61.2	61.2	63.6	61.2	58.8	58.8	58.8	56.4	61.2	58.8	56.4	61.2	63.6	66.0	61.2	61.2	61.2	61.2	56.4	51.6	56.4	56.4	61.2	70.8	60.2
16	D	70.8	66.0	68.4	66.0	58.8	58.8	58.8	37.3	54.0	70.8	63.6	66.0	63.6	68.4	66.0	58.8	49.3	56.4	58.8	56.4	54.0	54.0	56.4	61.2	60.1
17		61.2	66.0	73.2	61.2	61.2	61.2	58.8	61.2	61.2	61.2	61.2	61.2	63.6	66.0	63.6	61.2	56.4	54.0	51.6	51.6	56.4	56.4	56.4	56.4	60.1
18		61.2	66.0	63.6	58.8	61.2	58.8	61.2	58.8	58.8	58.8	58.8	58.8	61.2	61.2	58.8	56.4	56.4	56.4	54.0	54.0	54.0	54.0	54.0	54.0	58.5
19		58.8	61.2	61.2	58.8	58.8	54.0	56.4	56.4	56.4	58.8	58.8	61.2	61.2	58.8	56.4	54.0	54.0	54.0	54.0	54.0	56.4	56.4	56.4	56.4	57.3
20	Q	61.2	61.2	61.2	58.8	56.4	56.4	56.4	58.8	58.8	56.4	58.8	58.8	61.2	61.2	61.2	56.4	56.4	54.0	54.0	54.0	54.0	54.0	54.0	56.4	57.6
21	Q	61.2	58.8	61.2	58.8	61.2	58.8	58.8	58.8	58.8	58.8	56.4	58.8	58.8	61.2	61.2	58.8	56.4	54.0	51.6	51.6	54.0	56.4	56.4	58.8	57.9
22		58.8	61.2	58.8	58.8	58.8	61.2	58.8	56.4	61.2	61.2	61.2	63.6	61.2	66.0	61.2	51.6	54.0	56.4	54.0	54.0	56.4	56.4	58.8	58.8	58.7
23	D	58.8	58.8	66.0	61.2	63.6	54.0	46.9	56.4	61.2	54.0	54.0	58.8	63.6	61.2	51.6	54.0	51.6	56.4	51.6	56.4	56.4	56.4	58.8	61.2	57.2
24		61.2	42.1	46.9	63.6	61.2	58.8	58.8	61.2	61.2	58.8	58.8	56.4	44.5	56.4	56.4	51.6	54.0	54.0	51.6	51.6	49.3	56.4	58.8	56.4	55.4
25		60.3	62.7	62.7	57.9	29.2	26.8	50.8	53.1	67.5	67.5	65.1	62.7	62.7	57.9	60.3	60.3	50.8	50.8	53.1	53.1	55.5	57.9	62.7	62.7	56.4
26		60.3	62.7	62.7	60.3	55.5	50.8	48.4	34.0	55.5	65.1	62.7	62.7	62.7	62.7	60.3	57.9	53.1	43.6	50.8	53.1	48.4	57.9	65.1	69.9	56.9
27		77.0	69.9	67.5	69.9	46.0	50.8	50.8	55.5	57.9	60.3	48.4	55.5	62.7	67.5	62.7	55.5	55.5	53.1	57.9	55.5	55.5	57.9	57.9	60.3	58.8
28		60.3	60.3	60.3	60.3	62.7	60.3	57.9	60.3	57.9	57.9	60.3	57.9	62.7	62.7	62.7	57.9	50.8	50.8	53.1	53.1	55.5	57.9	57.9	60.3	58.4
29		62.7	62.7	60.3	60.3	57.9	55.5	57.9	57.9	57.9	53.1	53.1	57.9	60.3	57.9	60.3	57.9	53.1	53.1	53.1	55.5	57.9	57.9	57.9	57.9	57.5
30	Q	57.9	57.9	60.3	57.9	50.8	62.7	60.3	57.9	57.9	57.9	57.9	57.9	60.3	60.3	60.3	60.3	57.9	57.9	55.5	53.1	57.9	57.9	57.9	57.9	58.1
31	Q	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	57.9	60.3	57.9	57.9	62.7	62.7	62.7	60.3	57.9	53.1	53.1	55.5	55.5	55.5	57.9	57.9	58.8
MEAN A		62.7	62.6	62.8	61.0	56.9	55.9	56.7	56.2	59.7	60.7	59.8	60.6	60.6	62.1	59.9	57.1	54.3	53.3	53.0	53.8	55.0	57.2	58.8	59.9	58.4
MEAN Q		60.8	60.4	61.8	59.9	58.0	59.9	59.4	59.4	58.9	58.9	58.5	58.9	61.3	62.3	61.8	59.4	57.0	55.1	53.7	53.7	55.1	56.1	57.5	58.5	58.6
MEAN D		65.5	64.5	66.5	60.7	57.4	48.3	52.6	52.6	59.8	63.1	60.2	63.6	57.4	61.2	55.9	53.1	51.6	52.6	53.6	56.4	56.4	59.8	58.3	60.7	58.0

VERTICAL INTENSITY

TABLE 36 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

DECEMBER 1969

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		413	413	405	405	405	405	398	398	377	377	384	362	384	413	398	398	405	420	420	413	420	413	405	405	401	
2		401	401	401	401	380	394	380	380	394	394	394	394	394	394	394	394	401	416	409	416	416	416	416	409	400	
3		407	399	399	399	399	399	399	399	399	399	399	392	399	399	399	399	399	399	399	399	399	407	414	428	435	403
4		418	396	396	382	396	404	396	396	396	382	382	375	375	368	353	368	389	389	389	396	396	396	396	396	389	
5	D	396	396	396	382	375	296	375	375	396	368	332	310	260	303	332	368	411	439	447	425	404	346	425	382	372	
6	D	296	303	231	317	425	375	411	411	396	396	382	375	389	389	382	411	389	396	404	411	418	411	404	404	380	
7		404	396	396	389	382	375	375	382	389	382	368	382	396	396	396	396	396	396	404	404	404	411	404	404	393	
8		404	404	368	382	389	360	368	396	404	396	396	396	396	396	396	396	396	404	404	404	411	404	404	418	395	
9	D	411	404	346	325	389	389	389	396	356	396	396	389	382	396	382	382	396	411	396	396	396	411	425	411	392	
10		404	396	396	396	389	389	389	389	382	389	389	389	396	396	396	389	396	396	396	396	411	425	396	303	253	386
11		274	396	396	382	389	368	439	504	411	396	382	396	396	389	382	382	396	396	404	411	411	411	411	418	398	
12		439	404	368	339	360	389	375	375	389	396	396	389	396	396	389	396	396	396	396	396	396	404	396	396	391	
13	Q	404	411	418	411	404	404	396	389	396	404	396	396	396	396	396	389	396	396	396	396	396	396	396	404	399	
14		404	396	396	396	404	389	389	396	396	396	396	396	389	396	389	396	396	396	404	404	404	404	404	411	398	
15		404	396	404	396	404	396	396	396	389	382	360	382	396	404	389	389	396	404	418	425	418	425	435	432	402	
16	D	368	310	368	368	375	389	411	461	396	368	382	382	404	404	389	389	404	425	425	439	425	425	425	418	398	
17		425	411	396	411	396	404	404	396	396	389	382	389	404	404	396	396	404	404	404	418	411	404	404	411	402	
18		418	404	404	396	396	396	396	396	396	389	396	389	396	396	396	396	396	396	396	396	404	404	411	411	399	
19		411	411	404	404	404	396	411	404	396	396	389	396	389	396	389	396	404	396	396	404	396	396	396	396	399	
20	Q	406	398	398	398	406	398	391	398	398	398	391	391	391	398	398	398	398	398	398	398	406	398	398	406	398	
21	Q	420	420	406	413	398	406	398	398	398	398	398	398	398	398	398	398	398	398	398	406	398	398	398	406	402	
22		406	398	398	398	398	398	406	370	384	398	398	384	384	406	370	377	391	398	406	413	398	398	406	406	395	
23	D	406	398	391	377	362	377	370	355	398	370	247	298	334	355	398	384	398	413	441	427	427	427	413	413	382	
24		377	391	348	391	406	406	406	398	406	384	384	370	291	362	370	384	398	406	413	413	434	434	420	406	391	
25		406	406	398	398	449	377	398	413	362	355	398	391	384	377	406	427	427	434	427	427	427	420	420	427	406	
26		416	416	416	416	394	401	365	380	387	380	380	394	401	401	401	409	416	416	423	423	437	430	416	437	406	
27		409	423	380	337	459	416	387	394	394	394	373	365	387	401	401	401	416	409	423	416	416	416	409	409	402	
28		409	409	409	401	401	401	409	409	409	394	394	394	401	401	401	409	416	409	416	416	416	416	416	416	407	
29		416	416	416	409	416	409	401	401	387	380	365	394	416	409	401	401	409	409	416	416	416	416	416	416	404	
30	Q	409	409	409	416	409	401	409	416	409	401	394	401	409	409	401	409	416	409	409	416	409	409	401	409	408	
31	Q	409	409	409	401	401	409	401	401	401	394	387	380	401	409	409	401	401	401	409	409	416	416	416	416	404	
MEAN A		399	398	389	388	399	391	395	399	395	389	381	382	385	392	390	395	402	406	409	411	411	408	407	405	397	
MEAN Q		409	409	408	408	403	403	399	401	401	399	393	393	399	402	401	399	402	401	402	405	405	403	402	408	402	
MEAN D		375	362	346	354	385	365	391	400	397	380	348	351	354	369	377	387	400	417	423	420	414	404	418	405	385	

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

MEAN VALUES OF MAGNETIC ELEMENTS

HORIZONTAL INTENSITY-ALL DAYS

TABLE 37 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	421	439	453	497	487	504	491	478	468	461	475	477	471	490	470	453
1-2	416	434	425	467	462	480	485	465	461	451	469	470	457	473	451	447
2-3	423	432	418	442	431	441	466	429	446	443	461	467	442	442	437	445
3-4	419	410	398	417	379	414	429	413	414	438	449	466	421	409	417	436
4-5	405	397	391	405	350	392	411	394	411	426	428	447	405	387	408	419
5-6	389	382	373	378	322	370	408	386	400	375	400	433	385	371	382	401
6-7	391	364	355	343	330	356	400	381	381	357	371	429	371	367	359	389
7-8	376	365	314	341	340	362	376	375	381	354	375	413	364	363	347	382
8-9	365	358	298	345	313	358	379	367	357	357	385	431	359	354	339	385
9-10	351	357	286	347	291	369	394	367	324	372	392	423	356	355	332	381
10-11	352	363	329	350	296	376	408	361	359	390	415	430	369	360	357	390
11-12	372	374	366	353	316	384	415	370	371	401	430	432	382	371	373	402
12-13	378	378	372	362	333	388	425	394	383	411	431	441	391	385	382	407
13-14	390	372	385	380	370	393	424	404	395	420	431	443	401	398	395	409
14-15	391	381	384	390	387	408	423	408	403	421	427	439	405	407	399	410
15-16	393	378	385	401	406	419	426	417	412	424	428	437	410	417	405	409
16-17	396	383	395	415	429	432	432	427	440	433	437	435	421	430	421	413
17-18	403	398	413	434	453	452	451	445	457	442	443	440	436	450	436	421
18-19	410	402	439	475	473	483	475	467	474	459	454	448	455	474	462	429
19-20	421	410	457	515	498	517	500	485	493	465	466	458	474	500	483	439
20-21	424	428	464	530	510	528	505	497	509	477	472	463	484	510	495	447
21-22	426	435	474	541	526	531	508	499	510	480	475	468	489	516	501	451
22-23	432	442	471	537	533	536	520	489	502	468	473	472	489	519	494	455
23-24	428	437	461	516	520	528	513	483	471	465	473	475	481	511	478	453
MEAN	399	397	396	424	406	434	444	425	426	425	436	447	422	427	418	420

MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION-ALL DAYS

TABLE 38 GREAT WHALE RIVER D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	55.9	51.6	50.2	52.5	49.5	58.1	57.3	59.8	53.6	58.7	60.6	62.7	55.9	56.2	53.8	57.7
1-2	57.0	51.3	43.6	47.9	49.0	50.6	55.6	55.7	53.7	57.0	61.1	62.6	53.8	52.7	50.6	58.0
2-3	55.4	53.2	48.6	48.3	47.0	43.9	53.1	50.7	49.5	56.6	58.8	62.8	52.3	48.7	50.7	57.6
3-4	52.8	52.6	47.7	47.6	42.3	45.1	49.4	48.0	46.0	53.9	57.7	61.0	50.3	46.2	48.8	56.0
4-5	47.9	48.2	48.4	46.8	43.4	43.6	49.5	47.6	49.6	52.2	53.1	56.9	48.9	46.0	49.3	51.5
5-6	48.1	46.8	47.0	47.2	43.8	43.5	51.3	52.2	49.3	48.7	51.0	55.9	48.7	47.7	48.0	50.4
6-7	48.8	47.7	51.7	49.1	49.5	47.6	54.1	53.8	51.6	52.3	47.0	56.7	50.8	51.3	51.2	50.0
7-8	49.7	52.6	51.3	53.5	54.0	51.2	53.5	56.0	57.0	55.6	51.6	56.2	53.5	53.6	54.3	52.5
8-9	52.2	55.4	57.5	58.4	52.9	51.2	57.9	56.9	60.5	62.2	57.7	59.7	56.9	54.7	59.6	56.2
9-10	54.1	55.8	60.3	61.0	56.8	57.3	62.6	60.6	59.3	63.1	59.1	60.7	59.2	59.3	60.9	57.4
10-11	55.0	56.2	59.2	65.0	60.9	67.7	68.5	66.0	62.0	60.8	60.3	59.8	61.8	65.8	61.8	57.8
11-12	56.2	57.6	63.0	66.6	70.4	70.6	72.6	70.8	65.2	60.3	61.7	60.6	64.6	71.1	63.8	59.0
12-13	56.1	58.7	64.2	67.9	67.8	70.8	73.1	70.8	63.1	60.0	61.7	60.6	64.6	70.6	63.8	59.3
13-14	55.1	57.7	63.5	66.1	66.5	67.7	70.9	68.0	63.1	59.6	61.1	62.1	63.4	68.3	63.1	59.0
14-15	51.5	56.7	60.1	61.0	63.7	62.5	64.6	60.6	56.8	60.5	61.8	59.9	60.0	62.8	59.6	57.5
15-16	48.7	55.1	54.6	57.4	59.7	55.2	57.3	54.1	51.8	59.3	59.5	57.1	55.8	56.6	55.8	55.1
16-17	47.6	52.1	50.6	53.0	55.8	51.0	51.9	49.1	48.7	55.4	56.1	54.3	52.1	51.9	51.9	52.5
17-18	46.9	49.0	50.1	52.5	56.5	49.0	49.1	46.0	49.7	51.9	53.7	53.3	50.6	50.2	51.0	50.8
18-19	46.9	48.0	51.1	54.5	55.6	50.8	50.9	49.0	51.2	52.2	52.3	53.0	51.3	51.6	52.3	50.0
19-20	48.7	47.9	50.9	58.7	56.1	53.6	54.0	52.4	55.2	53.1	53.9	53.8	53.2	54.0	54.5	51.1
20-21	50.6	49.5	52.7	59.7	56.0	54.9	55.6	57.1	58.7	55.6	55.5	55.0	55.1	55.9	56.7	52.6
21-22	51.0	50.9	54.5	60.2	59.1	59.0	57.5	60.9	60.4	57.5	57.4	57.2	57.1	59.1	58.1	54.1
22-23	53.1	52.9	54.0	59.7	59.5	62.4	61.5	60.2	60.0	57.6	58.3	58.8	58.2	60.9	57.8	55.8
23-24	53.8	51.9	52.9	55.4	56.8	60.8	60.7	60.6	54.4	57.9	59.4	59.9	57.0	59.7	55.1	56.3
MEAN	51.8	52.5	53.7	56.3	55.5	55.3	58.0	57.0	55.4	56.8	57.1	58.4	55.6	56.5	55.5	54.9

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

MEAN VALUES OF MAGNETIC ELEMENTS

VERTICAL INTENSITY-ALL DAYS

TABLE 39 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	352	339	346	323	358	363	373	369	367	394	399	399	365	366	358	372
1-2	337	345	342	339	363	355	374	351	367	383	387	398	362	361	358	367
2-3	336	332	359	355	365	360	366	350	382	378	378	389	363	360	369	359
3-4	338	332	365	365	385	367	376	362	377	371	383	388	367	372	369	360
4-5	338	351	370	373	412	373	386	390	392	390	388	399	380	390	381	369
5-6	354	360	389	418	436	406	389	405	418	412	402	391	398	409	409	377
6-7	356	375	403	425	440	412	392	392	423	423	415	395	404	409	419	385
7-8	364	385	424	425	435	401	392	386	415	427	416	399	406	403	423	391
8-9	359	377	419	406	437	397	386	386	425	411	408	395	401	402	415	385
9-10	350	373	405	389	412	381	380	382	402	397	403	389	388	389	398	378
10-11	339	356	380	376	393	368	366	369	388	383	391	381	374	374	382	367
11-12	334	349	365	363	361	350	358	356	378	375	385	382	363	356	370	362
12-13	335	355	352	346	358	350	361	352	377	377	386	385	361	355	363	365
13-14	333	350	355	353	361	355	365	359	375	385	391	392	365	360	367	367
14-15	339	358	360	355	370	357	367	367	381	395	396	390	370	366	373	371
15-16	352	361	367	364	374	366	370	376	389	408	400	395	377	372	382	377
16-17	359	366	376	371	381	376	373	384	398	412	405	402	384	378	389	383
17-18	366	367	385	382	373	386	380	391	402	412	407	406	388	382	395	387
18-19	365	360	384	381	373	395	390	395	404	416	411	409	390	388	396	386
19-20	366	363	374	369	379	387	399	396	407	417	412	411	390	391	392	388
20-21	358	359	366	357	363	376	397	388	402	417	406	411	383	381	386	384
21-22	362	352	366	357	356	376	396	386	389	417	407	408	381	379	382	382
22-23	366	353	359	344	350	369	391	379	369	406	409	407	375	372	369	384
23-24	362	344	352	340	351	373	379	375	369	400	397	405	371	369	365	377
MEAN	351	357	373	370	383	375	379	377	392	400	399	397	379	379	384	376

MEAN VALUES OF MAGNETIC ELEMENTS

HORIZONTAL INTENSITY-QUIET DAYS

TABLE 40 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	412	418	430	476	482	467	469	452	462	450	457	466	453	468	454	438
1-2	409	423	425	443	471	470	461	444	453	450	458	467	448	461	443	439
2-3	406	424	426	405	446	463	461	444	459	448	458	472	443	453	435	440
3-4	407	424	418	428	422	442	459	445	460	452	453	471	440	442	440	439
4-5	409	420	401	422	414	435	443	438	431	458	456	463	432	433	428	437
5-6	409	418	396	398	396	426	426	433	445	437	449	461	424	420	419	434
6-7	409	415	386	367	398	420	407	404	405	394	449	456	409	407	388	432
7-8	409	409	402	380	378	427	401	409	383	390	447	452	407	404	389	429
8-9	407	406	390	398	372	417	426	438	408	415	449	457	415	413	403	430
9-10	405	406	379	403	353	419	434	434	412	444	449	457	416	410	409	429
10-11	399	405	407	393	391	421	437	420	427	448	447	454	421	418	419	426
11-12	402	408	412	397	391	421	439	418	435	448	445	453	422	417	423	427
12-13	405	406	404	405	415	428	432	419	433	441	443	452	424	424	421	426
13-14	400	398	400	404	416	421	432	411	422	436	438	452	419	420	415	422
14-15	394	391	390	400	415	419	426	408	415	425	428	445	413	417	407	414
15-16	392	386	391	398	415	417	425	412	413	421	424	438	411	417	406	410
16-17	391	387	389	403	426	424	428	419	419	423	425	437	414	424	408	410
17-18	392	397	396	405	436	435	439	437	431	433	432	441	423	437	416	415
18-19	399	408	409	436	454	449	459	454	445	445	438	445	437	454	434	422
19-20	403	418	422	464	461	467	475	459	455	454	443	452	448	465	449	429
20-21	406	418	436	490	469	484	477	465	462	461	451	457	456	474	462	433
21-22	407	413	452	487	466	500	479	458	458	461	453	459	458	476	464	433
22-23	413	418	451	508	476	492	479	451	453	458	454	463	460	474	468	437
23-24	413	418	434	489	483	498	479	452	456	459	457	464	458	478	460	438
MEAN	404	410	410	425	427	444	445	434	435	440	446	456	431	438	427	429

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION-QUIET DAYS

TABLE 41 GREAT WHALE RIVER D = 339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	54.0	52.0	54.7	56.9	60.1	57.2	59.0	59.9	57.5	58.2	58.0	60.8	57.4	59.1	56.8	56.2
1-2	53.5	53.0	54.2	53.1	56.2	57.2	57.6	58.5	55.6	57.2	59.4	60.4	56.3	57.4	55.0	56.6
2-3	53.5	52.5	55.2	50.2	52.4	55.8	56.6	56.1	56.6	57.7	58.9	61.8	55.6	55.2	54.9	56.7
3-4	53.0	53.0	52.3	54.0	50.9	53.4	56.1	54.2	56.6	58.7	58.5	59.9	55.0	53.6	55.4	56.1
4-5	53.5	52.0	51.3	53.5	51.4	54.4	54.7	54.7	52.8	57.2	58.0	58.0	54.3	53.8	53.7	55.4
5-6	52.0	51.6	51.8	52.1	50.4	52.9	52.7	55.6	54.7	56.3	56.5	59.9	53.9	52.9	53.7	55.0
6-7	52.5	51.1	54.7	52.6	53.8	53.9	54.2	54.7	54.2	54.4	56.5	59.4	54.3	54.1	54.0	54.9
7-8	52.5	53.5	57.6	56.4	53.3	54.8	53.7	56.6	54.7	57.7	57.0	59.4	55.6	54.6	56.6	55.6
8-9	52.5	54.0	57.6	57.9	56.7	55.3	58.5	60.9	59.9	61.5	58.0	58.9	57.6	57.8	59.2	55.8
9-10	54.0	55.9	57.6	59.8	57.2	60.1	63.4	61.8	60.9	63.9	58.5	58.9	59.3	60.6	60.5	56.8
10-11	54.5	55.9	58.5	62.2	65.3	65.9	67.2	65.6	63.3	62.5	59.9	58.5	61.6	66.0	61.6	57.2
11-12	54.9	57.3	59.5	64.6	68.7	70.2	71.1	68.5	64.2	62.0	60.4	58.9	63.4	69.6	62.6	57.9
12-13	54.9	55.9	61.9	64.6	70.6	70.7	73.5	69.9	65.2	63.0	60.4	61.3	64.3	71.2	63.7	58.1
13-14	56.4	56.9	61.9	63.2	65.8	66.9	70.1	68.5	63.3	63.4	61.8	62.3	63.4	67.8	62.9	59.3
14-15	54.0	56.4	60.5	58.8	60.1	62.5	64.8	61.8	58.0	61.5	60.8	61.8	60.1	62.3	59.7	58.2
15-16	50.6	53.0	55.2	55.9	53.3	55.3	59.0	53.7	52.8	57.7	57.0	59.4	55.2	55.3	55.4	55.0
16-17	48.1	48.7	52.3	51.1	48.5	49.1	50.8	46.5	48.0	53.4	54.6	57.0	50.7	48.7	51.2	52.1
17-18	46.7	45.8	47.5	45.8	45.6	43.8	46.4	42.7	44.6	50.5	52.7	55.1	47.3	44.6	47.1	50.1
18-19	47.7	46.3	47.5	46.3	46.6	42.3	46.9	43.2	44.6	49.6	52.2	53.7	47.2	44.8	47.0	50.0
19-20	49.6	46.3	48.9	49.7	50.0	45.2	48.4	45.6	48.9	51.0	53.2	53.7	49.2	47.3	49.6	50.7
20-21	51.1	49.6	50.8	53.1	52.4	50.5	50.8	50.8	51.8	53.9	53.2	55.1	51.9	51.1	52.4	52.3
21-22	52.5	51.1	54.7	54.0	56.7	57.2	53.2	54.2	55.1	55.8	55.1	56.1	54.6	55.3	54.9	53.7
22-23	52.5	51.1	55.2	58.4	57.2	59.7	56.1	55.1	56.1	57.2	56.1	57.5	56.0	57.0	56.7	54.3
23-24	53.0	51.1	54.7	58.8	58.6	60.1	58.5	57.0	56.1	57.7	57.0	58.5	56.8	58.6	56.8	54.9
MEAN	52.4	52.2	54.8	55.5	55.9	56.4	57.6	56.5	55.6	57.6	57.2	58.6	55.9	56.6	55.9	55.1

MEAN VALUES OF MAGNETIC ELEMENTS

VERTICAL INTENSITY-QUIET DAYS

TABLE 42 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	357	362	368	351	366	385	386	378	396	396	397	409	379	379	378	381
1-2	348	361	370	354	371	369	380	354	388	394	399	409	375	369	376	379
2-3	347	362	367	368	344	363	380	357	379	397	399	408	373	361	378	379
3-4	350	362	364	367	354	359	371	368	367	396	397	408	372	363	373	379
4-5	350	362	348	364	378	353	374	358	363	389	393	403	370	366	366	377
5-6	348	355	350	374	366	359	368	371	375	397	393	403	372	366	374	375
6-7	353	352	361	374	373	362	358	364	388	397	392	399	373	364	380	374
7-8	351	354	357	372	390	365	357	368	363	380	393	401	371	370	368	375
8-9	351	354	363	361	384	362	361	370	359	379	392	401	370	369	365	374
9-10	344	351	352	362	371	369	367	375	367	387	392	399	370	371	367	371
10-11	338	351	357	362	351	365	368	371	369	389	393	393	367	364	369	369
11-12	340	351	364	354	347	362	370	371	375	390	393	393	367	362	371	369
12-13	344	357	371	358	354	365	364	371	379	393	396	399	371	363	375	374
13-14	344	360	368	356	360	371	370	374	385	397	399	402	374	369	377	376
14-15	350	361	370	359	366	368	373	375	386	400	399	401	376	370	379	378
15-16	354	362	370	365	361	368	371	377	389	402	397	399	376	369	381	378
16-17	355	364	373	371	367	373	371	380	389	405	400	402	379	373	384	380
17-18	357	364	376	378	371	378	373	381	389	406	399	401	381	376	387	380
18-19	357	365	376	388	376	381	370	385	390	409	400	402	383	378	391	381
19-20	360	374	378	397	387	385	380	388	389	413	400	405	388	385	394	385
20-21	360	372	380	401	390	394	386	390	389	412	400	405	390	390	395	384
21-22	357	364	374	407	384	399	384	390	386	407	400	403	388	389	394	381
22-23	357	362	370	403	378	389	390	380	382	403	399	402	385	384	389	380
23-24	355	362	375	395	374	376	389	378	382	405	397	408	383	379	389	381
MEAN	351	360	367	373	369	372	373	374	380	398	397	402	376	372	379	378

MEAN VALUES OF MAGNETIC ELEMENTS

HORIZONTAL INTENSITY-DISTURBED DAYS

TABLE 43 GREAT WHALE RIVER

H = 9500 PLUS TABULAR VALUES IN GAMMAS

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	412	415	423	523	479	516	472	498	454	455	494	503	470	491	464	456
1-2	394	405	340	503	431	473	500	479	465	404	460	492	445	471	428	438
2-3	437	441	408	471	396	395	450	407	445	379	460	485	431	412	426	456
3-4	416	388	368	448	294	351	361	407	348	361	431	471	387	353	381	426
4-5	373	388	373	437	302	334	317	356	418	350	365	429	370	327	395	389
5-6	326	366	276	376	288	292	368	365	376	282	258	381	330	328	327	333
6-7	378	329	282	276	283	283	383	372	349	212	187	382	310	330	280	319
7-8	333	309	259	301	289	269	251	395	376	230	238	354	300	301	291	308
8-9	338	237	207	345	276	310	258	352	304	205	249	410	291	299	265	309
9-10	295	228	86	299	88	322	294	300	78	213	253	369	235	251	169	286
10-11	305	244	233	291	99	353	389	252	114	235	333	391	270	273	218	318
11-12	306	277	341	308	162	403	404	277	167	253	377	396	306	312	267	339
12-13	326	298	315	283	131	377	400	363	223	320	376	423	319	318	285	356
13-14	388	269	356	295	209	340	415	404	313	385	398	434	350	342	337	372
14-15	384	330	379	348	289	387	426	415	382	378	408	425	379	379	372	387
15-16	402	330	377	405	342	403	434	418	416	417	445	438	402	400	404	404
16-17	402	354	386	460	400	428	436	432	447	462	470	435	426	424	439	415
17-18	425	402	418	489	491	457	459	454	471	476	460	442	454	465	463	432
18-19	432	384	461	585	550	516	505	504	524	507	478	464	492	519	519	440
19-20	466	376	452	631	603	575	572	550	540	502	485	486	520	575	531	453
20-21	449	447	449	588	618	566	562	587	560	520	492	482	527	583	529	467
21-22	443	445	442	589	645	574	548	588	568	507	465	489	525	589	527	461
22-23	455	444	434	595	549	570	543	559	535	476	465	489	509	555	510	463
23-24	453	429	415	554	514	541	515	547	398	462	463	483	481	529	457	457
MEAN	389	356	353	433	364	418	428	428	386	375	396	440	397	409	387	395

MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION-DISTURBED DAYS

TABLE 44 GREAT WHALE RIVER D =339.0 DEGREES EAST PLUS TABULAR VALUES IN MINUTES

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	62.1	34.0	22.3	48.3	10.8	57.6	45.7	59.4	43.7	58.0	63.5	65.5	47.6	43.4	43.1	56.3
1-2	66.0	32.6	6.0	43.4	19.5	42.2	49.1	51.2	47.5	48.0	62.6	64.5	44.4	40.5	36.2	56.4
2-3	53.9	42.2	30.5	44.4	17.6	29.2	47.2	47.4	33.7	52.3	54.0	66.5	43.2	35.3	40.2	54.1
3-4	47.1	52.3	37.7	49.7	18.5	38.4	35.1	43.1	38.5	45.6	53.0	60.7	43.3	33.8	42.9	53.3
4-5	34.0	44.1	44.0	43.0	33.9	31.6	39.0	45.5	44.2	41.8	38.7	57.4	41.4	37.5	43.2	43.5
5-6	41.8	42.2	34.8	38.6	33.9	35.0	50.1	51.7	42.8	33.2	29.1	48.3	40.1	42.7	37.3	40.3
6-7	44.7	48.5	50.2	42.0	43.1	37.9	53.0	57.4	40.8	41.3	12.4	52.6	43.7	47.8	43.6	39.5
7-8	46.1	48.5	50.2	51.1	57.5	44.6	43.8	61.7	57.6	48.0	42.0	52.6	50.3	51.9	51.7	47.3
8-9	51.5	53.8	66.6	65.1	51.2	45.1	58.3	60.8	64.3	70.4	57.3	59.8	58.7	53.9	66.6	55.6
9-10	53.4	49.0	68.0	64.6	45.0	49.9	57.4	59.8	39.9	64.2	61.6	63.1	56.3	53.0	59.2	56.8
10-11	55.8	48.0	56.0	72.3	40.6	69.2	71.9	65.6	44.2	53.7	55.9	60.2	57.8	61.8	56.6	55.0
11-12	55.3	53.8	66.6	75.7	68.1	73.0	76.7	67.0	57.6	55.2	64.0	63.6	64.7	71.2	63.7	59.2
12-13	52.4	59.5	67.1	76.6	56.5	73.5	74.8	66.0	47.1	53.7	64.5	57.4	62.4	67.7	61.1	58.5
13-14	51.0	58.1	62.7	68.9	63.3	70.6	73.3	67.0	62.8	53.2	54.0	61.2	62.2	68.5	61.9	56.1
14-15	45.6	57.6	60.3	59.8	77.7	64.8	64.6	59.8	60.0	59.9	60.6	55.9	60.6	66.7	60.0	55.0
15-16	46.1	62.4	55.0	62.2	77.7	52.3	57.8	56.0	53.8	64.7	63.0	53.1	58.7	61.0	58.9	56.2
16-17	50.0	61.0	49.8	63.6	77.2	49.9	51.5	51.7	52.8	63.8	57.3	51.6	56.7	57.6	57.5	55.0
17-18	50.5	58.6	50.2	69.9	95.5	49.9	52.0	48.8	58.5	56.1	55.4	52.6	58.2	61.6	58.7	54.3
18-19	48.5	59.5	59.9	80.0	93.1	58.1	55.9	56.5	65.7	58.5	54.0	53.6	61.9	65.9	66.0	53.9
19-20	51.9	52.8	50.7	81.0	75.3	59.5	67.0	61.3	62.8	59.0	54.9	56.4	61.1	65.8	63.4	54.0
20-21	51.0	50.4	51.7	65.6	61.3	57.1	64.1	67.0	63.3	60.9	58.7	56.4	59.0	62.4	60.4	54.1
21-22	50.0	52.3	49.8	66.0	58.4	63.9	60.3	68.0	64.7	61.8	57.3	59.8	59.4	62.6	60.6	54.8
22-23	54.4	47.5	43.0	62.2	36.8	67.2	63.2	61.7	64.7	59.9	57.3	58.3	56.4	57.2	57.5	54.4
23-24	54.9	43.7	38.7	56.4	22.9	62.9	54.9	63.7	46.1	59.5	61.1	60.7	52.1	51.1	50.2	55.1
MEAN	50.7	50.5	48.8	60.4	51.5	53.5	57.0	58.3	52.4	55.1	53.8	58.0	54.2	55.0	54.2	53.3

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

MEAN VALUES OF MAGNETIC ELEMENTS

VERTICAL INTENSITY-DISTURBED DAYS

TABLE 45 GREAT WHALE RIVER

Z = 59000 PLUS TABULAR VALUES IN GAMMAS

1969

U.T.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	SUMMER	EQUINOX	WINTER
0-1	320	355	370	254	314	339	363	364	335	388	381	375	347	345	337	358
1-2	280	340	372	337	360	349	384	328	353	364	358	362	349	355	356	335
2-3	284	284	415	357	427	380	385	325	412	332	368	346	360	380	379	321
3-4	298	273	431	352	479	400	446	355	391	338	361	354	373	420	378	321
4-5	331	348	386	373	508	430	446	446	421	404	417	385	408	458	396	370
5-6	387	362	445	533	531	489	455	432	458	467	459	365	449	477	476	393
6-7	376	401	487	531	558	522	460	414	450	502	502	391	466	489	492	417
7-8	402	428	521	517	512	473	466	383	440	493	522	400	463	459	493	438
8-9	413	415	547	489	556	455	437	430	530	493	502	397	472	470	515	432
9-10	390	438	513	476	483	409	437	422	474	464	498	380	449	438	482	426
10-11	357	399	476	436	452	380	375	368	477	408	433	348	409	394	449	384
11-12	337	373	440	399	420	363	354	333	434	379	377	351	380	367	413	360
12-13	320	391	392	332	459	377	352	310	432	358	371	354	371	375	379	359
13-14	319	356	366	355	418	370	352	351	379	368	377	369	365	373	367	355
14-15	331	361	369	341	433	359	360	367	378	392	394	377	372	380	370	366
15-16	350	368	376	361	409	360	360	381	395	446	414	387	384	378	394	380
16-17	364	373	383	374	405	380	373	391	411	446	419	400	393	387	403	389
17-18	377	361	398	390	347	395	383	411	429	433	414	417	396	384	412	392
18-19	374	300	376	350	320	418	397	412	412	437	417	423	386	387	394	379
19-20	374	302	333	266	296	402	404	381	402	437	417	420	369	371	359	378
20-21	359	282	310	283	190	366	401	327	392	423	398	414	345	321	352	363
21-22	372	244	320	271	164	356	400	315	371	425	410	404	338	309	347	357
22-23	373	316	337	241	201	326	375	318	329	417	411	418	339	305	331	380
23-24	362	322	352	305	279	336	339	337	361	407	407	405	351	323	356	374
MEAN	352	350	405	372	397	393	396	371	411	417	418	385	389	389	401	376

HOURLY RANGES

TABLE 46 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

JANUARY 1969

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	3	4	6	3	3	2	10	10	5	12	7	10	2	3	3	3	2	4	3	3	3	4	1	1	107	4	
2	1	1	1	8	12	3	1	1	1	1	1	1	2	1	1	3	1	1	1	1	1	1	1	1	47	2	
3	Q	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	1	
4		1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	3	2	2	1	30	1
5		1	1	1	3	9	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	37	2	
6	Q	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24	1	
7		1	1	0	3	5	2	1	4	7	10	7	15	15	12	3	2	1	1	3	3	4	7	1	2	110	5
8		4	1	5	5	5	4	4	12	10	14	4	4	2	2	1	1	1	3	3	3	2	2	3	96	4	
9		1	1	3	5	2	5	1	1	1	1	0	1	1	1	1	1	1	2	2	1	1	1	3	38	2	
10	Q	2	1	1	1	1	1	1	1	1	2	2	1	2	3	1	1	1	1	1	1	1	1	1	30	1	
11		1	1	1	1	1	1	2	1	10	1	1	1	1	1	1	1	1	1	1	1	3	2	2	1	38	2
12		1	1	1	2	4	3	5	4	5	5	15	12	5	2	6	2	1	1	1	1	1	1	1	1	81	3
13	Q	1	1	1	1	1	1	1	1	1	3	3	4	1	1	1	1	1	1	1	1	1	2	1	32	1	
14		5	3	3	7	5	18	14	14	23	4	10	10	1	3	2	1	1	3	3	2	4	10	5	152	6	
15	D	12	12	14	15	10	7	8	5	6	18	11	5	4	4	4	3	2	3	9	10	4	3	3	175	7	
16		3	7	4	4	19	13	8	7	5	10	11	15	14	15	22	5	3	4	3	1	2	2	3	5	185	8
17	D	8	25	30	9	11	82	21	3	22	11	21	19	15	18	8	5	4	3	8	10	5	7	12	367	15	
18	D	23	6	5	13	22	12	7	24	17	7	21	37	12	8	3	3	3	8	8	5	5	7	5	269	11	
19		24	20	14	6	14	13	11	8	9	17	25	13	12	8	4	4	3	1	3	5	3	5	1	226	9	
20		3	3	12	24	6	7	13	11	5	6	3	6	4	7	8	7	3	1	5	3	5	5	4	3	154	6
21		3	3	4	3	5	5	5	8	4	5	13	11	8	1	1	1	1	2	3	3	2	5	1	3	100	4
22		1	1	3	3	3	1	1	3	12	12	3	1	1	1	1	1	1	2	1	1	1	1	1	1	57	2
23		1	1	1	1	1	6	9	3	1	1	1	1	2	1	1	1	1	1	3	3	3	1	1	1	46	2
24		1	1	1	1	1	1	1	1	1	1	3	5	4	6	11	19	8	8	10	13	12	14	4	128	5	
25	D	17	23	15	4	36	37	21	43	22	24	35	19	33	22	19	15	14	17	10	10	12	10	4	6	468	20
26	D	48	61	11	32	19	8	3	4	5	4	5	18	30	18	17	3	4	3	3	4	7	7	5	5	324	14
27		7	3	2	3	17	25	27	29	24	21	30	19	8	10	9	3	4	4	4	5	3	3	9	7	276	12
28		4	5	12	5	1	1	1	3	1	3	3	3	1	1	1	1	1	1	1	2	1	1	1	1	55	2
29	Q	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	1	22	1
30		3	1	1	1	10	5	1	1	8	28	35	12	1	1	1	1	1	1	1	1	2	1	1	1	119	5
31		1	1	1	1	1	1	1	5	8	8	8	10	8	7	4	4	8	5	3	3	3	3	5	1	100	4
SUMS		183	193	157	168	227	271	182	211	218	234	281	255	196	160	134	89	88	81	96	102	104	100	99	83	3912	
MEANS		6	6	5	5	7	9	6	7	7	8	9	8	6	5	4	3	3	3	3	3	3	3	3	3	5	

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 48 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

FEBRUARY 1969

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	2	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	3	4	1	1	1	33	1
2	D	1	1	1	1	1	1	1	1	18	14	3	4	3	2	3	17	12	9	62	54	12	5	8	10	244	10
3	D	7	26	53	7	8	12	15	18	26	12	35	29	24	36	41	60	11	8	11	12	8	16	13	11	499	21
4		7	7	6	3	3	2	4	9	10	10	9	7	8	7	5	5	5	4	3	5	6	6	11	11	153	6
5		12	13	12	8	12	22	8	15	6	3	7	10	6	4	3	1	1	1	2	3	3	3	3	1	159	7
6		3	4	30	48	22	19	8	14	11	14	12	5	4	1	1	1	1	3	2	3	4	4	12	13	239	10
7		3	1	1	1	1	1	4	12	5	5	7	12	6	2	1	1	3	3	3	5	3	5	4	4	93	4
8		13	8	10	8	16	8	8	12	5	3	3	3	1	4	3	2	2	3	4	3	2	1	2	2	126	5
9	Q	2	5	1	3	2	1	2	2	1	2	1	1	1	1	1	1	1	2	4	1	1	2	1	1	40	2
10		10	8	7	5	3	1	3	5	8	10	8	19	5	3	3	1	3	3	3	3	5	20	24	17	177	7
11	D	47	42	14	12	3	17	32	24	60	59	63	21	12	26	14	14	5	11	19	8	14	12	10	12	551	23
12		21	9	5	7	7	7	4	3	1	1	1	1	1	1	1	1	2	1	5	7	5	4	7	13	115	5
13		14	9	4	6	5	11	21	6	5	7	5	3	3	1	3	5	3	3	2	3	5	5	3	5	137	6
14		1	3	3	15	10	3	5	3	1	3	3	7	7	5	1	1	1	1	3	3	3	5	5	5	97	4
15	D	4	3	25	44	10	8	11	7	4	6	22	17	18	6	9	3	2	4	8	9	9	14	9	8	260	11
16		5	9	3	4	8	20	19	15	7	5	4	8	6	10	3	3	4	4	4	3	2	1	4	2	153	6
17	Q	2	1	1	3	3	14	7	3	4	2	3	1	1	1	1	1	1	3	1	2	4	1	2	1	63	3
18	Q	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	2	1	3	1	1	1	2	24	1
19		1	1	3	12	17	11	4	3	3	1	1	1	5	3	2	1	1	3	3	2	4	4	1	1	88	4
20		1	1	1	17	20	10	5	3	3	3	2	3	3	2	2	3	3	3	2	6	3	3	3	3	105	4
21		5	4	3	5	8	18	32	33	5	3	3	1	3	3	3	2	1	3	1	1	3	1	1	1	143	6
22	Q	1	1	1	1	1	2	5	3	4	1	1	1	1	1	1	2	1	1	1	1	3	3	3	1	41	2
23		2	1	3	2	4	27	33	21	4	5	8	16	12	5	3	7	1	1	1	1	2	4	1	1	165	7
24		1	3	2	3	5	18	7	6	5	8	3	3	3	3	4	1	3	1	2	1	1	2	1	1	87	4
25		1	10	10	3	4	3	8	7	4	3	3	1	1	1	1	1	1	1	1	2	3	1	1	1	72	3
26		1	1	7	19	12	12	15	5	17	17	15	10	5	5	7	3	3	1	2	3	5	3	3	1	172	7
27	D	1	4	13	12	14	13	13	6	7	8	5	4	12	10	21	13	30	12	14	15	8	5	5	7	252	11
28		3	6	5	12	15	8	9	5	5	7	4	3	3	3	3	3	4	3	4	3	4	15	6	10	143	6
SUMS		171	183	226	264	215	270	284	242	231	214	234	193	156	148	142	155	107	96	170	165	127	147	145	146	4431	
MEANS		6	7	8	9	8	10	10	9	8	8	8	7	6	5	5	6	4	3	6	6	5	5	5	5		7

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 49 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

FEBRUARY 1969

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	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2	1	1	1	1	30	1	
2	D	1	1	1	1	1	1	0	1	6	5	3	2	2	2	5	15	17	12	20	39	11	8	15	12	181	8
3	D	21	27	37	8	7	10	9	19	17	13	17	15	12	21	22	36	5	8	8	8	8	10	4	6	348	15
4		3	3	4	1	2	1	5	4	3	4	3	2	5	4	4	5	8	4	3	3	3	3	11	8	96	4
5		10	8	6	3	4	12	9	5	6	3	1	4	4	4	5	3	2	1	2	1	1	2	3	1	100	4
6		1	3	25	53	10	8	10	7	3	7	3	2	3	1	1	1	1	1	1	1	1	1	12	10	166	7
7		3	1	1	1	1	1	2	6	1	1	2	7	7	3	3	3	2	3	1	1	3	1	2	3	59	2
8		9	3	5	4	12	8	5	5	1	1	2	1	2	3	4	3	3	3	4	1	1	1	1	1	83	3
9	Q	1	2	3	3	1	1	1	1	1	1	1	1	1	1	2	3	1	1	2	1	1	1	1	1	33	1
10		5	3	5	3	1	1	1	1	3	3	4	4	1	1	2	4	3	1	1	1	2	12	17	7	86	4
11	D	53	45	13	4	1	10	12	24	51	72	47	34	16	28	13	8	5	4	10	8	11	4	7	10	490	20
12		15	3	5	8	8	12	5	3	1	1	1	1	1	1	2	2	3	1	1	3	2	1	2	7	89	4
13		3	8	3	6	4	7	7	10	5	3	1	1	3	3	4	3	4	1	1	1	1	1	1	3	84	4
14		1	1	3	11	7	1	1	1	1	1	1	3	4	3	1	1	2	1	2	1	1	1	5	5	59	2
15	D	4	3	9	42	12	8	8	4	3	3	7	4	12	8	5	4	4	2	4	4	3	3	5	6	167	7
16		4	6	1	3	3	21	10	10	1	3	3	4	4	5	3	2	3	1	2	1	1	1	1	1	94	4
17	Q	1	1	3	3	3	10	3	1	1	1	1	2	1	1	1	2	2	1	1	1	3	1	1	1	46	2
18	Q	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	23	1
19		1	1	1	10	15	12	3	1	2	1	2	1	7	5	4	3	1	1	1	1	2	1	1	1	78	3
20		1	1	1	3	11	8	2	1	1	1	1	2	3	3	2	4	6	3	2	3	1	1	1	1	63	3
21		5	5	1	2	7	10	9	10	4	4	3	2	3	3	3	3	2	1	1	1	1	1	1	1	83	3
22	Q	1	1	1	1	1	2	4	2	2	2	1	1	1	2	4	2	5	2	1	1	1	1	1	1	41	2
23		1	1	1	3	1	20	11	9	3	1	5	8	5	5	3	5	2	3	1	2	1	1	1	1	94	4
24		1	3	3	1	2	10	5	1	3	3	2	3	3	4	3	1	5	3	1	1	1	1	1	1	62	3
25		1	5	9	5	4	1	3	3	2	2	3	1	2	1	1	1	1	1	1	1	1	1	1	1	52	2
26		1	1	4	13	13	5	11	3	4	5	4	7	3	5	4	2	2	3	3	3	3	1	1	1	102	4
27	D	1	3	19	4	9	12	5	3	1	3	2	3	7	8	21	16	12	17	16	15	5	5	3	3	193	8
28		2	3	5	6	15	12	12	3	3	2	1	1	2	3	5	3	5	5	3	3	2	3	8	4	111	5
SUMS		152	144	171	203	157	206	155	140	130	148	123	118	116	130	129	138	109	87	97	109	73	69	109	100	3113	
MEANS		5	5	6	7	6	7	6	5	5	5	4	4	4	5	5	5	4	3	3	4	3	2	4	4		5

HOURLY RANGES

TABLE 50 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

MARCH 1969

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		12	3	1	1	1	2	1	1	2	2	1	1	1	3	3	3	4	4	5	5	4	1	5	6	72	3
2		11	12	40	33	8	5	1	3	4	5	7	10	7	4	3	3	1	1	2	1	1	3	1	1	167	7
3	Q	1	1	3	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	31	1
4	Q	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	4	3	21	18	19	17	91	4
5		6	4	2	3	2	2	3	4	1	2	4	18	14	4	4	3	2	3	1	5	3	2	2	8	102	4
6		5	3	5	10	7	11	19	8	9	12	13	23	7	3	3	3	2	3	8	3	3	5	3	2	170	7
7		3	13	17	23	12	26	17	5	11	6	10	5	4	9	12	6	3	3	10	11	8	7	8	8	237	10
8		10	18	7	37	13	5	6	6	11	13	5	9	11	3	2	5	2	3	2	3	5	3	3	5	187	8
9		3	8	10	17	15	26	7	10	15	19	12	4	4	5	4	7	5	4	4	3	5	4	6	1	198	8
10	Q	4	3	3	4	10	11	11	5	15	14	6	3	1	1	1	1	1	1	5	4	1	5	3	1	114	5
11		1	3	3	24	9	12	21	12	15	10	10	15	22	14	8	5	4	5	8	9	5	12	29	58	314	13
12	D	51	82	38	22	11	10	23	19	19	27	29	23	7	4	4	7	11	14	8	7	3	1	3	3	426	18
13		11	21	10	5	5	5	10	4	4	3	2	2	2	2	1	3	1	1	1	5	3	5	3	4	113	5
14		4	4	12	8	9	3	4	3	3	1	2	3	2	3	2	2	3	3	2	6	3	11	3	6	102	4
15		10	30	25	12	12	10	5	7	29	10	24	8	10	5	4	5	12	10	11	10	9	10	7	7	282	12
16		3	1	1	3	58	41	10	33	23	42	30	18	8	3	3	2	2	3	3	3	6	3	3	4	306	13
17	D	21	55	24	5	24	46	23	6	12	12	13	17	25	33	3	5	4	8	10	10	16	22	7	1	402	17
18		1	2	3	39	30	10	33	24	17	11	16	6	4	3	3	3	2	3	3	1	8	8	5	4	239	10
19		1	2	3	10	3	3	6	24	19	19	3	1	1	1	3	3	1	2	3	5	16	23	10	14	176	7
20		17	33	21	7	5	4	3	28	15	16	14	11	4	3	3	4	8	8	13	9	11	9	22	21	289	12
21		17	17	12	4	14	5	15	26	15	16	5	8	3	7	6	1	1	2	5	5	9	13	13	10	229	10
22		4	7	12	38	15	3	5	9	35	24	8	12	4	6	3	3	3	4	5	3	8	2	5	8	226	9
23	D	14	5	5	3	8	4	3	2	4	5	5	3	4	2	5	4	2	10	28	31	16	15	23	9	210	9
24	D	32	28	17	28	21	16	36	35	169	118	36	30	26	12	5	6	8	4	3	2	2	5	3	2	644	27
25	D	2	1	3	2	2	19	25	24	19	25	26	5	17	4	11	3	3	4	4	4	3	3	9	3	221	9
26		8	15	3	1	2	9	6	6	15	4	9	12	8	7	3	6	3	6	4	3	3	8	2	7	150	6
27	Q	5	3	1	7	18	12	3	2	4	4	5	2	3	3	3	4	3	2	2	2	1	2	1	1	93	4
28	Q	1	1	2	10	10	12	5	8	3	3	3	1	1	2	3	5	4	3	1	2	2	1	1	2	86	4
29		1	1	1	2	4	17	9	24	13	13	20	6	5	5	8	7	8	5	7	7	3	15	25	40	246	10
30		33	6	21	13	19	8	6	6	3	9	3	4	3	1	4	1	1	5	11	14	3	24	22	10	230	10
31		5	5	31	12	4	6	3	10	5	7	10	9	9	8	6	8	9	3	8	3	5	5	4	2	177	7
SUMS		297	388	337	384	354	346	320	355	510	453	332	271	219	162	125	120	115	129	183	180	187	246	251	266	6530	
MEANS		10	13	11	12	11	11	10	11	16	15	11	9	7	5	4	4	4	4	6	6	6	8	8	9		9

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 51 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

MARCH 1969

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				
1	5	2	1	1	1	1	1	1	1	1	1	1	1	3	3	3	8	5	5	5	2	1	3	4	60	3	
2	11	10	35	35	3	3	1	1	1	2	2	5	2	3	3	4	1	1	1	1	1	1	1	1	129	5	
3	Q	1	1	1	2	3	3	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	30	1	
4	Q	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	3	2	10	9	6	5	52	2	
5		3	3	1	1	1	1	1	1	1	1	2	3	7	4	4	3	3	1	1	3	1	1	1	4	52	2
6		1	1	1	4	5	10	6	4	3	4	10	8	5	2	2	5	4	4	4	3	1	1	1	2	91	4
7		3	6	14	22	14	19	18	8	3	4	4	5	3	9	5	5	4	4	7	7	7	5	5	6	187	8
8		5	10	15	17	33	4	2	3	1	4	3	3	4	3	1	3	3	3	2	3	1	1	3	5	132	6
9		1	5	12	17	13	8	6	2	5	12	1	3	3	4	3	5	3	3	3	3	3	1	1	1	118	5
10	Q	2	2	3	3	13	5	10	3	3	5	2	3	1	1	1	2	1	1	3	1	1	2	1	1	70	3
11		1	1	5	24	10	7	23	7	13	10	8	19	15	3	7	5	3	3	3	8	7	9	31	37	259	11
12	D	23	47	20	28	9	10	15	12	26	17	32	4	5	5	5	3	4	10	8	3	3	1	1	2	293	12
13		5	27	12	2	4	1	3	3	1	2	1	2	2	1	3	2	3	3	1	2	1	4	3	6	94	4
14		3	5	9	7	13	3	3	3	1	1	1	2	1	1	3	3	3	1	1	3	1	3	1	8	80	3
15		15	11	48	33	7	12	5	6	11	15	11	9	9	3	4	10	7	8	3	3	2	5	7	4	248	10
16		1	1	1	1	32	30	7	17	13	26	27	12	3	3	3	3	3	1	3	3	2	2	2	2	199	8
17	D	21	48	50	2	13	31	8	1	2	3	4	8	10	13	8	8	8	6	4	5	14	14	2	1	284	12
18		1	1	3	29	22	3	21	26	9	8	5	4	3	2	3	4	5	4	3	1	3	1	2	2	165	7
19		1	1	1	8	6	1	1	11	11	3	2	1	1	1	3	1	1	3	7	8	6	10	8	8	97	4
20		13	32	22	5	4	3	3	21	4	5	7	4	3	3	4	5	8	6	4	6	5	8	11	6	192	8
21		10	16	19	4	19	5	10	29	17	4	2	2	3	4	6	2	2	3	2	3	1	8	11	2	184	8
22		1	5	11	22	4	2	1	3	18	8	10	3	5	5	4	5	4	3	4	2	3	2	3	8	136	6
23	D	5	2	3	3	3	1	1	1	2	1	3	4	3	3	4	9	3	7	22	11	14	12	23	20	160	7
24	D	15	10	25	21	16	12	18	14	85	87	28	12	12	9	3	12	11	5	4	3	2	3	2	2	411	17
25	D	1	1	2	1	1	8	12	13	12	10	8	5	5	4	5	5	3	3	3	2	2	2	9	9	126	5
26		5	16	2	1	1	5	2	3	7	1	4	10	5	4	4	5	3	5	3	3	4	3	1	5	102	4
27	Q	4	1	1	4	11	6	3	1	3	2	2	3	3	3	3	1	1	1	1	1	1	1	1	1	60	3
28	Q	1	1	1	8	5	16	7	3	2	3	3	1	1	3	3	6	3	3	2	1	1	1	1	1	77	3
29		1	1	1	1	1	7	12	8	8	16	10	4	4	5	9	9	5	8	6	4	2	3	9	29	163	7
30		8	6	11	10	21	4	3	3	1	3	4	3	2	1	3	3	3	5	7	8	3	12	9	10	143	6
31		4	5	21	5	3	3	1	1	3	3	5	7	5	5	8	7	7	3	3	3	3	1	2	1	109	5
SUMS		172	279	352	322	292	224	206	211	269	263	204	151	128	112	117	145	119	115	118	111	111	124	164	194	4503	
MEANS		6	9	11	10	9	7	7	7	9	8	7	5	4	4	4	5	4	4	4	4	4	4	5	6		6

HOURLY RANGES

TABLE 52 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

APRIL 1969

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		
DAY	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	4	12	16	6	8	8	3	11	12	15	22	3	3	3	8	12	27	9	24	25	44	5	282	12	
2		5	10	3	6	4	4	3	2	4	3	8	8	5	5	9	6	4	8	8	26	10	21	25	19	206	9	
3		56	35	16	12	8	6	3	10	5	5	3	5	5	3	3	3	3	8	5	10	5	8	8	9	234	10	
4		5	21	10	35	6	14	12	6	9	17	10	8	8	8	3	4	2	3	5	13	10	4	10	8	231	10	
5		5	8	4	3	15	23	28	15	5	8	19	5	3	2	3	4	2	6	3	5	3	7	3	6	185	8	
6		7	5	8	8	5	7	4	19	21	6	2	2	3	5	4	4	3	5	6	12	16	16	4	5	177	7	
7		44	32	11	8	3	33	23	10	15	18	6	10	5	6	8	2	2	3	12	17	8	8	6	9	299	12	
8		10	7	8	10	9	4	3	3	4	5	6	3	3	1	1	2	1	3	3	4	6	12	12	10	130	5	
9		5	3	3	35	34	15	11	5	14	19	15	21	11	7	5	3	5	9	7	11	22	17	3	5	285	12	
10	Q	1	1	1	3	6	17	12	10	8	4	5	14	3	4	3	3	3	3	7	9	8	6	5	3	139	6	
11		3	5	3	6	10	8	5	37	8	4	8	8	15	10	3	3	3	2	5	3	3	1	1	2	156	7	
12		2	1	1	4	3	3	6	4	3	3	1	3	4	3	2	2	4	5	3	1	17	18	8	18	119	5	
13	D	35	7	15	15	13	22	57	35	16	16	15	10	12	8	10	9	5	26	33	20	45	39	37	34	534	22	
14		18	49	15	7	8	17	14	4	10	8	4	7	10	7	6	4	4	5	7	14	23	20	24	11	296	12	
15		27	21	20	28	25	24	5	9	45	10	15	17	28	10	3	6	6	5	8	10	2	7	3	3	337	14	
16		5	6	5	32	9	9	10	8	8	15	8	10	14	5	8	5	5	8	3	8	34	33	10	11	269	11	
17	D	16	17	8	11	5	26	21	21	10	10	12	12	15	12	18	10	14	8	11	14	21	6	12	13	323	13	
18		12	18	30	30	13	24	29	33	6	12	10	5	4	2	3	1	2	3	3	7	3	14	6	12	282	12	
19	Q	12	17	8	3	3	1	1	1	1	1	1	3	2	3	1	1	2	3	5	5	11	3	6		95	4	
20		6	15	8	4	4	3	15	11	5	1	2	2	3	3	1	1	1	3	4	7	8	10	13	10	140	6	
21	Q	19	8	4	2	4	3	5	5	1	1	1	1	1	2	3	1	1	2	1	2	2	4	3	3	79	3	
22		3	3	3	1	2	3	4	10	7	10	5	10	8	5	5	3	3	2	3	1	2	1	3	3	100	4	
23	Q	1	2	3	3	5	12	13	7	5	1	3	1	5	4	3	2	3	4	3	5	5	3	5	5	101	4	
24		5	5	14	12	11	21	24	8	8	2	1	2	1	2	1	1	7	5	3	3	2	3	5	8	154	6	
25		12	18	3	3	3	17	15	13	10	4	3	3	3	4	4	3	1	3	3	3	4	1	5	5	143	6	
26	Q	4	15	15	14	1	2	5	4	2	1	1	1	3	2	2	3	5	4	8	6	7	2	5	8	120	5	
27		2	29	12	29	12	8	12	11	17	11	19	23	3	3	3	5	3	5	6	6	5	4	2	3	233	10	
28	D	3	1	6	9	22	24	11	21	11	17	22	37	25	29	25	13	11	11	6	5	6	5	6		331	14	
29		8	8	3	1	4	3	2	5	5	3	3	3	3	5	3	5	3	5	8	12	6	14	11	19	142	6	
30	D	12	33	21	16	21	33	28	13	12	25	12	17	14	16	11	14	9	5	11	10	4	14	13	4	368	15	
SUMS		344	401	265	362	284	392	389	348	278	251	232	264	242	178	159	126	124	173	215	258	316	334	292	263	6490		
MEANS		11	13	9	12	9	13	13	12	9	8	8	9	8	6	5	4	4	6	7	9	11	11	10	9			9

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 53 GREAT WHALE RIVER

DECLINATION WEST IN TEN GAMMA UNITS

APRIL 1969

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	12	21	8	5	7	1	2	1	6	6	3	3	3	4	4	22	14	15	7	49	3	199	8
2		3	5	2	8	5	4	2	1	2	1	4	5	5	5	8	5	8	12	6	17	14	9	13	24	168	7
3		33	37	10	6	5	3	3	2	1	3	1	3	3	3	3	4	5	6	3	17	3	4	3	3	164	7
4		8	14	12	26	19	7	5	3	5	13	12	3	4	4	2	5	2	3	2	6	4	2	3	1	165	7
5		9	8	1	1	5	11	14	12	8	12	5	3	3	2	2	3	2	3	2	2	1	1	1	5	116	5
6		5	5	10	10	6	8	3	5	10	3	1	1	1	3	5	3	4	5	3	4	8	7	8	10	128	5
7		38	27	10	12	5	12	10	8	23	4	1	3	3	3	4	5	4	2	5	8	5	2	1	3	198	8
8		9	7	5	17	5	3	1	1	1	2	3	2	1	2	2	3	3	1	1	1	1	5	5	3	84	4
9		1	1	1	10	26	20	8	2	3	15	22	17	6	6	4	3	4	8	3	5	15	3	2	1	186	8
10	Q	1	1	1	1	4	5	11	5	5	3	5	3	3	2	3	3	3	5	3	3	3	3	3	3	82	3
11		2	4	3	4	7	6	2	17	8	3	5	6	11	3	5	1	1	1	2	1	2	1	1	1	97	4
12		1	1	1	1	1	1	1	1	1	1	1	4	3	3	3	2	2	2	4	2	12	9	5	10	72	3
13	D	25	15	7	15	5	12	32	17	8	4	10	3	4	5	5	4	10	19	10	24	17	12	43	13	319	13
14		18	27	5	3	2	5	2	3	3	3	2	6	5	4	5	5	7	5	6	5	15	20	12	12	180	8
15		19	13	21	14	15	5	7	5	28	14	7	10	10	3	5	3	6	5	8	5	1	6	1	1	212	9
16		2	3	4	12	8	11	10	6	8	6	4	4	5	4	6	7	7	8	2	5	17	15	3	5	162	7
17	D	15	21	12	8	7	11	15	18	8	7	5	6	8	7	14	5	12	10	10	10	8	3	10	6	236	10
18		18	11	25	17	4	22	24	19	3	4	3	2	2	2	3	1	3	1	2	1	5	4	4	4	183	8
19	Q	8	22	9	4	2	1	1	1	2	1	1	1	1	2	2	3	2	1	3	1	1	5	1	2	77	3
20		2	10	10	2	3	1	10	6	1	1	1	1	1	1	2	3	3	2	1	2	4	3	6	8	92	4
21	Q	24	5	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2	3	1	1	2	1	2	1	58	2
22		3	1	1	1	1	1	1	3	3	2	3	4	5	3	3	3	3	3	2	1	1	1	2	1	52	2
23	Q	2	1	3	1	1	6	7	3	3	1	2	2	2	3	3	2	2	3	1	5	3	1	1	2	60	3
24		3	5	10	12	8	13	11	2	3	1	1	2	1	2	3	2	3	5	2	3	2	1	3	5	103	4
25		19	9	2	2	2	9	7	10	3	2	3	3	3	4	2	3	3	2	2	3	3	1	1	3	101	4
26	Q	1	12	12	8	1	1	2	1	1	1	3	1	3	3	1	3	5	2	3	3	3	1	2	1	74	3
27		2	18	8	12	10	6	10	9	3	3	7	5	3	3	3	4	3	3	6	3	3	1	1	2	128	5
28	D	1	1	3	7	20	24	18	22	12	8	9	14	17	23	8	7	10	7	5	4	5	3	3	4	235	10
29		5	5	1	2	3	1	1	3	3	1	3	1	3	4	5	5	7	5	4	8	3	4	7	30	114	5
30	D	5	39	39	19	12	20	10	3	4	17	10	8	7	12	10	5	8	3	10	11	4	7	9	3	275	11
SUMS		283	329	231	248	214	238	234	196	164	139	138	131	130	126	125	108	135	140	134	178	175	146	207	171	4320	
MEANS		9	11	8	8	7	8	8	7	5	5	5	4	4	4	4	4	5	5	4	6	6	5	7	6		6

HOURLY RANGES

TABLE 54 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

MAY 1969

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	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		
		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		8	23	7	19	24	15	10	16	6	15	5	1	3	1	1	3	2	3	3	3	7	6	5	2	188	8
2	D	3	4	6	30	15	17	11	5	10	19	17	5	8	25	12	8	5	9	22	17	13	11	12	7	291	12
3		4	10	6	12	53	37	26	48	11	12	19	23	14	4	5	4	4	5	2	7	7	13	12	15	353	15
4		5	3	3	17	35	12	4	8	8	10	8	7	3	5	3	3	5	3	6	3	4	4	2	10	171	7
5		25	12	5	17	11	4	3	8	7	6	3	8	6	8	5	3	3	4	5	6	5	5	8	11	178	7
6		7	3	12	27	24	30	16	30	3	1	3	3	3	4	2	1	1	2	3	4	5	4	3	6	197	8
7	Q	16	6	10	8	5	5	12	15	10	8	5	1	1	1	1	1	1	1	1	1	1	1	1	3	115	5
8		3	3	12	17	15	12	14	9	5	1	1	3	3	2	3	6	1	3	2	1	1	2	9	4	132	6
9		5	2	2	35	18	8	7	4	40	15	22	4	7	3	1	1	1	3	3	6	5	24	23	12	251	10
10		6	5	4	37	26	17	6	5	4	10	14	10	4	6	5	5	1	5	4	3	4	1	1	3	186	8
11	Q	2	2	6	2	11	11	6	7	8	12	8	3	2	3	5	4	3	3	3	3	2	3	3	1	113	5
12		1	2	4	3	3	4	2	7	5	5	2	2	1	2	1	2	1	3	5	10	9	10	18	15	117	5
13	D	8	10	15	29	38	24	16	27	20	16	37	24	18	42	4	6	17	12	16	16	36	14	36	26	507	21
14	D	13	80	30	12	28	26	17	7	5	24	19	24	5	7	4	5	8	3	5	42	19	15	18	52	468	20
15	D	43	14	77	37	24	14	33	37	85	62	114	58	104	67	35	45	16	31	19	24	36	44	41	24	1084	45
16	D	77	30	30	68	36	11	12	15	14	42	35	40	60	7	3	3	3	4	3	4	13	5	7	4	526	22
17		3	11	21	11	15	14	18	5	21	17	7	8	15	4	2	2	3	4	2	4	7	12	10	5	221	9
18		48	30	15	8	9	6	5	12	12	25	15	30	3	4	4	7	5	9	18	12	5	5	12	3	302	13
19		7	3	3	5	8	6	9	9	11	5	12	12	10	10	14	6	6	5	3	9	8	2	6	6	175	7
20		9	17	10	8	3	35	27	8	6	8	3	4	2	3	4	5	3	3	3	7	11	7	3	8	197	8
21		6	10	19	11	8	34	11	10	12	12	42	17	32	16	15	11	3	5	5	8	9	14	6	14	330	14
22		8	5	15	24	14	5	7	8	9	9	35	35	30	11	12	9	5	3	8	8	4	4	3	2	273	11
23		3	6	24	17	9	5	8	35	22	11	24	12	9	10	8	4	7	5	3	10	3	2	4	3	244	10
24		3	2	2	1	18	15	11	4	12	11	7	7	8	8	3	5	5	5	5	8	10	9	10	9	178	7
25		37	21	28	17	10	8	3	3	3	3	1	2	1	6	2	1	3	1	1	3	7	5	5	5	176	7
26	Q	3	10	15	7	2	3	2	1	3	3	8	8	2	2	1	3	1	1	3	1	2	3	4	2	90	4
27	Q	1	2	3	2	5	2	1	1	4	2	1	2	3	2	4	3	1	1	1	2	2	3	2	3	53	2
28		2	1	2	5	3	13	10	6	22	14	9	19	3	6	7	4	4	4	3	2	1	3	4	5	152	6
29	Q	3	1	3	1	1	2	3	7	4	2	3	3	3	3	1	4	4	3	3	5	9	17	10	98	4	
30		4	3	5	3	21	12	12	13	30	28	4	12	15	5	3	5	8	5	1	8	7	9	8	12	233	10
31		5	10	10	13	51	37	11	15	19	25	5	7	10	4	4	3	3	3	1	13	15	15	6	10	295	12
SUMS		368	341	404	503	543	444	333	385	431	433	488	394	388	281	176	169	133	152	162	248	263	264	299	292	7894	
MEANS		12	11	13	16	18	14	11	12	14	14	16	13	13	9	6	5	4	5	5	8	8	9	10	9		11

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 55 GREAT WHALE RIVER		DECLINATION WEST IN TEN GAMMA UNITS																							MAY 1969			
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	
DAY		T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0			
		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		5	26	8	21	12	8	3	5	4	4	5	2	1	1	2	3	4	1	2	2	1	1	1	1	123	5	
2	D	1	3	9	29	8	8	3	1	3	12	6	3	3	11	8	8	16	10	33	12	8	8	8	5	216	9	
3		1	3	6	7	20	30	28	12	14	16	15	15	5	3	5	3	4	5	2	3	2	3	3	5	210	9	
4		2	3	2	19	24	7	3	2	3	4	2	2	1	4	3	5	3	5	5	1	1	1	3	5	110	5	
5		13	6	3	12	9	2	2	4	3	4	1	2	2	5	3	3	3	3	5	3	4	2	3	13	110	5	
6		3	1	9	16	8	24	19	10	1	1	1	1	3	3	1	2	2	3	3	1	1	1	3	2	119	5	
7	Q	9	3	10	10	11	5	3	12	5	2	3	1	1	1	2	2	1	1	1	1	1	1	1	1	88	4	
8		1	3	11	10	18	9	14	5	2	1	1	1	2	3	1	4	1	3	3	1	1	1	4	3	103	4	
9		3	1	1	26	13	8	3	1	19	10	8	3	3	2	2	3	2	4	6	8	3	5	16	3	153	6	
10		3	2	3	20	14	10	8	4	4	3	6	4	4	3	5	4	1	4	2	2	2	1	1	1	111	5	
11	Q	1	1	2	3	12	9	2	3	3	8	6	3	3	1	4	1	3	2	1	4	1	1	1	1	76	3	
12		1	2	3	3	1	1	2	1	3	3	3	2	2	3	2	2	2	1	3	5	8	5	8	11	77	3	
13	D	6	9	6	13	30	20	19	19	15	5	18	26	14	12	3	4	12	18	7	15	13	8	25	24	341	14	
14	D	24	28	17	4	20	24	14	5	2	7	10	10	4	4	4	11	7	3	4	26	13	24	9	30	304	13	
15	D	24	15	45	39	26	8	11	41	57	96	89	70	94	57	37	37	21	14	22	42	27	35	19	22	948	40	
16	D	35	14	21	26	21	16	17	13	5	36	12	6	32	4	3	2	4	2	2	3	8	3	4	1	290	12	
17		1	5	15	12	17	11	10	3	11	12	7	5	3	4	3	1	5	2	1	2	3	5	7	4	149	6	
18		40	24	13	12	4	6	5	4	10	12	15	6	3	2	3	6	5	11	15	10	3	2	3	2	216	9	
19		3	4	4	4	6	3	3	2	5	1	6	8	4	4	5	4	3	8	2	8	5	2	3	2	99	4	
20		3	30	20	8	3	9	15	4	5	1	2	5	3	3	3	3	2	3	2	5	8	3	1	2	143	6	
21		6	3	5	8	7	11	8	5	15	8	19	20	18	10	6	7	4	2	3	4	7	5	7	4	192	8	
22		3	4	17	23	10	3	1	3	3	3	26	35	18	6	5	3	8	4	8	5	2	1	3	1	195	8	
23		2	2	10	15	3	2	3	22	16	5	9	8	10	6	5	8	4	5	2	6	3	2	2	1	151	6	
24		3	1	2	1	10	21	10	3	3	2	3	2	3	4	5	3	3	2	3	7	5	5	2	7	110	5	
25		44	10	15	12	3	3	1	1	1	2	3	1	1	4	3	2	2	3	4	3	4	4	2	3	131	5	
26	Q	2	6	10	6	1	3	1	1	3	2	2	3	1	1	2	4	1	1	1	1	2	3	3	1	61	3	
27	Q	1	1	3	3	3	2	1	1	1	3	1	1	1	3	3	3	1	1	1	2	1	2	1	2	42	2	
28		1	1	2	2	7	8	8	3	10	7	10	7	3	5	8	7	8	4	1	1	1	1	2	1	108	5	
29	Q	1	1	3	1	2	1	2	3	3	3	1	1	2	3	3	2	3	2	2	3	3	2	6	3	56	2	
30		3	2	2	3	11	10	4	3	17	10	3	3	3	3	4	3	10	5	3	3	3	3	3	6	120	5	
31		3	4	7	6	21	33	6	5	10	10	3	2	6	3	3	3	3	3	1	7	6	8	5	7	165	7	
SUMS		248	218	284	374	355	315	229	201	256	293	296	258	253	178	146	153	148	135	150	196	150	148	159	174	5317		
MEANS		8	7	9	12	11	10	7	6	8	9	10	8	8	6	5	5	5	4	5	6	5	5	5	6		7	

HOURLY RANGES

TABLE 56 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

JUNE 1969

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		12	15	24	15	12	14	6	3	3	3	3	1	3	3	4	3	3	4	3	10	8	6	3	3	164	7
2		3	2	2	22	28	16	10	23	15	9	3	3	3	1	1	1	1	3	3	4	4	3	7	5	172	7
3		5	5	9	4	5	5	4	3	8	3	2	1	1	3	1	4	1	3	3	3	8	4	17	17	119	5
4		5	7	5	14	18	14	5	28	25	6	4	5	4	3	2	1	1	4	1	7	4	5	3	2	173	7
5		2	10	7	5	2	11	5	5	5	6	6	5	1	3	2	2	3	1	2	5	2	1	2	2	95	4
6	Q	3	1	3	9	4	8	8	3	1	1	1	1	3	1	2	1	3	1	4	4	3	4	3	7	79	3
7		9	12	8	5	21	8	6	4	5	10	22	17	12	5	3	3	2	2	2	1	2	3	5	7	174	7
8		9	12	3	6	5	29	26	14	8	10	6	3	5	4	4	3	7	5	10	10	28	21	9	8	245	10
9		8	15	14	14	4	8	8	5	5	5	5	7	3	9	3	1	4	26	17	14	20	5	17	8	225	9
10		11	28	22	11	9	11	23	14	12	8	17	5	14	11	3	3	5	6	6	4	2	3	2	3	233	10
11		2	5	5	3	2	21	21	8	28	26	6	1	4	7	4	2	2	3	4	2	2	5	11	8	182	8
12	D	5	14	10	18	12	41	19	15	43	18	9	9	8	5	4	8	8	8	5	6	6	7	6	6	288	12
13	D	3	8	15	22	41	23	10	5	3	5	5	5	4	2	5	5	2	8	26	15	19	12	15	24	282	12
14	D	26	10	24	25	17	22	17	53	30	32	8	8	30	38	16	5	16	5	5	5	12	19	17	17	457	19
15		4	5	10	21	22	3	5	3	26	15	12	17	8	10	19	3	3	5	5	10	12	3	3	3	227	9
16	D	3	12	19	14	24	33	30	24	39	40	17	14	8	10	17	15	5	4	12	4	4	13	14	12	387	16
17	D	6	35	68	48	7	8	40	53	23	16	24	17	5	1	4	10	10	4	9	10	3	1	4	3	409	17
18	Q	4	3	7	7	4	6	2	2	1	1	1	1	2	1	1	3	2	3	3	2	2	2	2	1	63	3
19		1	1	1	3	1	2	3	8	15	11	11	3	3	5	4	4	3	3	3	3	3	3	5	3	102	4
20		6	22	18	14	43	26	25	15	49	46	8	10	18	4	2	3	3	2	4	3	1	3	6	4	335	14
21		6	8	8	3	12	15	21	24	8	15	11	14	6	3	5	3	1	2	2	1	1	3	1	3	176	7
22	Q	2	1	1	4	2	2	1	1	1	1	3	3	1	2	1	3	1	2	1	1	3	1	2	1	41	2
23		0	1	1	1	2	3	3	1	3	3	4	3	3	2	1	2	3	4	4	1	5	8	6	14	78	3
24		17	17	37	32	8	33	24	15	8	15	5	8	8	2	3	4	3	5	10	7	3	15	15	22	316	13
25		5	2	7	3	3	3	8	17	10	4	3	2	3	2	3	3	3	5	19	8	10	7	10	12	152	6
26		7	14	4	3	12	14	11	3	3	7	4	7	5	2	4	5	5	3	1	5	4	3	3	3	132	6
27		3	3	21	25	5	3	15	7	3	2	7	5	10	1	2	3	1	2	1	1	5	4	9	12	150	6
28	Q	2	4	5	5	3	2	1	1	2	1	1	1	1	1	1	1	1	1	3	2	4	1	4	1	49	2
29	Q	3	1	1	5	6	3	1	3	8	4	1	2	3	1	1	1	1	2	4	3	3	4	3	4	68	3
30		4	2	4	5	5	17	11	5	12	3	3	3	1	3	3	1	2	1	3	5	3	1	3	3	103	4
SUMS		176	275	363	366	339	404	369	365	402	326	212	181	180	143	126	102	106	127	178	155	186	169	208	218	5676	
MEANS		6	9	12	12	11	13	12	12	13	11	7	6	6	5	4	3	4	4	6	5	6	6	7	7		8

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 57 GREAT WHALE RIVER		DECLINATION WEST IN TEN GAMMA UNITS																							JUNE 1969			
HOUR UT	DAY	0 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 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 TO 20	20 TO 21	21 TO 22	22 TO 23	23 TO 24	SUMS	MEANS	
1		8	15	25	15	11	12	5	1	1	1	1	1	3	5	4	1	3	3	3	3	2	2	1	1	125	5	
2		1	1	1	20	17	21	7	12	9	4	1	3	3	2	2	3	3	3	3	1	2	1	4	3	126	5	
3		4	3	9	10	3	3	2	1	3	2	3	1	2	1	4	3	3	4	3	1	4	2	7	10	88	4	
4		3	4	4	12	12	8	4	18	16	5	2	2	5	2	4	3	4	2	1	4	3	1	2	1	122	5	
5		1	15	9	2	1	3	3	1	1	3	3	1	1	1	2	4	1	1	2	3	1	1	1	1	62	3	
6	Q	1	1	4	6	5	3	3	2	1	3	1	1	3	1	1	3	1	3	1	1	4	1	3		54	2	
7		5	5	5	3	14	10	5	1	1	2	5	8	5	3	3	6	2	1	1	2	2	2	1	2	94	4	
8		14	10	8	3	4	12	6	5	5	6	5	4	4	3	3	3	5	10	3	6	10	10	3	1	143	6	
9		3	7	18	14	8	5	3	3	1	2	2	5	1	5	4	3	4	15	17	13	17	10	10	8	178	7	
10		3	12	18	21	10	4	12	5	5	5	5	3	4	3	3	3	4	7	3	2	1	3	2	1	139	6	
11		1	3	3	2	3	18	9	5	15	10	3	1	2	3	3	2	1	4	1	1	2	3	6		104	4	
12	D	4	22	12	15	11	19	8	3	26	18	12	3	3	4	3	5	7	7	3	3	6	6	1		204	9	
13	D	3	6	14	29	33	13	5	5	3	1	3	2	3	3	7	5	3	18	11	9	5	19	9		212	9	
14	D	10	10	21	29	15	10	15	21	20	14	4	3	10	16	10	7	10	2	1	4	7	5	6	4		254	11
15		1	1	4	16	11	1	1	2	7	5	2	3	5	3	4	3	1	4	5	4	6	3	2	2		96	4
16	D	2	5	11	19	14	10	21	25	27	26	9	8	4	5	9	4	4	6	8	6	3	6	6	4		242	10
17	D	7	37	42	25	3	2	21	16	11	5	5	6	4	3	3	6	5	10	9	10	4	2	2	2		240	10
18	Q	2	1	5	7	3	4	1	1	1	1	2	3	1	1	2	3	3	2	3	2	3	1	1		54	2	
19		1	1	1	1	1	2	2	5	10	8	5	4	4	3	3	2	3	1	2	3	3	4	3	1		73	3
20		2	37	15	5	28	28	9	6	30	30	8	8	7	3	3	1	1	2	2	2	2	1	3	2		235	10
21		5	8	5	1	10	12	12	6	3	2	4	5	2	2	2	2	2	1	2	1	3	1	1	1		93	4
22	Q	1	1	1	3	1	1	1	1	1	3	3	1	1	1	3	3	1	1	1	2	2	1	1	1		36	2
23		0	1	0	1	1	1	1	1	3	2	1	1	1	1	4	1	4	5	4	2	3	5	4	5		52	2
24		12	8	35	19	11	24	16	10	8	6	3	4	2	3	5	5	2	4	8	4	1	4	12	8		214	9
25		1	1	5	2	3	3	3	11	3	2	3	1	1	3	4	3	3	5	15	7	5	5	4	5		98	4
26		3	15	3	2	10	8	2	2	2	3	3	1	1	1	4	3	3	2	1	3	1	2	2	1		78	3
27		1	1	18	15	5	1	4	1	1	1	1	3	4	3	1	3	1	1	1	0	3	1	7	3		80	3
28	Q	2	3	3	3	2	1	1	1	1	2	2	1	1	1	2	3	2	3	1	2	3	1	1	1		43	2
29	Q	1	1	1	8	9	2	1	1	3	3	2	1	1	2	3	3	3	3	3	2	2	3	1	2		61	3
30		3	1	1	3	3	7	5	3	3	3	2	1	1	1	3	4	1	4	2	2	1	1	2	1		58	2
SUMS		105	236	301	311	262	248	188	175	221	178	104	88	87	103	100	93	115	135	108	107	97	118	91		3658		
MEANS		4	8	10	10	9	8	6	6	7	6	3	3	3	3	3	3	4	5	4	4	3	4	3			5	

HOURLY RANGES

TABLE 58 GREAT WHALE RIVER		HORIZONTAL COMPONENT IN TEN GAMMA UNITS																							JULY 1969		
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
DAY		T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0	T0		
1	D	2	3	7	5	6	8	32	40	36	10	4	10	8	7	5	5	3	5	6	15	11	8	10	8	254	11
2		17	10	10	22	16	7	4	10	2	5	1	1	0	1	1	1	1	1	1	1	1	5	2	4	124	5
3		1	3	3	5	2	2	3	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	2	4	42	2
4	Q	3	3	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	2	1	3	1	2	3	33	1
5	Q	1	1	3	4	5	3	5	3	2	1	1	3	1	1	0	1	1	3	3	1	1	2	2	1	49	2
6		1	1	1	1	3	4	2	2	1	1	1	1	3	3	3	3	4	1	1	1	1	2	2	44	2	
7		1	1	2	3	5	7	1	1	1	1	4	2	2	3	2	1	2	5	5	1	5	4	4	3	66	3
8		3	3	2	3	8	12	4	3	1	1	1	1	2	2	2	1	2	4	4	5	3	3	6	6	82	3
9		5	18	11	14	10	7	4	20	15	4	4	2	3	3	4	2	2	5	5	11	9	3	3	4	168	7
10		8	8	24	16	12	6	5	4	10	10	10	11	4	1	3	5	2	3	1	3	1	4	8	7	166	7
11		8	5	17	8	1	1	1	5	6	1	1	1	1	1	3	1	3	5	5	5	13	3	4	3	102	4
12		18	12	14	22	18	12	12	8	22	13	9	4	1	2	6	1	3	3	4	5	7	29	20	15	260	11
13	D	3	6	19	10	12	18	19	8	12	17	23	17	4	4	4	2	3	5	14	8	15	18	8	4	253	11
14	D	3	5	5	39	60	11	5	17	18	20	17	10	5	11	5	6	3	4	7	10	6	8	4	5	284	12
15		1	2	8	8	2	1	3	5	17	13	3	7	6	4	3	3	2	4	1	3	3	5	3	3	110	5
16		3	2	7	26	17	7	11	9	3	5	35	26	4	3	3	4	3	4	3	3	4	7	5	2	196	8
17		4	7	5	4	12	15	13	2	3	1	2	2	2	1	2	3	1	3	3	2	3	1	2	1	94	4
18		1	1	1	1	1	1	4	8	6	5	8	15	5	3	1	2	1	2	1	1	4	4	1	1	78	3
19	Q	1	1	1	1	1	14	17	15	10	1	5	1	1	1	1	0	1	1	1	1	1	1	1	1	79	3
20	Q	1	1	1	2	7	9	8	3	1	1	1	1	1	1	1	1	1	2	3	1	3	3	1	1	56	2
21		3	2	1	1	3	1	1	1	1	1	1	1	1	3	1	3	3	2	8	3	4	3	12	11	71	3
22		9	8	5	3	3	24	15	15	11	5	7	3	2	2	3	7	1	5	3	4	5	4	5	7	156	7
23		5	1	4	5	6	1	1	1	1	1	3	3	1	1	1	1	3	5	8	6	3	3	8	5	77	3
24		8	3	1	1	1	10	8	10	12	1	1	1	1	3	3	2	1	3	1	3	2	3	1	1	81	3
25		1	4	21	15	11	12	21	18	4	2	1	1	1	1	2	1	1	1	3	1	1	3	3	1	130	5
26	D	3	2	10	26	8	11	3	1	1	1	2	6	3	12	17	4	1	2	3	3	8	8	10	19	164	7
27	D	55	29	19	47	32	18	18	70	59	19	20	17	10	11	3	3	5	8	9	10	12	8	5	4	491	20
28		5	5	5	5	6	8	12	15	19	15	2	2	1	1	1	1	1	3	1	2	2	2	3	1	118	5
29	Q	1	1	1	1	1	1	1	7	3	1	1	1	1	1	1	1	1	3	3	3	2	3	1	1	41	2
30		8	8	1	2	2	2	3	1	1	2	1	1	1	1	4	5	7	6	8	18	10	5	4	11	112	5
31		7	5	3	7	5	4	2	3	2	1	3	3	1	3	4	4	3	4	2	4	7	2	3	2	84	4
SUMS		190	161	213	308	277	238	239	307	282	160	174	156	80	93	91	76	67	104	120	136	152	155	145	141	4065	
MEANS		6	5	7	10	9	8	8	10	9	5	6	5	3	3	3	2	2	3	4	4	5	5	5	5		5

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 59 GREAT WHALE RIVER		DECLINATION WEST IN TEN GAMMA UNITS																							JULY 1969		
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
DAY		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	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	D	1	1	5	3	6	5	15	51	35	5	2	3	5	4	7	7	3	4	5	10	6	3	6	5	197	8
2		24	5	6	22	17	5	3	3	3	3	1	1	1	3	1	3	3	1	1	1	1	3	1	1	113	5
3		1	1	3	3	2	1	1	1	1	1	1	1	1	3	1	3	1	0	1	1	2	1	1	3	35	1
4	Q	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	1	1	1	1	1	3	1	1	32	1
5	Q	1	1	3	3	2	3	2	2	2	2	1	1	1	1	1	3	2	1	0	1	1	1	1	1	37	2
6		1	1	1	1	1	2	1	2	3	2	1	1	2	3	4	3	4	4	2	1	1	1	1	1	44	2
7		1	1	1	3	5	8	2	1	2	2	1	2	1	4	6	3	5	3	1	1	4	2	3	3	65	3
8		1	1	1	2	8	14	1	1	2	1	1	2	1	2	3	1	3	3	3	3	1	1	3	3	61	3
9		1	15	7	17	8	10	5	5	9	3	2	1	1	4	3	1	5	5	2	5	3	1	1	2	116	5
10		3	4	19	17	17	3	3	1	1	5	6	4	1	1	5	4	3	1	1	1	1	2	4	5	112	5
11		5	5	10	10	1	1	1	1	3	2	2	1	1	3	2	3	1	3	1	1	8	2	2	1	70	3
12		15	14	11	10	9	11	11	6	8	5	2	1	1	4	1	2	1	2	1	5	3	12	8	8	151	6
13	D	1	1	13	8	7	8	8	1	3	9	7	5	4	2	3	1	1	3	9	9	10	5	4	2	124	5
14	D	2	4	5	15	35	5	1	11	13	13	8	3	5	7	3	6	4	4	5	4	3	2	1	1	160	7
15		1	2	4	3	1	1	1	1	3	4	3	2	3	3	3	3	1	1	1	2	3	3	2	1	52	2
16		1	1	3	12	5	4	10	3	1	3	10	14	3	3	2	3	5	6	7	3	3	3	1	1	107	4
17		1	5	2	3	4	26	4	1	1	1	1	1	2	1	3	1	2	4	4	3	3	1	1	1	76	3
18		1	1	1	0	0	0	2	3	2	4	4	4	3	3	3	1	1	1	1	1	1	3	1	1	42	2
19	Q	1	1	1	1	1	8	7	8	2	1	3	2	1	1	3	2	1	1	1	1	1	1	1	1	51	2
20	Q	1	1	1	3	5	6	4	1	1	1	1	2	3	3	1	3	3	1	1	1	1	2	1	1	48	2
21		3	1	1	1	1	1	1	1	1	2	1	1	1	1	3	5	3	5	5	3	1	1	4	8	55	2
22		5	5	5	4	3	17	17	10	7	3	4	2	1	1	4	3	1	3	1	3	3	2	3	3	110	5
23		3	2	3	2	2	2	1	1	1	1	1	1	1	2	3	3	3	5	6	1	1	3	8	57	2	
24		1	1	1	0	0	7	12	6	2	0	1	1	1	2	2	1	2	2	1	1	1	1	1	1	48	2
25		1	1	20	18	15	8	7	4	1	1	1	1	1	2	3	1	1	2	1	1	1	1	1	1	94	4
26	D	1	2	9	12	8	7	1	1	1	1	1	4	4	8	21	8	3	1	2	2	3	4	5	15	124	5
27	D	35	19	15	35	24	19	9	43	65	7	8	6	3	6	3	5	4	8	5	7	2	2	1	1	334	14
28		3	7	5	3	5	3	6	10	12	3	1	1	1	1	2	1	2	2	1	1	1	1	1	1	74	3
29	Q	1	1	1	1	1	1	1	3	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	30	1
30		5	4	2	3	3	1	1	1	1	1	1	1	1	1	3	5	9	14	15	13	5	2	4	5	101	4
31		5	4	3	2	4	3	1	1	1	1	2	3	1	2	4	4	3	2	3	1	4	1	1	1	57	2
SUMS		128	113	163	218	201	191	140	185	190	89	80	74	57	82	105	94	84	88	91	92	85	67	72	88	2777	
MEANS		4	4	5	7	6	6	5	6	6	3	3	2	2	3	3	3	3	3	3	3	3	2	2	3		4

HOURLY RANGES

TABLE 60 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

AUGUST 1969

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	3	1	1	1	2	3	10	3	1	3	3	3	2	1	2	1	1	3	1	1	1	2	1	1	51	2
2		1	1	1	1	1	1	1	1	1	1	1	1	1	2	5	1	5	2	9	3	5	5	5	2	57	2
3	D	1	2	5	5	3	3	1	5	5	14	8	4	5	5	3	3	3	11	4	14	10	17	10	12	153	6
4		15	18	10	21	9	23	12	6	5	32	16	24	7	3	7	6	3	6	4	5	5	5	5	2	249	10
5		2	1	10	28	16	32	12	4	7	1	5	8	5	6	3	3	4	3	4	3	2	2	2	2	165	7
6		5	10	15	4	4	20	14	7	3	3	3	2	2	1	1	1	1	1	1	3	3	2	1	2	109	5
7		1	1	2	4	11	19	18	10	18	3	1	2	1	5	3	2	2	3	5	7	10	5	8	12	153	6
8		2	8	3	3	3	2	1	19	17	15	8	20	23	5	5	2	7	2	3	2	3	11	2	10	176	7
9		6	8	23	22	10	3	3	12	17	6	5	4	7	5	4	3	5	3	4	1	3	5	5	5	169	7
10		4	3	17	10	23	12	6	11	8	13	18	3	1	1	3	4	1	3	1	1	1	1	1	1	147	6
11	Q	1	1	1	1	1	1	0	1	1	1	2	1	2	2	3	2	5	2	1	4	4	1	4	44	2	
12	D	5	18	21	16	6	35	11	10	11	29	30	49	35	11	7	6	3	11	8	3	1	4	5	8	343	14
13		4	5	6	23	14	13	10	7	27	21	12	5	2	1	1	3	3	1	3	5	3	3	8	2	182	8
14		1	2	1	3	8	8	10	20	8	13	15	15	8	8	8	3	3	3	4	3	2	2	2	1	151	6
15		1	1	1	1	1	8	10	11	5	1	1	1	2	3	1	1	1	2	2	3	2	8	5	1	73	3
16		1	1	1	1	1	1	1	1	1	6	4	2	1	1	1	2	2	4	2	2	3	7	8	3	57	2
17		3	14	10	8	8	6	15	10	3	7	5	3	1	1	1	1	1	2	3	2	3	4	5	3	119	5
18		3	7	14	7	2	1	1	1	1	3	7	3	3	3	5	5	1	1	3	1	1	2	3	1	79	3
19	D	5	18	21	11	6	22	16	8	8	28	26	4	4	7	2	2	2	14	10	12	14	27	36	14	317	13
20		5	1	35	31	15	17	36	13	19	8	14	4	4	3	2	1	1	1	1	5	4	3	6	7	236	10
21		4	9	7	27	22	17	3	1	1	1	1	1	4	3	4	3	2	1	8	6	2	1	2	4	134	6
22		3	3	4	2	3	2	1	1	1	3	4	5	3	2	1	3	3	3	1	3	14	7	1	5	78	3
23		7	5	3	10	25	14	6	15	8	8	7	17	17	9	7	5	3	5	2	4	8	8	4	10	207	9
24		8	9	30	23	16	3	4	3	4	1	7	4	3	3	2	1	2	3	5	5	6	4	4	4	154	6
25	Q	8	9	10	6	10	4	3	3	1	1	1	1	1	1	2	1	1	2	2	1	1	1	1	1	72	3
26	D	1	1	1	1	3	5	10	8	10	34	53	19	12	3	5	3	3	2	2	3	3	8	7	13	210	9
27	D	12	31	33	95	66	17	11	17	7	40	41	16	4	2	1	7	5	3	3	3	4	11	5	2	436	18
28		3	6	14	13	25	11	9	10	5	7	3	3	1	5	2	2	2	5	4	4	3	1	3	1	142	6
29	Q	1	2	2	5	10	4	3	2	1	1	1	1	1	3	2	3	2	1	3	1	1	1	2	1	54	2
30	Q	1	1	1	3	2	5	20	19	5	1	1	2	2	5	3	1	1	2	3	2	5	3	1	1	90	4
31		1	1	1	1	1	1	6	21	12	9	4	1	1	1	1	1	1	2	3	4	4	1	6	3	87	4
SUMS		118	198	304	387	327	313	264	260	221	314	307	228	165	111	96	83	76	110	110	113	131	165	155	138	4694	
MEANS		4	6	10	12	11	10	9	8	7	10	10	7	5	4	3	3	2	4	4	4	4	5	5	4		6

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 62 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

SEPTEMBER 1969

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	8	2	3	5	7	3	2	3	3	1	1	1	1	1	1	0	1	1	2	3	1	1	1	1	53	2
2	Q	1	1	1	1	7	5	5	3	3	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	40	2
3		1	1	0	1	0	1	0	0	1	1	3	3	1	1	1	1	1	3	3	1	5	2	2	2	35	1
4		1	6	8	11	5	5	2	2	1	2	1	1	1	1	1	2	1	4	5	3	5	2	3	3	74	3
5		1	1	1	1	1	3	1	9	6	3	3	3	8	9	14	21	19	9	12	12	7	8	28	26	206	9
6	D	10	5	38	39	12	35	25	30	8	11	33	42	5	4	5	4	3	4	4	4	9	10	15	3	358	15
7		3	9	9	5	4	10	3	21	37	44	17	16	12	10	3	4	5	6	5	16	11	4	13	12	279	12
8		12	17	55	32	30	14	12	44	15	21	19	6	6	8	8	3	3	3	5	6	1	3	1	2	326	14
9		1	4	12	7	4	21	10	22	8	8	8	7	5	7	4	3	10	3	5	2	1	8	4	3	167	7
10		18	24	11	15	14	10	3	2	1	0	1	1	1	2	4	3	2	3	4	3	7	6	3	3	141	6
11		9	41	23	18	10	8	14	18	12	20	17	6	4	3	3	3	2	3	5	7	9	3	3	3	244	10
12		7	8	6	17	17	18	13	3	3	3	4	1	3	3	1	1	2	2	2	1	1	1	1	0	118	5
13	Q	0	1	1	6	12	8	2	1	4	5	3	3	3	1	1	1	2	2	2	1	1	1	2	2	65	3
14		1	3	9	12	8	2	1	1	3	8	4	3	1	1	1	3	1	3	8	12	12	12	14	14	137	6
15		21	12	38	15	10	6	20	21	10	8	8	8	12	8	4	5	21	15	9	3	3	2	4	4	267	11
16		7	5	26	22	13	17	10	5	10	4	2	3	3	2	1	2	1	1	1	1	2	3	3	1	145	6
17		1	1	2	1	1	0	1	1	1	8	7	21	15	4	9	5	3	5	12	6	7	10	6	6	133	6
18	D	5	21	26	10	6	27	18	14	16	14	11	12	5	9	20	5	3	8	9	5	12	12	10	21	299	12
19		12	18	11	25	18	17	16	3	3	6	9	3	5	4	2	3	3	3	3	2	3	3	7	4	183	8
20		2	1	8	12	14	12	12	14	20	23	6	2	3	3	3	5	2	8	8	3	3	3	2	1	170	7
21		2	3	3	9	14	12	3	6	5	3	3	2	1	1	1	2	2	2	2	1	1	3	2	3	85	4
22	Q	3	1	7	5	9	5	20	12	6	3	2	3	1	2	1	1	1	1	1	1	2	1	1	1	90	4
23		1	1	3	2	1	3	3	1	2	1	1	2	3	3	4	4	3	2	6	5	14	15	7	10	97	4
24		2	2	4	5	20	14	5	3	3	8	12	5	3	1	1	1	2	2	2	2	3	2	4	3	109	5
25		2	5	8	35	46	8	14	19	4	2	1	3	2	3	5	4	6	3	3	3	3	5	5	4	193	8
26	Q	2	1	1	5	4	1	16	10	5	7	10	2	1	1	1	1	1	2	1	2	2	2	1	1	80	3
27		1	1	1	0	1	0	0	1	1	1	1	1	1	2	1	2	1	2	1	3	3	14	14	12	65	3
28	D	6	12	7	7	13	10	5	7	23	30	14	76	73	62	20	10	11	5	6	5	9	14	26	12	463	19
29	D	11	13	10	22	32	58	26	11	71	41	95	46	38	28	35	26	12	18	10	12	12	26	77	56	786	33
30	D	25	20	44	87	28	17	9	19	55	80	98	46	24	38	25	9	5	17	14	23	21	9	5	3	721	30
SUMS		176	240	376	432	361	350	271	306	340	367	395	329	242	223	181	133	131	138	150	151	168	188	264	217	6129	
MEANS		6	8	13	14	12	12	9	10	11	12	13	11	8	7	6	4	4	5	5	5	6	6	9	7		9

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 63 GREAT WHALE RIVER		DECLINATION WEST IN TEN GAMMA UNITS																							SEPTEMBER 1969		
HOUR UT	DAY	0 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 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 TO 20	20 TO 21	21 TO 22	22 TO 23	23 TO 24	SUMS	MEANS
1	Q	3	1	1	2	6	3	1	2	1	0	1	1	1	1	2	3	2	1	1	1	1	1	1	1	38	2
2	Q	1	0	1	1	5	2	3	3	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	35	1
3		1	1	0	0	0	0	1	1	1	1	1	1	1	1	3	3	2	1	3	1	1	1	1	1	27	1
4		1	3	8	12	6	3	1	1	1	1	1	1	1	2	2	1	2	1	3	1	1	1	1	1	56	2
5		1	1	1	1	1	1	1	2	2	2	2	2	5	6	8	14	12	4	10	8	5	8	21	21	139	6
6	D	9	3	16	22	12	20	25	5	3	5	12	18	6	5	2	5	6	2	3	2	3	9	11	1	205	9
7		1	4	8	1	3	8	1	8	28	19	5	4	5	9	2	5	4	5	3	12	9	3	12	5	164	7
8		7	12	21	39	18	17	10	21	28	41	13	6	3	7	3	3	3	2	3	2	1	1	1	1	263	11
9		1	3	11	3	2	5	5	8	3	4	3	3	3	3	5	3	8	3	5	2	2	3	3	1	92	4
10		19	14	8	16	10	3	1	1	1	0	1	1	1	1	3	2	1	3	4	3	3	2	2	1	101	4
11		5	23	28	28	4	9	8	14	12	13	7	3	2	3	2	3	3	3	3	3	2	1	1	1	181	8
12		4	3	3	5	19	8	5	1	1	2	2	2	1	1	4	1	2	1	1	1	1	1	1	1	71	3
13	Q	1	1	1	4	4	3	1	1	1	3	1	3	1	1	3	1	1	1	2	1	2	1	1	1	40	2
14		1	4	9	12	7	2	2	1	1	3	1	2	1	3	2	4	2	6	8	4	8	7	12	21	123	5
15		9	10	38	8	8	5	20	21	5	10	6	9	6	6	5	3	5	14	9	7	3	2	2	3	214	9
16		11	8	21	32	5	19	8	3	4	2	1	3	1	2	2	2	1	1	1	1	1	1	1	1	132	6
17		1	1	1	1	1	1	1	1	1	3	3	5	3	6	8	8	3	3	6	5	1	4	3	3	73	3
18	D	1	17	17	8	5	12	14	5	5	4	5	5	3	8	11	5	7	5	9	2	3	6	5	19	181	8
19		2	9	6	12	18	14	8	1	1	3	4	1	3	3	2	1	2	2	2	1	1	2	2	3	103	4
20		1	2	7	10	8	9	11	10	9	17	3	1	2	3	2	5	1	6	6	2	1	1	1	1	119	5
21		1	4	3	8	6	3	5	1	2	1	1	2	1	1	1	2	2	1	1	1	1	1	1	3	53	2
22	Q	3	1	5	5	4	4	5	5	4	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	50	2
23		1	1	1	1	1	1	1	1	1	1	1	1	2	3	5	3	2	3	3	3	6	8	8	4	62	3
24		2	1	2	3	11	14	2	1	1	1	3	5	3	1	1	2	2	1	1	1	1	1	1	1	62	3
25		1	4	8	17	30	5	7	11	1	2	2	3	2	3	3	6	4	2	2	2	3	1	1	1	121	5
26	Q	1	1	1	4	4	2	8	9	5	4	3	2	1	1	2	1	1	1	1	1	2	0	1	0	56	2
27		1	0	0	0	1	0	1	0	1	1	1	1	1	1	3	2	2	1	1	2	1	7	6	5	39	2
28	D	8	18	4	2	7	3	3	2	5	10	5	46	46	42	20	8	14	6	7	5	5	17	16	5	304	13
29	D	4	5	5	33	25	30	16	12	19	70	91	34	11	21	25	12	11	22	7	18	8	7	28	63	577	24
30	D	12	14	20	57	15	15	10	11	29	105	83	35	23	31	5	10	3	10	14	10	8	4	2	2	528	22
SUMS		114	169	255	347	246	221	185	163	177	330	264	202	141	177	139	121	111	113	121	104	86	103	147	173	4209	
MEANS		4	6	9	12	8	7	6	5	6	11	9	7	5	6	5	4	4	4	4	3	3	3	5	6		6

HOURLY RANGES

TABLE 64 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

OCTOBER 1969

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	4	48	11	15	17	10	46	39	35	27	29	29	26	8	10	6	13	8	8	10	8	7	5	3	422	18
2	D	20	26	9	12	23	41	34	35	63	55	35	61	23	10	11	17	17	10	8	5	4	5	3	3	530	22
3	D	2	37	23	40	28	17	18	10	16	15	10	15	10	8	14	6	9	8	7	6	3	1	3	3	309	13
4		3	9	6	6	21	18	21	9	6	13	4	3	3	2	3	1	2	3	8	5	5	5	4	2	162	7
5		7	4	2	3	5	14	10	4	17	6	8	7	3	3	3	2	1	3	3	5	5	3	2	2	122	5
6	D	1	4	14	36	19	10	13	16	6	4	10	10	7	6	5	5	5	17	8	13	8	7	3	1	228	10
7		1	3	1	56	8	4	13	8	12	5	5	1	1	1	2	1	1	2	1	2	3	3	1	1	136	6
8	Q	1	1	1	1	1	1	3	2	7	3	1	1	1	3	1	2	1	2	1	3	2	3	2	2	46	2
9		3	1	1	1	5	5	6	10	1	1	1	1	1	1	1	1	2	2	5	6	5	10	5	2	77	3
10	D	8	5	37	22	26	12	8	15	21	10	35	23	17	8	9	3	1	5	12	13	12	13	5	2	322	13
11		6	8	10	9	4	26	18	16	14	10	10	7	8	7	8	3	5	4	3	3	2	5	7	2	195	8
12		3	27	13	6	3	5	16	27	21	10	10	5	10	8	5	5	5	5	4	2	3	2	1	1	197	8
13		1	1	1	3	7	12	10	17	3	4	19	19	4	3	2	1	1	3	2	3	1	1	1	1	120	5
14	Q	1	1	1	5	3	2	1	1	1	1	1	1	1	2	3	1	2	3	2	2	2	2	1	1	41	2
15	Q	1	1	1	2	8	10	17	8	8	6	3	5	1	1	1	0	1	1	1	1	1	1	1	1	81	3
16		0	1	4	8	8	7	10	12	2	2	1	1	1	1	1	2	3	2	5	4	2	3	5	1	86	4
17		5	6	2	1	2	8	5	3	2	1	1	1	1	1	1	1	1	2	1	4	2	9	8	12	80	3
18		10	4	10	10	3	5	20	9	10	10	11	11	3	3	1	1	1	1	1	1	5	2	1	1	134	6
19		3	3	7	5	6	5	7	26	21	11	9	5	10	16	5	3	3	4	4	5	2	5	4	4	173	7
20		5	5	3	12	7	4	2	1	1	1	0	1	1	1	1	1	1	1	2	3	2	3	1	1	60	3
21		2	1	3	1	1	1	4	11	20	22	14	3	3	2	2	2	3	4	5	7	4	5	3	1	124	5
22		2	1	8	5	12	25	25	8	8	10	6	5	5	3	3	2	1	2	7	5	1	3	1	1	149	6
23		1	2	1	2	3	8	8	5	2	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	49	2
24		1	5	11	23	35	20	13	8	11	26	7	16	14	3	3	3	1	3	4	1	2	10	4	3	227	9
25		4	3	3	1	6	33	16	2	1	1	1	1	1	1	1	1	1	1	1	3	3	3	3	1	92	4
26	Q	1	1	1	1	4	3	18	13	17	3	1	1	2	1	1	1	1	1	1	1	3	1	1	1	79	3
27		1	1	1	4	3	2	3	2	5	3	3	1	3	1	2	2	3	3	3	8	7	5	5	10	81	3
28		5	5	7	5	11	5	6	5	3	5	1	1	2	2	3	2	2	3	3	5	5	5	4	2	97	4
29		0	2	1	12	8	2	1	2	3	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	48	2
30	Q	1	1	1	1	0	1	6	3	3	1	1	0	1	1	1	1	1	2	1	1	1	1	0	1	31	1
31		1	1	3	10	20	7	10	14	12	10	10	10	13	5	4	3	2	3	1	2	2	2	3	2	150	6
SUMS		104	218	197	318	307	323	388	341	352	278	249	247	178	114	109	81	92	110	116	132	107	128	89	70	4648	
MEANS		3	7	6	10	10	10	13	11	11	9	8	8	6	4	4	3	3	4	4	4	3	4	3	2		6

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 56 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

NOVEMBER 1969

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	3	5	11	5	3	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	41	2	
2		8	8	6	3	5	5	3	9	10	17	4	2	3	2	1	4	13	3	3	3	7	5	9	19	152	6	
3	D	24	11	6	6	25	12	14	16	27	19	4	3	3	6	3	10	7	3	5	6	4	5	5	3	227	9	
4		3	1	5	12	8	3	10	13	7	5	12	10	1	2	1	1	1	2	1	3	1	1	3	3	109	5	
5		5	4	1	7	8	8	5	3	3	2	3	3	2	1	1	2	3	2	1	1	1	1	1	1	69	3	
6	Q	1	1	1	1	1	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	2	33	1	
7		1	21	10	10	3	20	11	8	14	17	6	9	10	10	3	3	1	3	6	3	4	5	3	5	186	8	
8		8	5	5	8	11	12	22	17	5	3	3	3	2	3	4	3	3	4	12	19	14	8	17	17	208	9	
9	D	12	3	3	13	12	24	16	17	24	21	16	25	30	14	20	36	10	21	21	5	8	5	3	1	360	15	
10	D	3	2	2	17	26	23	86	25	30	25	12	44	97	51	19	15	8	14	14	14	14	7	2	5	555	23	
11		4	7	4	4	12	7	5	6	11	8	5	14	13	7	5	5	6	3	4	6	4	3	3	3	149	6	
12		13	14	1	2	10	9	5	4	3	7	5	4	5	2	1	1	1	3	3	2	1	2	1	1	100	4	
13		1	4	4	1	1	1	2	3	10	8	4	4	3	3	1	2	3	3	2	3	2	3	1	1	70	3	
14	Q	1	2	2	4	4	1	0	1	0	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	28	1	
15	Q	1	1	0	1	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	1	
16		1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	1	3	3	1	1	24	1	
17		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	2	1	1	27	1	
18		1	1	1	1	1	1	1	1	1	0	1	2	1	1	1	1	1	2	2	2	1	1	1	1	27	1	
19		1	2	1	1	1	4	13	9	5	2	2	1	1	1	2	1	1	1	3	1	3	3	2	5	66	3	
20		6	14	15	5	3	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	66	3	
21	Q	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	1	1	1	1	1	24	1	
22		1	1	1	23	10	9	21	7	5	3	2	3	1	1	1	1	1	3	3	2	1	3	2	2	107	4	
23		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	2	3	3	1	34	1	
24		1	2	3	2	2	1	2	1	3	7	9	4	2	3	2	2	1	2	2	3	3	1	3	2	63	3	
25		1	2	3	1	0	2	16	10	11	4	3	3	7	1	2	3	2	3	2	3	3	2	5	14	103	4	
26		14	7	12	17	5	21	10	3	1	1	1	1	3	3	2	5	3	5	5	8	10	7	1	2	147	6	
27	D	1	2	1	8	49	23	28	14	24	16	45	14	20	16	16	7	9	5	7	5	5	2	4	5	326	14	
28		3	3	5	5	10	4	12	12	10	13	3	3	2	3	2	3	1	1	2	3	4	12	8	6	130	5	
29		2	3	9	3	2	3	39	24	13	6	8	5	9	8	6	4	3	5	16	11	8	10	4	6	207	9	
30	D	14	20	21	34	15	10	14	16	20	33	6	10	8	4	5	3	9	7	8	5	3	3	1	2	271	11	
SUMS		137	149	136	197	230	211	344	227	243	226	164	174	233	151	107	120	96	105	133	121	114	105	90	114	3927		
MEANS		5	5	5	7	8	7	11	8	8	8	5	6	8	5	4	4	3	4	4	4	4	4	3	4		5	

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 67 GREAT WHALE RIVER		DECLINATION WEST IN TEN GAMMA UNITS																							NOVEMBER 1969		
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
DAY		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	5	10	5	3	1	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	37	2
2		8	3	1	1	5	3	2	2	5	4	1	2	2	2	5	3	1	3	2	2	2	1	3	14	77	3
3	D	23	3	8	3	14	22	5	15	5	4	3	3	3	4	3	7	6	2	1	2	3	4	1	1	145	6
4		1	1	3	10	5	1	2	5	3	2	5	5	2	1	2	1	2	1	1	1	1	1	1	3	60	3
5		4	2	1	5	3	3	2	1	1	2	2	4	2	1	5	4	4	2	1	1	1	1	1	1	54	2
6	Q	1	1	1	2	3	3	3	1	1	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	28	1
7		1	13	10	5	2	6	5	4	10	12	5	4	8	6	3	5	2	1	3	1	1	3	1	3	114	5
8		5	3	3	13	5	13	16	7	2	2	2	2	2	5	8	5	3	2	13	10	13	14	8	8	164	7
9	D	4	2	1	7	13	21	41	28	14	12	15	24	12	11	11	31	15	19	14	5	5	5	3	1	314	13
10	D	2	2	1	21	28	18	75	48	11	16	10	16	32	27	18	12	7	8	11	4	12	3	2	3	387	16
11		3	3	4	3	8	2	2	1	5	3	3	5	9	5	5	5	5	3	3	2	1	1	2	2	85	4
12		5	12	2	1	10	8	2	1	1	2	5	2	2	1	1	2	1	3	3	1	1	1	1	1	69	3
13		1	1	2	1	1	1	1	1	2	4	1	2	3	2	2	4	4	3	1	2	1	1	1	1	43	2
14	Q	1	2	3	2	3	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	27	1
15	Q	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	1
16		1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	23	1
17		1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	23	1
18		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	26	1
19		1	2	1	1	1	1	8	5	1	1	2	1	2	1	2	2	1	1	1	1	1	1	1	2	41	2
20		3	19	17	3	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	64	3
21	Q	0	1	1	1	1	1	1	0	1	1	1	1	2	2	2	3	1	1	1	1	1	0	1	0	25	1
22		1	1	2	18	10	4	17	5	1	1	2	3	1	2	2	1	1	1	2	1	1	1	1	1	80	3
23		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	2	1	2	2	1	29	1
24		1	1	4	2	1	1	1	1	1	3	3	2	2	3	3	3	1	1	1	1	1	1	2	1	41	2
25		1	2	1	1	1	0	5	5	2	2	1	2	2	3	1	3	2	1	2	2	1	2	1	8	51	2
26		3	6	8	16	10	14	8	1	1	1	1	2	3	3	1	7	8	2	5	5	3	1	1	2	112	5
27	D	1	1	1	8	32	32	20	12	22	17	15	10	11	9	10	4	5	3	2	3	3	1	3	5	230	10
28		6	4	5	6	5	7	7	7	8	3	1	2	2	2	2	4	1	1	1	1	1	8	6	1	91	4
29		1	1	5	3	1	1	10	25	5	5	4	3	5	5	3	4	3	2	5	3	4	9	3	6	116	5
30	D	19	15	18	35	7	3	8	4	8	8	5	8	6	3	5	2	5	3	3	2	2	2	1	1	173	7
SUMS		102	111	117	177	178	171	248	184	116	113	95	111	122	107	103	125	87	75	82	60	68	70	53	74	2749	
MEANS		3	4	4	6	6	6	8	6	4	4	3	4	4	4	3	4	3	3	3	2	2	2	2	2		4

HOURLY RANGES

TABLE 68 GREAT WHALE RIVER

HORIZONTAL COMPONENT IN TEN GAMMA UNITS

DECEMBER 1969

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	3	1	1	1	0	1	1	1	6	7	3	4	5	3	1	1	1	3	2	3	3	1	1	1	54	2	
2	1	1	1	1	3	5	8	8	8	3	1	1	1	1	1	2	1	2	1	1	1	1	1	1	55	2	
3	1	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	3	6	6	4	35	1	
4	6	2	2	4	5	3	3	1	1	3	1	3	3	5	4	4	2	3	3	5	1	1	2	1	68	3	
5	D	1	1	1	1	5	19	16	19	5	8	20	21	12	8	9	3	5	5	10	8	11	13	6	10	217	9
6	D	19	20	24	23	29	34	12	10	16	15	15	22	29	8	12	20	5	2	2	8	7	5	6	4	347	14
7		3	5	2	1	2	3	3	3	3	4	5	5	4	1	2	2	1	1	1	2	1	2	1	1	58	2
8		1	1	8	6	2	5	4	5	2	1	1	1	1	3	2	1	1	1	3	3	2	1	2	2	58	2
9	D	2	2	15	14	5	4	5	2	1	1	1	2	2	3	2	3	2	4	2	2	4	2	3	2	85	4
10		1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	2	3	3	8	8	10	54	2
11		12	8	3	2	4	10	8	22	10	3	5	3	4	3	3	3	2	3	3	4	3	2	3	3	126	5
12		3	5	5	17	10	8	5	8	4	4	2	1	1	1	1	1	1	1	2	2	2	1	1	1	87	4
13	Q	1	2	2	1	1	1	6	6	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	35	1
14		1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	2	1	2	1	2	1	1	26	1
15		1	1	1	1	1	1	1	1	1	2	2	5	3	2	2	1	1	1	2	2	3	3	5	7	50	2
16	D	5	10	8	3	6	1	6	32	17	10	6	5	8	5	5	3	3	6	7	4	3	3	3	2	161	7
17		3	6	7	2	1	1	1	1	1	2	1	3	1	1	1	1	1	1	1	3	1	1	1	1	43	2
18		2	2	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25	1
19		1	1	1	1	2	5	3	1	1	0	1	1	2	1	1	1	1	1	2	1	1	1	1	1	32	1
20	Q	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	1
21	Q	2	1	4	5	3	3	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	32	1
22		1	1	1	0	0	1	8	12	10	1	1	2	1	6	3	1	5	5	3	3	5	2	1	1	74	3
23	D	1	1	2	3	6	7	8	10	8	23	13	23	10	10	15	7	3	2	5	6	5	7	3	5	183	8
24		4	30	17	3	4	1	3	3	1	5	5	8	10	7	3	1	1	5	2	3	3	4	3	3	129	5
25		2	3	2	3	21	44	17	14	14	12	12	5	5	5	10	9	5	2	2	4	2	3	5	3	204	9
26		1	3	5	2	5	12	32	20	23	5	8	6	2	2	1	1	1	2	5	5	4	5	16	9	175	7
27		9	6	10	8	17	17	7	9	12	10	17	19	5	2	2	1	2	2	1	1	1	1	1	1	161	7
28		1	0	1	1	1	1	0	1	2	2	3	2	1	1	1	1	3	1	1	2	1	1	1	1	30	1
29		3	1	1	1	1	1	1	1	5	3	4	6	2	1	1	1	1	1	1	1	1	1	1	1	41	2
30	Q	0	0	0	1	8	3	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	28	1	
31	Q	0	0	0	1	2	1	1	1	1	1	2	1	1	1	0	1	1	1	1	1	1	1	1	1	22	1
SUMS		92	118	129	110	147	197	166	195	157	132	135	156	122	86	92	77	55	64	68	83	82	85	87	81	2716	
MEANS		3	4	4	4	5	6	5	6	5	4	4	5	4	3	3	2	2	2	2	3	3	3	3	3		4

RECORD OF OBSERVATIONS AT GREAT WHALE RIVER MAGNETIC OBSERVATORY 1969

HOURLY RANGES

TABLE 69 GREAT WHALE RIVER		DECLINATION WEST IN TEN GAMMA UNITS																							DECEMBER 1969		
HOUR UT	DAY	0 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 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 TO 20	20 TO 21	21 TO 22	22 TO 23	23 TO 24	SUMS	MEANS
1		2	1	1	1	0	1	0	1	3	3	2	1	4	3	1	2	2	1	1	2	1	1	1	1	36	2
2		1	1	1	1	3	3	3	2	3	1	1	1	1	1	2	1	1	1	1	1	1	2	1	1	35	1
3		1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	4	25	1
4		2	1	1	3	10	1	1	1	1	1	2	3	3	5	3	2	1	1	1	1	1	1	1	1	48	2
5	D	1	1	1	1	3	11	14	12	3	3	8	10	10	3	5	5	5	5	5	5	5	14	5	4	139	6
6	D	19	18	14	8	15	41	8	8	6	4	5	12	11	7	10	7	3	2	1	3	5	3	4	2	216	9
7		1	2	1	2	1	2	3	1	1	1	3	3	4	1	1	3	1	1	1	1	1	1	1	1	38	2
8		1	1	12	3	1	4	3	1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	1	45	2
9	D	1	1	12	12	2	1	2	1	1	1	1	2	3	3	2	1	1	1	1	1	1	1	2	1	57	2
10		1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	5	19	50	2
11		6	5	1	3	1	14	3	8	2	1	1	1	3	3	3	3	3	2	1	1	1	1	1	1	69	3
12		3	2	2	8	10	3	3	5	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	53	2
13	Q	1	2	3	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	28	1
14		1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	26	1
15		1	1	1	1	2	1	1	1	1	2	2	2	2	1	2	1	2	1	2	1	1	1	4	7	41	2
16	D	2	3	4	3	3	1	3	12	12	3	2	2	3	8	3	3	3	5	3	2	1	1	2	1	85	4
17		1	2	7	1	1	1	1	0	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	32	1
18		1	5	3	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	28	1
19		1	1	1	1	1	5	1	1	1	1	1	1	3	3	2	1	1	1	1	1	1	1	1	1	33	1
20	Q	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24	1
21	Q	2	4	5	6	3	2	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	38	2
22		1	1	1	1	1	1	1	8	1	1	1	2	3	9	5	3	5	6	1	1	2	1	1	1	58	2
23	D	1	1	5	6	10	1	7	5	1	10	6	7	3	5	9	5	4	2	3	3	1	1	4	2	102	4
24		3	28	28	5	1	1	1	1	1	2	1	3	3	8	3	1	1	2	1	1	1	3	1	1	101	4
25		1	1	1	1	25	16	8	7	14	3	5	3	1	5	6	5	4	1	1	1	2	1	2	1	115	5
26		1	2	2	1	3	6	12	14	7	1	1	1	2	1	2	3	5	2	3	3	2	3	14	8	99	4
27		6	5	5	8	12	5	5	1	3	3	8	8	3	2	3	1	1	2	1	1	1	1	1	1	87	4
28		1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	1	1	1	1	1	1	1	27	1
29		2	2	1	1	1	1	1	1	1	3	3	1	2	1	1	1	1	1	1	1	1	1	0	1	30	1
30	Q	0	0	0	1	8	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	27	1
31	Q	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25	1
SUMS		67	97	119	86	126	131	90	100	74	56	65	75	77	80	81	69	58	51	42	44	41	55	63	70	1817	
MEANS		2	3	4	3	4	4	3	3	2	2	2	2	2	3	3	2	2	2	1	1	1	2	2	2		2

