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RECORD OF OBSERVATIONS AT  
MEANOOK MAGNETIC OBSERVATORY  
1963

A. B. Cook and G. A. Brown

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# MEANOOK MAGNETIC OBSERVATORY 1963

Geographic Latitude 54° 37' N

Geographic Longitude 113° 20' W

*Officer-in-Charge:* Anne B. Cook

Geomagnetic Latitude 61.8° N

Geomagnetic Longitude 301.0° E

*Assistant:* Glenn A. Brown

## Introduction

Meanook magnetic observatory was established in July 1916 some 85 miles north of the city of Edmonton and 11 miles south of the town of Athabasca, Alberta. The observatory is controlled by the Division of Geomagnetism of the Dominion Observatory, Ottawa.

## The Magnetic Equipment

The photographic recording equipment at Meanook consists of three sets; standard la Cour, low-sensitivity la Cour, and Ruska variometers. The la Cour variometers have been operating since the second Polar Year 1932-33. The Ruska variometers were installed in May 1961, in the basement of the old magnetic observatory. Since October 1st, 1963 they have been used as the Meanook standard recorders. Fibers of 40 microns diameter were installed in the Ruska horizontal and declination variometers. Variometer rooms were thermostatically controlled with no appreciable change in temperature. The chart speeds were 20 mm/hr for Ruska and 15 mm/hr for la Cour. All variometers were calibrated monthly. Telluric current apparatus was in operation during 1963. This report deals with magnetic observations only.

## Scale Coefficients

Standard H 7.84 $\gamma$ /mm Temp. 1 $\gamma$ /degree C

D 1.00'/mm

Z 10.83 $\gamma$ /mm

Ruska H 11.60 $\gamma$ /mm

D 1.68'/mm

Z 11.86 $\gamma$ /mm

Low H 22.56 $\gamma$ /mm

D 2.40'/mm

Z 29.98 $\gamma$ /mm

## Stand-by Variometers

A three-component electrical Serson magnetometer was in operation with a chopper-bar type inked-output chart of 20 mm/hr. The scale sensitivity was 8.3 $\gamma$ /mm corresponding to a full-scale sensitivity of 1000 $\gamma$  in all components. By means of limit switches and a relay the sensitivity of the electrical magnetometer is halved whenever any one element goes off the scale, thus converting the instrument into a storm recorder.

## Absolute Instruments

The absolute instrument used at Meanook during 1963 were Cooke magnetometer No. 15 for declination with IMS correction of  $-0.3'$ ; quartz horizontal magnetometer No. 259 for horizontal intensity with IMS correction plus 0.00013H; Ruska earth inductor No. 6540 for determining inclination, and Dominion Observatory proton precession magnetometer\* for determining total force; a transistorized fluxgate was used as a standby for determining declination, inclination and total force.

## Absolute Observations of Base-line Values

Absolute observations were made on the average of twice a week. Simultaneous marks were placed on the la Cour and Ruska magnetograms to determine base-line values by measurement of the record ordinates and calculation of observed values. The r.m.s. values of the observed minus adopted for D, H, and Z were:

D;  $\pm 3'$

H;  $\pm 2\gamma$

Z;  $\pm 3\gamma$

## The Magnetic Reductions

The time used in 1963 was Universal Time (U.T.). The hourly values for D, H, and Z were obtained from the magnetograms by means of a ruled transparent scale. Each value represents the mean reading for 60 minutes centred on the half hour. The product of the ordinate and the scale value is added to the adopted base-line value and the sum obtained is the appropriate hourly value printed in the text. From the tabulated mean values for each calendar month the mean value for each hour for the day and the mean daily value for each day of the month were derived.

The tables for All Days, Internationally Quiet and Disturbed Days for D, H, and Z represent the mean values.

## Magnetic Activity and Disturbance Indices

Maximum hourly ranges in all elements as well as disturbance indices and copies of magnetograms were sent upon request to geophysical prospecting agencies operating in Canada. Three-hour range indices from which planetary K-indices were derived were sent to De Bilt, Netherlands and Göttingen, Germany each month. K-indices and character figures were supplied to the International Association of Geomagnetism and Aeronomy Bulletins edited by Bartels, Romana and Veldkamp. Lower limit of K9 is 1500 $\gamma$ .

\*The value adopted for the gyromagnetic frequency for water is  $4257.60 \pm 0.03$  cycles/second/oersted.

## Mean Values for Month and Year

Month	D		H	Z	X	Y		I	F
	East					East			
	°	'	γ	γ	γ	γ	°	'	γ
1963									
January.....	23	60.2	13065	58719	11936	5314	77	27.3	60155
February.....		59.7	072	718	945	16		27.0	155
March.....		59.5	074	716	946	16		26.8	154
April.....		59.4	078	708	950	16		26.5	147
May.....		58.8	080	705	954	16		25.3	145
June.....		58.5	088	709	959	18		26.0	150
July.....		58.1	083	701	955	15		26.2	141
August.....		58.4	080	704	953	15		26.3	145
September.....		58.3	060	713	935	06		27.6	148
October.....		58.0	072	716	945	10		25.9	154
November.....		58.5	075	713	947	09		26.7	151
December.....		57.4	085	713	959	13		26.1	154
Year.....	23	58.7	13076	58711	11949	5314	77	26.5	60150

## Mean Annual Values

Month	D		H	Z	X	Y		I	F
	East					East			
	°	'	γ	γ	γ	γ	°	'	γ
1956.....	24	22.5	12894	58735	11740	5321	77	37.1	60134
1957.....		23.1	921	801	768	35		36.4	204
1958.....		15.0	943	819	801	16		35.4	226
1959.....		13.0	960	787	827	16		34.1	198
1960.....		09.7	985	774	845	16		32.5	177
1961.....		06.0	13024	748	887	18		30.1	175
1962.....		02.4	054	725	919	18		28.1	156
1963.....	23	58.7	076	711	949	14		26.5	150

**HORIZONTAL INTENSITY**  
Mean values for periods of sixty minutes, Universal Time

Table 1 Meanook

H = 12,000  $\gamma$  +

January 1963

Hour U. T. 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	1083	1080	1079	1080	1089	1073	1070	1066	1066	1066	1052	1073	1073	1070	1066	1073	1082	1078	1066	1062	1057	1057	1066	1073	1071
2 Q	1078	1078	1078	1076	1074	1073	1070	1070	1069	1070	1071	1073	1075	1080	1082	1084	1080	1071	1070	1066	1064	1064	1072	1081	1073
3	1084	1085	1082	1081	1074	1072	1070	1073	1073	1073	1073	1076	1080	1077	1077	1080	1080	1076	1074	1073	1071	1073	1075	1080	1077
4	1077	1078	1080	1073	1081	1077	1073	1074	1076	1080	1083	1088	1085	1081	1066	1043	1067	1079	1079	1064	1058	1057	1066	1072	1073
5	1076	1080	1075	1073	1072	1067	1066	1064	1012	1052	1067	1070	1075	1081	1084	1086	1082	1075	1071	1067	1067	1068	1071	1075	1070
6 Q	1081	1082	1082	1081	1078	1075	1074	1076	1077	1078	1081	1082	1085	1085	1085	1086	1083	1080	1074	1074	1075	1078	1082	1083	1080
7	1082	1079	1074	1076	1076	1090	1078	1081	1081	1080	1081	1081	1082	1083	1081	1078	1068	1059	1061	1065	1071	1074	1076	1081	1077
8	1082	1081	1075	1074	1075	1074	1074	1077	1064	1071	1074	1081	1081	1081	1081	1082	1078	1072	1068	1068	1070	1073	1073	1081	1075
9 Q	1085	1084	1082	1081	1080	1080	1080	1080	1081	1080	1080	1081	1081	1081	1081	1078	1074	1069	1069	1076	1078	1075	1076	1080	1079
10	1080	1074	1070	1068	1071	1073	1073	1073	1074	1074	1074	1075	1074	1070	1078	1080	1076	1067	1068	1073	1074	1073	1073	1077	1073
11	1080	1082	1080	1080	1078	1075	1076	1080	1081	1081	1082	1086	1089	1090	1084	1081	1084	1076	1052	1052	1073	1071	1069	1076	1077
12	1082	1082	1081	1079	1076	1078	1073	1073	1072	1068	1072	1077	1076	1079	1080	1082	1082	1080	1079	1073	1078	1080	1080	1096	1078
13 D	1095	1076	1081	1197	1115	1088	1056	981	978	969	885	898	1047	1082	1057	1072	1075	1064	1057	1048	1062	1064	1059	1066	1049
14 D	1078	1090	1085	1086	1089	1095	1074	1057	931	922	624	925	1078	1063	1001	1007	1053	1047	1041	1018	1045	1055	1076	1080	1026
15 D	1072	1073	1079	1095	1109	1104	1036	1079	953	911	1010	1049	1039	1002	1060	1072	1083	1075	1095	1053	1056	1056	1065	1084	1055
16	1072	1042	1079	1081	1080	1079	1065	1060	1023	1022	1025	1030	1009	1071	1014	971	1056	1089	1072	1062	1024	1042	1065	1084	1050
17	1078	1079	1083	1079	1078	1056	1056	977	842	1062	1041	1042	1072	1065	1065	1087	1080	1041	1070	1057	1057	1057	1060	1074	1053
18	1078	1073	1072	1072	1075	1072	1071	1064	1041	1057	988	1057	1072	1060	1076	1087	1082	1081	1072	1066	1060	1053	1058	1038	1064
19	1073	1073	1081	1072	1071	1086	1086	1064	882	943	1030	1072	1065	1034	954	1043	1086	1058	1065	1061	1057	1046	1050	1058	1046
20	1075	1086	1082	1081	1076	1075	1068	1057	1049	1051	1053	1058	1070	1079	1081	1086	1084	1078	1071	1066	1059	1058	1064	1074	1070
21	1080	1080	1079	1078	1075	1075	1072	1073	1073	1064	1069	1068	1078	1082	1082	1080	1079	1075	1074	1072	1068	1068	1072	1077	1075
22	1076	1076	1077	1077	1075	1072	1065	1057	1062	1071	1073	1080	1081	1084	1085	1084	1080	1079	1079	1073	1068	1069	1073	1079	1075
23	1074	1076	1080	1085	1089	1081	1079	1072	1077	1072	1072	1074	1057	1065	1080	1081	1080	1083	1074	1069	1065	1064	1068	1080	1075
24	1080	1080	1078	1074	1072	1064	1065	1064	1057	1064	1041	1058	1077	1088	1089	1090	1088	1075	1072	1064	1057	1053	1079	1085	1072
25	1068	1064	1069	1066	1072	1066	1068	1063	1064	1057	1064	1076	1072	1073	1071	1085	1072	1068	1057	1057	1057	1064	1070	1075	1068
26	1080	1079	1079	1074	1072	1072	1072	1070	1056	1066	1081	1079	1079	1080	1079	1079	1079	1078	1073	1072	1072	1072	1072	1073	1075
27 Q	1078	1080	1080	1079	1079	1078	1076	1076	1075	1075	1075	1075	1077	1082	1084	1082	1080	1076	1074	1077	1079	1080	1078	1074	1078
28 Q	1077	1079	1080	1077	1076	1073	1075	1076	1073	1073	1079	1080	1080	1082	1085	1086	1082	1077	1072	1072	1072	1077	1081	1081	1078
29	1081	1081	1080	1080	1080	1079	1079	1079	1078	1078	1082	1080	1078	1086	1088	1090	1087	1080	1074	1072	1064	1066	1063	1073	1078
30 D	1084	1081	1091	1089	1127	1179	1134	1081	1020	901	1079	962	946	932	973	1083	1079	1065	1065	1080	1030	1040	1108	1259	1062
31 D	1325	1378	1340	1353	1220	1138	1068	836	680	171	458	623	795	817	698	818	909	901	1001	1001	1057	1042	1064	1084	952
Mean	1087	1087	1088	1091	1086	1082	1073	1058	1028	1017	1023	1043	1059	1061	1054	1065	1073	1067	1067	1063	1063	1064	1071	1082	1065

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 2 Meanook

D = 23°E + ...

January 1963

Hour U. T. 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	58.0	59.3	60.9	61.5	62.5	59.9	62.0	62.3	61.0	60.3	59.6	60.9	60.9	62.1	61.7	62.9	62.0	60.9	59.5	59.5	58.0	57.3	57.6	58.1	60.4
2 Q	59.2	60.0	61.0	61.6	61.7	61.6	61.4	61.0	60.5	60.3	60.3	60.2	60.0	60.5	61.1	62.8	64.0	62.4	62.0	60.9	59.1	58.5	58.5	58.9	60.7
3	59.5	60.4	61.2	61.2	61.2	61.6	61.8	62.4	61.1	61.0	62.0	62.0	60.4	60.9	61.0	62.2	63.0	62.8	60.9	59.9	59.0	58.7	58.4	58.1	60.9
4	59.0	59.8	60.5	61.1	63.7	61.1	61.2	61.0	60.0	60.0	59.3	61.0	61.0	62.0	61.6	55.1	57.5	57.0	55.0	56.0	58.0	58.8	58.7	60.3	59.5
5	60.0	60.0	60.8	61.7	61.7	61.1	60.9	62.0	55.9	55.9	63.0	67.2	62.0	62.0	60.5	62.8	61.8	61.0	60.4	60.7	60.0	59.9	59.7	59.5	60.9
6 Q	59.3	59.7	60.1	60.9	61.0	61.0	61.0	60.8	60.9	60.0	60.4	60.1	60.0	59.7	60.3	61.4	62.5	62.7	61.8	60.8	58.9	57.9	58.4	59.3	60.4
7	60.0	60.8	59.3	61.4	61.0	67.5	61.4	60.6	60.0	60.1	60.5	60.2	60.1	60.7	61.6	59.5	62.4	58.8	56.6	58.0	57.0	57.3	57.3	58.1	60.0
8	58.9	59.8	60.8	61.3	61.5	61.1	62.1	63.3	61.7	61.0	60.1	60.3	60.3	60.1	60.1	61.3	63.1	63.2	61.8	60.2	59.3	58.1	58.1	58.9	60.7
9 Q	59.1	59.7	60.6	61.0	61.2	60.9	60.1	60.2	60.1	60.2	60.8	61.0	61.0	60.1	60.6	60.9	62.0	60.9	59.6	59.4	58.5	58.0	58.8	58.9	60.2
10	59.0	59.2	59.5	60.6	62.0	62.2	61.4	60.7	60.7	60.2	61.0	60.7	61.1	58.9	60.0	62.2	63.1	62.1	62.0	61.0	59.8	59.2	59.5	59.9	60.7
11	60.3	60.5	61.2	61.4	61.4	61.0	61.0	60.6	60.3	60.2	60.2	60.2	60.4	60.9	62.1	62.0	63.5	65.6	61.4	51.1	53.5	56.0	56.3	58.0	60.0
12	59.7	60.0	60.6	61.0	62.1	60.8	61.1	61.4	61.4	61.2	62.4	61.8	60.9	60.0	60.9	62.6	63.5	64.0	61.9	60.5	58.8	57.2	56.6	58.0	60.8
13 D	58.0	56.5	59.9	73.8	82.6	66.4	64.4	66.9	52.0	66.9	73.0	59.6	60.2	58.9	55.6	57.9	60.3	58.8	58.3	55.2	58.3	59.1	59.7	62.0	61.8
14 D	61.8	60.0	60.9	63.4	68.1	69.3	66.6	65.8	48.3	61.9	55.5	59.3	59.9	60.3	47.8	44.8	59.4	58.4	55.1	56.7	58.7	56.3	60.0	58.8	59.0
15 D	60.5	60.8	60.8	71.3	85.4	68.3	64.8	70.1	52.7	46.8	69.2	62.6	58.9	57.0	52.5	57.3	61.9	64.0	63.3	59.8	60.2	59.8	59.9	60.4	62.0
16	59.0	67.8	63.4	60.3	61.8	62.0	62.9	53.9	58.2	67.9	62.3	64.4	57.4	57.2	54.9	46.8	57.0	60.5	62.7	59.9	59.3	57.4	56.2	59.9	59.7
17	59.0	59.1	61.0	60.8	62.5	50.8	71.9	67.2	55.9	61.7	59.2	60.0	59.0	57.4	56.4	58.9	62.0	56.9	59.9	59.0	60.2	59.4	59.8	60.1	59.9
18	59.4	59.8	60.2	60.4	63.7	66.2	62.6	63.1	60.0	61.0	51.9	56.8	60.9	60.1	57.0	58.0	58.7	60.3	58.0	59.0	58.9	58.7	55.9	60.9	59.6
19	64.8	61.4	59.8	60.4	62.2	72.9	63.5	61.8	54.4	55.5	58.2	62.9	61.8	63.2	45.8	56.9	62.1	60.8	58.9	57.9	57.0	55.9	55.9	56.2	59.6
20	59.1	61.0	61.1	61.6	61.5	61.5	62.8	71.1	68.9	64.0	59.0	57.0	60.9	59.0	60.6	61.0	61.8	61.9	61.9	61.0	59.1	57.8	58.0	59.1	61.3
21	59.8	59.9	60.6	61.2	60.9	60.7	60.4	61.2	60.9	60.4	61.1	61.1	59.1	58.8	60.0	60.6	61.0	62.1	62.6	60.9	59.4	58.9	58.9	59.5	60.4
22	60.1	60.7	60.8	60.6	60.6	61.0	60.0	60.6	61.6	61.2	60.9	60.9	60.2	59.1	59.9	60.6	60.4	61.9	61.5	60.1	58.8	58.3	58.7	58.1	60.3
23	59.0	59.8	60.9	61.0	62.0	62.0	63.5	65.9	62.8	62.1	63.1	62.0	57.7	58.4	61.0	60.7	61.8	60.0	58.9	58.9	57.8	58.0	60.3	60.4	60.7
24	60.0	60.9	60.9	61.4	62.9	62.7	62.1	60.4	54.5	61.3	57.7	55.1	58.3	62.0	63.6	63.0	62.9	59.0	57.2	56.1	57.4	55.4	52.3	61.0	59.5
25	58.8	60.7	60.5	64.7	64.9	62.0	60.1	60.4	60.8	59.7	60.6	60.7	61.6	60.7	60.7	61.8	61.0	60.5	60.6	60.2	57.7	59.2	59.9	60.6	60.8
26	60.3	60.6	60.7	60.6	60.3	60.3	60.7	60.5	57.8	59.7	60.8	60.7	60.4	60.7	60.8	60.7	60.5	60.5	60.9	60.2	59.8	60.0	60.9	60.5	60.4
27 Q	60.0	60.0	60.6	60.7	60.2	60.2	60.2	59.9	60.5	62.8	62.4	60.9	61.2	61.7	61.6	61.6	60.8	59.8	59.3	58.9	59.7	60.9	61.7	61.0	60.7
28 Q	60.2	60.1	60.0	60.2	60.0	60.6	59.8	60.9	61.5	60.8	60.6	60.8	61.6	61.9	61.7	61.3	60.8	60.1	60.8	60.4	59.6	59.2	59.8	59.8	60.5
29	60.7	60.8	61.0	61.3	61.3	61.3	60.0	60.3	61.9	61.7	61.7	60.4	60.4	61.7	63.9	63.1	61.6	59.0	59.4	58.2	54.9	55.9	55.3	58.6	60.2
30 D	59.0	56.2	60.5	58.9	63.5	66.4	59.0	62.2	52.8	-4.7	63.7	75.8	69.9	62.7	74.5	82.8	69.8	61.4	59.9	58.8	52.5	51.7	55.8	56.9	60.0
31 D	56.0	63.0	62.4	56.6	55.9	58.8	60.7	60.7	43.0	50.0	61.0	69.8	76.9	45.1	0.2	35.9	63.8	47.7	43.3	44.5	51.9	56.8	59.3	60.8	53.5
Mean	59.6	60.3	60.7	61.7	63.3	62.3	62.0	62.2	58.4	58.4	61.0	61.5	61.1	59.8	57.7	59.7	61.8	60.5	59.5	58.5	58.1	57.9	58.3	59.4	60.2

**VERTICAL INTENSITY**  
Mean values for periods of sixty minutes, Universal Time

Table 3 Meanook

$Z = 58,000 \quad \gamma +$

January 1963

Hour U. T. 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	732	731	731	740	746	753	750	742	731	728	708	722	731	726	719	722	721	720	725	729	730	732	723	721	730
2 Q	731	731	731	731	731	731	731	730	728	725	724	723	723	726	728	730	728	729	731	730	725	725	729	729	729
3	729	729	729	729	729	729	730	728	722	719	718	720	721	721	723	724	724	720	720	723	722	724	728	726	724
4	728	728	729	731	732	731	723	723	720	719	716	710	709	710	709	699	711	697	709	711	718	728	730	728	719
5	726	726	729	731	730	731	731	720	642	643	680	699	707	709	720	725	721	723	725	728	729	729	731	729	715
6 Q	723	724	725	724	723	721	721	720	720	721	720	719	720	720	720	720	719	718	720	720	719	720	720	721	721
7	720	723	730	730	732	729	723	720	720	718	718	718	719	717	713	709	709	719	720	719	718	718	720	721	720
8	725	726	726	726	725	725	718	708	711	720	721	720	720	720	720	721	720	717	721	721	719	720	721	722	721
9 Q	720	720	720	722	722	721	720	720	720	720	720	719	719	720	720	720	719	717	719	720	720	720	720	720	720
10	721	723	730	734	733	731	729	723	722	721	719	719	719	708	708	719	720	719	720	719	717	719	720	722	721
11	722	722	722	722	722	723	723	722	720	720	720	720	719	719	715	720	720	719	719	718	711	715	720	721	720
12	722	722	723	727	733	733	731	729	725	721	718	718	719	721	725	725	726	720	713	719	719	718	720	730	723
13 D	732	745	756	811	780	792	732	774	532	591	565	621	649	700	708	737	720	720	730	732	732	736	741	765	712
14 D	763	758	753	753	785	787	762	716	593	581	396	599	679	668	644	646	721	733	730	746	765	747	747	746	700
15 D	740	745	749	785	719	754	596	684	614	556	614	699	707	661	700	718	720	724	730	732	735	744	737	740	705
16	741	763	764	743	737	732	724	668	608	635	668	686	697	709	656	678	703	721	723	731	743	763	765	767	713
17	743	743	744	741	745	649	679	649	632	696	691	687	700	700	719	731	731	722	745	733	737	737	739	744	714
18	741	738	743	744	764	751	748	732	698	704	643	680	687	683	724	732	719	722	721	730	737	741	750	802	726
19	764	745	741	740	743	740	722	740	528	566	647	697	699	667	632	685	721	721	743	732	735	746	757	764	708
20	757	743	732	733	732	733	738	700	671	694	707	711	703	721	726	734	732	732	732	733	733	733	733	733	725
21	732	731	731	731	732	732	732	732	726	711	710	719	720	722	722	724	726	729	730	730	730	730	730	730	726
22	730	730	729	729	730	730	729	722	720	730	721	722	719	721	722	723	723	725	724	724	726	729	731	732	725
23	732	735	740	760	766	762	753	719	721	729	721	720	711	700	720	723	730	732	729	727	730	731	732	732	732
24	732	730	731	731	732	733	732	721	690	712	686	680	699	717	721	721	720	720	719	720	721	734	783	774	723
25	753	743	739	739	733	733	731	722	723	721	711	725	721	730	719	721	725	734	733	740	733	734	733	730	731
26	729	729	729	731	731	731	730	730	710	711	729	725	726	726	726	726	726	726	730	725	725	727	729	725	726
27 Q	725	725	725	725	725	725	725	725	724	718	721	721	720	721	721	721	721	721	721	724	724	725	725	726	723
28 Q	725	724	724	724	725	725	725	722	727	722	721	721	722	721	721	721	721	721	723	723	723	723	721	721	723
29	722	722	722	722	722	722	724	724	724	722	721	720	718	721	720	716	716	711	711	713	719	722	731	739	721
30 D	736	737	774	777	806	786	786	749	655	424	579	603	636	738	688	679	682	710	733	743	733	750	785	804	712
31 D	836	837	840	856	848	805	732	668	709	462	765	424	461	466	439	495	700	710	745	763	717	732	744	746	687
Mean	736	736	738	743	743	738	727	719	687	677	687	693	700	704	701	709	720	721	726	727	727	731	736	739	719



## DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 4 Meanook

January 1963

Day	Horizontal Intensity						Declination						Vertical Intensity								
	Maximum 12,000 $\gamma$ +			Minimum 12,000 $\gamma$ +			Range	Maximum 23° E +			Minimum 23° E +			Range	Maximum 58,000 $\gamma$ +			Minimum 58,000 $\gamma$ +			Range
	h.	m.	$\gamma$	h.	m.	$\gamma$		h.	m.	'	h.	m.	'		h.	m.	$\gamma$	h.	m.	$\gamma$	
1	04	39	1103	10	11	1038	65	04	06	69.0	04	50	52.9	16.1	05	17	762	10	37	698	64
2 Q	15	05	1088	19	22	1055	33	16	11	65.5	22	26	58.0	7.5	00	03	732	12	53	719	13
3	00	41	1089	20	33	1065	24	16	36	64.9	23	53	57.1	7.8	06	51	731	09	08	712	19
4	00	41	1091	15	28	1034	57	04	12	67.0	18	27	52.5	14.5	04	33	742	17	30	685	57
5	15	04	1088	08	41	965	123	11	43	69.1	08	26	46.0	23.1	05	36	734	08	42	603	131
6 Q	16	07	1090	17	46	1058	32	17	35	64.7	21	22	57.4	7.3	02	24	730	09	45	715	15
7	05	52	1114	17	15	1002	112	05	35	75.1	17	07	51.0	24.1	17	50	735	05	58	697	38
8	06	44	1097	08	02	1053	44	06	57	65.2	09	48	57.1	8.1	02	40	730	07	26	696	34
9 Q	00	40	1088	17	44	1066	22	16	40	63.0	21	42	57.2	5.8	02	41	724	17	35	715	9
10	15	26	1090	18	10	1061	29	18	13	66.3	13	17	57.1	9.2	03	41	739	13	36	699	40
11	12	09	1095	17	54	1066	29	17	25	67.9	19	58	45.3	22.6	19	00	729	21	03	704	25
12	23	18	1118	22	31	1057	61	17	08	66.3	22	19	54.0	12.3	05	05	743	10	20	710	33
13 D	03	38	1298	11	09	608	690	04	14	104.4	08	04	36.9	67.5	03	34	873	08	16	369	504
14 D	05	02	1163	10	50	73	1090	05	03	86.4	08	54	32.9	53.5	04	52	847	10	45	195	652
15 D	06	07	1370	08	58	785	585	06	08	138.6	09	05	7.7	130.9	03	51	849	08	55	517	332
16	07	40	1183	15	42	893	290	09	31	74.2	07	51	34.8	39.4	21	00	795	08	37	563	232
17	05	07	1149	08	05	506	643	06	19	88.9	05	43	20.6	68.3	01	52	766	08	09	475	291
18	23	43	1102	10	08	946	156	05	20	72.3	10	25	47.7	24.6	23	44	862	10	21	601	261
19	05	48	1119	09	20	791	328	05	34	82.7	14	38	36.0	46.7	00	01	810	09	20	464	346
20	01	35	1090	09	35	1018	72	07	30	79.0	11	50	55.1	23.9	00	04	772	08	27	642	130
21	01	00	1088	09	58	1050	38	18	13	63.9	09	56	54.4	9.5	06	10	734	09	58	678	56
22	15	31	1089	07	08	1036	53	08	44	63.9	07	08	52.7	11.2	09	12	740	07	07	700	40
23	04	37	1111	13	26	1025	86	07	42	71.9	13	20	51.0	20.9	04	38	786	13	21	658	128
24	23	16	1109	08	08	1018	91	04	42	65.8	08	08	40.9	24.9	22	57	829	08	14	646	183
25	15	58	1096	09	47	1042	54	04	04	74.4	20	28	54.9	19.5	00	38	770	10	10	695	75
26	01	09	1089	08	35	1038	51	09	59	62.4	08	36	52.5	9.9	01	10	734	08	38	688	46
27 Q	14	41	1087	12	21	1070	17	09	41	64.6	08	58	57.7	6.9	08	19	731	09	05	706	25
28 Q	15	03	1088	09	27	1065	23	05	13	62.9	06	52	58.8	4.1	08	30	731	10	35	718	13
29	15	45	1096	22	18	1053	43	14	25	65.0	20	57	53.0	12.0	23	16	741	17	40	708	33
30 D	23	35	1354	09	22	661	693	11	53	110.8	09	21	-83.8	194.6	23	18	848	18	04	711	137
31 D	03	24	1612	09	20	-68	1680	12	34	93.8	14	40	-18.3	112.1	03	21	949	09	17	152	797
Mean			1143			907	236			75.1			41.6	33.5			774			621	153
No. days			31			31	31			31			31	31			31			31	31

**HORIZONTAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 5 Meanook

H = 12,000  $\gamma$  +

February 1963

Hour U. T. 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	24	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	1078	1075	1074	1075	1074	1073	1072	1065	1042	1025	899	1016	1011	926	1048	1078	1064	1049	1057	1057	1050	1068	1071	1096	1047	
2 Q	1093	1088	1085	1083	1078	1077	1076	1075	1073	1073	1074	1075	1073	1075	1079	1078	1071	1065	1064	1064	1060	1066	1072	1073	1075	
3	1077	1079	1078	1075	1075	1072	1073	1075	1077	1080	1080	1079	1076	1073	1065	1066	1065	1057	1057	1057	1057	1062	1068	1071	1072	
4	1076	1079	1080	1081	1081	1079	1078	1078	1080	1080	1081	1082	1082	1082	1079	1074	1067	1057	1053	1062	1061	1065	1068	1072	1074	
5	1075	1078	1080	1081	1080	1079	1079	1077	1078	1073	1072	1050	1049	1061	1078	1084	1075	1065	1062	1060	1064	1065	1072	1073	1072	
6	1079	1081	1079	1080	1081	1080	1074	1076	1080	1078	1078	1080	1078	1073	1072	1081	1079	1069	1064	1065	1068	1073	1078	1080	1076	
7	1082	1083	1081	1080	1080	1080	1079	1078	1078	1072	1080	1081	1088	1087	1087	1083	1080	1073	1072	1074	1073	1075	1073	1078	1079	
8 Q	1079	1079	1079	1080	1080	1079	1078	1080	1080	1079	1079	1079	1085	1085	1084	1084	1082	1082	1087	1088	1089	1088	1085	1083	1082	
9	1082	1087	1087	1088	1086	1086	1084	1085	1086	1088	1089	1089	1093	1095	1091	1089	1089	1090	1087	1093	1098	1098	1090	1064	1088	
10 D	1253	1214	1206	1223	1122	1096	959	694	893	847	914	954	691	853	1036	1087	1055	1068	1041	1032	1056	1090	1082	1087	1023	
11 D	1087	1084	1093	1092	1089	1116	1094	1080	1076	979	1086	1048	1002	1050	1056	1080	1071	1073	1063	1057	1063	1056	1067	1088	1068	
12 D	1093	1056	1076	1097	1089	1065	985	1026	706	1081	1072	1065	1050	1053	1072	1073	1074	1068	1056	1047	1055	1062	1072	1078	1049	
13 D	1065	1080	1073	1069	1078	1078	899	991	901	1018	1006	962	931	981	1073	1006	1002	1058	1062	1018	1040	1064	1069	1063	1024	
14 D	1064	1072	1087	1095	1096	1093	1079	1025	838	1096	1090	1076	1068	1035	1033	1076	1072	1070	1058	1060	1059	1065	1072	1075	1060	
15	1072	1082	1084	1080	1081	1077	1078	1086	1079	1054	1039	1040	1002	998	1039	1082	1078	1064	1067	1065	1064	1064	1068	1072	1063	
16	1078	1080	1082	1084	1082	1079	1078	1080	1081	1079	1064	1082	1080	1080	1080	1076	1065	1069	1072	1065	1066	1069	1073	1079	1076	
17	1080	1085	1086	1082	1081	1080	1082	1082	1077	1079	1074	1082	1081	1084	1081	1079	1073	1072	1069	1072	1074	1075	1075	1075	1078	
18	1080	1083	1085	1086	1087	1086	1088	1083	1081	1079	1078	1082	1088	1090	1086	1088	1081	1078	1079	1081	1081	1086	1088	1089	1084	
19 Q	1088	1088	1087	1087	1086	1086	1085	1086	1085	1086	1088	1090	1089	1090	1090	1089	1084	1079	1078	1080	1086	1089	1086	1086	1086	
20	1087	1087	1086	1087	1086	1086	1086	1086	1081	1059	1042	1054	1094	1096	1089	1088	1089	1088	1082	1072	1072	1077	1085	1072	1080	
21	1072	1080	1084	1080	1082	1080	1081	1086	1060	1066	1079	1079	1081	1086	1088	1079	1064	1059	1073	1079	1081	1082	1074	1073	1077	
22	1078	1081	1079	1081	1075	1075	1078	1064	1044	1073	1081	1087	1081	1090	1084	1081	1079	1070	1100	1108	1116	1122	1126	1122	1086	
23	1082	1085	1087	1087	1085	1081	1074	1074	1084	1083	1086	1076	1078	1088	1087	1079	1064	1059	1059	1062	1070	1077	1082	1086	1078	
24 Q	1085	1085	1086	1081	1080	1079	1078	1079	1080	1079	1080	1078	1082	1086	1086	1086	1084	1075	1064	1057	1060	1072	1081	1088	1084	1078
25	1080	1082	1075	1081	1080	1082	1080	1080	1079	1077	1081	1088	1088	1087	1089	1084	1076	1067	1064	1064	1069	1072	1075	1080	1078	
26	1086	1086	1087	1087	1086	1080	1079	1081	1079	1064	1071	1084	1079	1080	1090	1082	1081	1072	1065	1068	1072	1077	1075	1081	1078	
27 Q	1087	1091	1088	1089	1089	1087	1084	1084	1084	1087	1088	1088	1089	1089	1089	1088	1083	1076	1071	1068	1072	1079	1082	1082	1084	
28	1086	1083	1087	1085	1075	1081	1087	1088	1078	1082	1090	1088	1089	1095	1090	1089	1086	1076	1068	1068	1075	1088	1095	1086	1084	
29																										
30																										
31																										
Mean	1086	1086	1087	1089	1084	1082	1066	1058	1041	1061	1063	1068	1053	1059	1075	1078	1072	1069	1067	1066	1071	1077	1078	1080	1072	

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 6 Meanook

D = 23° E + ...'

February 1963

Hour U. T. 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	24	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	61.3	61.4	61.9	62.5	62.3	61.8	62.1	62.0	72.0	72.7	55.7	73.8	63.7	54.8	55.7	65.9	58.0	49.9	50.4	48.8	49.8	50.7	55.7	57.8	59.6	
2 Q	59.4	61.3	61.6	62.2	61.8	61.1	60.3	59.9	60.1	60.7	60.8	60.8	61.8	61.9	61.5	62.7	63.0	62.7	61.3	60.2	59.2	58.7	59.5	59.9	60.9	
3	60.7	60.7	61.0	60.8	59.9	61.5	60.1	60.0	60.2	60.5	60.9	61.7	61.4	60.8	62.4	61.8	60.3	58.9	57.7	56.6	57.0	57.0	58.4	59.9	60.0	
4	60.8	60.6	60.2	59.8	59.7	59.7	59.8	60.7	60.8	60.3	60.5	60.8	61.0	61.6	62.3	62.7	63.8	62.1	56.4	55.5	56.8	57.1	58.1	59.7	60.0	
5	59.8	59.1	59.9	60.1	60.2	59.9	59.9	59.5	61.2	60.6	60.3	59.8	57.7	59.8	63.9	64.8	63.7	62.9	60.9	59.9	58.8	58.6	59.7	60.3	60.5	
6	59.8	59.9	61.0	61.0	60.6	59.9	60.1	57.7	58.8	58.4	59.4	60.7	61.3	61.7	63.0	66.3	63.8	60.8	58.8	58.9	58.5	57.9	58.6	59.9	60.3	
7	59.8	59.8	60.4	60.4	60.2	59.7	59.4	59.5	59.1	55.8	58.2	59.8	60.7	59.8	60.7	61.7	61.9	60.8	59.6	58.9	58.3	57.7	57.2	58.6	59.5	
8 Q	59.7	60.2	60.3	60.0	60.0	60.6	60.2	60.0	59.6	60.2	60.4	59.7	60.7	60.6	60.6	60.7	60.2	59.7	58.7	58.6	58.9	60.1	60.9	61.7	60.1	
9	59.8	59.7	59.8	60.0	60.0	59.9	59.7	59.5	59.7	60.0	60.1	60.3	61.5	61.0	60.8	61.4	61.0	61.0	58.4	57.8	57.3	57.3	55.8	56.6	59.5	
10 D	59.1	64.5	66.0	68.7	71.8	55.8	58.8	11.7	31.8	59.7	58.1	85.3	85.2	67.8	58.3	59.7	59.8	58.8	53.6	49.8	53.3	59.7	58.8	58.1	58.9	
11 D	63.6	63.5	61.7	63.3	72.6	70.9	57.4	56.8	48.1	42.8	59.7	65.6	64.4	61.8	63.4	62.2	57.5	55.9	56.6	54.3	57.6	57.9	59.8	63.1	60.0	
12 D	61.7	66.8	69.7	64.5	66.8	57.7	43.0	59.3	47.4	61.6	63.6	61.7	58.1	59.8	60.6	63.3	63.6	61.4	60.7	58.7	58.7	58.6	60.8	60.2	60.3	
13 D	62.1	62.1	62.2	71.8	68.2	67.7	42.7	62.6	42.8	56.9	53.6	53.7	48.5	53.2	57.8	56.1	50.6	51.7	55.7	55.5	50.9	54.6	57.4	61.3	56.7	
14 D	62.7	59.8	60.5	65.7	69.7	69.7	60.4	49.0	26.4	61.8	61.9	62.5	60.5	57.6	54.7	59.8	59.7	59.9	58.7	59.5	58.7	58.9	59.6	59.1	59.0	
15	59.7	59.7	59.7	60.6	60.4	61.9	63.8	59.0	59.3	56.9	55.7	56.1	60.6	60.6	58.7	61.7	63.1	62.5	60.8	58.6	58.2	58.7	58.9	59.3	59.7	
16	58.8	59.6	59.8	60.4	60.6	60.4	60.2	60.5	60.3	60.5	55.7	59.7	59.9	59.8	59.5	59.7	58.5	58.0	58.1	57.7	58.1	58.0	58.7	58.8	59.2	
17	59.3	59.5	59.7	59.7	59.8	59.0	60.6	59.2	59.6	57.8	56.7	59.7	59.7	60.4	61.0	61.7	61.8	60.6	60.0	59.3	58.8	59.1	59.4	59.7	59.7	
18	59.0	59.0	59.5	59.7	59.7	59.7	59.5	58.5	60.2	60.6	61.6	61.7	60.8	61.0	61.5	62.3	61.7	60.4	58.7	58.1	57.7	57.5	57.7	58.4	59.8	
19 Q	58.8	59.5	59.8	59.9	59.9	59.6	59.7	59.8	59.7	59.8	60.0	60.6	60.0	60.8	61.4	62.6	63.0	62.0	61.2	59.2	57.8	57.9	58.8	59.5	60.1	
20	59.1	58.8	58.8	57.7	57.8	58.7	60.7	60.5	63.4	64.7	60.6	63.9	62.5	62.5	59.6	61.0	62.6	62.2	61.6	57.9	56.7	56.6	55.6	55.7	60.0	
21	59.2	59.6	59.7	59.7	59.8	59.7	64.3	64.7	58.8	64.6	66.5	63.7	63.7	60.8	61.7	63.6	62.7	55.8	52.7	52.7	53.8	54.6	57.7	59.8	60.0	
22	60.9	60.8	60.6	60.6	59.9	61.3	60.2	56.1	51.4	64.1	60.1	62.6	61.7	62.6	60.8	61.9	61.7	62.4	58.0	56.1	56.0	57.1	58.5	59.7	59.8	
23	59.9	59.8	59.9	59.9	59.8	59.7	62.6	68.0	59.7	58.6	58.9	57.6	58.9	61.8	63.2	63.7	59.0	58.0	58.7	56.8	56.7	56.8	58.3	59.6	59.8	
24 Q	60.5	60.4	60.4	60.4	60.4	60.0	60.7	58.7	58.8	58.7	58.8	60.1	60.9	60.9	61.8	62.6	63.6	61.7	60.7	58.8	57.8	57.9	57.6	58.2	60.0	
25	58.5	58.1	58.7	59.4	59.1	59.7	59.8	60.0	58.7	58.6	59.5	60.4	60.7	60.7	59.8	61.8	61.9	61.5	59.7	58.6	57.2	56.8	57.3	58.2	59.4	
26	58.6	58.7	59.3	59.7	59.8	61.9	62.7	59.6	55.9	61.7	64.6	64.1	61.7	61.7	61.8	60.9	62.6	60.9	60.0	58.2	57.0	56.8	57.6	58.5	60.2	
27 Q	58.8	59.6	59.8	59.8	59.7	59.6	59.9	59.7	59.9	60.2	59.9	60.7	60.7	60.7	61.5	62.2	62.5	61.4	58.9	57.5	56.7	56.9	57.5	58.2	59.7	
28	58.6	58.7	59.2	60.1	60.6	60.3	59.8	59.5	57.7	56.7	58.7	60.6	61.8	62.2	64.7	62.7	63.8	61.8	57.6	55.5	54.5	54.7	54.6	56.6	59.2	
29																										
30																										
31																										
Mean	60.0	60.4	60.7	61.3	61.8	61.0	59.2	57.9	56.1	59.8	59.6	62.0	61.4	60.5	60.8	62.0	61.3	59.8	58.3	57.1	56.8	57.3	58.1	59.1	59.7	

**VERTICAL INTENSITY**  
**Mean values for periods of sixty minutes, Universal Time**

Table 7 Meanook

Z = 58,000 γ +

February, 1963

Hour U. T. 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	731	732	732	731	737	737	733	721	648	672	574	632	678	623	659	686	688	704	720	735	733	752	764	762	704	
2 Q	744	743	737	736	733	733	732	732	732	730	730	723	724	729	732	732	732	731	731	732	732	732	732	734	732	
3	733	733	732	731	731	732	731	731	731	730	730	725	723	721	721	721	723	730	732	733	733	733	734	733	730	
4	733	732	731	730	730	730	729	729	729	729	729	729	727	727	727	727	727	727	727	723	724	732	733	734	732	730
5	732	732	732	732	732	732	732	732	734	731	731	729	711	697	699	710	714	718	721	726	731	733	733	733	733	725
6	731	731	732	735	733	732	732	723	723	731	731	731	725	722	716	721	710	716	721	725	726	727	731	727	726	
7	725	725	725	725	725	725	725	725	718	705	721	721	721	721	721	723	722	722	725	725	725	725	725	726	723	
8 Q	730	730	727	726	725	727	725	725	725	722	721	721	722	721	721	721	720	719	720	721	721	721	721	721	723	
9	720	720	720	720	720	720	720	720	720	719	713	712	714	714	714	716	716	714	712	713	712	713	708	720	717	
10 D	830	799	731	657	723	737	642	321	662	713	644	660	690	645	697	720	711	738	733	732	757	762	751	759	700	
11 D	764	752	749	739	731	678	678	732	708	623	719	732	699	720	699	712	732	733	726	733	751	732	740	745	722	
12 D	743	752	764	754	724	704	592	644	550	697	716	719	685	688	710	709	711	721	723	734	736	746	753	754	710	
13 D	747	752	751	752	740	736	491	610	623	620	666	651	631	654	705	665	709	734	750	753	750	743	746	751	697	
14 D	754	751	751	759	716	729	722	597	430	708	731	721	718	690	691	712	731	732	735	745	743	743	744	741	712	
15	733	734	733	732	732	734	733	726	721	713	666	683	661	656	701	723	732	729	732	731	731	732	733	731	718	
16	732	731	730	730	729	729	729	726	721	722	707	712	721	721	722	719	721	720	720	721	724	730	732	730	724	
17	724	726	722	723	726	730	730	729	721	711	719	721	720	722	722	723	721	720	722	723	724	724	723	723	723	
18	722	722	721	722	722	723	721	724	720	716	716	720	719	717	718	720	720	721	718	720	719	719	720	720	720	
19 Q	721	721	721	721	721	721	721	721	721	720	718	712	716	719	721	722	722	721	721	721	721	721	720	719	720	
20	719	719	720	722	722	729	737	739	710	668	679	699	710	709	710	714	713	710	709	711	716	720	726	743	714	
21	725	724	724	722	722	724	730	705	684	673	710	720	713	718	722	719	711	710	710	711	710	721	724	724	714	
22	724	729	723	723	730	734	730	713	649	691	724	733	723	724	722	723	721	721	722	726	730	730	725	729	721	
23	724	722	721	721	721	721	721	720	722	722	721	708	690	720	721	720	713	718	724	724	724	726	727	727	720	
24 Q	729	724	723	722	722	722	722	721	720	718	718	720	722	721	722	722	721	716	718	718	718	720	723	722	721	
25	722	723	730	727	730	731	725	721	719	710	719	716	714	712	726	726	725	724	713	714	714	718	719	720	721	
26	720	720	720	720	720	723	728	721	688	659	689	721	712	702	711	713	711	712	711	713	721	724	723	723	713	
27 Q	722	723	721	721	721	721	721	721	717	710	720	720	718	718	718	718	718	717	714	720	722	722	722	721	720	
28	721	721	721	722	725	725	725	719	679	656	702	714	714	715	711	721	720	715	713	715	719	721	722	722	714	
29																										
30																										
31																										
Mean	734	733	730	727	726	725	709	698	690	700	706	710	707	705	713	717	719	721	722	725	727	730	731	732	718	

DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 8 Meanook

February 1963

Day	Horizontal Intensity					Declination					Vertical Intensity				
	Maximum 12,000 $\gamma$ +		Minimum 12,000 $\gamma$ +		Range $\gamma$	Maximum 23° E +		Minimum 23° E +		Range '	Maximum 58,000 $\gamma$ +		Minimum 58,000 $\gamma$ +		Range $\gamma$
	h. m.	$\gamma$	h. m.	$\gamma$		h. m.	'	h. m.	'		h. m.	$\gamma$	h. m.	$\gamma$	
1	23 48	1104	13 14	797	307	11 13	80.1	12 01	41.1	39.0	23 06	773	10 47	466	307
2 Q	03 10	1103	16 52	1053	50	15 47	67.3	00 05	57.7	9.6	00 10	750	09 44	720	30
3	01 54	1087	18 47	1050	37	14 21	64.8	19 39	55.8	9.0	00 17	737	14 01	713	24
4	13 11	1087	18 42	1048	39	16 50	66.8	19 22	53.3	13.5	22 29	740	19 11	721	19
5	15 47	1095	11 40	1024	71	14 40	66.2	12 24	54.3	11.9	07 53	738	12 27	680	58
6	08 01	1092	18 40	1057	35	15 42	67.5	07 42	52.7	14.8	03 15	740	07 52	700	40
7	12 37	1092	09 45	1062	30	15 56	63.6	09 39	51.2	12.4	02 12	730	09 45	691	39
8 Q	21 26	1093	05 18	1072	21	07 03	62.7	19 12	58.0	4.7	00 38	732	17 03	713	19
9	22 33	1132	23 17	1024	108	15 05	62.9	21 03	50.7	12.2	23 51	758	23 04	694	64
10 D	01 02	1403	12 20	396	1007	12 20	141.3	07 31	-51.9	193.2	00 30	894	07 25	-6.8	962
11 D	00 24	1162	12 04	935	227	04 50	85.8	09 24	36.1	49.7	00 25	786	09 55	583	203
12 D	06 07	1228	03 11	261	967	02 07	77.5	06 20	11.9	65.6	03 39	789	08 13	629	160
13 D	16 35	1163	08 02	547	616	05 56	88.1	06 26	-5.4	93.5	19 52	824	06 27	325	499
14 D	04 11	1150	08 32	687	463	05 04	85.8	08 41	-6.3	92.1	03 28	786	08 20	222	564
15	07 55	1101	14 00	926	175	05 57	69.8	10 02	46.5	23.3	01 10	743	12 59	599	144
16	00 29	1105	10 18	1050	55	11 38	62.7	10 43	51.0	11.7	00 30	751	10 47	678	73
17	08 01	1096	10 26	1054	42	06 49	64.9	10 28	50.7	14.2	07 11	736	09 23	700	36
18	06 21	1096	09 31	1072	24	06 19	64.6	06 52	55.9	8.7	07 40	732	09 31	709	23
19 Q	21 07	1097	19 38	1057	40	15 58	64.1	21 12	56.2	7.9	16 00	724	11 52	710	14
20	14 24	1111	09 40	995	116	09 45	68.3	23 15	51.8	16.5	07 27	754	09 36	617	137
21	22 05	1108	08 18	1049	59	10 30	68.9	19 55	51.6	17.3	06 25	739	09 35	651	88
22	08 12	1102	08 25	1009	93	09 20	67.0	08 40	45.9	21.1	11 05	738	08 25	607	131
23	12 50	1096	17 07	1048	48	07 14	73.8	11 58	52.9	20.9	07 32	733	12 13	658	75
24 Q	22 26	1104	18 37	1049	55	16 05	66.2	22 35	55.8	10.4	00 09	732	10 52	711	21
25	14 30	1094	17 40	1060	34	16 51	62.9	09 20	55.7	7.2	05 12	734	09 34	700	34
26	14 24	1101	09 25	1049	52	05 57	69.1	08 54	49.0	20.1	06 25	739	08 52	623	116
27 Q	01 35	1111	19 16	1063	48	16 51	63.5	21 53	55.9	7.6	01 36	732	09 17	700	32
28	22 58	1101	08 59	1058	43	14 33	69.2	09 05	51.8	17.4	06 07	732	09 23	627	105
29															
30															
31															
Mean		1122		948	174		72.0		42.5	29.5		753		610	143
No. days		28		28	28		28		28	28		28		28	28

**HORIZONTAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 9 Meanook

H = 12,000  $\gamma$  +

March 1963

Hour U. T. 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	24	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	1080	1081	1090	1101	1157	1107	1110	1161	1128	1091	1084	1049	1058	1083	1088	1080	1046	1051	1065	1064	1068	1067	1075	1073	1086	
2	1080	1080	1084	1081	1082	1087	1090	1087	1086	1084	1080	1083	1082	1096	1087	1088	1078	1065	1064	1064	1077	1083	1086	1088	1082	
3	1083	1087	1089	1088	1081	1082	1100	1043	1072	1075	1072	1064	1088	1098	1095	1088	1079	1073	1072	1072	1077	1075	1079	1080	1080	
4	1079	1088	1088	1086	1087	1088	1087	1088	1086	1072	1089	1087	1088	1087	1084	1081	1074	1072	1068	1064	1071	1080	1082	1086	1082	
5	1084	1087	1088	1088	1083	1081	1084	1084	1077	1078	1081	1086	1087	1086	1080	1084	1081	1072	1067	1069	1071	1071	1075	1076	1080	
6	1077	1088	1088	1088	1087	1082	1086	1086	1086	1086	1087	1087	1087	1087	1080	1079	1078	1062	1048	1048	1052	1074	1077	1079	1078	
7	1081	1082	1082	1083	1085	1080	1083	1082	1080	1085	1085	1086	1087	1088	1089	1089	1082	1072	1067	1067	1063	1079	1067	1063	1079	
8 D	1090	1095	1134	1085	1072	1078	1071	1017	1029	1004	954	591	960	1087	1039	1046	1040	1047	1056	1027	1058	1094	1091	1084	1035	
9 D	1093	1076	1078	1096	1135	1098	1077	1072	1045	1072	1037	1063	1041	1056	1056	1078	1078	1072	1063	1070	1073	1079	1067	1088	1074	
10 D	1094	1077	1087	1087	1076	1086	1059	1048	979	747	879	936	803	771	798	865	1037	994	1047	1048	1072	1063	1093	1087	993	
11 D	1086	1087	1107	1089	1097	1079	1079	1087	1077	1042	1043	1071	1086	1085	1053	1063	1061	1056	1050	1047	1050	1064	1066	1083	1071	
12	1086	1094	1082	1086	1080	1080	1081	1079	1038	1041	1027	1067	1067	1049	1057	1036	1068	1064	1052	1052	1061	1064	1071	1078	1065	
13	1080	1085	1083	1081	1080	1081	1079	1080	1094	1063	1071	1076	1041	1016	1033	1037	1085	1071	1057	1060	1064	1071	1077	1079	1068	
14 Q	1087	1082	1081	1084	1083	1080	1080	1081	1081	1084	1085	1085	1086	1083	1081	1082	1078	1070	1059	1056	1057	1063	1070	1079	1077	
15	1080	1084	1079	1078	1080	1079	1080	1079	1081	1079	1085	1085	1084	1083	1081	1079	1074	1063	1053	1053	1056	1063	1071	1077	1075	
16 Q	1081	1082	1086	1086	1085	1085	1085	1085	1085	1085	1088	1089	1088	1088	1085	1087	1079	1071	1064	1063	1058	1060	1064	1072	1079	
17	1081	1084	1087	1086	1087	1087	1087	1088	1088	1089	1090	1087	1082	1079	1081	1081	1077	1079	1075	1071	1059	1059	1063	1067	1080	
18	1077	1081	1085	1086	1081	1085	1086	1080	1070	1071	1084	1088	1081	1057	1026	1049	1067	1069	1068	1067	1071	1068	1070	1080	1073	
19	1080	1078	1088	1087	1098	1134	1098	1092	1085	1081	1078	1078	1077	1077	1078	1071	1072	1078	1071	1063	1067	1067	1062	1071	1081	
20	1078	1074	1073	1080	1080	1085	1085	1087	1081	1079	1081	1079	1092	1092	1092	1094	1088	1078	1071	1072	1078	1072	1064	1071	1081	
21	1080	1077	1082	1074	1079	1080	1079	1064	1085	1087	1086	1087	1085	1085	1082	1080	1077	1067	1063	1063	1064	1070	1071	1074	1077	
22 Q	1078	1079	1082	1082	1085	1085	1086	1086	1086	1086	1084	1085	1085	1093	1095	1088	1087	1077	1062	1062	1062	1070	1076	1080	1080	
23	1086	1087	1087	1086	1086	1088	1094	1091	1086	1091	899	1104	1102	1084	1047	1084	1087	1073	1055	1056	1058	1070	1071	1079	1073	
24	1078	1085	1082	1081	1082	1082	1082	1084	1086	1088	1080	1078	1080	1078	1091	1086	1087	1084	1070	1062	1062	1070	1076	1071	1073	1079
25	1080	1082	1082	1084	1080	1081	1084	1084	1085	1087	1085	1093	1090	1081	1078	1077	1078	1062	1054	1056	1062	1071	1074	1074	1078	
26 Q	1078	1082	1085	1086	1086	1086	1085	1087	1087	1088	1088	1087	1087	1082	1082	1086	1084	1076	1064	1056	1055	1064	1067	1071	1079	
27 Q	1080	1082	1086	1086	1086	1086	1087	1085	1087	1088	1087	1086	1088	1091	1091	1088	1081	1070	1064	1069	1071	1073	1073	1077	1082	
28	1081	1085	1089	1090	1093	1094	1091	1100	1090	1095	1095	1101	1097	1097	1094	1093	1090	1080	1070	1062	1062	1062	1070	1073	1086	
29	1086	1091	1094	1091	1092	1095	1096	1100	1094	1088	1080	1077	1047	1091	1094	1094	1088	1078	1070	1067	1065	1068	1071	1077	1083	
30	1083	1087	1090	1087	1090	1088	1091	1090	1083	1082	1085	1080	1088	1088	1087	1086	1083	1075	1070	1070	1070	1066	1071	1078	1082	
31	1085	1088	1089	1090	1089	1087	1086	1077	1083	1083	1087	1087	1086	1079	1083	1087	1079	1069	1063	1062	1066	1079	1079	1081	1081	
Mean	1083	1084	1088	1086	1089	1087	1085	1082	1077	1067	1063	1062	1068	1071	1067	1071	1076	1067	1063	1061	1065	1071	1074	1077	1074	

### DECLINATION

Mean values for periods of sixty minutes, Universal Time

Table 10 Meanook

D = 23° E + ...'

March 1963

Hour U. T. 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	24	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	56.7	56.4	56.8	58.2	61.5	64.5	58.7	70.8	67.7	58.2	59.4	60.2	57.1	61.0	63.7	63.9	61.6	58.7	56.8	55.6	55.7	55.8	57.7	58.1	59.8	
2	59.6	59.6	59.7	59.7	61.4	59.6	63.7	58.5	60.8	60.7	57.8	62.6	63.7	63.9	65.0	64.4	62.8	61.5	58.5	56.6	56.0	55.9	57.1	57.7	60.3	
3	58.8	58.8	58.7	59.5	61.5	59.4	61.4	52.6	58.1	61.5	63.3	61.8	63.5	60.6	62.9	63.7	64.2	63.7	60.6	56.8	56.2	57.1	57.1	57.5	60.0	
4	58.1	59.7	59.5	59.8	59.6	59.5	59.5	60.8	61.4	61.0	61.5	61.3	61.5	62.6	61.6	61.4	62.6	60.2	58.8	57.4	55.9	55.1	56.7	57.1	59.7	
5	57.6	58.0	58.5	58.4	59.5	58.7	59.6	59.4	59.2	61.0	60.8	62.0	61.7	61.9	59.6	63.7	63.7	62.6	60.9	57.7	55.7	55.4	55.7	56.0	59.5	
6	57.0	57.0	56.3	56.6	56.7	59.7	59.1	58.7	59.6	59.7	60.2	60.5	59.7	61.1	62.1	62.5	64.5	63.4	59.3	55.1	52.4	52.7	56.0	58.7	58.7	
7	58.5	58.3	58.9	59.1	59.2	56.7	60.4	59.6	59.9	59.7	59.9	60.1	60.2	60.5	61.6	63.0	64.5	64.9	63.5	59.6	57.7	54.5	52.9	43.9	59.0	
8 D	54.7	57.0	57.7	59.8	58.3	56.7	61.5	89.7	60.3	56.3	61.9	55.4	77.0	67.6	61.9	59.1	56.0	51.8	56.3	55.5	50.2	55.4	55.8	55.8	59.6	
9 D	57.1	58.7	57.4	61.7	82.6	58.8	58.7	59.2	59.5	59.6	58.5	59.8	59.3	58.1	60.0	64.7	64.5	61.2	59.8	56.7	56.3	56.6	57.7	58.5	60.2	
10 D	56.8	67.8	62.6	62.3	66.0	64.3	62.5	61.0	52.6	49.7	50.1	61.0	57.7	38.4	45.8	42.2	54.4	56.7	56.0	51.9	56.6	59.4	59.5	53.9	56.3	
11 D	63.4	59.9	65.6	72.7	70.3	60.7	66.5	61.4	59.8	59.5	56.6	57.5	60.4	60.8	61.4	62.6	63.5	62.0	59.4	57.6	56.9	55.8	54.7	55.7	61.0	
12	60.6	60.5	66.5	56.7	63.5	57.9	58.9	59.4	54.9	55.5	47.8	58.0	59.0	56.7	56.5	58.8	62.5	62.6	59.6	58.0	54.7	55.0	56.5	58.1	58.3	
13	59.3	59.5	59.1	59.6	59.7	59.7	63.0	60.6	63.5	60.6	57.5	60.6	53.4	55.4	56.6	58.3	64.6	63.5	62.6	58.5	56.4	55.7	56.3	57.3	59.2	
14 Q	57.5	59.2	59.6	59.7	59.8	59.8	59.6	59.6	59.3	59.3	58.7	59.4	59.1	60.6	63.6	65.7	65.5	63.6	60.5	58.4	57.6	57.1	57.5	60.0		
15	58.3	58.6	59.6	61.8	59.7	59.6	59.6	59.5	59.3	58.6	59.7	59.8	60.4	61.0	62.5	63.7	63.6	61.3	57.6	56.6	55.6	55.7	56.5	59.5		
16 Q	57.5	58.4	58.6	58.8	59.0	59.1	59.3	59.5	60.6	59.8	59.9	60.6	60.5	60.6	61.5	62.6	64.2	63.4	61.6	60.6	58.4	56.8	56.2	56.1	59.7	
17	56.0	56.7	57.8	58.4	58.7	58.9	59.4	59.5	59.6	60.3	61.3	60.8	60.6	61.2	62.0	66.4	63.6	63.5	61.5	60.7	58.8	56.2	55.5	56.2	59.7	
18	56.3	56.4	56.7	55.7	56.7	58.1	59.6	63.5	66.0	68.2	62.6	62.4	62.1	60.8	56.6	56.9	59.6	57.0	60.5	59.7	58.1	56.6	55.5	54.9	59.2	
19	52.7	56.6	56.4	55.6	57.4	53.8	60.4	60.7	59.7	61.5	62.8	64.4	63.9	63.4	63.0	59.2	57.5	58.7	57.5	53.2	52.8	54.6	56.0	55.3	58.2	
20	55.4	56.6	57.0	58.3	58.9	58.7	59.3	60.7	60.3	62.9	67.3	66.6	62.6	62.6	63.5	64.4	64.6	63.5	61.4	58.5	56.1	56.6	54.9	53.6	60.2	
21	55.3	57.6	58.8	61.6	61.6	58.5	59.1	55.3	59.5	60.5	59.9	60.4	59.7	60.5	61.4	62.6	63.2	61.5	59.1	56.6	55.6	56.0	57.1	57.8	59.1	
22 Q	58.4	58.3	58.4	58.6	58.9	59.1	59.1	59.3	59.3	59.7	61.7	61.4	60.7	62.7	64.0	64.7	65.8	66.0	62.8	59.7	55.8	54.9	54.9	55.3	60.0	
23	56.3	56.0	57.2	57.7	57.8	58.3	58.8	59.8	60.4	61.3	53.8	71.9	65.6	63.7	56.7	59.6	64.5	63.4	60.7	56.7	54.1	54.6	54.8	56.0	59.2	
24	57.0	57.9	58.7	59.0	59.0	59.0	58.9	58.9	59.0	59.0	59.6	58.6	62.2	61.6	61.8	64.2	65.4	63.6	61.1	57.6	55.6	54.8	55.7	56.3	59.3	
25	57.5	57.8	58.8	59.2	59.6	59.8	59.6	59.6	59.7	59.8	58.8	59.7	60.7	62.1	62.6	63.7	66.2	63.6	61.2	56.6	54.8	54.7	55.7	56.7	59.5	
26 Q	57.3	57.6	57.9	58.7	58.9	59.0	59.4	59.4	59.7	59.9	59.8	59.8	60.2	60.7	61.3	63.4	64.8	64.3	63.9	59.7	54.6	54.9	55.9	56.8	59.5	
27 Q	57.1	58.4	58.8	58.8	58.8	58.9	59.9	59.8	59.8	59.8	59.8	59.8	61.7	61.7	61.9	62.4	63.8	63.2	59.9	56.3	56.7	56.8	56.9	56.7	59.5	
28	57.3	58.0	58.8	58.9	59.2	59.1	59.9	64.0	61.9	61.4	61.8	61.0	60.6	60.8	62.5	64.1	65.6	65.7	63.8	60.5	57.6	54.7	53.3	53.8	60.2	
29	55.6	57.3	58.9	58.4	59.8	58.5	58.8	60.0	60.8	60.4	63.9	62.0	54.8	59.8	62.3	62.9	64.8	64.6	63.5	60.6	56.7	54.8	52.5	52.8	59.4	
30	54.6	55.8	57.3	58.0	58.9	58.9	58.9	60.7	59.1	60.8	60.7	60.6	61.0	60.7	61.5	63.4	64.3	64.1	62.7	59.7	57.6	56.4	55.9	55.9	59.5	
31	56.4	57.6	58.6	58.9	59.0	58.5	59.2	58.8	60.2	62.0	60.0	60.4	60.8	61.9	63.9	64.0	65.6	64.3	62.9	59.9	56.9	53.7	50.8	49.1	59.3	
Mean	57.3	58.3	58.9	59.4	60.7	59.1	60.1	61.0	60.1	60.0	59.7	61.0	61.0	60.5	60.9	61.9	63.3	62.4	60.7	57.8	56.0	55.7	55.8	55.7	59.5	

**VERTICAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 11 Meanook

Z = 58,000  $\gamma$  +

March 1963

Hour U. T. 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 D	722	731	751	765	799	772	774	702	698	735	721	692	686	705	714	721	711	722	724	725	731	732	733	733	730	
2	733	728	723	722	724	725	715	722	728	740	709	719	711	721	717	722	722	722	722	722	722	723	722	722	722	
3	721	719	722	721	722	723	684	633	639	688	689	693	711	733	722	720	718	717	715	718	721	723	730	731	709	
4	725	724	724	724	722	722	722	720	683	674	704	724	725	723	725	723	723	721	710	712	719	722	722	722	718	
5	719	719	720	720	723	723	722	722	715	707	711	714	713	712	706	711	710	711	711	711	718	722	724	724	717	
6	722	723	728	732	735	740	733	722	721	717	717	717	711	711	712	714	714	711	712	717	717	721	723	722	721	
7	723	722	723	723	723	708	723	720	720	718	718	718	719	719	720	720	716	714	712	711	713	713	714	737	719	
8 D	774	774	825	767	736	723	689	568	633	659	634	473	501	670	660	696	701	703	737	734	746	754	736	731	693	
9 D	745	739	737	763	755	711	726	712	636	659	664	698	680	699	703	715	716	721	723	725	725	734	736	736	715	
10 D	746	753	743	750	731	736	636	701	657	547	581	615	573	504	506	661	716	705	763	740	756	769	766	778	685	
11 D	820	781	790	766	724	742	714	683	695	673	685	709	715	722	710	716	720	723	722	734	750	740	737	756	731	
12	753	771	765	756	739	677	701	715	660	635	633	656	690	701	711	694	715	713	716	722	724	725	731	732	710	
13	731	726	724	724	723	723	723	722	685	657	658	677	660	655	663	689	710	711	713	715	722	724	725	727	703	
14 Q	733	731	724	723	723	724	723	723	723	723	723	722	722	722	722	722	722	722	722	724	725	728	732	733	729	725
15	727	727	728	729	732	733	725	724	723	721	723	723	723	724	726	723	723	721	720	722	724	727	731	728	725	
16 Q	725	724	723	723	723	723	723	723	722	711	715	723	723	723	724	724	723	723	723	723	723	723	724	724	723	
17	725	724	724	723	723	723	723	723	722	720	718	718	712	709	712	712	702	700	699	702	712	723	733	734	718	
18	731	732	734	752	746	729	733	728	713	722	724	725	722	706	658	663	681	690	702	710	716	723	728	735	716	
19	734	723	732	746	769	782	767	750	732	723	711	712	712	712	713	714	712	712	713	715	723	723	727	735	729	
20	738	741	735	734	733	733	735	735	725	723	701	680	707	714	723	723	722	720	714	714	715	724	733	732	723	
21	734	725	725	734	733	725	723	658	715	722	722	721	720	721	722	721	720	722	721	720	722	724	724	724	723	721
22 Q	721	721	721	721	721	721	722	722	721	712	706	701	703	712	720	720	715	713	712	712	712	713	719	722	722	716
23	720	722	723	723	723	723	721	725	701	709	571	603	700	697	674	701	705	711	712	714	721	723	723	723	702	
24	722	723	722	722	722	722	721	721	721	720	692	700	689	721	722	723	722	715	714	714	722	724	724	724	718	
25	724	723	723	723	723	723	716	716	714	714	707	714	713	712	712	712	715	715	712	712	713	721	721	721	716	
26 Q	721	718	718	718	718	718	718	718	718	714	714	714	713	713	713	716	714	714	711	711	712	713	714	714	715	
27 Q	718	718	718	718	718	718	714	714	714	714	712	712	709	709	713	716	716	716	714	711	709	711	712	713	714	
28	713	713	714	713	714	714	719	705	708	711	713	713	711	712	713	713	712	710	708	707	707	709	711	713	712	
29	717	720	722	719	718	715	720	720	718	701	690	688	658	690	720	722	718	713	712	712	712	712	713	716	710	
30	722	723	724	725	723	722	722	721	724	722	709	687	707	715	719	720	719	714	715	712	712	712	713	714	716	
31	715	716	718	718	720	723	732	734	720	723	719	719	714	711	711	715	714	714	712	710	712	714	718	723	718	
Mean	732	731	733	733	731	726	720	710	703	700	694	693	696	703	703	712	714	714	716	718	722	725	726	728	716	



DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 12 Meanook

March 1963

Day	Horizontal Intensity						Declination						Vertical Intensity								
	Maximum 12,000 $\gamma$ +			Minimum 12,000 $\gamma$ +			Range	Maximum 23° E +			Minimum 23° E +			Range	Maximum 58,000 $\gamma$ +			Minimum 58,000 $\gamma$ +			Range
	h.	m.	$\gamma$	h.	m.	$\gamma$		h.	m.	'	h.	m.	'		h.	m.	$\gamma$	h.	m.	$\gamma$	
1 D	07	55	1289	12	17	1017	272	07	53	102.7	06	53	33.8	68.9	04	53	846	07	40	614	232
2	10	00	1111	19	10	1057	54	06	24	68.4	10	04	43.3	25.1	09	41	749	10	10	666	83
3	06	06	1129	07	50	999	130	14	45	68.3	07	36	46.6	21.7	13	25	744	07	51	550	194
4	08	25	1104	09	06	1057	47	08	05	66.7	21	22	54.1	12.6	00	01	731	08	57	658	73
5	10	48	1092	18	38	1063	29	15	52	64.9	21	29	54.6	10.3	22	22	730	10	15	695	35
6	01	53	1095	19	50	1040	55	16	47	67.6	20	48	49.7	17.9	05	58	749	17	58	709	40
7	05	22	1111	23	48	1020	91	18	05	66.5	23	31	36.4	30.1	23	30	748	05	40	690	58
8 D	02	28	1181	11	24	287	894	07	13	121.8	11	12	20.4	101.4	02	40	878	11	21	259	619
9 D	04	33	1255	14	20	977	278	04	40	99.8	16	13	49.7	50.1	04	28	836	08	50	490	346
10 D	03	27	1138	09	06	513	625	05	49	86.7	14	18	19.2	67.5	23	57	823	09	07	407	416
11 D	02	29	1150	10	02	997	153	03	53	92.8	23	07	49.7	43.1	00	18	845	10	02	620	225
12	00	27	1147	13	44	984	163	03	19	77.7	10	30	43.6	34.1	01	55	810	10	56	604	206
13	08	00	1110	15	05	936	174	18	05	69.5	12	28	49.3	20.2	00	10	734	09	48	631	103
14 Q	00	01	1103	19	19	1048	55	17	35	66.7	00	03	55.3	11.4	00	04	737	11	13	715	22
15	04	00	1089	18	56	1048	41	16	24	64.7	21	30	54.7	10.0	02	35	734	09	27	712	22
16 Q	08	52	1094	20	37	1052	42	16	50	65.7	22	41	54.8	10.9	00	07	734	09	26	702	32
17	10	17	1095	21	01	1052	43	15	37	67.3	22	45	53.6	13.7	23	54	736	17	12	694	42
18	08	25	1109	14	38	1016	93	09	05	72.1	03	31	53.5	18.6	03	52	765	14	42	643	122
19	05	43	1182	22	44	1048	134	13	52	65.7	05	37	47.6	18.1	05	43	841	10	40	701	140
20	10	28	1104	22	38	1048	56	10	53	71.1	23	08	52.0	19.1	01	36	743	11	08	679	64
21	00	45	1095	07	37	1041	54	04	05	66.7	07	10	50.5	16.2	00	46	742	07	37	628	114
22 Q	13	24	1101	19	00	1055	46	17	36	67.2	20	50	54.6	12.6	06	55	722	11	32	694	28
23	01	20	1127	10	24	724	403	11	27	79.0	10	25	22.7	56.3	07	32	739	10	50	439	300
24	01	25	1101	17	17	1061	40	17	10	67.2	21	12	53.6	13.6	22	14	734	12	18	664	70
25	11	13	1094	18	59	1048	46	17	31	67.6	20	28	53.2	14.4	01	10	725	10	26	700	25
26 Q	10	07	1093	20	04	1047	46	17	01	65.9	20	30	52.8	13.1	00	11	723	10	35	711	12
27 Q	06	09	1094	17	54	1062	32	17	14	65.0	19	17	55.7	9.3	02	48	722	11	53	700	22
28	07	46	1122	20	23	1048	74	07	35	70.9	23	00	51.9	19.0	07	06	727	07	46	668	59
29	08	42	1108	12	17	1031	77	19	07	65.8	21	46	51.6	14.2	07	33	723	12	04	642	81
30	07	33	1099	21	15	1057	42	15	55	65.2	00	02	53.6	11.6	08	00	726	11	23	671	55
31	06	13	1099	19	12	1060	39	16	43	66.9	23	46	47.2	19.7	07	08	741	13	26	701	40
Mean			1123			984	139			73.4			47.4	26.0			759			634	125
No. days			31			31	31			31			31	31			31			31	31

**HORIZONTAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 13 Meanook

H=12,000  $\gamma$  +

April 1963

Hour U. T. 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	24	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	1090	1093	1104	1109	1108	1203	1174	1108	1069	1061	1061	1095	1085	1084	1083	1078	1071	1062	1061	1063	1071	1075	1078	1079	1090	
2	1084	1087	1091	1083	1083	1084	1084	1085	1086	1086	1088	1087	1087	1086	1084	1080	1069	1054	1043	1061	1075	1077	1076	1084	1079	
3	1079	1086	1087	1087	1079	1084	1077	1076	1080	1084	1097	1092	1087	1086	1084	1074	1062	1061	1064	1071	1072	1077	1078	1085	1079	
4 D	1093	1093	1086	1090	1092	1087	1094	1097	1101	1094	1108	1105	1096	1073	1037	1054	1069	1067	1054	1053	1077	1088	1085	1096	1083	
5 D	1102	1302	1116	1101	1195	1086	1098	1070	944	913	957	1023	1000	1028	1050	1046	1061	1054	1050	1071	1073	1071	1075	1075	1069	
6 D	1084	1087	1085	1087	1085	1084	1089	1085	916	1068	1007	1054	1083	1085	1058	1078	1070	1077	1061	1065	1075	1075	1074	1093	1061	
7	1091	1086	1087	1090	1081	1088	1102	1041	1047	991	1090	1054	1044	1072	1069	1052	1046	1053	1061	1064	1069	1072	1086	1078	1067	
8	1093	1092	1087	1085	1085	1087	1085	1086	1087	1086	1082	1074	1068	1087	1086	1083	1071	1056	1065	1068	1072	1074	1077	1085	1080	
9	1087	1088	1089	1086	1085	1084	1079	1071	1087	1085	1081	1078	1083	1075	1075	1075	1054	1038	1051	1061	1069	1067	1076	1083	1075	
10 Q	1085	1084	1086	1084	1085	1085	1085	1087	1085	1085	1079	1078	1077	1078	1079	1074	1061	1053	1056	1058	1063	1068	1076	1079	1076	
11 Q	1085	1090	1092	1090	1092	1090	1090	1088	1091	1085	1083	1093	1088	1086	1083	1075	1068	1061	1060	1054	1054	1056	1077	1098	1080	
12	1087	1085	1093	1090	1092	1092	1092	1108	1092	1061	1047	1096	1101	1085	1081	1081	1070	1069	1057	1054	1054	1053	1063	1076	1079	
13	1084	1089	1085	1078	1085	1092	1093	1089	1058	918	907	946	1019	1069	1056	1071	1069	1053	1048	1062	1083	1070	1057	1093	1053	
14 D	1121	1105	1085	1084	1085	1085	1086	1085	1083	1032	1012	1070	989	950	977	986	1061	1075	1083	1069	1073	1075	1099	1125	1062	
15	1127	1119	1100	1074	1093	1108	904	865	991	1010	1048	992	1009	1044	1070	1080	1068	1069	1070	1076	1077	1076	1084	1086	1052	
16	1090	1102	1093	1090	1085	1085	1087	1086	1083	1072	1085	1084	1085	1090	1091	1077	1070	1069	1068	1069	1065	1075	1079	1086	1082	
17	1096	1090	1087	1096	1092	1090	1092	1091	1083	1079	1072	1079	1082	1086	1087	1084	1068	1054	1054	1065	1069	1077	1080	1083	1080	
18	1082	1087	1090	1089	1088	1092	1090	1086	1085	1065	1091	1085	1068	1086	1083	1056	1074	1060	1057	1070	1059	1068	1068	1100	1078	
19	1093	1087	1084	1096	1099	1125	1104	1076	1107	1117	1100	1099	1100	1100	1100	1090	1072	1068	1053	1072	1075	1083	1090	1099	1091	
20	1100	1095	1095	1092	1086	1091	1084	1074	1075	1086	1087	1084	1068	1069	1074	1052	1060	1068	1068	1069	1074	1079	1084	1085	1079	
21 Q	1092	1091	1090	1090	1084	1084	1084	1084	1086	1090	1092	1084	1053	1070	1083	1082	1071	1057	1058	1068	1074	1072	1068	1083	1078	
22	1112	1122	1086	1076	1079	1078	1080	1082	1084	1085	1083	1078	1086	1092	1082	1064	1053	1046	1056	1067	1083	1056	1083	1085	1079	
23	1084	1085	1092	1148	1123	1086	1111	1067	1028	1069	1068	1068	1070	1070	1069	1068	1059	1056	1056	1070	1076	1077	1078	1084	1078	
24 Q	1085	1084	1083	1078	1080	1082	1084	1089	1092	1091	1093	1092	1091	1090	1084	1072	1067	1070	1076	1078	1078	1076	1076	1084	1082	
25	1089	1091	1092	1085	1091	1092	1099	1096	1092	1096	1095	1092	1092	1091	1086	1078	1069	1061	1057	1059	1061	1076	1078	1086	1084	
26	1092	1088	1093	1082	1081	1083	1089	1092	1094	1095	1096	1096	1094	1092	1084	1074	1068	1060	1060	1068	1084	1080	1078	1102	1085	
27	1091	1099	1102	1096	1107	1117	1114	1085	1067	1029	1068	1060	1039	1071	1089	1086	1083	1060	1046	1041	1060	1075	1078	1071	1076	
28 Q	1078	1087	1092	1092	1092	1091	1091	1093	1100	1102	1100	1100	1097	1097	1098	1096	1091	1088	1088	1083	1076	1074	1078	1086	1090	
29	1092	1095	1096	1099	1088	1092	1092	1092	1096	1097	1098	1099	1096	1094	1092	1090	1082	1071	1071	1075	1077	1078	1083	1086	1089	
30 D	1102	1097	1096	1092	1094	1096	1093	1098	1099	1081	1100	1107	1097	1087	1092	1100	1056	1061	1100	1053	1078	1067	1100	1102	1089	
31																										
Mean	1093	1103	1092	1091	1093	1094	1088	1079	1070	1065	1069	1070	1072	1076	1076	1072	1068	1062	1062	1065	1072	1073	1079	1088	1078	

### DECLINATION

Mean values for periods of sixty minutes, Universal Time

Table 14 Meanook

D = 23° E + ...'

April 1963

Hour U. T. 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	24	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	49.9	51.0	52.2	55.6	55.1	53.4	54.7	60.7	61.9	67.9	64.3	59.7	58.9	60.7	62.4	64.6	64.8	63.5	62.0	59.0	57.0	55.1	54.5	55.2	58.5	
2	56.9	58.3	58.9	59.0	58.7	59.0	59.3	59.4	59.6	59.9	60.1	60.9	60.9	61.8	63.4	64.4	63.9	63.8	57.9	54.2	54.9	54.9	55.8	55.4	59.2	
3	56.7	57.4	58.6	58.9	61.2	62.9	61.4	63.8	62.3	59.8	60.3	60.1	60.9	61.9	63.0	65.1	65.5	64.0	61.9	59.9	56.9	54.3	52.9	53.9	60.2	
4 D	54.7	56.0	57.2	57.7	57.5	58.0	58.0	58.7	62.9	67.9	61.1	61.0	60.9	60.1	54.4	61.4	64.3	64.6	58.4	54.0	52.0	52.5	51.9	52.8	58.3	
5 D	49.0	64.9	61.6	58.0	97.2	72.8	61.6	61.4	53.6	54.1	55.2	56.0	68.1	58.3	65.9	64.1	63.9	64.8	61.1	60.2	58.2	56.3	55.0	59.1	61.7	
6 D	58.9	59.1	61.7	68.2	64.0	61.8	66.1	62.1	43.9	62.1	61.1	47.8	59.3	63.2	62.2	64.0	60.2	59.3	58.3	56.8	58.1	57.1	58.9	57.9	59.7	
7	57.4	60.0	59.6	59.2	59.0	58.9	66.4	50.9	60.1	50.1	61.9	61.2	58.5	60.9	64.4	61.9	61.2	58.9	59.2	57.0	55.8	54.9	55.1	56.0	58.7	
8	57.1	57.6	58.3	58.6	59.2	63.8	59.1	58.9	59.1	60.1	60.2	60.1	57.1	61.1	63.3	65.7	65.1	64.0	59.6	58.0	55.4	54.1	54.9	55.2	59.4	
9	57.3	58.9	60.1	60.0	73.1	61.3	58.3	53.9	57.0	58.6	60.0	59.1	62.1	62.4	64.2	66.1	64.8	60.2	57.1	56.0	55.4	54.3	54.6	55.1	59.6	
10 Q	56.8	58.0	58.7	59.1	59.3	59.1	59.9	59.9	59.2	59.3	59.8	61.1	61.8	62.3	64.5	65.0	64.1	62.6	59.8	57.4	57.2	56.8	56.1	56.2	59.8	
11 Q	56.3	57.1	57.9	58.4	58.8	58.9	59.0	59.0	58.9	60.9	65.0	61.9	63.2	63.2	64.4	65.7	64.8	63.6	63.0	60.2	57.1	54.4	53.2	53.0	59.9	
12	55.3	56.0	56.5	57.5	58.4	58.2	58.8	63.5	61.9	55.1	61.2	66.2	63.2	64.0	67.2	64.2	66.9	64.6	63.7	59.3	55.1	52.1	54.2	54.7	60.0	
13	55.3	56.2	60.3	62.2	59.7	60.2	58.9	60.1	59.1	62.6	62.1	67.4	77.4	74.5	71.1	69.3	66.2	60.2	53.5	50.0	54.2	51.5	50.2	50.2	60.5	
14 D	50.4	54.1	54.4	58.1	57.2	58.3	58.2	58.7	60.5	58.8	61.5	61.1	55.5	60.3	52.4	51.2	56.0	62.4	63.0	57.4	56.6	56.2	53.6	55.0	57.1	
15	55.5	53.1	68.6	57.7	57.6	59.3	51.5	51.0	68.9	64.9	62.2	55.2	57.4	60.7	61.0	64.2	63.0	61.3	60.2	58.2	57.2	55.5	55.4	55.2	59.0	
16	55.1	54.9	55.2	56.1	58.0	59.2	59.2	60.1	59.3	60.3	62.2	61.6	61.4	63.8	64.5	66.4	66.0	63.3	57.2	60.2	56.3	55.2	54.1	53.4	59.3	
17	53.5	53.6	65.4	58.0	57.5	59.5	59.9	60.6	61.5	59.3	58.5	61.9	64.1	65.7	66.8	66.4	67.3	63.2	57.1	53.5	53.5	53.7	53.8	54.2	59.5	
18	54.7	55.5	56.5	57.3	58.2	58.3	57.9	59.5	61.6	61.3	64.7	62.4	61.0	67.5	68.6	64.9	61.9	60.2	53.5	56.6	54.5	53.1	52.4	53.7	59.0	
19	57.6	55.6	56.4	56.0	56.4	62.5	65.0	63.3	61.7	61.0	61.0	61.6	63.4	64.0	66.7	67.5	66.4	60.5	58.6	58.5	56.1	55.0	55.0	56.3	60.3	
20	58.5	57.5	57.3	57.6	58.0	58.0	58.4	56.3	60.9	60.6	62.4	62.6	64.5	69.7	70.0	63.9	59.5	58.9	58.4	55.7	54.5	54.5	54.6	56.1	59.5	
21 Q	57.6	58.4	58.5	58.5	58.5	58.6	58.6	58.6	58.7	58.8	59.6	59.4	56.0	64.4	67.0	66.6	65.5	63.7	57.5	55.8	55.7	55.3	55.6	56.5	59.3	
22	55.0	57.9	59.5	58.5	58.0	58.2	58.4	58.2	57.5	57.9	59.1	60.4	63.7	64.4	64.7	65.2	65.0	60.5	53.5	51.3	53.8	49.1	53.5	56.0	58.3	
23	57.4	57.0	55.3	60.5	60.4	60.5	57.0	54.4	69.8	65.3	62.4	67.7	66.4	66.2	67.3	67.5	65.4	62.5	59.0	56.3	54.5	53.0	53.5	55.0	60.6	
24 Q	57.0	58.5	59.3	59.5	59.1	58.7	58.8	58.6	59.1	59.5	59.7	60.5	63.5	65.6	66.7	67.7	67.5	66.0	61.9	58.5	56.5	55.5	54.6	55.0	60.3	
25	55.4	56.8	57.1	60.5	62.6	62.6	59.8	57.5	58.3	59.3	59.9	61.5	63.3	64.3	65.2	65.4	64.3	62.7	59.4	54.3	51.6	50.4	50.1	52.1	58.9	
26	54.1	54.8	56.3	59.0	67.6	61.1	58.2	57.5	57.7	58.4	58.9	59.7	61.3	63.6	65.8	66.7	65.6	64.2	58.6	54.4	53.4	50.9	49.9	47.4	58.6	
27	49.5	47.7	54.3	53.5	53.9	58.8	58.3	60.5	61.4	63.0	68.4	62.9	63.6	70.3	68.8	73.2	70.4	65.4	62.4	49.7	50.1	53.9	54.1	54.8	59.5	
28 Q	56.2	57.4	58.3	58.3	58.4	58.6	58.9	58.9	58.7	59.3	59.5	60.5	61.8	63.7	65.8	67.4	66.5	64.2	60.4	57.7	55.4	55.4	55.4	54.9	59.6	
29	55.4	56.4	57.4	58.2	59.1	61.3	57.7	58.7	58.4	59.3	60.0	60.4	62.4	65.3	66.6	67.4	66.2	63.5	59.1	56.1	54.7	54.4	54.8	55.0	59.5	
30 D	54.9	56.3	57.7	58.1	57.7	58.1	58.2	60.0	59.3	55.4	60.3	62.6	63.5	63.7	63.4	67.5	73.3	73.7	54.4	64.0	50.1	40.4	51.2	51.3	59.0	
31																										
Mean	55.3	56.6	58.3	58.6	60.7	60.0	59.2	58.8	59.8	60.0	61.1	60.8	62.2	63.9	64.8	65.4	64.9	63.0	59.0	56.8	55.1	53.7	54.0	54.6	59.4	

**VERTICAL INTENSITY**  
**Mean values for periods of sixty minutes, Universal Time**

Table 15 Meanook

Z = 58,000  $\gamma$  +

April 1963

Hour U. T. 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	734	747	782	775	769	761	777	756	712	696	658	721	720	718	723	723	728	731	724	723	723	723	723	721	733	
2	721	722	723	722	719	718	718	718	718	718	718	718	716	715	714	712	710	710	709	710	710	714	721	722	723	716
3	731	723	721	722	724	712	700	712	695	670	702	712	712	714	716	714	711	711	710	709	710	711	712	713	711	
4 D	715	718	718	718	721	723	731	735	721	709	720	716	711	689	642	649	683	697	698	701	711	724	724	742	709	
5 D	767	736	786	772	698	643	712	701	581	571	611	630	620	690	692	703	712	728	732	732	735	737	742	754	699	
6 D	745	742	748	731	721	723	711	596	429	645	642	579	679	693	696	711	702	703	700	706	722	731	732	732	688	
7	731	733	724	731	726	728	670	584	616	523	660	669	667	689	693	690	693	713	718	721	723	724	728	732	690	
8	734	725	723	722	723	718	721	718	716	709	697	695	692	713	720	722	715	712	713	712	711	712	712	714	714	
9	718	718	719	721	701	715	711	676	682	707	711	710	713	712	714	718	715	713	720	719	719	722	721	721	712	
10 Q	716	715	716	718	718	718	718	712	712	712	713	714	712	713	715	715	716	718	718	715	718	721	721	721	716	
11 Q	716	715	714	714	714	714	714	714	715	700	690	716	716	716	715	712	711	710	712	712	713	713	714	722	713	
12	728	731	722	721	721	722	721	674	697	636	594	680	712	707	705	710	707	708	701	706	713	713	712	713	702	
13	718	722	726	733	723	721	715	712	669	539	555	530	591	647	658	668	680	681	687	693	711	715	723	750	677	
14 D	795	756	733	732	716	712	714	712	713	670	625	677	572	553	549	539	633	690	707	709	713	721	734	768	685	
15	769	800	780	755	764	758	651	609	636	638	655	629	645	669	701	712	714	720	720	721	723	720	724	727	706	
16	745	746	751	764	739	731	734	723	703	663	700	711	707	714	718	714	712	711	709	711	713	719	723	727	721	
17	740	745	758	731	728	736	741	712	709	714	694	708	711	712	713	712	708	706	705	702	707	712	720	718	719	
18	718	718	718	719	719	718	713	705	706	656	688	701	674	689	701	698	703	702	703	713	721	742	741	750	709	
19	747	724	721	732	745	689	692	670	714	746	728	722	722	720	714	712	707	712	711	713	718	723	723	723	718	
20	732	719	714	714	714	713	714	664	653	685	693	711	681	658	670	670	667	692	702	706	712	714	718	718	697	
21 Q	713	711	712	712	712	713	713	713	713	713	712	712	684	684	701	703	711	710	709	710	712	718	722	723	710	
22	736	774	754	723	716	715	715	715	714	713	712	710	712	718	718	712	706	701	701	712	733	722	729	728	721	
23	726	729	749	761	778	756	746	626	596	696	698	698	714	712	714	723	723	722	714	718	724	721	722	722	716	
24 Q	723	722	721	724	724	725	717	719	719	719	716	715	712	712	711	712	708	709	710	713	715	715	716	717	716	
25	717	721	716	717	711	704	702	710	709	711	711	710	709	706	704	704	703	706	708	713	717	719	721	711	711	
26	727	727	724	728	712	722	713	712	712	713	713	713	713	714	712	711	710	709	706	708	711	722	724	727	716	
27	730	725	724	734	749	764	756	714	701	616	624	636	626	652	695	699	700	697	698	702	714	724	721	716	700	
28 Q	721	719	715	713	713	713	713	713	712	713	714	712	713	713	713	712	710	712	709	710	712	713	719	719	713	
29	718	715	714	716	724	727	722	715	714	714	714	714	712	711	711	710	709	708	704	703	704	711	714	715	713	
30 D	714	714	715	714	714	715	718	717	714	689	687	707	705	696	692	696	682	682	682	692	735	704	713	714	704	
31																										
Mean	732	729	732	729	725	721	716	695	683	676	682	689	688	695	698	699	702	707	708	710	716	719	722	726	708	

## DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 16 Meanook

April 1963

Day	Horizontal Intensity					Declination					Vertical Intensity								
	Maximum		Minimum		Range	Maximum		Minimum		Range	Maximum		Minimum		Range				
	12,000 $\gamma$ +		12,000 $\gamma$ +			23° E +		23° E +			58,000 $\gamma$ +		58,000 $\gamma$ +						
	h.	m.	$\gamma$	h.	m.	$\gamma$	h.	m.	'	h.	m.	'	h.	m.	$\gamma$	h.	m.	$\gamma$	
1	05	47	1265	08	50	983	09	23	77.5	06	01	29.5	05	01	810	10	02	550	260
2	02	34	1099	18	08	1037	15	48	67.6	21	14	52.8	23	59	732	19	09	701	31
3	10	18	1103	18	00	1057	05	12	67.9	22	36	52.6	00	27	734	08	56	641	93
4 D	23	17	1173	14	48	999	09	11	72.9	21	42	47.8	23	17	763	15	05	596	167
5 D	01	27	1583	08	24	807	04	38	130.3	00	58	39.1	01	02	841	08	25	484	357
6 D	08	05	1126	11	16	756	03	14	82.7	08	39	15.8	02	47	765	08	29	301	464
7	07	30	1150	09	35	951	06	29	75.3	07	43	40.0	23	10	755	09	26	460	295
8	01	03	1111	12	03	1013	15	59	68.1	12	04	48.1	00	16	752	12	05	649	103
9	04	37	1108	17	34	1021	04	18	83.1	08	00	49.6	04	13	742	08	13	649	93
10 Q	07	55	1096	17	54	1045	14	46	66.0	22	58	55.1	23	36	729	08	11	700	29
11 Q	23	22	1105	20	32	1050	10	39	67.1	23	17	52.0	23	11	725	10	26	676	49
12	07	37	1145	10	02	994	14	28	68.7	09	41	49.2	01	11	735	10	03	529	206
13	23	28	1116	09	51	790	12	35	82.8	23	27	47.5	23	58	756	09	41	466	290
14 D	00	56	1158	15	05	872	17	36	66.7	15	13	30.3	00	38	818	15	04	489	329
15	02	06	1183	07	06	427	06	49	85.9	06	43	11.8	02	06	850	07	06	493	357
16	01	44	1115	08	58	1049	16	04	67.7	03	03	51.6	03	14	775	09	03	625	150
17	07	50	1116	17	58	1038	02	27	72.5	01	25	52.4	02	58	777	08	01	657	120
18	23	55	1137	09	35	1024	14	21	71.5	18	32	48.7	23	56	777	09	35	599	178
19	05	14	1247	16	37	1028	05	22	80.2	05	36	44.7	05	14	812	05	34	582	230
20	00	29	1128	07	03	1009	14	11	74.4	07	29	51.4	00	27	750	07	58	582	168
21 Q	23	59	1114	12	27	1035	14	40	68.6	12	32	53.1	23	59	734	12	55	658	76
22	01	33	1142	17	46	1038	01	32	69.6	19	36	46.5	01	53	804	11	27	701	103
23	03	30	1311	07	35	973	08	13	79.8	07	38	36.5	04	28	811	07	50	528	283
24 Q	10	26	1099	16	28	1060	17	01	69.5	22	52	53.7	07	07	723	18	04	701	22
25	06	41	1107	19	04	1052	04	07	70.4	22	18	48.5	03	26	723	05	20	691	32
26	03	52	1114	16	58	1053	04	15	76.2	23	47	46.0	03	54	756	04	36	696	60
27	06	08	1147	09	46	980	15	35	77.4	19	43	43.5	06	08	787	09	45	540	247
28 Q	11	03	1109	21	03	1063	16	03	69.4	21	00	53.5	00	01	725	19	17	702	23
29	03	50	1122	17	50	1061	15	34	68.6	21	04	53.4	05	17	740	20	23	699	41
30 D	23	05	1153	19	37	1009	16	45	80.4	21	03	62.4	20	36	760	10	11	663	97
31																			
Mean			1156			976			75.3			45.6			765			600	165
No. days			30			30			30			30			30			30	30

**HORIZONTAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 17 Meanook

H = 12,000  $\gamma$  +

May 1963

Hour U. T. 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	24	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	1072	1095	1283	1288	1156	1088	1024	869	761	787	887	1004	990	1036	1061	1072	1031	1048	1083	1081	1078	1081	1075	1111	1044	
2 D	1110	1115	1109	1085	1097	1054	1020	1112	1099	884	958	960	1067	1067	1059	1073	1073	1071	1081	1081	1088	1090	1091	1099	1064	
3	1136	1123	1105	1103	1099	1098	1030	1091	1091	1091	1075	1073	1053	1043	1083	1073	1057	1043	1052	1063	1063	1084	1134	1104	1082	
4 D	1155	1143	1092	1080	1087	1020	895	912	746	738	967	1077	1102	1074	1067	1054	1051	1055	1060	1068	1071	1074	1101	1106	1034	
5	1103	1085	1088	1099	1089	1091	1053	1046	1065	1045	1042	1078	1075	1083	1094	1080	1066	1058	1062	1069	1073	1083	1082	1091	1075	
6	1098	1083	1097	1106	1076	1091	1089	1085	1082	1080	1091	1085	1090	1085	1080	1074	1068	1059	1055	1068	1067	1075	1083	1088	1081	
7	1091	1092	1084	1084	1084	1085	1095	1099	1100	1078	1028	1091	1088	1089	1101	1091	1078	1067	1054	1060	1065	1071	1081	1104	1081	
8	1100	1096	1111	1101	1094	1093	1090	1090	962	1035	1097	1091	1087	1078	1065	1074	1073	1067	1062	1075	1077	1084	1078	1088	1078	
9	1093	1102	1114	1100	1097	1113	1026	1080	1079	1047	1048	1073	1040	1071	1081	1077	1076	1059	1058	1052	1045	1073	1084	1075	1073	
10	1091	1115	1112	1101	1079	1091	1090	1096	1066	1062	1155	1079	1094	1067	1062	1062	1061	1068	1056	1059	1090	1091	1106	1107	1086	
11	1140	1157	1249	1120	1093	1091	1081	1058	1057	990	1051	1059	990	1044	1067	1070	1066	1063	1058	1062	1059	1085	1079	1106	1079	
12	1115	1110	1093	1091	1090	1095	1045	1052	1061	1096	1085	1092	1083	1085	1067	1077	1093	1077	1075	1076	1070	1076	1077	1096	1082	
13 D	1117	1123	1121	1104	1287	1019	1093	1051	965	908	983	674	975	1071	1076	1085	1091	1081	1074	1075	1085	1097	1118	1125	1059	
14	1135	1098	1130	1128	1135	1123	839	1014	936	867	998	1020	1063	1099	1102	1095	1081	1071	1067	1075	1075	1085	1082	1089	1059	
15	1085	1091	1098	1092	1082	1081	1040	1065	1088	1094	1083	1082	1075	1083	1082	1079	1069	1068	1065	1070	1084	1095	1094	1079	1080	
16 Q	1102	1118	1098	1084	1086	1087	1090	1091	1087	1085	1088	1091	1096	1098	1091	1090	1083	1073	1067	1073	1075	1082	1083	1097	1088	
17	1099	1097	1095	1091	1091	1091	1088	1091	1097	1096	1063	1075	1099	1097	1114	1120	1108	1083	1075	1070	1068	1073	1085	1095	1090	
18 Q	1095	1097	1094	1088	1091	1089	1091	1093	1094	1095	1099	1097	1099	1099	1099	1095	1088	1077	1069	1072	1077	1079	1086	1089	1090	
19	1028	1090	1091	1093	1095	1097	1098	1094	1091	1095	1099	1099	1098	1105	1106	1097	1072	1068	1085	1101	1110	1112	1128	1153	1099	
20	1176	1118	1140	1106	1103	1093	1084	1082	1091	1091	1091	1092	1091	1095	1095	1089	1072	1062	1069	1081	1087	1088	1096	1101	1095	
21	1112	1091	1087	1083	1087	1088	1091	1092	1096	1099	1100	1101	1104	1103	1095	1083	1064	1044	1052	1068	1075	1083	1095	1106	1088	
22 Q	1102	1100	1097	1092	1093	1092	1092	1092	1089	1097	1100	1100	1099	1093	1100	1094	1077	1063	1052	1055	1064	1078	1088	1098	1088	
23 Q	1104	1102	1098	1093	1092	1092	1096	1100	1096	1092	1097	1102	1111	1107	1100	1089	1078	1066	1067	1078	1085	1082	1084	1092	1092	
24 Q	1100	1100	1101	1097	1096	1095	1093	1092	1090	1092	1092	1092	1094	1100	1104	1100	1092	1080	1075	1084	1085	1096	1100	1106	1094	
25	1111	1122	1104	1107	1111	1112	1115	1116	1123	1117	1110	1101	1092	1075	1090	1091	1083	1076	1076	1071	1078	1087	1082	1107	1098	
26	1124	1122	1126	1108	1102	1100	1087	1088	1090	1091	1089	1088	1092	1096	1101	1102	1084	1070	1056	1055	1065	1078	1094	1100	1092	
27	1110	1108	1095	1093	1092	1092	1092	1094	1092	1092	1092	1090	1092	1104	1101	1092	1091	1089	1081	1079	1082	1086	1093	1122	1094	
28	1105	1117	1131	1192	1138	1107	1089	1015	866	886	902	974	1089	1110	1111	1100	1088	1074	1063	1067	1081	1092	1107	1114	1068	
29 D	1114	1121	1145	1278	1147	1060	686	1037	1100	1089	1083	1091	1074	1074	1103	1098	1084	1076	1068	1079	1085	1094	1100	1097	1082	
30	1106	1110	1115	1117	1113	1069	896	1094	1092	1087	1071	1077	1107	1111	1107	1096	1084	1078	1068	1077	1091	1090	1093	1098	1086	
31	1107	1101	1095	1088	1084	1096	1092	1089	1088	1089	1054	1062	1045	1041	1082	1080	1066	1060	1056	1071	1082	1100	1088	1103	1080	
Mean	1110	1107	1116	1113	1105	1087	1045	1067	1046	1035	1057	1060	1076	1083	1088	1085	1075	1067	1066	1071	1077	1085	1092	1102	1080	

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 18 Meanook

D = 23° E + ...'

May 1963

Hour U. T. 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 D	53.3	55.1	49.8	64.2	60.2	57.3	63.1	55.5	40.8	56.3	61.1	64.4	62.9	65.2	66.3	63.4	59.2	54.2	56.7	58.2	56.7	56.0	55.9	55.8	58.0
2 D	55.1	62.5	62.3	61.3	67.3	70.3	59.0	63.3	59.3	46.4	53.0	65.4	60.6	64.3	67.9	69.2	67.3	65.1	61.3	57.3	56.5	56.4	57.5	55.6	61.0
3	52.5	52.3	57.1	56.2	58.3	61.6	61.3	74.2	60.3	58.9	57.4	59.3	59.4	61.0	64.9	66.5	66.3	61.1	57.4	57.5	54.2	54.5	55.2	53.3	59.2
4 D	55.9	61.2	57.0	58.9	60.2	60.7	52.3	47.7	66.3	61.4	59.5	57.9	63.2	65.7	65.3	63.6	61.9	64.1	62.1	59.3	56.2	56.1	58.0	59.3	59.7
5	58.4	57.2	57.3	70.1	69.4	61.2	57.1	48.3	61.5	57.2	52.3	57.2	58.6	62.7	65.4	65.3	65.2	63.1	58.3	56.5	54.9	54.1	53.4	53.9	59.1
6	54.8	55.9	61.4	63.7	73.9	61.3	60.6	61.7	55.1	54.7	58.7	60.7	62.4	63.4	63.5	65.9	64.3	62.3	60.6	58.1	55.2	53.0	52.3	53.3	59.9
7	54.4	55.8	56.6	57.1	57.4	59.6	60.1	58.8	57.8	58.1	54.3	61.0	64.4	67.2	68.5	66.4	65.6	63.8	61.1	57.6	55.1	53.2	52.5	52.3	59.1
8	52.4	55.1	54.3	57.5	58.9	60.2	58.3	59.1	48.4	56.5	63.9	62.4	64.1	64.9	64.0	65.8	65.4	64.3	61.5	58.9	55.7	54.8	53.5	53.4	58.9
9	54.7	54.3	55.1	62.4	56.3	56.4	61.4	67.8	61.9	60.8	65.7	62.1	61.5	62.8	68.6	69.8	67.3	65.1	62.2	57.9	51.7	53.2	53.2	53.2	60.2
10	54.2	53.2	55.4	55.3	53.1	55.3	66.4	61.3	54.6	60.6	50.2	58.2	63.1	64.9	65.8	65.1	63.7	62.4	60.5	53.2	50.8	51.2	50.2	49.3	57.4
11	49.9	50.2	58.9	58.1	61.4	59.3	56.3	55.1	60.7	49.9	58.2	59.7	59.1	58.0	68.0	70.2	69.2	65.1	61.3	55.9	52.3	52.6	50.2	48.9	57.8
12	49.2	51.3	54.1	54.4	56.2	57.3	46.2	58.1	59.2	58.2	58.3	58.2	57.3	61.9	68.2	70.1	66.7	67.1	64.3	55.2	54.1	51.7	51.1	52.3	57.5
13 D	52.2	56.4	56.5	54.0	51.8	41.2	61.3	60.2	47.7	59.5	62.2	38.2	57.2	63.4	65.1	66.4	65.2	65.2	64.1	61.7	59.2	57.2	57.2	54.2	57.3
14	52.4	50.0	57.7	65.1	66.1	60.2	54.4	60.2	65.0	57.2	66.0	57.7	61.9	64.1	68.1	69.2	68.6	65.5	63.0	58.4	54.6	53.9	53.1	53.5	60.2
15	53.2	55.2	56.2	58.6	62.8	73.2	60.3	58.0	57.6	57.5	57.0	58.2	58.9	63.2	65.0	65.1	65.9	61.3	58.9	54.0	53.3	52.9	51.2	52.2	58.7
16 Q	52.5	58.2	58.1	57.4	58.3	57.3	57.2	55.8	54.9	56.2	57.3	59.2	62.1	64.2	65.2	66.0	65.3	64.1	59.9	55.0	52.5	51.8	51.3	52.2	58.0
17	53.1	55.3	57.2	58.1	57.4	57.9	59.7	58.1	56.7	56.2	53.9	60.5	66.2	68.2	72.2	71.4	69.9	68.3	63.6	58.1	56.2	53.7	53.1	54.1	60.0
18 Q	56.2	57.2	58.3	58.2	57.2	57.0	57.4	58.0	57.9	57.4	57.3	59.6	61.9	63.9	67.2	68.2	64.9	61.9	60.2	56.1	53.9	53.8	54.2	55.0	58.9
19	55.7	56.3	56.3	56.9	57.3	57.9	57.4	59.6	61.6	58.1	58.2	59.0	62.7	66.4	66.7	68.4	66.5	62.2	55.7	55.1	54.8	52.5	51.5	52.3	58.7
20	50.2	55.0	60.2	66.2	64.2	59.2	57.3	60.1	56.2	55.9	56.8	59.2	62.5	65.5	67.2	67.1	65.3	63.9	61.0	56.4	54.3	53.1	53.0	53.4	59.3
21	55.2	56.2	56.0	56.2	57.1	57.2	56.7	57.2	57.2	57.4	58.5	60.3	62.9	65.2	67.0	66.2	65.1	64.0	58.1	52.2	46.4	46.7	49.9	53.2	57.6
22 Q	55.2	55.7	56.1	56.2	56.6	56.7	56.7	57.2	57.2	58.4	59.1	61.2	64.0	66.4	68.2	67.6	65.6	63.2	58.2	53.5	50.4	49.2	50.4	53.3	58.2
23 Q	56.0	57.1	57.1	56.7	56.5	56.5	56.4	57.6	56.7	57.3	59.6	62.1	66.1	67.4	68.2	67.3	65.1	62.2	57.6	54.9	54.1	53.4	54.2	54.3	58.9
24 Q	54.5	55.1	55.2	56.2	57.2	57.1	56.8	56.6	57.3	58.2	59.2	61.3	62.6	64.7	66.2	65.5	64.4	61.2	56.4	55.9	54.2	52.2	51.9	52.9	58.0
25	53.2	53.5	55.2	55.5	55.2	55.2	56.3	57.3	57.6	58.2	60.3	58.2	67.5	68.0	73.2	68.2	67.4	62.4	58.7	54.4	52.2	52.2	51.1	50.9	57.4
26	50.3	50.5	53.4	54.1	60.2	61.1	61.2	59.8	58.7	58.6	60.2	59.8	62.2	65.2	66.5	66.8	67.9	63.2	59.1	54.2	52.3	52.5	52.0	50.9	58.4
27	53.0	55.1	57.3	57.1	57.2	61.9	57.0	57.7	56.2	57.0	56.9	59.3	62.1	64.2	65.9	67.2	64.8	63.0	59.3	54.4	52.3	50.5	51.2	50.4	58.0
28	51.5	54.2	57.2	66.0	60.5	59.7	56.3	61.8	40.3	61.4	62.9	68.2	62.3	67.8	71.6	70.6	70.2	64.5	59.1	54.4	51.3	51.0	52.7	53.2	59.5
29 D	54.7	56.2	56.7	72.2	61.3	62.0	57.2	61.1	58.0	57.3	55.4	57.3	61.2	62.6	64.3	65.5	64.2	61.9	59.3	53.2	52.2	52.2	53.5	53.9	58.9
30	55.5	56.0	63.2	60.4	63.7	66.7	67.2	58.6	57.1	56.9	56.2	56.1	61.1	63.5	64.1	63.0	61.4	60.9	61.2	55.3	54.8	54.5	55.0	55.1	59.5
31	55.1	55.2	56.3	56.5	56.2	59.6	65.0	61.0	58.3	53.1	56.3	62.2	61.7	59.4	65.0	67.0	63.9	60.2	57.2	57.1	57.0	52.2	48.5	49.4	58.1
Mean	53.7	55.2	56.9	59.4	59.6	59.2	58.5	58.9	56.7	57.1	58.2	59.5	62.0	64.3	66.8	67.0	65.6	63.0	59.9	56.1	53.8	53.0	52.8	53.0	58.8

**VERTICAL INTENSITY**  
**Mean values for periods of sixty minutes, Universal Time**

Table 19 Meanook

$z = 58,000 \gamma +$

May 1963

Hour U. T. 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 D	703	720	629	713	701	695	625	496	382	422	455	617	596	685	694	690	678	683	703	711	722	730	733	748	647
2 D	745	776	757	740	725	617	564	703	716	481	437	533	696	713	714	724	717	738	731	730	731	735	744	745	688
3	747	750	760	741	742	730	672	703	701	710	704	703	707	690	716	716	720	718	712	715	724	736	770	749	723
4 D	768	767	758	742	747	613	567	582	347	435	621	691	714	707	703	704	703	714	734	736	735	738	758	757	684
5	768	751	746	754	728	740	632	583	598	588	586	699	705	712	717	715	715	717	721	725	730	736	736	734	701
6	732	727	745	759	692	731	734	712	699	689	710	715	724	721	715	717	722	722	710	713	721	725	725	726	721
7	726	725	723	723	723	723	710	712	711	693	618	691	704	700	714	715	714	712	709	714	717	721	724	737	711
8	749	748	746	762	727	744	711	714	528	608	699	712	708	715	706	705	712	711	706	710	715	723	735	732	710
9	736	730	736	748	729	737	570	639	689	598	620	683	667	704	723	724	725	726	716	721	718	734	749	748	703
10	742	751	766	777	748	737	725	716	703	679	634	670	718	702	691	684	686	715	726	723	732	737	750	758	719
11	781	789	714	789	651	725	701	640	629	531	579	616	597	694	704	716	720	717	716	718	724	737	738	754	696
12	751	762	746	741	738	727	613	627	636	701	694	705	705	706	691	709	716	712	706	711	724	738	746	747	711
13 D	763	804	792	775	640	597	718	668	595	534	608	490	616	690	717	731	738	735	727	724	739	749	768	770	696
14	789	756	771	744	795	756	517	623	625	537	545	586	679	718	735	732	728	726	722	727	727	731	738	741	698
15	727	722	724	730	737	724	640	655	702	715	716	707	705	716	716	716	716	715	714	713	724	726	727	727	713
16 Q	736	759	736	724	718	717	716	712	711	705	716	718	719	719	717	715	712	711	706	714	716	718	718	722	719
17	722	724	718	718	718	717	718	717	718	706	633	628	685	693	705	703	702	701	705	706	715	723	726	725	705
18 Q	725	724	722	718	716	714	715	716	714	715	713	711	716	705	705	704	702	692	694	699	706	707	710	712	711
19	714	712	712	711	711	712	714	718	709	715	713	716	710	709	709	705	699	694	694	697	709	728	749	788	714
20	829	798	799	770	801	759	736	711	727	725	726	727	719	717	719	724	719	716	717	717	717	717	717	720	739
21	727	720	720	720	720	720	720	724	720	717	717	717	717	717	715	712	709	709	707	709	711	712	713	714	716
22 Q	715	713	711	711	714	716	717	715	695	693	706	710	706	701	703	707	707	706	705	707	712	716	716	716	710
23 Q	716	714	712	710	710	710	710	706	705	679	700	698	707	710	704	695	694	694	685	690	695	701	706	707	702
24 Q	707	705	705	706	706	706	706	706	706	706	706	706	706	706	706	705	702	698	692	692	695	701	703	705	704
25	704	706	703	703	701	701	706	706	707	703	706	697	678	661	663	678	688	687	688	688	694	706	715	728	697
26	748	764	774	782	758	707	712	714	708	701	709	710	716	716	717	717	712	706	702	700	702	706	718	730	723
27	739	728	726	719	723	712	711	712	705	705	708	714	713	717	715	712	707	708	705	701	701	706	723	739	715
28	751	741	756	836	801	772	730	615	459	391	487	582	686	718	720	715	709	706	705	707	718	722	727	731	687
29 D	738	739	772	739	730	654	486	600	707	709	702	718	692	686	719	718	714	716	707	713	712	718	719	721	701
30	732	740	764	758	704	663	509	707	720	709	672	675	713	718	717	715	716	716	717	716	715	717	718	718	706
31	718	716	714	709	711	715	713	707	696	669	644	640	650	647	682	696	708	717	707	718	726	762	751	737	702
Mean	740	741	738	741	725	710	668	676	658	642	651	674	692	703	709	711	710	711	710	712	717	725	731	736	705



## DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 20 Meanook

May 1963

Day	Horizontal Intensity					Declination					Vertical Intensity				
	Maximum 12,000 $\gamma$ +		Minimum 12,000 $\gamma$ +		Range $\gamma$	Maximum 23° E +		Minimum 23° E +		Range '	Maximum 58,000 $\gamma$ +		Minimum 58,000 $\gamma$ +		Range $\gamma$
	h. m.	$\gamma$	h. m.	$\gamma$		h. m.	'	h. m.	'		h. m.	$\gamma$	h. m.	$\gamma$	
1 D	03 08	1469	08 34	671	798	09 34	80.4	08 53	24.0	56.4	23 47	765	09 15	258	507
2 D	01 00	1174	09 54	738	436	11 31	82.3	09 23	36.0	46.3	01 23	796	09 44	605	191
3	00 56	1199	06 25	981	218	07 14	85.4	23 48	48.8	36.6	22 52	794	06 20	612	182
4 D	00 43	1186	09 02	455	731	08 36	84.3	07 26	21.2	63.1	01 27	812	08 53	788	24
5	02 50	1128	07 00	972	156	03 31	81.5	07 05	40.2	41.3	03 17	816	07 12	498	318
6	03 54	1143	04 08	1030	113	03 57	98.4	09 01	45.2	53.2	03 55	817	08 06	656	161
7	23 44	1129	10 08	965	164	13 54	70.4	10 05	40.6	29.8	23 47	746	10 10	570	176
8	01 02	1141	08 24	856	285	10 11	67.9	08 20	32.8	35.1	03 12	776	08 21	415	361
9	06 15	1197	06 35	881	316	06 58	78.2	06 23	42.7	35.5	03 14	763	06 23	451	312
10	06 31	1169	10 50	957	212	06 36	78.6	10 43	42.2	36.4	03 22	788	10 46	550	238
11	02 23	1471	09 39	921	550	04 05	94.1	09 25	39.7	54.4	03 58	879	09 41	445	434
12	01 01	1143	06 52	990	153	15 26	72.3	06 33	37.2	35.1	01 07	769	08 04	540	229
13 D	04 43	1679	11 08	510	1169	04 39	105.3	05 16	6.4	98.9	04 19	957	05 11	322	635
14	05 20	1207	06 31	623	584	10 05	80.4	06 17	26.3	54.1	04 37	838	06 30	328	510
15	01 25	1117	06 56	963	154	05 40	79.5	07 05	42.2	37.3	00 01	742	06 54	532	210
16 Q	01 38	1130	17 58	1062	68	15 47	67.2	21 28	50.4	16.8	01 31	777	08 36	701	76
17	15 35	1125	10 29	1048	77	14 45	73.8	10 14	50.4	23.4	00 24	728	10 42	589	139
18 Q	12 42	1113	17 56	1068	45	15 03	69.4	21 12	52.9	16.5	12 05	722	17 37	686	36
19	13 35	1114	17 09	1052	62	15 16	71.1	22 57	50.0	21.1	23 59	819	18 05	685	134
20	02 53	1216	17 56	1055	161	03 03	75.7	00 23	47.7	28.0	02 45	835	07 14	694	141
21	00 16	1122	17 33	1036	86	13 55	68.3	21 36	44.6	23.7	04 23	747	17 22	687	60
22 Q	04 03	1110	16 29	1047	63	14 18	69.3	21 07	48.1	21.2	06 07	720	08 47	669	51
23 Q	12 43	1116	17 54	1060	56	15 03	69.4	08 54	51.7	17.7	08 35	714	09 24	660	54
24 Q	23 59	1111	18 00	1071	40	15 24	67.3	22 26	51.2	16.1	00 27	714	19 12	688	26
25	01 40	1144	19 47	1055	89	14 16	79.2	23 56	49.6	29.6	23 57	739	13 58	641	98
26	01 58	1138	18 50	1046	92	16 02	69.1	01 04	47.2	21.9	08 32	792	06 23	685	107
27	23 56	1154	20 35	1075	79	15 25	69.2	20 56	48.3	20.9	23 36	751	09 31	695	56
28	03 25	1285	08 22	712	573	09 49	113.0	08 16	24.7	88.3	03 21	897	08 13	241	656
29 D	03 10	1395	06 24	466	929	09 58	80.4	06 11	24.7	55.7	02 58	806	16 20	307	499
30	04 07	1215	06 25	627	588	06 02	99.4	06 23	43.0	56.4	02 19	805	06 20	282	523
31	21 43	1129	12 50	1000	129	15 11	72.1	22 58	46.3	25.8	21 43	774	10 40	617	157
Mean		1199		903	296		79.1		40.5	38.6		787		552	235
No. days		31		31	31		31		31	31		31		31	31

**HORIZONTAL INTENSITY**  
Mean values for periods of sixty minutes, Universal Time

Table 21 Meanook

H = 12000  $\gamma$  +

June 1963

Day	Hour U. T.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	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		1118	1111	1101	1105	1089	1101	1098	1100	1085	1029	734	977	1104	1123	1114	1099	1073	1073	1063	1064	1076	1084	1089	1100	1071		
2		1122	1119	1114	1092	1099	1076	1092	1091	1100	1100	1099	1082	1013	1077	1078	1068	1087	1068	1064	1064	1068	1078	1093	1107	1086		
3		1108	1101	1108	1091	1093	1085	1081	1093	1101	1101	1089	1080	1099	1099	1097	1093	1091	1077	1072	1072	1085	1090	1090	1107	1092		
4	Q	1101	1096	1095	1090	1089	1089	1089	1090	1060	1101	1108	1102	1103	1108	1101	1095	1091	1081	1071	1061	1068	1072	1088	1094	1105	1090	
5	Q	1105	1101	1095	1089	1093	1085	1087	1090	1093	1097	1101	1105	1112	1115	1112	1101	1082	1064	1048	1050	1065	1087	1097	1108	1091		
6		1112	1111	1108	1105	1101	1100	1103	1103	1107	1109	1113	1120	1127	1124	1126	1122	1101	1087	1073	1057	1083	1097	1120	1240	1110		
7	D	1679	1701	1363	1386	1209	1137	817	941	921	844	945	975	1002	998	1073	1010	1045	1046	1048	1080	1079	1102	1120	1100	1109		
8		1108	1110	1090	1084	1079	1081	1081	1079	1079	1015	970	1052	1086	1084	1086	1089	1072	1065	1065	1063	1055	1092	1152	1148	1079		
9		1155	1181	1142	1099	1101	1075	1088	1085	996	983	1030	995	1072	1092	1078	1079	1070	1072	1069	1072	1078	1085	1095	1098	1079		
10		1112	1116	1097	1086	1085	1086	1085	1090	1090	1071	1050	1079	1087	1090	1092	1084	1072	1068	1064	1069	1072	1070	1085	1094	1083		
11		1104	1110	1102	1101	1100	1102	1094	1096	1098	1098	1097	1088	1086	1096	1098	1102	1095	1078	1072	1077	1088	1100	1094	1105	1095		
12		1109	1113	1109	1091	1095	1094	1086	1092	1096	1103	1088	1093	1110	1110	1101	1088	1073	1062	1064	1073	1085	1094	1109	1117	1094		
13		1124	1114	1110	1102	1094	1094	1094	1096	1093	1076	1048	1054	1089	1106	1113	1116	1102	1073	1062	1065	1070	1082	1092	1106	1091		
14		1070	1099	1102	1094	1092	1094	1094	1094	1100	1102	1084	1075	1084	1102	1101	1110	1115	1098	1086	1086	1091	1093	1098	1116	1097		
15		1127	1102	1105	1108	1116	1044	1064	1100	1097	1099	1101	1109	1106	1098	1086	1081	1074	1080	1085	1086	1094	1073	1101	1099	1093		
16	Q	1101	1103	1099	1095	1091	1095	1095	1095	1095	1099	1101	1100	1103	1103	1101	1088	1077	1072	1074	1077	1080	1094	1103	1121	1094		
17		1126	1095	1091	1096	1089	1100	1103	1095	1012	1033	1041	1041	1019	942	945	1028	1034	1054	1075	1076	1095	1105	1114	1125	1064		
18	D	1105	1110	1118	1154	1188	1132	1110	1063	1110	1107	1096	1089	1048	1006	1070	1059	1040	1018	1032	1063	1100	1108	1146	1197	1095		
19		1145	1108	1134	1136	1098	1083	1079	1073	1086	1093	1094	1094	1093	1085	1090	1098	1080	1073	1069	1070	1079	1071	1087	1121	1094		
20		1141	1275	1301	1141	1102	1103	1043	875	906	865	742	969	1102	1088	1094	1090	1088	1086	1087	1081	1087	1090	1102	1118	1065		
21		1120	1118	1109	1110	1094	1087	1084	1084	1038	1055	1094	1102	1110	1116	1116	1102	1091	1081	1071	1071	1078	1081	1081	1089	1091		
22	Q	1102	1110	1098	1102	1110	1094	1094	1081	1094	1094	1094	1090	1094	1101	1099	1094	1083	1069	1057	1058	1059	1071	1083	1082	1088		
23	Q	1095	1102	1094	1102	1098	1101	1094	1096	1095	1079	1086	1099	1102	1103	1102	1102	1094	1087	1073	1072	1069	1075	1097	1108	1093		
24		1115	1115	1101	1103	1107	1099	1100	1101	1103	1100	1101	1094	1101	1103	1080	1079	1100	1107	1093	1080	1070	1068	1093	1111	1097		
25	D	1103	1135	1103	1170	1243	1144	879	973	1054	921	1060	1077	1101	1070	1100	1130	1109	1095	1080	1092	1105	1068	1144	1195	1089		
26	D	1209	1448	1158	1147	1081	1101	1079	750	915	1086	1116	1109	1103	1101	1092	1107	1098	1086	1085	1074	1086	1086	1097	1101	1097		
27	D	1107	1108	1149	1124	1045	1085	1092	917	972	1081	984	1030	1061	1092	1104	1114	1100	1078	1067	1053	1061	1078	1115	1101	1072		
28		1124	1116	1107	1102	1100	1093	1114	1048	873	1023	1103	1110	1085	1084	1068	1103	1096	1069	1070	1085	1074	1092	1092	1097	1081		
29		1099	1104	1109	1091	1093	1094	1105	1083	1093	1101	1106	1107	1108	1103	1100	1069	1078	1077	1068	1069	1078	1089	1091	1102	1092		
30		1116	1117	1100	1093	1100	1069	1052	1069	1045	1085	1038	1066	1061	1084	1092	1102	1080	1075	1053	1061	1072	1076	1104	1103	1080		
31																												
Mean		1135	1148	1124	1116	1106	1094	1073	1054	1055	1059	1050	1072	1085	1086	1090	1090	1082	1074	1068	1070	1078	1085	1103	1118	1088		

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 22 Meanook

D = 23° E + ...'

June 1963

Hour U. T. 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	24	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	53.7	56.2	58.9	57.7	60.8	59.4	59.9	56.4	57.3	71.4	62.7	83.8	69.0	69.0	70.2	65.7	62.9	58.4	55.4	53.9	53.2	52.9	52.6	53.4	60.6	
2	55.3	56.5	59.0	65.2	62.2	59.4	59.2	58.9	57.4	56.9	55.7	59.3	58.9	63.4	65.9	68.8	67.6	64.2	57.9	54.0	54.0	52.0	52.8	54.2	59.1	
3	55.1	55.4	57.5	59.2	62.7	59.7	64.9	61.8	61.6	55.6	57.4	60.8	59.2	63.1	66.2	65.3	64.2	60.1	57.9	55.1	53.9	54.1	53.9	53.0	59.1	
4 Q	53.8	55.1	56.2	57.2	57.2	57.3	55.7	56.6	56.2	57.4	58.1	59.3	61.6	63.8	65.2	67.3	66.1	62.1	58.2	54.3	52.4	52.1	52.2	53.3	57.9	
5 Q	56.1	57.4	57.7	57.3	57.1	57.1	57.1	57.0	57.2	57.3	58.1	59.3	62.3	64.6	66.6	67.2	64.3	60.6	56.5	53.5	52.3	52.2	53.0	54.1	58.2	
6	56.0	56.3	55.7	55.9	56.2	56.4	56.2	56.2	58.2	58.5	59.0	61.1	64.1	65.3	70.2	70.3	70.0	72.2	71.2	73.2	62.6	45.4	48.3	49.2	60.3	
7 D	37.7	16.7	27.3	10.8	55.5	52.0	42.9	41.1	58.3	42.6	50.5	61.4	65.4	70.5	70.6	70.2	67.8	64.5	58.0	56.4	53.3	52.5	57.5	53.5	51.6	
8	54.4	56.0	57.0	56.4	55.4	60.4	66.8	60.8	64.5	62.7	63.5	64.2	63.3	66.9	69.9	57.5	68.4	65.5	62.6	57.0	50.5	51.8	53.6	53.5	60.5	
9	50.5	55.5	55.0	55.5	58.5	58.1	57.3	58.3	50.8	49.6	51.5	49.0	56.0	63.5	65.7	68.0	67.3	63.5	61.4	55.5	51.9	51.1	53.3	55.2	56.8	
10	57.5	57.9	56.6	55.5	55.5	57.5	55.5	56.3	57.2	56.5	52.7	62.0	63.5	65.9	68.8	68.9	66.6	60.6	60.2	57.4	52.5	49.5	46.2	49.7	58.0	
11	51.6	55.5	59.6	57.1	55.6	68.5	56.0	55.3	55.9	55.8	57.4	58.1	60.9	63.5	64.5	68.0	70.2	62.3	60.4	57.5	50.4	49.6	49.5	49.7	58.2	
12	51.6	54.5	55.6	59.5	58.7	56.4	54.6	57.4	56.0	57.5	55.5	57.7	61.6	65.3	65.5	66.0	65.5	61.2	56.5	52.0	47.6	47.9	48.7	49.7	56.8	
13	49.4	51.2	54.7	53.5	53.9	53.5	53.8	56.8	55.8	57.0	60.7	61.3	68.4	67.9	68.5	68.7	68.1	67.2	61.0	55.6	52.0	50.9	50.9	52.5	58.1	
14	54.9	57.7	56.7	56.6	56.7	56.7	56.7	57.0	57.8	58.0	55.7	57.8	58.7	62.3	61.9	64.7	65.2	63.4	60.9	58.4	57.2	54.7	54.3	53.2	58.2	
15	54.2	58.3	61.2	58.7	59.2	62.7	70.7	65.2	65.6	60.4	60.0	61.0	65.2	66.7	69.4	68.9	66.1	61.2	56.7	54.7	54.5	49.9	51.7	52.7	60.6	
16 Q	57.8	59.5	60.5	60.3	60.3	60.2	60.0	60.1	60.1	60.1	60.7	62.6	65.1	66.2	67.1	68.1	69.1	63.4	59.4	54.0	54.1	55.2	55.3	56.2	60.6	
17	58.4	57.7	60.1	59.6	61.1	58.3	64.1	60.0	58.0	66.1	67.2	69.2	69.9	67.1	64.9	70.3	69.1	69.7	59.8	52.1	53.8	56.1	57.4	56.4	61.9	
18 D	58.8	60.8	60.4	61.2	59.0	59.1	66.4	64.0	63.9	66.1	59.0	60.1	63.6	67.0	65.1	69.1	68.1	62.7	56.0	56.0	54.2	51.2	48.1	47.6	60.3	
19	47.1	50.3	54.8	62.6	59.0	57.1	55.8	56.8	55.1	56.2	58.1	59.8	61.1	62.7	66.6	67.2	67.1	65.2	62.8	50.1	51.0	49.7	50.2	50.8	57.5	
20	50.8	49.9	54.0	56.8	55.2	55.1	56.0	54.1	65.1	63.6	63.1	59.2	62.0	65.7	68.3	69.9	68.3	64.0	58.2	56.6	55.2	53.1	52.6	54.1	58.8	
21	55.0	55.7	55.3	55.1	66.5	57.9	58.2	57.8	57.7	58.1	57.7	61.1	64.1	65.3	66.9	67.6	67.0	63.8	60.1	56.3	54.5	53.1	53.9	53.0	59.2	
22 Q	54.1	56.1	56.6	56.2	56.0	57.0	61.0	61.1	60.9	58.1	59.0	59.9	62.0	64.0	65.1	65.4	63.6	62.4	59.1	55.5	53.0	51.4	51.5	53.0	58.4	
23 Q	54.4	55.9	56.7	57.0	58.0	59.0	56.8	56.1	56.4	52.4	54.1	58.5	62.0	64.4	66.5	68.5	69.0	66.0	59.2	55.2	51.5	51.5	52.0	53.2	58.1	
24	56.0	57.7	57.5	56.7	56.6	62.6	63.7	56.8	56.1	57.0	58.4	59.8	63.0	64.0	65.8	64.6	65.0	60.9	56.3	54.7	52.9	50.2	51.8	52.0	58.3	
25 D	53.0	54.0	53.0	53.9	61.0	53.7	59.2	57.5	61.9	60.2	61.1	62.8	61.5	65.3	66.3	67.3	69.2	67.0	64.3	56.8	61.8	50.0	49.5	54.0	59.4	
26 D	49.1	62.9	55.9	56.0	62.6	55.9	54.6	45.9	52.9	63.8	58.6	57.9	61.9	64.0	65.1	66.4	66.9	64.8	61.9	55.6	54.6	54.3	53.8	52.9	58.3	
27 D	53.9	54.8	56.0	63.9	54.4	61.9	60.9	66.4	61.1	57.9	53.9	51.8	59.9	64.4	61.9	65.1	63.9	63.6	58.9	59.9	57.1	52.9	52.8	53.1	58.8	
28	54.9	53.3	55.2	54.9	57.0	59.9	59.8	52.2	44.8	51.1	58.9	59.7	58.6	59.4	63.9	68.3	64.9	62.8	59.5	55.4	54.2	53.4	51.9	53.5	57.0	
29	54.1	55.4	57.6	56.7	55.7	56.4	60.0	56.7	57.9	59.9	59.0	59.9	61.9	62.5	63.9	63.5	65.0	65.2	59.9	55.4	52.4	52.2	52.5	52.9	58.2	
30	55.5	56.5	58.1	56.5	61.0	53.7	53.8	63.1	58.3	59.9	58.0	54.8	63.5	60.9	61.0	65.7	64.0	62.9	58.1	52.2	49.1	47.1	50.7	52.6	57.4	
31																										
Mean	53.5	54.7	56.0	56.1	58.3	58.1	58.6	57.5	58.0	58.3	58.2	60.4	62.6	64.8	66.2	67.4	66.7	63.7	59.6	55.8	53.7	51.6	52.1	52.7	58.5	

**VERTICAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 23 Meanook

Z = 58,000  $\gamma$  +

June 1963

Hour U. T. 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	745	731	731	735	725	670	680	702	713	715	705	653	545	635	676	669	695	705	709	717	721	725	729	733	699
2	732	727	729	729	740	719	778	672	687	700	685	686	707	707	702	706	706	705	709	717	729	761	751	732	718
3	731	731	742	742	749	738	725	719	680	498	293	486	643	707	707	706	697	710	707	706	717	719	719	722	679
4 Q	728	721	719	717	713	713	681	582	663	709	710	711	716	708	706	704	705	706	705	702	705	708	716	717	703
5 Q	716	709	708	708	708	708	708	708	708	708	709	709	708	708	703	700	699	700	704	703	707	715	718	719	708
6	719	717	715	710	709	709	709	709	710	709	712	713	713	708	708	707	697	694	675	683	681	728	768	794	713
7 D	643	629	270	635	718	719	549	741	701	609	640	636	638	660	709	684	702	718	725	740	736	738	773	746	669
8	737	736	740	736	729	720	688	697	670	589	535	642	704	713	716	719	713	710	709	716	719	734	781	780	705
9	785	751	773	753	683	626	693	704	672	655	666	602	689	721	721	717	717	719	717	711	720	722	732	741	708
10	746	744	730	728	728	727	721	718	719	688	628	692	706	722	720	716	709	702	708	715	716	724	724	723	716
11	728	737	736	730	729	721	720	715	711	709	708	706	698	709	708	714	709	706	707	700	709	720	730	741	717
12	732	730	729	737	732	724	697	693	702	705	681	673	706	714	711	709	707	704	698	699	703	709	720	725	710
13	735	743	756	746	735	724	722	718	723	671	643	656	690	710	721	720	715	709	710	711	720	720	723	732	715
14	743	744	729	718	716	716	714	710	707	699	656	667	672	692	688	683	699	705	706	712	721	724	729	734	708
15	754	754	756	754	763	647	656	734	695	734	738	744	740	734	724	722	720	723	722	723	729	733	740	745	729
16 Q	742	742	737	738	737	735	734	733	734	733	733	732	734	737	735	731	728	731	723	721	722	728	740	757	734
17	768	764	751	745	749	741	727	732	626	587	624	624	584	517	548	626	667	710	717	733	744	755	762	761	690
18 D	759	764	772	810	797	771	723	689	718	743	731	738	681	624	701	691	690	689	689	734	819	829	825	820	743
19	805	781	799	807	768	740	721	713	718	719	718	716	713	708	708	711	700	697	694	695	702	712	728	759	731
20	799	851	842	794	765	753	633	473	559	509	545	566	698	706	718	708	707	719	710	702	719	719	727	746	695
21	752	751	741	745	738	707	718	712	643	616	701	720	729	728	727	724	722	718	716	719	716	720	729	733	718
22 Q	735	741	735	732	727	698	719	687	708	719	714	708	708	718	714	712	710	705	706	708	708	715	726	729	715
23 Q	731	734	729	729	728	732	728	724	716	688	705	719	724	723	721	715	716	717	719	720	726	722	720	729	722
24	731	733	729	728	719	734	697	721	720	719	719	713	707	698	686	674	680	688	697	701	714	716	724	729	712
25 D	729	749	757	796	729	731	398	551	662	621	661	660	716	697	683	726	719	718	716	718	734	784	790	838	703
26 D	814	822	791	765	610	738	718	451	565	629	720	735	733	720	719	723	722	712	709	708	711	724	735	729	709
27 D	724	720	767	778	667	654	713	589	635	655	603	601	616	680	715	728	720	713	719	720	750	742	753	751	696
28	752	738	739	731	731	745	758	688	448	627	694	710	708	695	686	719	728	716	719	719	720	731	729	737	707
29	740	731	740	736	673	719	716	651	670	701	719	721	721	719	718	708	706	706	716	719	732	731	735	740	715
30	752	763	762	737	725	657	592	650	659	683	578	608	621	686	702	727	729	728	721	735	739	728	738	752	699
31																									
Mean	744	743	732	742	725	714	691	676	675	668	663	675	689	696	703	706	707	709	709	713	723	731	741	746	709

DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 24 Meanook

June 1963

Day	Horizontal Intensity					Declination					Vertical Intensity										
	Maximum 12,000 $\gamma$ +		Minimum 12,000 $\gamma$ +		Range $\gamma$	Maximum 23° E +		Minimum 23° E +		Range '	Maximum 58,000 $\gamma$ +		Minimum 58,000 $\gamma$ +		Range $\gamma$						
	h.	m.	$\gamma$	h.		m.	$\gamma$	h.	m.		'	h.	m.	$\gamma$		h.	m.	$\gamma$			
1	13	28	1142	10	45	582	560	11	30	98.5	00	02	51.9	46.6	04	24	759	10	15	239	520
2	05	23	1162	12	06	987	175	16	14	71.3	05	30	51.4	19.9	02	23	759	12	08	501	258
3	23	55	1145	11	48	1055	90	06	09	77.2	09	58	53.7	23.5	04	10	747	08	02	645	102
4 Q	00	01	1123	07	24	1031	92	15	31	68.3	20	42	51.2	17.1	00	01	739	07	23	543	196
5 Q	23	54	1120	19	00	1043	77	15	33	68.2	20	01	51.5	16.7	23	08	721	15	07	697	24
6	23	58	1424	19	20	1038	386	17	34	75.2	23	56	34.7	40.5	23	52	820	18	46	665	155
7 D	00	59	1786	06	57	324	1462	06	37	135.7	03	06	-128.9	264.6	07	12	979	02	50	-25	1004
8	23	07	1217	10	32	930	287	10	45	74.5	23	56	45.5	29.0	23	07	819	10	47	483	336
9	01	02	1250	08	51	878	372	15	33	71.0	11	35	43.0	28.0	01	02	827	11	13	549	278
10	00	58	1137	10	10	983	154	15	27	70.3	10	01	37.4	32.9	01	48	753	10	07	559	194
11	05	17	1120	18	40	1066	54	05	17	80.8	23	04	48.5	32.3	05	18	763	05	48	688	75
12	01	40	1134	17	33	1048	86	15	18	67.2	21	27	46.4	20.8	03	55	745	11	12	636	109
13	00	44	1137	10	54	1026	111	12	17	70.5	00	07	48.1	22.4	02	24	763	10	04	621	142
14	00	14	1143	11	47	1061	82	15	39	68.4	10	02	51.5	16.9	01	25	754	10	58	638	116
15	06	07	1179	05	42	913	266	05	43	81.4	05	28	20.5	60.9	05	04	811	05	36	495	316
16 Q	23	33	1137	16	58	1063	74	15	59	71.1	21	22	52.4	18.7	23	57	767	06	15	732	35
17	23	31	1147	13	10	773	374	13	14	90.6	14	37	44.5	46.1	00	58	794	13	12	423	371
18 D	04	33	1232	13	21	904	328	13	22	87.3	23	50	45.0	42.3	20	34	905	13	34	540	365
19	03	04	1197	18	34	1042	155	03	21	71.0	00	40	44.6	26.4	03	02	835	17	46	684	151
20	02	13	1343	10	38	600	743	10	58	86.4	07	27	13.1	73.3	01	40	881	07	17	328	553
21	00	51	1140	09	00	972	168	04	36	76.1	05	20	50.2	25.9	04	14	794	08	47	513	281
22 Q	01	43	1130	18	37	1048	82	14	20	66.5	04	58	50.5	16.0	01	38	757	04	57	669	88
23 Q	23	27	1116	20	47	1053	63	15	50	70.5	20	40	52.3	18.2	05	27	738	09	44	663	75
24	23	53	1129	19	58	1049	80	05	56	77.5	21	40	48.7	28.8	05	49	751	06	18	672	79
25 D	06	10	1377	06	30	701	676	06	40	83.5	07	01	35.7	47.8	23	35	856	06	15	288	568
26 D	01	20	1642	07	50	-6	1648	07	25	94.0	07	57	-33.4	127.4	01	43	859	07	43	168	691
27 D	02	07	1201	07	53	700	501	08	30	77.9	04	55	14.9	63.0	02	58	827	04	50	425	402
28	00	30	1147	08	46	778	369	15	00	70.6	07	45	32.8	37.8	06	19	773	08	43	361	412
29	02	25	1132	17	20	1045	87	06	58	70.9	21	27	47.4	23.5	22	47	751	07	40	594	157
30	01	12	1152	06	25	983	169	04	42	71.9	06	23	28.1	43.8	02	16	774	10	40	513	261
31																					
Mean			1215			889	326			78.1			34.4	43.7			794			517	277
No. days			30			30	30			30			30	30			30			30	30

**HORIZONTAL INTENSITY**  
Mean values for periods of sixty minutes, Universal Time

Table 25 Meanook

H = 12,000  $\gamma$  +

July 1963

Hour U. T. 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	1117	1109	1132	1103	1093	1085	1082	1086	1096	1095	1089	1093	1094	1107	1102	1100	1086	1076	1067	1066	1078	1079	1082	1085	1092
2 Q	1089	1093	1093	1093	1093	1092	1094	1096	1075	1088	1101	1102	1103	1104	1101	1095	1089	1093	1082	1079	1080	1079	1083	1086	1091
3 Q	1095	1102	1093	1098	1095	1093	1092	1093	1097	1100	1096	1099	1101	1109	1110	1108	1094	1073	1056	1058	1061	1079	1086	1095	1091
4	1097	1101	1103	1109	1110	1111	1117	1119	1104	1118	1112	1104	1093	1096	1093	1101	1096	1085	1063	1070	1094	1125	1138	1097	1102
5	1101	1109	1109	1122	1127	1170	1032	866	955	1117	1107	1097	1089	1101	1087	1103	1086	1075	1049	1060	1078	1064	1094	1072	1078
6	1109	1127	1133	1131	1118	1086	1091	877	937	1070	1050	1086	1062	1061	1065	1070	1085	1063	1057	1054	1070	1075	1076	1078	1068
7	1093	1101	1110	1085	1096	1093	1093	1090	1078	1000	999	1009	1092	1086	1046	1086	1083	1079	1079	1068	1062	1067	1064	1075	1072
8	1102	1098	1119	1122	1117	1094	1088	1054	882	1092	1096	1084	1093	1095	1098	1075	1094	1082	1064	1049	1053	1069	1072	1099	1079
9	1124	1178	1166	1180	1126	1117	915	1046	1029	1054	1070	1077	1053	1060	1084	1079	1072	1090	1086	1082	1074	1062	1071	1103	1083
10	1133	1093	1106	1115	1096	1091	1064	1071	1037	1088	1105	1094	1078	1075	1072	1086	1089	1081	1069	1062	1074	1078	1079	1089	1083
11	1125	1125	1112	1102	1106	1099	1076	1095	1095	1093	1086	1092	1094	1093	1101	1095	1082	1079	1071	1070	1063	1071	1082	1089	1092
12	1100	1098	1099	1100	1100	1102	1093	1093	1096	1096	1098	1097	1100	1106	1108	1107	1100	1085	1082	1081	1077	1081	1092	1108	1096
13	1102	1108	1106	1100	1103	1105	1100	1087	1094	1100	1106	1108	1108	1108	1107	1100	1086	1070	1071	1085	1096	1104	1102	1106	1099
14 Q	1121	1123	1124	1126	1128	1128	1130	1132	1130	1132	1133	1134	1135	1132	1128	1123	1104	1099	1090	1085	1082	1088	1092	1100	1117
15 Q	1103	1109	1110	1107	1104	1099	1103	1108	1108	1108	1107	1100	1101	1101	1115	1108	1095	1081	1067	1068	1075	1087	1085	1097	1098
16	1132	1126	1124	1133	1116	1104	1111	1113	1106	1108	1115	1121	1125	1132	1141	1136	1123	1111	1113	1116	1109	1112	1116	1124	1119
17	1124	1120	1124	1135	1122	1079	1006	1001	712	573	686	687	730	987	1023	997	1045	1097	1102	1100	1092	1092	1098	1092	993
18	1107	1096	1090	1101	1094	1109	1104	1106	1100	1085	1042	1009	1056	1095	1056	1055	1097	1108	1091	1088	1078	1088	1078	1070	1084
19	1114	1123	1112	1104	1092	1088	1092	1092	1094	1096	1097	1084	1070	1079	1088	1092	1091	1071	1061	1064	1071	1077	1083	1095	1088
20	1100	1102	1096	1097	1101	1092	1096	1100	1100	1100	1100	1103	1122	1124	1124	1116	1100	1087	1084	1087	1085	1092	1094	1109	1100
21 D	1116	1109	1108	1107	1096	1088	1085	1075	1012	885	723	580	400	1066	1081	1040	1013	1045	1065	1070	1077	1092	1107	1108	1009
22	1105	1110	1101	1100	1102	1094	1011	1030	881	938	1121	1060	1014	1049	1070	1057	1045	1085	1086	1085	1086	1077	1081	1100	1062
23 D	1105	1107	1115	1109	1115	1099	1058	1034	1109	1112	1091	1117	1116	1096	1084	1116	1094	1103	1079	1081	1089	1102	1143	1195	1102
24 D	1140	1200	1180	1260	1197	1028	999	1088	1029	893	1095	1070	952	1015	1097	1078	1068	1078	1096	1083	1080	1085	1105	1113	1084
25	1125	1109	1117	1099	1124	1083	1068	899	1076	1122	1109	1090	1093	1084	1081	1096	1078	1065	1077	1083	1076	1068	1091	1101	1084
26	1093	1102	1113	1091	1107	1102	1118	1060	971	1105	1034	1013	1084	1062	1061	1093	1091	1081	1070	1048	1060	1069	1085	1117	1077
27	1138	1141	1127	1149	1090	1100	1051	917	1009	1092	1107	1092	1105	1035	1044	1080	1084	1084	1086	1084	1068	1064	1084	1088	1080
28	1144	1141	1093	1088	1081	1088	1087	1087	1085	1058	1094	1091	1090	1084	1094	1095	1086	1080	1076	1065	1060	1066	1080	1093	1087
29 Q	1098	1102	1095	1095	1093	1092	1095	1100	1103	1104	1107	1107	1106	1103	1117	1102	1090	1084	1080	1079	1087	1099	1115	1142	1100
30 D	1146	1127	1111	1162	1207	1138	1113	934	640	1111	1132	1099	758	894	1099	1123	1091	1089	1068	1060	1078	1113	1123	1178	1066
31 D	1218	1144	1105	1091	1077	1099	1106	1094	1076	1092	1060	1037	986	1013	1107	1103	1098	1085	1078	1077	1084	1091	1107	1131	1090
Mean	1116	1118	1114	1117	1110	1099	1077	1053	1030	1059	1067	1056	1042	1076	1090	1091	1085	1082	1076	1074	1078	1084	1093	1104	1083

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 26 Meanook

D = 23° E + ...'

July 1963

Hour U. T. 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	24	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	54.6	53.5	63.8	59.8	56.8	58.9	59.0	56.9	58.3	57.7	56.8	58.3	60.8	63.9	64.7	66.0	66.1	63.6	60.1	55.8	52.4	51.3	51.8	53.2	58.5	
2 Q	54.5	55.9	56.8	56.9	57.4	56.8	56.2	55.8	53.0	56.6	58.7	59.9	61.8	63.0	64.7	64.8	64.6	63.9	61.7	57.7	54.0	52.3	50.9	51.2	57.9	
3 Q	52.8	54.4	56.6	56.8	56.6	56.1	56.8	57.2	57.1	56.9	55.3	56.9	59.8	61.9	62.4	63.8	63.4	61.8	58.7	54.6	48.8	48.4	50.2	52.2	56.6	
4	53.5	55.0	55.8	56.5	56.3	56.6	56.4	53.9	56.9	59.3	58.8	61.6	64.0	69.1	71.8	72.6	69.1	65.3	59.0	61.3	51.8	47.1	44.8	41.1	58.2	
5	42.9	46.1	48.2	51.0	50.5	52.8	70.2	44.2	60.5	56.1	56.8	57.9	62.1	66.5	69.3	70.0	68.4	64.8	60.5	59.7	56.8	50.7	49.0	46.2	56.7	
6	46.4	50.5	54.6	52.7	77.5	63.7	58.2	44.5	20.7	57.6	57.7	58.7	60.8	62.8	66.7	65.7	67.5	65.7	61.8	57.7	53.8	53.5	53.5	54.0	57.0	
7	54.7	54.2	55.2	54.3	53.6	53.8	57.0	56.5	57.2	52.7	73.4	62.9	64.2	64.3	67.0	66.6	64.7	65.7	64.9	60.4	55.7	52.7	52.3	51.0	58.9	
8	51.2	52.5	59.1	55.0	56.7	65.0	60.9	61.7	52.2	58.7	57.7	56.9	59.7	63.7	65.9	67.7	66.9	65.8	63.6	57.6	52.5	51.1	50.1	46.5	58.3	
9	45.9	55.4	50.8	58.5	64.7	57.5	48.6	61.2	63.8	57.7	54.7	58.0	58.5	59.7	67.5	70.4	70.1	66.6	60.9	56.7	54.7	50.9	51.6	53.6	58.3	
10	54.4	55.4	56.7	66.0	58.7	60.8	60.8	57.9	52.6	56.2	58.2	59.6	59.9	62.1	66.5	67.0	68.1	65.7	62.8	57.6	55.6	52.7	51.4	52.9	59.0	
11	56.3	58.8	56.6	60.2	60.3	59.1	65.6	58.6	54.6	54.1	55.4	57.7	61.4	64.0	65.8	66.4	66.8	63.7	60.3	56.4	53.1	50.7	50.2	51.3	58.6	
12	51.9	54.8	56.5	57.5	58.7	60.2	57.7	57.5	56.2	56.6	56.8	58.6	61.1	63.6	66.1	68.3	69.6	66.9	60.7	56.3	51.1	47.3	47.7	49.4	58.0	
13	51.4	53.6	55.4	55.5	56.6	56.0	61.1	56.6	61.1	59.7	58.4	58.7	61.3	63.9	65.6	65.4	64.1	60.6	56.6	53.6	50.9	48.8	50.4	51.6	57.4	
14 Q	54.0	54.5	56.1	56.6	56.4	56.6	56.5	56.3	55.1	56.6	56.8	58.5	60.9	63.5	64.6	67.6	65.9	64.6	58.7	53.7	51.7	50.9	50.7	52.4	57.5	
15 Q	53.9	55.4	57.1	56.8	56.7	56.2	55.4	55.5	56.6	58.2	58.5	58.6	61.7	63.7	65.6	66.6	68.3	66.6	61.8	57.7	53.4	51.8	50.4	51.4	58.2	
16	52.4	53.5	52.6	57.1	53.2	52.6	55.7	55.6	56.0	57.1	57.7	58.5	60.7	62.3	65.2	65.6	65.1	61.4	56.6	55.6	54.1	54.7	53.6	53.0	57.1	
17	52.8	61.4	59.1	53.4	65.0	64.8	61.2	60.6	76.6	88.4	58.4	70.8	80.9	81.4	73.6	67.3	60.7	56.1	53.8	51.8	51.0	51.3	51.4	51.9	62.6	
18	53.0	53.4	55.2	55.7	56.7	57.0	62.8	56.6	54.4	54.6	56.6	60.7	62.6	66.7	71.7	72.6	67.4	63.8	58.1	56.6	53.8	53.5	52.6	52.6	58.7	
19	54.4	53.6	56.7	54.7	55.3	55.3	56.2	56.8	55.5	57.6	58.3	60.5	58.6	62.5	64.6	67.1	65.6	62.6	57.2	52.8	49.9	50.2	52.1	53.6	57.2	
20	54.8	55.1	55.7	56.0	56.4	56.1	55.6	55.3	56.6	56.9	57.8	59.2	62.7	65.4	69.6	70.5	69.5	65.7	59.7	55.9	53.6	52.7	51.6	52.3	58.5	
21 D	54.9	56.7	57.7	58.6	59.9	58.9	62.9	68.3	65.2	62.4	65.2	70.5	77.7	68.0	63.7	72.6	71.0	60.7	59.4	57.5	53.4	51.5	52.7	53.8	61.8	
22	55.8	57.4	58.3	58.1	57.9	61.3	52.2	64.1	65.6	60.3	55.7	59.5	51.4	61.8	66.0	63.4	62.5	61.2	54.7	50.1	47.8	49.0	50.6	52.9	57.4	
23 D	55.2	56.8	56.3	55.6	56.5	68.2	69.5	58.5	58.7	56.1	54.4	57.7	59.3	59.8	66.9	65.5	66.7	62.1	54.7	51.4	49.7	50.9	54.7	58.7	58.5	
24 D	56.3	62.6	62.2	65.8	59.0	63.8	66.8	60.9	57.8	53.2	55.4	53.8	50.9	48.8	61.8	63.8	66.9	64.8	59.2	56.9	54.6	52.9	54.3	55.1	58.6	
25	56.2	56.8	57.9	62.3	66.0	57.3	64.8	62.8	63.0	56.8	57.1	56.8	60.4	60.6	66.6	69.6	68.5	61.1	56.8	53.9	54.0	52.7	53.3	54.7	59.6	
26	55.0	56.3	56.6	58.2	57.8	57.3	59.8	56.2	46.5	57.8	51.7	46.7	58.0	61.9	58.9	64.3	66.3	65.5	60.8	56.8	47.9	47.6	50.4	48.2	56.3	
27	54.6	63.9	58.8	59.9	81.4	57.9	62.4	56.9	52.2	58.0	58.8	58.3	59.8	59.7	65.2	69.0	67.8	63.1	57.5	55.1	52.1	52.8	54.6	56.1	59.8	
28	57.9	60.7	57.1	55.1	56.4	59.6	57.5	56.9	53.9	48.2	55.6	57.0	59.9	62.3	64.9	65.6	65.4	63.9	59.9	55.4	53.8	53.1	54.0	55.8	57.9	
29 Q	56.9	57.7	57.8	57.1	56.9	57.6	57.1	57.6	58.1	57.4	57.9	58.8	60.1	61.8	65.7	65.9	67.0	63.7	58.2	53.7	52.1	49.7	47.9	49.1	57.7	
30 D	54.5	56.1	57.0	59.7	64.0	58.0	51.9	37.4	17.8	63.0	57.0	58.5	56.2	71.2	70.9	72.4	72.7	65.5	64.9	56.8	53.0	45.0	44.9	45.5	56.4	
31 D	53.6	54.4	50.7	55.3	63.8	60.0	58.0	51.5	53.8	54.0	50.2	52.0	49.7	51.1	64.1	69.9	70.1	67.1	59.0	54.9	51.3	48.2	49.8	50.3	56.0	
Mean	53.4	55.7	56.4	57.3	59.4	58.5	59.1	56.4	55.1	57.9	57.5	58.7	60.8	63.2	66.2	67.5	67.0	63.8	59.4	55.8	52.5	50.8	51.1	51.8	58.1	

**VERTICAL INTENSITY**  
**Mean values for periods of sixty minutes, Universal Time**

Table 27 Meantook

Z = 58,000  $\gamma$  +

July 1963

Hour U. T. 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	761	750	762	749	741	725	689	694	707	711	708	709	713	719	719	718	718	716	715	713	712	713	716	719	721
2 Q	722	724	721	719	716	715	715	712	667	679	705	711	712	710	707	709	710	708	708	708	708	708	707	710	709
3 Q	719	721	719	716	710	708	708	707	707	705	689	696	702	707	706	708	702	695	686	687	696	698	699	705	703
4	707	707	708	712	721	740	740	739	708	709	702	704	683	680	664	662	664	675	680	683	719	773	802	759	710
5	718	740	739	758	734	697	637	773	693	719	716	715	707	708	697	705	701	697	685	685	700	705	721	729	712
6	738	749	755	770	618	693	719	447	413	654	686	713	705	706	695	694	709	710	716	709	707	708	711	709	685
7	713	715	731	737	728	676	674	706	657	535	533	554	664	696	662	697	688	687	692	686	692	698	708	713	676
8	726	721	740	729	697	712	706	654	493	643	686	685	698	694	690	675	686	689	690	685	688	698	718	845	694
9	754	780	775	810	686	736	502	681	638	568	616	667	675	686	710	711	705	708	705	708	718	716	719	737	696
10	728	725	723	718	711	726	594	623	578	654	696	701	688	681	680	686	695	697	692	697	707	716	720	728	690
11	738	729	728	729	694	714	655	699	706	697	697	708	713	709	710	709	707	702	702	702	705	708	713	719	708
12	726	724	724	724	723	707	693	702	708	710	711	712	716	719	715	713	715	714	712	709	708	706	707	715	713
13	719	725	731	727	724	728	708	675	671	708	707	713	716	719	716	711	708	705	702	700	701	703	707	708	710
14 Q	716	716	718	715	715	714	710	701	698	701	708	708	708	706	702	699	696	692	695	698	701	703	708	712	706
15 Q	718	719	720	720	720	719	713	711	711	708	707	705	697	694	695	697	693	690	686	686	696	706	705	708	705
16	724	729	749	780	751	729	719	714	713	711	712	715	717	711	714	718	708	701	697	705	705	708	721	736	720
17	759	788	773	773	740	722	672	725	695	724	725	660	506	540	590	585	632	695	702	719	712	713	726	736	693
18	749	738	724	731	726	726	713	712	713	683	642	620	647	687	648	629	663	697	727	718	705	700	709	727	697
19	748	739	724	712	709	708	716	712	709	708	709	699	679	677	694	702	702	702	703	705	708	705	707	716	708
20	713	709	707	706	708	705	705	705	706	707	707	708	710	708	707	701	695	690	693	694	703	706	708	708	703
21 D	715	709	708	708	713	712	669	621	573	510	612	578	484	578	629	651	632	683	708	719	720	724	723	723	658
22	720	725	720	724	719	699	499	583	461	562	686	662	609	627	669	675	664	699	713	708	706	708	715	727	666
23 D	738	728	729	728	729	706	582	569	673	702	686	709	715	706	685	706	697	702	710	708	719	741	794	857	709
24 D	763	802	780	676	721	622	529	661	653	571	682	661	578	632	707	697	698	713	715	720	719	729	739	740	688
25	740	730	741	774	738	615	643	471	600	710	726	708	720	709	698	712	702	685	681	689	707	720	738	752	696
26	753	751	753	741	733	729	743	673	570	702	655	604	670	665	664	709	717	715	718	719	729	740	749	747	707
27	765	795	777	773	696	714	643	467	514	651	698	700	714	658	652	690	726	717	706	704	709	717	733	749	695
28	774	766	754	737	727	699	665	695	691	643	671	701	703	701	712	719	714	716	720	716	711	714	719	720	712
29 Q	720	720	719	716	716	719	719	709	711	712	717	717	714	704	710	710	712	710	706	707	710	716	730	773	716
30 D	817	787	752	792	752	784	758	743	368	684	741	733	592	540	655	720	720	722	728	729	767	775	758	779	716
31 D	817	777	753	762	743	754	721	719	687	713	687	660	622	675	730	725	728	725	724	720	720	720	737	768	724
Mean	739	739	737	737	718	711	673	668	638	671	687	684	673	679	688	695	697	701	703	705	709	715	724	738	701



DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 28 Meanook

July 1963

Day	Horizontal Intensity						Declination						Vertical Intensity								
	Maximum		Minimum		Range		Maximum		Minimum		Range		Maximum		Minimum		Range				
	12,000 $\gamma$ +		12,000 $\gamma$ +				23° E +		23° E +				58,000 $\gamma$ +		58,000 $\gamma$ +						
	h.	m.	$\gamma$	h.	m.	$\gamma$	h.	m.	'	h.	m.	'	h.	m.	$\gamma$	h.	m.	$\gamma$			
1	02	46	1148	18	49	1054	94	01	39	69.9	01	07	48.7	21.2	00	19	774	06	28	643	131
2 Q	11	27	1109	08	23	1054	55	16	01	65.8	08	21	46.8	19.0	00	54	727	08	29	637	90
3 Q	00	40	1133	19	01	1052	81	15	50	64.8	21	23	47.4	17.4	00	36	735	10	11	673	62
4	22	18	1191	19	00	1048	143	15	38	76.0	22	58	63.0	13.0	22	12	814	16	30	648	166
5	05	22	1245	07	57	639	606	06	05	89.7	07	20	07.8	81.9	07	31	896	05	58	540	356
6	07	27	1358	07	15	654	704	04	17	111.7	08	30	-24.9	136.6	03	54	806	08	17	232	574
7	02	08	1125	10	55	922	203	10	48	82.6	09	08	37.7	44.9	03	13	749	10	55	459	290
8	04	21	1209	08	13	582	627	07	05	72.7	08	10	36.5	36.2	05	20	805	09	04	390	415
9	03	30	1178	06	35	720	458	03	58	94.9	06	32	27.9	67.0	03	53	860	06	28	309	551
10	03	45	1135	06	39	996	139	03	33	77.9	08	09	41.7	36.2	05	21	738	08	08	491	247
11	06	00	1134	06	22	1006	128	06	05	73.1	22	07	49.1	24.0	03	45	751	06	23	597	154
12	00	59	1118	00	57	1068	50	17	03	71.0	21	54	45.8	25.2	00	11	732	05	44	676	56
13	00	06	1134	17	51	1061	73	07	44	65.1	00	46	48.4	16.7	02	08	738	07	54	623	115
14 Q	00	26	1139	19	35	1077	62	15	49	70.3	21	37	49.6	20.7	00	30	724	18	01	686	38
15 Q	14	38	1118	19	21	1061	57	16	50	69.6	22	28	49.7	19.9	02	36	726	15	46	687	39
16	00	31	1163	01	53	1099	64	15	48	68.4	02	59	49.6	18.8	03	25	798	17	52	692	106
17	04	43	1178	10	16	477	701	09	25	128.6	12	17	-11.6	140.2	11	45	962	12	01	264	698
18	05	52	1132	11	16	960	172	15	07	75.4	10	36	50.9	24.5	00	33	757	11	13	569	188
19	00	45	1137	18	30	1045	92	15	38	68.1	21	02	47.6	20.5	00	25	759	12	51	662	97
20	12	55	1130	19	00	1065	65	16	23	75.5	22	03	49.8	25.7	04	40	716	17	40	682	34
21 D	14	00	1136	12	04	-44	1180	11	01	142.5	10	23	23.1	119.4	11	56	915	10	57	324	591
22	10	44	1135	09	11	798	337	09	00	80.7	06	21	33.0	47.7	23	04	738	08	45	373	365
23 D	02	12	1144	07	27	974	170	05	58	84.7	21	53	43.9	40.8	23	31	946	07	21	512	434
24 D	23	30	1241	09	19	715	526	04	02	136.3	03	58	7.7	128.6	03	53	1191	01	43	479	712
25	04	47	1272	07	48	641	631	04	48	95.1	05	40	39.8	55.3	03	16	815	07	45	271	544
26	23	57	1162	08	11	795	367	17	38	69.1	08	13	30.9	38.2	06	27	773	08	25	395	378
27	03	50	1263	07	45	844	419	04	20	95.5	07	30	38.9	56.6	03	46	819	07	12	740	79
28	00	54	1146	09	37	1036	110	06	00	70.7	09	36	43.0	27.7	00	50	804	09	40	590	214
29 Q	23	33	1169	17	13	1076	93	16	13	68.7	23	55	46.4	22.3	23	59	797	07	44	695	102
30 D	04	11	1291	08	00	100	1191	13	36	91.6	09	45	-64.4	156.0	07	51	874	07	00	-57	931
31 D	00	30	1281	13	14	889	392	16	22	74.9	12	54	28.8	46.1	00	31	858	12	50	584	274
Mean			1176			854	322			83.2			33.3	49.9			809			518	291
No. days			31			31	31			31			31	31			31			31	31

**HORIZONTAL INTENSITY**  
Mean values for periods of sixty minutes, Universal Time

Table 29 Meanook

H = 12,000  $\gamma$  +

August 1963

Hour U. T. 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	1122	1117	1129	1101	1145	1136	1134	1105	1091	1099	1054	1073	1091	1075	1033	1040	1037	1055	1069	1076	1105	1120	1102	1115	1093
2	1114	1122	1099	1099	1104	1084	1111	1091	906	1005	1076	1095	1084	1087	1085	1080	1072	1077	1071	1082	1077	1086	1099	1126	1080
3	1126	1116	1126	1092	1100	1100	1100	1106	1103	1093	1091	1108	1102	1100	1100	1087	1082	1069	1065	1071	1077	1084	1092	1132	1097
4	1134	1108	1092	1084	1091	1095	1098	1079	1092	1048	1031	962	954	929	1056	1058	1074	1081	1078	1076	1063	1069	1092	1132	1066
5	1116	1124	1121	1130	1096	1095	1094	1085	1015	1038	1070	1061	1035	1114	1111	1100	1069	1063	1053	1059	1070	1077	1092	1095	1083
6	1103	1109	1099	1115	1140	1099	930	1026	1081	1078	1090	1068	1070	1084	1096	1092	1061	1045	1053	1060	1072	1070	1093	1116	1077
7	1124	1120	1119	1120	1110	1099	1090	1078	1061	1020	1069	1081	1071	1052	1092	1093	1083	1073	1068	1069	1078	1085	1095	1108	1086
8	1112	1115	1111	1092	1100	1099	1106	1100	1092	1099	1064	1092	1094	1108	1109	1094	1074	1053	1052	1056	1070	1085	1100	1110	1091
9	1110	1118	1110	1103	1105	1120	1053	1059	1099	1106	1123	1104	1103	1096	1099	1086	1077	1068	1061	1063	1070	1081	1093	1110	1092
10	1103	1101	1100	1095	1100	1103	1102	1101	1105	1106	1110	1085	1088	1087	1084	1068	1078	1077	1070	1072	1081	1092	1102	1108	1092
11 Q	1109	1108	1097	1093	1096	1096	1104	1102	1103	1105	1104	1102	1106	1108	1097	1099	1088	1081	1077	1077	1082	1091	1102	1100	1097
12 Q	1104	1108	1096	1098	1100	1098	1099	1100	1100	1103	1106	1098	1092	1100	1100	1085	1078	1074	1076	1078	1077	1078	1085	1092	1092
13 Q	1101	1100	1094	1099	1098	1098	1100	1099	1100	1101	1101	1099	1096	1102	1103	1097	1087	1081	1077	1077	1082	1090	1100	1108	1096
14 Q	1100	1104	1100	1099	1100	1101	1102	1103	1104	1107	1106	1106	1107	1109	1106	1093	1085	1075	1066	1069	1077	1098	1108	1110	1097
15	1109	1111	1110	1107	1108	1110	1112	1114	1116	1115	1118	1121	1120	1115	1109	1104	1092	1079	1073	1077	1092	1085	1066	1109	1103
16 Q	1124	1108	1096	1100	1102	1104	1106	1103	1102	1103	1101	1104	1108	1102	1097	1103	1080	1075	1070	1081	1096	1107	1110	1115	1100
17	1110	1114	1100	1106	1102	1099	1108	1103	1109	1101	1102	1109	1112	1116	1110	1096	1076	1077	1082	1085	1088	1100	1090	1100	1100
18 D	1108	1104	1096	1102	1100	1118	1103	1078	621	948	889	1045	943	638	937	1112	1103	1098	1085	1085	1091	1079	1092	1116	1029
19 D	1117	1132	1090	1101	1095	1098	1100	1096	1100	1104	1103	1100	1103	1106	1098	1089	1086	1029	983	1067	1065	1087	1253	1502	1113
20 D	1387	1410	1292	1321	1180	827	757	475	769	653	788	491	620	967	1104	1062	1035	1086	1081	1071	1071	1076	1086	1154	990
21 D	1155	1153	1143	1129	1092	1125	1049	779	658	561	969	1064	1022	1045	1054	1053	1074	1085	1066	1079	1085	1106	1104	1107	1031
22	1108	1100	1092	1095	1093	1096	1094	1023	1009	1110	1090	1070	1085	1085	1096	1085	1074	1065	1064	1068	1077	1073	1095	1102	1081
23	1134	1142	1268	1154	1128	904	773	995	961	1005	838	660	765	854	986	1081	1092	1096	1085	1075	1069	1076	1091	1112	1014
24	1149	1115	1131	1105	1098	1095	1091	1080	982	992	1066	1090	1076	1068	1084	1098	1075	1060	1052	1060	1075	1091	1096	1108	1080
25	1107	1094	1099	1099	1105	1105	1107	1107	1093	1068	1111	1113	1111	1114	1114	1105	1090	1072	1059	1067	1087	1086	1111	1099	1097
26	1100	1106	1101	1106	1119	1107	1099	1101	1093	1092	1103	1099	1099	1099	1083	1098	1098	1084	1077	1085	1085	1091	1099	1094	1097
27	1103	1105	1115	1103	1105	1103	1105	1109	1113	1113	1107	1077	1084	1073	1089	1084	1068	1045	1044	1066	1084	1103	1091	1123	1092
28 D	1132	1105	1107	1116	1130	1128	1109	1090	1084	869	674	888	1018	1068	1095	1090	1097	1057	1039	1058	1093	1119	1107	1100	1057
29	1110	1115	1099	1099	1097	1103	1107	1097	1013	708	928	1039	1073	1060	1075	1092	1090	1080	1079	1090	1097	1091	1111	1102	1065
30	1114	1099	1107	1105	1103	1102	1101	1100	1099	1109	1091	1066	1094	1058	1077	1082	1073	1077	1059	1056	1076	1093	1110	1119	1091
31	1124	1113	1099	1107	1107	1113	1055	1029	1099	1080	1099	1113	1083	1044	980	1091	1034	1049	1084	1091	1095	1105	1115	1117	1084
Mean	1125	1123	1118	1113	1108	1089	1071	1056	1035	1027	1045	1045	1053	1057	1080	1088	1077	1070	1066	1073	1081	1090	1103	1124	1080

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 30 Meanook

D = 23° E + ...'

August 1963

Hour U. T. 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	54.0	53.7	65.4	55.0	65.5	54.8	58.9	56.0	52.9	57.0	53.1	58.4	64.7	70.2	62.6	63.4	65.7	66.0	62.1	55.8	53.7	54.0	54.1	52.4	58.7
2	51.5	58.1	56.9	56.5	58.2	75.4	74.9	57.8	46.9	52.1	55.1	57.6	62.3	67.0	68.5	69.0	65.8	61.1	57.1	51.2	49.3	49.7	49.6	55.1	58.6
3	57.1	57.8	65.6	60.6	66.1	60.7	58.8	56.9	55.0	53.5	53.6	61.0	65.1	67.4	67.2	65.9	64.5	62.1	58.1	52.5	50.9	50.1	48.6	51.6	58.8
4	56.0	57.6	56.0	58.4	56.1	57.4	60.8	67.4	58.3	52.4	52.8	53.0	47.1	48.3	64.4	63.7	66.6	65.1	62.1	56.1	50.6	46.4	49.0	50.2	56.5
5	55.5	58.4	63.1	63.3	64.8	59.2	59.0	58.0	57.7	56.0	52.7	59.6	53.8	62.3	67.9	68.9	66.7	64.2	60.4	55.8	52.2	50.5	48.8	50.2	58.7
6	53.2	53.6	56.2	58.9	69.0	63.9	53.5	54.6	56.2	51.5	53.2	52.0	59.2	65.5	69.7	70.1	68.2	62.4	58.1	52.4	51.1	50.2	51.1	53.2	57.8
7	57.0	62.4	56.2	62.3	60.9	56.5	52.4	53.9	55.1	50.2	55.0	56.5	62.1	60.6	65.2	69.2	67.4	62.2	58.4	54.1	53.9	53.9	54.7	55.2	58.1
8	56.1	57.1	55.9	59.5	56.3	60.3	57.9	57.5	55.8	59.3	50.1	56.1	56.2	66.3	71.3	70.0	67.2	61.8	56.0	50.3	49.3	49.3	50.4	53.9	57.7
9	56.0	56.5	57.2	57.6	59.3	64.2	63.1	58.6	59.0	57.8	56.0	60.7	63.3	67.3	70.3	70.2	69.2	65.2	59.5	56.1	52.8	50.3	50.2	52.1	59.7
10	55.4	56.3	56.4	56.0	55.4	55.8	56.3	57.4	58.5	59.0	58.3	55.3	60.0	66.5	68.1	65.1	62.8	61.2	57.8	54.3	50.4	51.9	52.6	54.4	57.7
11 Q	55.2	56.4	55.4	56.6	56.1	57.1	57.3	57.3	58.0	59.3	59.5	60.8	64.3	67.1	66.4	66.7	66.3	59.6	55.4	53.4	51.9	51.3	52.3	54.0	58.2
12 Q	56.8	57.9	57.7	57.4	56.4	56.6	57.9	58.7	59.4	59.4	59.5	59.4	61.6	63.6	66.3	65.4	64.4	60.4	56.4	53.1	51.2	50.3	52.4	54.2	58.2
13 Q	54.9	54.9	55.3	55.2	55.8	56.1	56.7	57.4	58.4	58.5	59.2	60.1	61.6	62.5	65.3	67.3	65.7	63.4	60.3	55.7	52.9	53.1	53.9	54.9	58.3
14 Q	56.1	56.7	55.8	55.6	56.1	56.5	57.3	59.5	58.7	58.5	59.1	60.4	62.3	64.0	65.7	66.0	64.4	60.4	56.4	51.9	48.9	49.5	51.2	48.5	57.7
15	55.5	55.6	55.6	56.4	56.4	56.6	56.5	56.9	57.8	58.7	59.8	60.8	61.2	65.2	69.4	69.7	68.4	62.4	55.9	51.7	49.1	49.1	44.5	52.4	57.7
16 Q	55.4	56.7	57.2	56.4	56.3	56.4	57.2	57.2	57.5	58.6	60.4	61.2	62.8	65.9	67.5	66.9	66.3	61.0	53.4	49.8	48.2	49.4	52.6	56.3	57.9
17	57.6	55.8	55.1	55.4	61.2	62.2	65.0	59.5	58.6	57.2	59.5	61.5	63.9	66.8	67.8	67.4	66.1	58.9	53.2	49.9	50.8	52.1	53.5	56.4	59.0
18 D	57.4	59.2	63.8	59.4	57.1	68.2	60.8	59.6	65.5	49.0	62.8	62.4	68.1	88.3	80.2	71.8	64.4	59.4	55.9	52.2	53.1	50.3	53.1	55.9	61.6
19 D	58.1	58.1	57.6	59.4	61.3	57.8	56.1	56.3	57.8	56.8	58.4	60.4	61.2	63.8	66.3	66.4	66.2	63.1	46.4	40.1	46.4	56.7	59.2	68.4	58.4
20 D	65.5	55.6	66.4	59.3	45.1	46.7	2.7	46.4	68.1	49.1	51.6	61.8	54.4	60.4	69.9	71.0	70.0	63.6	57.9	54.1	55.5	55.4	56.4	58.6	56.1
21 D	68.4	59.9	67.1	69.4	64.5	62.6	61.6	67.4	68.0	42.8	57.5	61.2	61.1	64.7	70.9	68.9	68.1	66.1	58.3	54.1	52.2	53.9	54.5	54.9	61.6
22	57.8	58.4	59.6	59.1	59.2	58.2	67.5	57.9	56.7	59.2	59.4	57.1	59.7	66.5	65.4	66.1	65.1	62.8	58.9	55.4	53.2	51.1	52.2	52.0	59.1
23	51.8	53.1	62.2	68.2	55.0	55.4	69.4	61.4	61.5	65.4	57.9	56.4	37.5	64.2	57.7	71.8	70.1	64.6	61.2	55.9	52.4	51.5	53.0	55.7	58.9
24	56.2	64.9	58.9	56.4	57.2	56.9	57.6	57.2	52.6	60.4	53.2	56.4	60.6	68.1	72.7	71.5	69.4	64.4	57.9	52.4	52.3	51.5	53.7	56.4	59.0
25	58.2	57.4	56.4	55.9	60.4	59.1	58.2	57.8	56.4	49.9	56.7	60.6	63.0	64.4	66.5	66.3	65.2	62.6	57.9	54.1	51.6	50.6	51.2	53.4	58.1
26	55.7	59.4	55.4	57.2	67.4	64.4	60.4	58.4	57.5	57.1	58.5	60.4	63.2	66.4	68.0	68.2	65.8	65.7	58.2	55.7	53.9	53.2	53.5	54.2	59.9
27	55.2	56.3	56.2	55.6	55.9	57.3	58.9	59.4	60.2	58.8	59.1	57.5	61.4	66.6	76.9	71.0	66.2	58.4	57.6	47.4	51.6	52.2	52.5	52.9	58.6
28 D	55.0	56.9	55.2	54.3	55.6	62.8	66.6	59.3	58.2	45.0	32.0	42.5	63.5	67.5	70.1	70.6	66.3	62.8	59.8	52.5	50.7	56.3	55.6	55.4	57.3
29	55.1	55.1	62.8	55.0	55.7	55.9	54.3	57.4	55.1	35.7	64.3	63.9	64.3	61.3	64.5	63.1	63.7	62.3	59.2	53.6	52.5	52.3	53.5	54.3	57.3
30	55.8	56.3	56.4	57.3	56.4	58.3	59.3	57.2	57.0	59.1	56.1	57.0	58.9	56.3	61.7	65.3	62.5	59.3	56.3	50.3	52.0	54.4	55.2	55.2	57.3
31	58.1	59.3	59.3	61.0	58.3	59.8	48.1	51.6	60.1	64.3	60.4	62.9	64.3	68.8	64.3	61.3	63.2	55.8	53.3	52.4	52.4	53.5	53.9	55.3	58.4
Mean	56.5	57.3	58.6	58.3	58.7	59.1	57.6	57.8	58.0	55.2	56.3	58.5	60.4	65.3	67.7	67.7	66.2	62.2	57.4	52.8	51.4	51.7	52.5	54.6	58.4

**VERTICAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 31 Meanook

Z = 58,000  $\gamma$  +

August 1963

Hour U. T. 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	24	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	772	753	754	744	764	669	764	710	689	699	681	666	699	700	668	652	681	699	701	710	731	756	757	742	715	
2	740	753	746	750	744	681	609	662	556	588	656	716	720	722	712	710	709	705	710	712	724	731	740	755	702	
3	753	755	765	744	739	702	699	701	710	688	682	715	718	712	708	704	708	704	705	710	713	722	722	748	717	
4	770	751	741	734	717	717	721	661	683	645	598	547	580	539	648	656	688	704	710	709	710	720	734	747	685	
5	781	762	746	775	714	713	718	681	606	547	609	612	764	717	713	711	699	697	699	704	707	722	733	733	702	
6	733	737	754	776	764	525	592	592	645	634	688	677	679	694	710	712	707	702	710	710	715	729	735	741	699	
7	753	764	775	730	769	731	692	672	650	559	632	682	688	678	701	701	702	702	699	707	713	716	720	722	702	
8	723	730	733	733	739	661	694	708	670	643	591	645	663	689	699	699	699	699	704	709	715	721	721	720	696	
9	721	723	736	749	763	696	635	654	682	686	688	718	728	716	711	710	710	705	701	702	708	711	711	713	708	
10	711	708	710	709	710	710	711	710	703	706	702	679	664	651	656	673	689	692	697	703	708	709	710	711	697	
11 Q	708	710	706	705	705	704	706	705	710	708	705	699	700	702	700	702	705	700	696	697	699	710	715	712	704	
12 Q	711	716	711	710	710	709	710	690	706	708	709	700	695	700	703	700	701	700	695	698	702	708	709	711	704	
13 Q	716	713	710	710	710	709	710	708	710	709	708	708	706	703	710	711	709	705	700	701	705	710	712	721	709	
14 Q	722	724	718	712	711	711	711	710	711	700	711	712	712	711	712	711	710	709	700	702	705	711	712	711	711	
15	711	710	709	708	709	710	710	710	709	710	711	712	711	700	693	699	699	689	693	699	710	723	730	735	709	
16 Q	730	719	717	716	713	719	722	716	714	712	711	720	719	716	711	713	705	700	700	702	705	712	714	716	713	
17	727	731	723	722	723	723	716	696	698	700	670	718	722	721	721	719	717	715	711	713	716	730	735	736	717	
18 D	732	743	760	767	763	729	722	667	551	567	604	688	570	473	584	704	729	727	722	727	732	738	732	737	685	
19 D	729	743	732	744	743	732	725	700	682	716	718	719	716	710	706	706	705	695	693	774	767	783	830	682	727	
20 D	754	691	728	719	678	754	770	757	622	651	546	476	613	662	732	719	700	729	718	721	731	738	735	754	696	
21 D	794	776	743	754	687	754	622	376	457	540	637	701	708	710	711	716	718	723	731	732	738	737	743	744	689	
22	733	727	729	726	725	729	670	592	555	698	705	694	710	709	722	721	721	717	715	721	728	731	740	755	708	
23	778	804	824	733	670	573	564	690	580	558	489	504	420	532	672	733	726	733	742	743	739	734	737	743	668	
24	764	790	795	770	741	733	740	686	591	597	666	708	699	705	718	737	737	735	731	731	734	741	741	738	722	
25	735	733	733	741	746	762	750	735	688	644	707	726	731	731	728	726	723	715	720	721	727	730	744	751	727	
26	763	757	731	740	751	696	714	726	700	714	729	734	729	729	712	712	712	711	710	710	715	723	729	723	724	
27	724	721	725	725	724	725	730	724	709	720	695	687	670	656	673	698	703	696	706	710	737	761	748	752	713	
28 D	774	738	728	740	758	741	655	633	662	481	344	427	546	656	716	723	736	733	753	766	764	772	771	761	683	
29	741	752	750	742	733	725	713	716	655	466	487	634	706	707	700	720	720	720	727	723	727	727	730	726	698	
30	730	729	729	733	733	732	730	719	707	719	708	660	698	687	697	709	703	720	721	724	726	726	730	741	717	
31	741	762	754	732	726	696	585	539	646	680	720	730	699	659	652	661	682	724	712	714	722	733	741	752	698	
Mean	741	739	739	735	728	711	691	675	657	648	651	668	679	681	696	705	708	710	710	716	722	729	734	733	704	

DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 32 Meanook

August 1963

Day	Horizontal Intensity					Declination					Vertical Intensity				
	Maximum 12,000 $\gamma$ +		Minimum 12,000 $\gamma$ +		Range $\gamma$	Maximum 23° E +		Minimum 23° E +		Range '	Maximum 58,000 $\gamma$ +		Minimum 58,000 $\gamma$ +		Range $\gamma$
	h. m.	$\gamma$	h. m.	$\gamma$		h. m.	'	h. m.	'		h. m.	$\gamma$	h. m.	$\gamma$	
1	04 53	1270	10 52	1003	267	04 50	92.1	05 36	36.7	55.4	04 34	861	05 21	541	320
2	00 17	1146	08 35	772	374	05 53	99.2	08 52	37.1	62.1	01 15	770	08 36	429	341
3	23 56	1172	04 36	1045	127	04 44	83.9	22 07	46.6	37.3	02 15	819	04 57	656	163
4	23 55	1176	13 31	878	298	07 21	88.0	13 10	36.1	51.9	00 24	776	13 13	462	314
5	03 41	1253	12 03	936	317	03 45	88.1	12 04	57.2	30.9	03 40	861	09 28	512	349
6	04 49	1209	06 23	790	419	04 57	81.7	06 22	38.2	43.5	04 05	829	06 22	417	412
7	02 57	1148	09 20	986	162	03 11	76.2	09 15	59.0	17.2	02 58	815	09 35	537	278
8	05 23	1136	10 18	1033	103	08 17	81.0	10 30	43.7	37.3	07 14	767	10 42	570	197
9	09 10	1179	07 03	971	208	05 56	75.3	10 07	44.3	31.0	04 20	780	07 03	548	232
10	00 55	1118	15 10	1031	87	14 47	71.4	11 42	49.3	22.1	06 58	716	13 25	636	80
11	Q 00 27	1124	20 12	1067	57	15 30	68.4	21 10	49.7	18.7	01 31	716	11 50	689	27
12	Q 00 13	1116	17 32	1063	53	14 59	69.4	21 13	49.4	20.0	07 50	718	07 30	662	56
13	Q 23 33	1118	19 02	1070	48	15 34	69.2	20 34	51.6	17.6	23 59	729	13 23	700	29
14	Q 23 00	1117	18 23	1062	55	15 35	67.4	20 30	47.8	19.6	01 40	729	09 23	690	39
15	23 27	1138	22 14	1051	87	15 58	72.4	21 23	42.0	30.4	23 28	752	14 30	687	65
16	Q 00 03	1146	17 10	1059	87	17 20	70.2	20 58	46.4	23.8	00 06	740	17 10	690	50
17	01 35	1139	19 57	1059	80	07 03	70.2	20 55	44.7	25.5	01 35	743	10 15	640	103
18	D 05 11	1202	08 50	98	1104	13 10	198.7	09 30	11.2	187.5	05 03	808	08 45	304	504
19	D 23 35	1708	18 13	942	766	23 24	83.5	19 48	36.4	47.1	22 35	868	23 38	514	354
20	D 01 20	1564	07 29	-138	1702	02 37	99.6	05 58	-137.6	237.2	06 48	1052	06 01	117	935
21	D 02 02	1386	08 58	50	1336	08 47	96.4	09 05	-10.7	107.1	09 50	905	09 02	70	835
22	06 38	1150	08 15	917	233	06 17	78.4	21 26	48.4	30.0	23 52	769	08 17	461	308
23	02 58	1484	11 18	491	993	06 25	97.4	05 16	-12.3	109.7	02 21	892	12 25	255	637
24	00 17	1163	08 44	858	305	15 08	75.2	08 39	38.9	36.3	02 07	808	08 44	468	340
25	00 21	1152	09 30	1037	117	16 08	69.4	09 44	47.7	21.7	05 06	769	09 08	604	165
26	05 26	1151	20 15	1053	98	04 47	77.4	00 15	51.3	26.1	01 00	786	08 05	656	130
27	23 37	1170	16 58	1015	155	14 45	83.2	19 07	42.4	40.8	23 59	786	13 40	635	151
28	D 06 02	1229	10 27	536	693	06 10	85.3	10 33	-1.8	87.1	00 16	789	10 27	252	537
29	00 14	1142	09 14	268	874	10 38	73.3	09 14	7.4	65.9	02 11	767	09 13	395	372
30	23 17	1144	13 46	1030	114	15 20	68.3	19 57	48.0	20.3	00 38	749	11 51	635	114
31	05 40	1159	14 25	934	225	03 03	72.3	06 47	37.4	34.9	02 52	774	06 12	505	269
Mean		1210		838	372		83.3		31.8	51.5		794		514	280
No. days		31		31	31		31		31	31		31		31	31

**HORIZONTAL INTENSITY**  
Mean values for periods of sixty minutes, Universal Time

Table 33 Meanook

H = 12,000  $\gamma$  +

September 1963

Hour U. T. 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	1123	1092	1111	1101	1099	1099	1108	1106	1062	788	989	1107	1076	1056	1094	1080	1049	1056	1073	1084	1085	1092	1099	1094	1072	
2 Q	1100	1090	1099	1093	1092	1099	1099	1095	1097	1099	1100	1099	1099	1099	1091	1078	1068	1059	1062	1067	1084	1087	1088	1121	1090	
3	1126	1107	1092	1098	1100	1104	1114	1098	1104	1090	1071	1079	1072	1105	1088	1086	1070	1057	1058	1061	1068	1085	1080	1101	1088	
4 Q	1101	1099	1099	1098	1101	1100	1106	1107	1096	1098	1090	1102	1104	1098	1098	1091	1075	1067	1065	1067	1083	1093	1102	1092	1093	
5	1112	1108	1097	1093	1098	1098	1098	1098	1099	1088	1102	1089	1121	1119	1113	1090	1077	1066	1066	1071	1081	1091	1112	1127	1097	
6 Q	1089	1085	1097	1100	1103	1105	1105	1104	1083	1070	1082	1092	1100	1098	1097	1085	1073	1064	1070	1082	1092	1093	1103	1110	1091	
7 Q	1113	1107	1103	1102	1100	1100	1101	1098	1105	1103	1102	1104	1105	1106	1104	1089	1074	1061	1060	1067	1078	1087	1082	1106	1094	
8	1108	1105	1100	1105	1138	1132	1101	1123	1113	1107	1092	964	901	1065	1105	1099	1074	1064	1061	1060	1067	1082	1093	1104	1082	
9	1113	1107	1109	1101	1165	1107	1105	1099	1071	1019	1063	1102	1080	971	1038	1091	1082	1067	1062	1071	1078	1093	1100	1103	1083	
10	1101	1098	1100	1082	1093	1097	1096	1095	1086	1097	1100	1089	1067	1091	1100	1091	1081	1082	1074	1076	1085	1112	1095	1097	1091	
11	1099	1100	1108	1099	1099	1102	1102	1100	1074	994	1047	1022	1063	1106	1103	1092	1062	1055	1042	1057	1095	1081	1114	1116	1081	
12	1123	1114	1106	1096	1109	1110	1096	1096	947	1087	1099	1100	1088	1066	1073	1079	1073	1060	1074	1088	1096	1097	1099	1100	1087	
13 Q	1096	1088	1092	1092	1096	1096	1098	1102	1090	1102	1103	1104	1102	1100	1096	1088	1078	1073	1114	1084	1102	1100	1118	1128	1098	
14 D	1103	1099	1124	1111	1079	1089	902	701	710	731	633	711	496	521	708	717	864	1033	1057	1119	1120	1148	1159	1129	920	
15	1128	1135	1095	1092	1109	974	1080	946	1039	1031	992	884	869	789	1083	1073	1017	1060	1059	1048	1087	1113	1132	1233	1044	
16	1108	1100	1094	1139	1115	1114	930	1072	973	784	709	636	953	1092	1073	1024	1068	1060	1044	1018	1064	1102	1140	1121	1026	
17	1184	1119	1094	1126	1149	1115	981	690	710	494	052	574	912	996	1055	1064	1079	1053	1016	1074	1104	1125	1112	1133	958	
18	1115	1115	1126	1096	1082	1086	1086	1093	1098	1100	1074	924	1010	1030	1061	1024	1009	1009	1063	1079	1085	1102	1110	1122	1071	
19	1114	1085	1095	1105	1088	1089	1084	929	979	846	806	613	964	1019	976	1007	1007	1093	1037	1056	1078	1094	1091	1107	1015	
20	1101	1089	1085	1092	1094	1101	1093	1099	1041	904	1013	1079	1105	1076	1005	1000	1034	1054	1063	1067	1070	1077	1087	1099	1063	
21	1108	1113	1117	1130	1119	1099	1091	1087	1049	1039	1023	1085	1093	1092	1031	940	1002	921	987	1046	1061	1058	1109	1092	1062	
22 D	1116	1124	1227	1402	832	341	744	686	737	1132	1075	1024	1037	1073	1078	1069	1054	1061	1060	1069	1132	1230	1281	1260	1035	
23 D	748	920	802	822	969	1013	1059	1015	982	865	847	1024	1070	1078	1101	1089	1071	1076	1076	1079	1080	1078	1071	1070	1000	
24	1065	1066	1070	1071	1079	1078	1072	1076	1078	1077	1070	1069	1080	1069	1041	1057	1058	1046	1026	1066	1099	1219	1270	1082	1082	
25 D	1267	1444	1175	1246	1223	1103	991	791	668	791	882	922	939	992	1038	999	1016	1060	1084	1078	1076	1103	1086	1083	1042	
26	1089	1091	1087	1096	1103	1065	1117	1108	1074	1051	1036	1009	1045	989	1076	1071	1049	1038	1072	1085	1088	1099	1093	1068	1071	
27	1080	1086	1098	1095	1088	1092	1095	1084	1056	1001	1059	1061	1043	1038	1062	1067	1077	1075	1059	1092	1053	1092	1131	1219	1080	
28 D	1098	1174	1382	1217	1031	990	1120	1077	798	951	1006	951	834	717	881	951	1067	1061	1072	1088	1124	1084	1116	1090	1037	
29	1092	1092	1100	1108	1100	1102	1086	1039	998	1022	946	978	979	1031	1069	1096	1077	1069	1065	1065	1059	1092	1070	1084	1059	
30	1090	1088	1075	1086	1084	1088	1096	1090	1077	1056	1025	1084	1077	1064	1084	1069	1073	1077	1076	1079	1084	1085	1082	1084	1078	
31																										
Mean	1101	1108	1105	1109	1091	1063	1065	1030	1002	988	979	989	1016	1025	1055	1048	1052	1056	1061	1070	1084	1099	1113	1122	1060	

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 34 Meanook

D = 23° E + ...

September 1963

Hour U. T. 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	59.0	57.3	56.2	61.8	55.6	57.0	59.4	54.1	55.3	33.8	50.0	62.6	66.0	60.4	65.4	65.3	59.8	55.1	52.3	50.6	51.0	52.4	56.0	58.3	56.5	
2 Q	58.4	58.5	57.1	57.1	59.7	57.8	57.9	57.1	57.7	58.6	59.6	60.3	61.3	62.0	64.5	66.3	64.3	61.3	57.0	52.1	51.5	52.2	53.3	55.6	58.4	
3	54.3	53.7	56.3	56.7	56.5	57.2	59.3	60.8	56.9	56.8	54.7	57.7	61.3	67.3	68.3	64.3	64.1	58.7	53.3	51.4	51.5	52.9	55.3	58.4	57.8	
4 Q	59.3	59.0	58.0	60.2	58.5	58.2	57.3	56.3	56.1	56.0	55.3	60.3	63.3	64.2	64.2	68.3	66.8	62.4	57.5	51.7	51.8	50.4	51.2	51.1	58.3	
5	53.5	59.1	55.5	56.6	57.3	56.8	56.8	57.0	57.1	54.1	58.9	53.3	61.6	66.0	66.6	67.3	66.3	61.3	57.6	53.8	49.2	50.3	52.3	53.1	57.6	
6 Q	56.9	55.3	57.3	57.3	57.1	58.1	60.5	58.1	55.8	53.0	57.9	57.3	61.0	63.3	64.3	65.6	64.1	59.3	54.4	49.6	50.4	52.2	53.3	56.2	57.4	
7 Q	57.7	57.3	57.5	57.2	57.3	57.3	61.5	59.3	59.5	58.5	59.0	60.1	62.0	64.1	66.3	68.1	66.5	62.3	56.3	53.8	51.7	51.2	53.5	56.2	58.9	
8	57.4	57.3	56.3	54.7	51.5	62.2	46.9	61.8	57.9	56.6	59.4	51.7	60.0	73.3	70.5	68.2	63.8	57.2	56.2	53.5	53.0	53.4	54.0	55.1	58.0	
9	55.2	56.1	56.4	57.7	59.4	61.2	56.7	56.1	58.4	54.2	58.7	62.1	63.3	59.9	56.1	63.3	62.2	60.8	56.8	55.2	52.9	52.4	53.7	55.6	57.7	
10	56.3	56.0	56.9	57.6	55.7	56.9	59.2	59.7	60.4	60.2	60.3	60.2	55.0	60.2	63.6	65.2	64.2	61.0	57.4	53.7	52.3	52.2	52.2	54.2	57.9	
11	55.8	58.1	54.9	57.1	56.5	58.1	58.2	57.3	60.1	72.0	68.4	69.8	56.8	64.0	64.5	62.6	61.2	55.4	55.9	50.9	53.5	51.4	53.7	54.8	58.8	
12	56.2	66.0	63.4	54.8	60.0	76.2	60.7	61.0	36.2	58.7	62.7	63.1	63.2	61.2	62.0	65.2	63.6	60.2	56.2	54.0	53.9	54.4	56.9	56.9	59.5	
13 Q	57.4	58.3	58.7	57.0	57.2	57.2	58.2	56.4	57.4	59.2	60.2	61.0	61.4	62.6	64.0	65.1	64.7	63.2	58.0	55.2	53.4	53.3	55.0	56.0	58.8	
14 D	58.6	55.3	57.2	58.8	83.7	61.0	57.2	46.5	43.9	69.1	85.7	94.8	123.9	110.8	84.1	78.6	62.9	48.1	45.2	52.3	55.1	57.7	62.2	59.3	67.2	
15	63.7	71.5	61.2	56.0	65.4	39.3	54.7	40.2	49.2	54.2	54.2	54.0	54.2	56.6	71.9	66.5	64.8	58.1	51.1	45.7	50.0	53.9	55.0	63.0	56.4	
16	58.7	58.3	57.0	76.9	59.3	58.5	44.2	51.8	49.6	53.0	36.2	50.2	71.2	70.3	68.4	64.9	58.4	56.0	59.5	54.5	48.5	52.0	54.9	59.2	57.2	
17	59.7	64.3	62.9	74.2	66.9	60.2	24.4	50.1	38.1	28.5	44.8	75.8	70.2	71.4	71.1	70.2	64.2	59.4	54.2	48.2	49.6	53.5	56.7	59.1	57.4	
18	59.0	60.2	67.8	57.4	56.3	56.4	56.3	56.9	57.0	54.2	57.9	43.1	61.4	73.2	68.4	62.2	56.2	58.9	46.0	49.2	50.2	52.2	54.2	55.8	57.1	
19	64.3	59.5	58.9	58.6	71.1	62.6	66.7	63.8	52.1	55.1	19.5	76.1	54.2	72.7	63.3	69.6	56.8	53.9	49.3	46.4	51.9	53.5	56.2	58.6	58.1	
20	58.6	59.6	59.2	58.5	60.1	60.6	56.3	57.1	57.9	53.2	61.5	57.5	64.1	65.6	59.7	55.6	53.4	52.6	54.6	52.0	53.2	51.5	52.1	51.6	56.9	
21	55.0	52.6	55.1	59.8	63.1	58.1	56.2	57.6	57.8	59.1	58.3	60.1	61.1	62.6	61.3	55.2	57.4	74.9	36.9	53.1	55.6	48.2	54.1	52.3	56.9	
22 D	50.8	50.1	49.1	52.5	69.1	68.1	68.1	58.9	82.7	64.1	65.2	63.9	70.4	70.9	65.7	65.7	67.5	61.1	64.1	77.2	75.3	47.6	48.7	45.2	62.6	
23 D	50.5	41.7	28.5	39.9	54.8	55.3	62.0	54.0	52.6	57.9	70.8	64.2	55.8	61.1	61.1	62.7	63.1	64.1	64.1	60.2	58.4	57.1	57.0	57.6	56.4	
24	57.9	58.1	58.2	58.8	58.1	57.4	57.5	58.1	59.2	59.1	60.0	60.2	63.9	63.9	62.1	62.3	60.9	62.1	61.1	55.1	53.4	57.1	64.8	63.4	59.7	
25 D	52.1	73.8	83.6	64.1	52.1	55.3	55.0	49.5	26.1	15.1	62.5	57.3	58.1	59.6	61.1	61.9	59.9	59.1	59.3	60.2	59.1	57.9	56.7	54.3	56.4	
26	56.2	57.7	57.1	56.3	95.8	65.8	58.6	56.6	57.6	58.0	59.2	59.3	58.2	59.6	61.6	62.9	60.7	62.0	57.1	55.6	58.9	59.1	57.1	58.2	60.4	
27	57.1	58.2	69.9	68.8	57.9	56.1	57.2	55.1	55.0	53.7	60.1	58.5	58.9	61.7	62.1	63.6	61.5	62.3	62.1	61.5	52.7	48.4	51.4	58.8		
28 D	52.1	54.3	80.1	73.0	54.8	54.5	60.8	54.9	50.6	49.5	54.3	59.2	59.7	71.5	41.5	53.9	55.7	54.9	59.5	60.5	61.2	56.1	60.2	59.9	58.0	
29	55.8	61.5	58.1	61.9	56.5	54.1	54.0	51.2	42.9	55.4	46.0	53.7	57.1	63.4	63.5	63.1	63.9	59.1	62.1	59.6	55.1	56.5	58.1	57.4	57.1	
30	55.9	75.7	67.1	55.1	56.0	56.1	57.1	55.7	54.9	61.7	55.1	59.1	58.6	58.1	61.1	60.6	61.9	60.7	58.8	56.3	55.2	55.0	55.1	56.0	58.6	
31																										
Mean	56.8	58.8	59.2	59.2	60.8	58.5	56.6	55.8	53.9	54.4	57.2	61.0	63.2	66.0	64.4	64.4	62.1	59.5	55.8	54.5	54.3	53.4	55.1	56.2	58.3	

**VERTICAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 35 Meanook

Z = 58,000  $\gamma$  +

September 1963

Hour U. T. 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	24	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	770	734	749	741	727	719	707	719	675	518	622	686	687	686	715	708	702	706	712	714	719	728	728	729	705	
2 Q	731	729	723	719	720	715	708	709	713	713	713	714	715	716	718	718	720	718	719	720	725	727	724	731	719	
3	732	762	752	732	719	734	738	716	720	702	672	675	686	697	697	711	713	709	715	718	723	731	728	734	718	
4 Q	729	726	725	727	719	719	719	707	692	697	692	702	720	719	719	721	719	718	719	719	722	727	728	734	718	
5	751	757	728	726	723	719	719	719	713	679	672	686	697	714	718	717	714	714	715	719	724	724	728	739	718	
6 Q	739	733	725	718	715	718	732	720	697	653	665	695	709	717	720	718	718	718	722	728	731	733	734	732	715	
7 Q	726	722	720	720	719	719	712	718	718	718	718	718	719	723	720	718	718	715	711	712	718	726	725	720	719	
8	720	723	733	751	783	645	626	734	739	733	715	598	509	665	713	718	717	722	726	727	726	730	728	723	705	
9	722	718	736	765	665	685	721	727	675	630	678	697	686	620	647	705	710	715	719	725	719	722	719	715	700	
10	715	717	718	719	718	717	718	718	634	686	699	696	671	695	707	708	707	708	706	709	711	718	719	727	706	
11	730	737	728	739	740	739	715	708	671	598	562	482	671	689	712	717	707	704	719	730	752	732	745	746	706	
12	750	792	766	744	756	731	670	708	588	676	717	718	713	701	711	713	718	717	718	724	728	730	728	726	719	
13 Q	727	726	725	719	717	717	714	711	717	719	718	714	717	717	718	717	717	717	717	717	722	720	729	760	720	
14 D	777	756	796	789	612	635	517	652	901	1074	909	901	639	552	805	587	631	711	757	778	760	778	781	751	744	
15	750	765	742	735	717	478	618	601	706	709	696	643	576	496	671	696	700	736	740	758	790	808	815	868	700	
16	761	763	757	748	677	717	595	659	593	652	495	457	576	687	697	691	727	733	745	782	769	772	776	796	693	
17	847	790	755	727	695	727	511	469	533	760	979	499	560	679	722	734	744	738	765	760	746	751	747	762	673	
18	759	765	788	748	742	737	728	721	696	716	717	591	611	641	705	683	713	708	724	731	729	732	737	748	716	
19	781	758	737	749	734	717	696	575	534	468	404	497	566	593	572	652	663	687	728	733	746	746	738	738	659	
20	743	748	747	750	745	672	698	726	665	583	626	705	736	710	656	629	652	670	698	718	730	737	750	773	703	
21	793	783	775	743	748	749	737	737	717	694	673	710	733	732	691	601	634	672	672	716	748	736	742	728	719	
22 D	733	743	813	795	594	777	626	999	697	765	738	683	681	717	690	749	750	734	726	732	738	900	854	578	743	
23 D	347	577	497	631	728	446	691	674	642	494	493	582	635	703	734	743	743	738	737	733	733	734	741	741	646	
24	739	739	739	738	738	738	739	739	742	741	739	735	734	736	739	736	734	737	745	761	794	794	813	788	749	
25 D	814	715	427	453	766	725	607	574	747	779	807	717	704	737	749	717	747	760	763	771	782	781	766	760	715	
26	767	750	743	748	697	628	727	754	747	738	718	724	736	761	758	751	747	763	755	751	756	772	782	783	745	
27	767	758	771	738	749	756	735	725	701	637	693	712	705	711	724	735	740	737	738	742	747	756	823	872	741	
28 D	812	845	793	693	482	593	682	709	750	671	704	676	545	641	699	698	747	727	744	780	796	780	795	763	714	
29	756	754	757	728	748	760	736	671	593	664	591	625	658	704	698	730	732	736	736	750	742	762	761	763	715	
30	761	810	777	747	736	744	710	673	705	704	665	711	723	718	734	736	736	736	736	735	735	735	734	731	731	
31																										
Mean	743	748	733	727	712	697	686	700	688	687	656	672	668	687	710	706	715	721	728	737	744	752	754	750	713	

MEANOOK MAGNETIC OBSERVATORY 1963



## DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 36 Meanook

September 1963

Day	Horizontal Intensity					Declination					Vertical Intensity									
	Maximum		Minimum		Range	Maximum		Minimum		Range	Maximum		Minimum		Range					
	12,000 $\gamma$ +		12,000 $\gamma$ +			23° E +		23° E +			58,000 $\gamma$ +		58,000 $\gamma$ +							
	h.	m.	$\gamma$	h.	m.	$\gamma$	h.	m.	'	'	h.	m.	$\gamma$	h.	m.	$\gamma$				
1	00	23	1145	09	08	707	03	06	72.1	09	35	12.7	59.4	03	03	811	09	06	396	415
2 Q	23	55	1147	17	50	1039	15	34	68.1	19	54	49.1	19.0	00	45	740	06	16	697	43
3	00	07	1141	17	37	1039	14	23	70.0	10	36	49.3	20.7	01	37	786	10	55	630	156
4 Q	22	49	1122	19	01	1054	14	54	69.0	21	05	49.3	19.7	23	13	744	11	02	686	58
5	23	10	1145	18	37	1051	15	48	70.0	20	18	55.3	14.7	01	00	773	09	52	655	118
6 Q	23	35	1159	09	34	1054	15	34	68.3	19	48	48.3	20.0	00	18	745	09	35	635	110
7 Q	23	38	1139	18	00	1056	15	19	69.7	21	41	50.2	19.5	23	40	734	06	19	696	38
8	05	30	1263	11	45	807	05	28	90.2	06	15	-23.6	113.8	06	20	825	06	08	365	460
9	10	29	1249	09	36	876	04	38	82.2	04	50	23.1	59.1	03	59	793	09	41	515	278
10	21	11	1141	18	53	1052	08	39	68.4	07	58	45.4	23.0	07	32	736	08	02	564	172
11	23	31	1142	09	23	886	09	27	101.7	19	35	43.1	58.6	20	00	772	09	50	502	270
12	05	46	1157	08	45	823	05	44	103.3	08	42	13.0	90.3	01	35	849	08	45	510	339
13 Q	23	47	1157	21	30	1057	15	54	66.2	21	23	49.5	16.7	23	51	802	07	17	692	110
14 D	19	03	1261	12	25	219	12	24	195.4	08	04	-16.1	211.5	09	27	1467	06	58	327	1140
15	23	30	1305	13	10	638	04	55	86.2	06	00	7.1	79.1	23	15	922	13	25	370	552
16	22	50	1190	11	25	435	03	27	113.6	10	15	4.5	109.1	23	22	840	10	47	270	570
17	00	37	1288	10	06	-441	10	24	144.2	09	32	131.5	275.7	09	37	1129	10	19	-267	1396
18	00	01	1180	11	27	848	13	42	79.2	11	30	32.0	47.2	02	25	857	11	27	541	316
19	00	12	1136	11	35	91	11	35	148.4	10	27	-2.8	151.2	00	21	796	10	00	84	712
20	05	21	1133	09	43	756	11	11	72.1	09	40	37.6	34.5	23	59	791	09	40	469	322
21	03	46	1180	17	45	737	17	28	88.1	17	58	27.6	60.5	00	08	804	18	06	527	277
22 D	23	14	1609	08	05	-165	05	10	149.2	08	20	17.2	132.0	07	32	1163	07	52	-31	1194
23 D	02	02	1413	02	35	367	03	54	108.2	00	18	-14.4	122.6	04	24	901	00	30	-26	927
24	23	56	1796	19	10	1002	22	37	78.9	20	19	47.6	31.3	22	27	878	23	34	705	173
25 D	02	41	1604	07	58	214	01	47	137.2	09	31	8.3	128.9	08	23	1058	02	41	239	819
26	04	28	1252	13	18	838	04	38	126.4	13	00	50.6	75.8	13	25	809	04	46	554	255
27	23	25	1288	09	28	951	02	38	86.7	22	23	37.1	49.6	22	50	920	09	30	588	332
28 D	02	15	1506	13	04	441	04	24	141.8	14	45	23.6	118.2	02	48	907	04	23	157	750
29	21	14	1153	10	08	867	03	00	78.3	08	08	30.6	47.7	03	01	801	08	15	531	270
30	06	40	1178	10	20	960	01	27	85.6	08	03	45.7	39.9	01	21	834	06	57	566	268
31																				
Mean			1253			709			973			22.3	75.0			866			438	428
No. days			30			30			30			30	30			30			30	30

**HORIZONTAL INTENSITY**  
Mean values for periods of sixty minutes, Universal Time

Table 37 Meanook

H = 12,000  $\gamma$  +

October 1963

Hour U. T. 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	24	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	1080	1084	1089	1080	1078	1078	1082	1083	1078	1087	1089	1090	1085	1080	1080	1080	1073	1071	1068	1074	1080	1077	1080	1078	1080	1080
2 Q	1078	1081	1087	1088	1088	1087	1090	1090	1091	1095	1098	1097	1092	1091	1091	1084	1078	1068	1071	1069	1080	1090	1087	1090	1085	1085
3 Q	1087	1085	1089	1088	1088	1085	1088	1080	1073	1080	1102	1091	1094	1091	1090	1082	1077	1069	1068	1076	1081	1085	1090	1090	1084	1084
4	1091	1090	1081	1078	1084	1091	1095	1063	1044	1065	1092	1104	1103	1097	1074	1068	1076	1073	1063	1065	1069	1078	1081	1084	1080	1080
5	1092	1094	1094	1095	1096	1097	1102	1102	1091	954	1010	1106	1104	1103	1100	1090	1081	1070	1068	1065	1077	1078	1080	1090	1081	1081
6	1092	1091	1089	1090	1097	1090	1091	1091	1092	1094	1096	1097	1098	1097	1096	1091	1078	1068	1069	1069	1070	1078	1081	1084	1087	1087
7	1091	1099	1098	1097	1094	1097	1100	1098	1096	1095	1100	1103	1103	1102	1100	1094	1078	1081	1078	1070	1073	1075	1056	1075	1090	1090
8	1090	1091	1138	1149	1114	1163	1046	981	1055	1046	1040	1051	1069	1076	1092	1080	1068	1080	1090	1075	1065	1062	1077	1087	1078	1078
9	1092	1091	1091	1091	1092	1103	1094	1090	1089	1091	1089	1091	1091	1092	1095	1091	1089	1076	1074	1066	1068	1076	1073	1087	1087	1087
10	1088	1094	1095	1099	1099	1098	1098	1092	1070	1051	1077	1092	1088	1097	1099	1103	1094	1088	1075	1074	1065	1068	1067	1074	1085	1085
11	1077	1085	1088	1090	1091	1098	1081	1124	993	1018	901	831	937	1095	1090	1084	1068	1070	1056	1056	1055	1080	1069	1084	1047	1047
12 D	1090	1154	1126	1172	1114	1094	1067	1016	885	822	781	646	755	623	1031	1034	1016	1040	1066	1084	1054	1078	1081	1084	996	996
13	1091	1089	1090	1121	1124	1104	1085	1081	952	989	1080	1080	1044	1081	1055	1073	1071	1076	1055	1053	1069	1077	1068	1106	1071	1071
14 D	1138	1187	1102	1104	1102	1080	1090	530	751	668	987	913	788	943	1010	984	982	1010	1046	1091	1091	1077	1080	1088	987	987
15	1089	1068	1091	1099	1091	1071	987	1090	1080	1095	1039	1030	1088	1081	1078	1087	1085	1081	1068	1058	1071	1082	1070	1085	1074	1074
16	1087	1096	1102	1099	1090	1088	1046	1024	1045	973	1025	1031	1010	1056	1078	1073	1065	1059	1052	1052	1080	1089	1082	1082	1062	1062
17	1085	1092	1094	1095	1091	1084	1090	1080	1083	1082	1090	1088	1082	1090	1090	1088	1074	1073	1068	1062	1067	1070	1080	1082	1083	1083
18	1082	1082	1088	1087	1084	1080	1076	1070	1069	1076	1078	1080	1091	1097	1091	1077	1081	1080	1062	1058	1067	1073	1070	1078	1078	1078
19	1083	1080	1084	1080	1080	1080	1081	1063	1071	1068	1074	1071	1080	1073	1078	1076	1080	1081	1080	1074	1069	1070	1071	1080	1076	1076
20	1080	1088	1085	1085	1091	1090	1080	1077	1080	1090	1074	1059	1045	1001	1102	1112	1095	1066	1056	1065	1068	1077	1071	1103	1076	1076
21	1103	1100	1099	1097	1083	1080	1066	1069	1080	1000	1058	1114	1111	1103	1099	1092	1083	1080	1071	1068	1074	1078	1090	1096	1083	1083
22 Q	1096	1097	1092	1089	1091	1091	1095	1099	1103	1103	1102	1103	1103	1103	1102	1100	1100	1095	1080	1073	1080	1089	1094	1099	1095	1095
23	1102	1102	1102	1103	1104	1102	1102	1102	1102	1102	1102	1102	1100	1097	1097	1091	1088	1080	1073	1066	1070	1088	1098	1098	1095	1095
24 D	1184	1274	1461	1323	1149	1196	1052	1015	697	732	393	996	1143	1027	1023	1037	1076	1039	1062	1048	1089	1056	1095	1083	1052	1052
25	1177	1111	1083	1081	1125	1102	1076	1084	1067	1066	1065	1068	1068	1066	1080	1078	1074	1068	1065	1066	1063	1056	1058	1071	1080	1080
26	1075	1065	1073	1068	1080	1082	1080	1080	1080	1077	1068	1046	1077	1065	1070	1073	1067	1058	1056	1056	1065	1078	1081	1084	1070	1070
27 Q	1082	1084	1082	1085	1084	1082	1082	1081	1082	1080	1091	1090	1091	1090	1081	1088	1080	1071	1061	1058	1066	1068	1075	1078	1080	1080
28	1081	1085	1087	1088	1088	1088	1088	1088	1087	1087	1080	1094	1095	1091	1090	1082	1077	1048	1033	1023	1083	1076	1077	1081	1078	1078
29 D	1056	1081	1071	1071	1078	1071	1058	1034	1008	988	1034	1061	1091	1047	954	1048	723	828	1091	1126	1139	1323	1175	1303	1061	1061
30 D	1257	1051	929	1048	1010	984	949	1019	1048	1090	1080	1089	1090	1085	1080	1078	1071	1066	1060	1065	1068	1077	1071	1073	1060	1060
31	1076	1077	1077	1076	1077	1076	1077	1080	1078	1088	1089	1087	1083	1080	1078	1073	1066	1060	1061	1067	1076	1080	1078	1078	1076	1076
Mean	1099	1098	1098	1100	1092	1091	1074	1051	1039	1031	1036	1047	1061	1062	1077	1077	1062	1060	1066	1066	1074	1084	1081	1092	1072	1072

MEANOOK MAGNETIC OBSERVATORY 1963

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 38 Meanook

D = 23°E + ...'

October 1963

Hour U. T. 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	24	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	55.4	55.3	54.7	54.6	53.2	55.9	55.1	55.9	54.7	56.4	56.8	58.6	57.9	58.4	59.6	61.0	60.5	58.4	56.4	54.6	54.2	54.7	54.7	55.6	56.4	
2 Q	56.3	56.3	56.1	56.1	55.9	56.1	55.6	56.1	56.3	56.9	57.9	58.3	57.9	58.4	58.6	59.8	61.0	60.0	57.3	54.6	53.4	53.2	54.6	55.1	56.8	
3 Q	55.8	55.7	55.3	58.7	57.2	56.2	55.3	54.8	57.5	61.2	60.0	58.0	57.7	58.2	59.0	59.4	61.2	61.0	58.0	55.2	54.5	53.6	54.0	54.5	57.2	
4	54.5	54.6	57.0	57.3	54.5	56.2	56.0	51.5	58.2	61.2	62.4	57.7	57.0	60.7	61.2	62.7	62.4	61.4	58.2	55.5	53.0	51.8	52.0	52.6	57.0	
5	54.2	52.9	54.2	54.4	54.5	54.9	54.5	55.7	56.4	59.1	69.3	61.1	58.6	58.7	60.4	61.8	62.3	61.3	59.1	55.7	53.4	51.4	52.0	52.7	57.1	
6	53.9	54.4	54.7	54.4	64.6	55.2	54.5	54.7	55.2	56.1	56.1	56.1	56.2	56.9	58.4	60.9	62.3	57.6	57.1	54.4	52.5	52.4	51.9	52.4	55.9	
7	53.8	54.3	54.3	54.1	54.1	55.3	56.1	60.8	58.3	57.6	55.6	56.0	56.1	57.3	59.3	61.8	58.8	58.0	58.5	56.5	54.4	52.6	48.6	50.8	56.0	
8	50.9	49.2	50.9	79.6	52.9	54.4	48.9	51.9	58.0	60.0	56.0	61.0	57.8	55.6	57.5	61.2	60.8	59.3	58.1	57.6	55.8	54.6	54.3	54.4	56.6	
9	54.2	54.2	55.1	54.4	57.0	58.0	55.9	55.7	56.5	57.2	57.5	57.4	56.2	55.9	56.2	57.4	59.1	61.4	61.1	59.1	56.2	54.2	52.5	52.7	52.8	56.4
10	52.5	54.3	55.5	55.9	55.9	55.7	55.7	57.4	61.9	67.5	60.6	60.9	54.7	56.4	56.5	59.6	61.4	61.6	57.5	55.2	55.7	52.7	52.5	52.5	57.0	
11	53.9	54.4	55.3	55.8	62.5	60.8	55.8	57.1	72.4	74.1	75.9	79.3	95.7	80.8	54.8	59.1	55.3	57.3	52.4	51.9	50.4	52.4	52.6	52.9	61.3	
12 D	50.4	57.4	69.0	57.4	53.1	59.5	69.7	57.6	56.1	65.7	71.2	83.1	57.4	59.3	50.7	52.6	55.8	48.7	47.9	54.2	55.6	55.9	55.6	55.9	58.3	
13	54.7	55.5	56.0	59.0	83.2	71.1	54.8	58.0	54.8	52.3	55.3	56.2	54.5	55.8	55.7	57.3	60.7	60.4	60.0	58.0	55.8	55.7	59.4	59.0	58.5	
14 D	57.3	55.8	58.5	62.4	58.2	69.7	60.0	72.4	67.4	66.6	67.4	66.7	42.2	58.3	54.1	53.8	51.1	52.6	48.9	55.5	55.2	53.8	54.0	54.3	58.2	
15	55.4	57.6	59.4	61.3	53.5	57.1	48.3	57.6	55.6	57.2	59.6	53.7	56.9	57.1	57.2	59.8	60.3	61.4	59.8	56.9	53.7	53.9	56.9	55.4	56.9	
16	57.4	55.9	61.4	60.6	55.1	59.9	55.7	66.3	67.3	66.8	61.9	62.3	51.7	60.3	56.1	52.5	54.4	59.1	57.1	52.2	55.9	55.7	55.6	55.7	58.2	
17	55.8	55.6	55.5	55.3	60.0	60.5	58.8	58.5	57.8	56.8	56.1	56.1	55.2	56.7	58.7	60.5	61.3	59.8	58.0	55.0	53.8	53.8	53.9	54.6	57.0	
18	54.3	55.1	56.0	59.3	55.3	56.3	55.5	61.9	63.9	60.7	57.1	55.5	55.5	54.3	55.5	53.9	57.5	59.0	56.3	52.1	52.4	52.9	52.9	53.0	56.1	
19	53.7	55.2	55.2	56.9	57.7	60.1	60.0	63.4	63.9	64.3	63.8	58.7	55.9	53.7	55.2	55.4	59.2	60.2	59.2	56.9	54.0	53.7	53.5	54.2	57.7	
20	52.3	53.8	53.7	53.7	57.0	58.7	58.2	61.7	60.2	59.9	62.9	60.4	69.5	55.0	56.2	58.4	60.2	57.7	53.7	52.7	52.0	51.8	47.3	44.1	56.4	
21	50.9	50.9	53.6	54.8	55.4	65.0	65.2	65.8	60.5	62.0	65.2	56.9	56.1	56.9	57.8	58.3	58.1	57.8	56.9	54.9	53.6	53.6	53.4	53.9	57.4	
22 Q	54.9	55.3	55.4	55.3	54.9	55.1	55.3	55.3	55.3	55.3	55.4	55.4	55.3	56.1	58.5	60.0	60.5	61.5	59.8	56.9	53.7	52.2	52.6	53.1	55.9	
23	53.6	54.3	55.2	55.2	55.0	55.2	55.0	55.0	55.0	55.3	55.5	56.0	56.8	58.2	58.5	59.7	61.0	61.5	60.0	57.5	55.2	52.5	50.6	50.5	56.0	
24 D	48.9	55.2	48.6	36.7	46.8	49.3	60.7	61.9	83.9	81.0	166.0	73.5	66.9	71.6	70.3	68.8	65.6	64.2	62.0	56.8	57.0	54.7	55.0	56.7	65.1	
25	38.6	75.2	55.9	56.6	57.9	62.3	67.5	57.4	58.4	58.4	59.6	58.8	59.8	59.8	62.3	64.8	65.1	65.1	62.1	59.8	57.6	55.1	55.7	58.4	59.8	
26	58.4	55.1	63.0	61.3	58.8	59.3	58.9	59.3	59.3	59.4	59.4	56.9	58.4	58.6	60.3	62.1	65.0	63.0	59.6	56.9	56.4	55.1	55.9	56.6	59.1	
27 Q	58.0	58.3	58.3	58.3	58.3	59.0	58.3	59.2	59.5	57.1	59.0	58.3	58.3	59.2	58.0	61.2	61.7	61.2	58.2	56.3	54.3	55.3	57.1	58.3	58.3	
28	58.5	58.7	58.3	58.3	58.3	58.2	58.0	58.0	58.2	58.3	59.5	60.7	59.7	58.5	60.0	61.3	61.3	54.8	55.8	47.6	49.4	52.4	53.1	55.0	57.1	
29 D	56.5	59.1	61.2	61.9	63.1	62.1	62.9	65.4	69.6	73.3	68.6	63.3	58.2	56.9	48.1	53.3	74.5	75.4	74.5	80.9	90.0	65.1	88.0	56.0	66.1	
30 D	52.3	61.1	61.6	68.3	61.9	61.7	68.3	63.8	58.2	58.9	57.7	58.4	61.6	61.2	61.7	63.6	64.8	63.3	61.2	58.2	57.0	56.0	56.7	57.5	60.6	
31	58.0	58.1	58.3	58.4	58.1	58.0	58.0	58.0	58.1	58.3	59.1	59.5	60.1	61.3	62.0	62.3	62.7	60.0	56.8	56.4	55.9	56.4	57.8	58.1	58.8	
Mean	54.0	56.1	56.7	57.6	57.6	58.6	57.9	59.1	60.3	61.1	64.1	60.4	58.6	58.9	58.1	59.6	60.9	60.1	58.1	56.2	55.6	54.2	55.1	54.4	58.0	

**VERTICAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 39 Meanook

Z = 58,000  $\gamma$  +

October 1963

Hour U. T. 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 Q	730	730	731	735	742	743	742	739	719	718	725	714	729	723	725	730	730	730	731	731	731	732	730	730	731
2 Q	731	731	731	730	730	730	730	730	728	729	728	725	724	725	725	723	722	721	719	725	730	730	728	724	728
3 Q	730	730	730	736	736	738	731	723	660	690	730	729	730	730	731	728	728	719	719	719	722	725	726	728	724
4	729	730	735	739	753	744	730	653	674	653	697	726	728	728	711	694	702	716	723	725	731	732	731	730	717
5	729	730	728	726	728	731	731	729	718	568	591	686	707	718	723	723	722	719	722	724	730	730	728	729	711
6	731	728	731	735	735	743	731	730	728	722	721	721	721	721	722	728	723	721	721	719	719	719	724	726	726
7	726	729	725	730	731	730	724	728	731	719	718	718	721	722	724	723	719	717	719	719	721	725	738	749	726
8	742	745	794	773	779	777	709	666	684	674	658	683	693	707	731	721	729	736	731	729	731	732	731	730	724
9	731	731	731	732	733	721	725	731	730	728	725	720	721	719	719	730	723	723	726	730	731	732	734	736	728
10	734	731	731	728	725	725	726	726	702	616	661	694	696	693	712	719	719	721	719	723	730	744	743	741	715
11	734	730	728	729	732	718	721	613	556	613	471	387	435	639	718	722	724	735	725	731	721	731	743	757	672
12 D	769	801	814	836	790	748	672	647	530	540	513	559	563	482	601	659	700	732	743	735	761	755	743	735	685
13	739	739	755	777	684	635	660	698	636	637	710	709	693	722	706	730	723	726	723	731	744	761	789	790	717
14 D	802	824	775	742	739	667	634	566	545	553	613	590	589	635	683	689	698	725	743	767	766	749	743	744	691
15	745	755	758	743	687	692	607	716	710	730	677	629	707	688	722	731	730	731	731	743	748	755	760	764	719
16	760	755	775	739	742	739	652	614	646	598	649	658	653	651	671	692	705	729	743	731	749	744	738	736	703
17	735	734	730	732	731	729	730	728	726	721	719	721	719	723	731	731	730	731	734	736	735	735	736	736	730
18	735	736	741	742	743	739	729	726	700	698	698	672	684	719	723	722	719	723	731	730	734	741	738	738	723
19	742	742	742	745	766	760	767	719	707	688	664	661	672	675	684	694	707	719	728	731	736	742	743	745	719
20	743	749	755	767	763	758	748	726	707	693	659	607	623	672	719	728	726	735	743	744	753	773	807	725	
21	770	766	783	798	766	757	721	707	711	628	610	710	730	730	731	730	730	731	730	730	731	732	731	731	729
22 Q	730	729	728	729	729	728	729	729	730	730	728	728	726	726	730	725	730	730	723	722	723	724	724	724	728
23	724	724	724	724	724	723	724	724	724	724	723	719	719	721	730	730	728	723	722	722	722	723	724	728	724
24 D	790	799	752	474	530	632	528	476	728	718	434	649	728	673	682	705	737	729	735	729	741	745	764	758	676
25	812	786	777	769	797	785	756	764	735	734	722	724	729	722	731	734	732	731	729	731	732	734	731	738	747
26	741	743	753	744	739	731	731	728	727	728	709	680	709	718	720	731	729	725	729	731	733	734	731	733	728
27 Q	731	728	726	727	727	729	731	729	729	713	713	724	724	721	720	724	722	720	726	729	729	729	729	729	726
28	728	727	726	725	725	726	725	725	726	720	709	704	717	721	725	727	724	717	723	715	739	730	738	746	725
29 D	740	745	745	751	752	740	717	681	616	594	611	644	701	675	574	539	592	713	766	828	717	660	377	607	675
30 D	552	692	681	706	712	672	586	622	664	726	739	743	739	734	738	732	731	728	728	731	734	733	732	731	704
31	731	731	731	730	728	730	730	730	730	730	728	728	728	730	730	728	727	730	731	732	730	731	730	730	730
Mean	738	744	744	736	732	727	706	696	689	679	761	681	692	698	709	718	718	725	730	734	734	734	728	737	716

## DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 40 Meanook

October 1963

Day	Horizontal Intensity					Declination					Vertical Intensity				
	Maximum 12,000 $\gamma$ +		Minimum 12,000 $\gamma$ +		Range $\gamma$	Maximum 23° E +		Minimum 23° E +		Range '	Maximum 58,000 $\gamma$ +		Minimum 58,000 $\gamma$ +		Range $\gamma$
	h. m.	$\gamma$	h. m.	$\gamma$		h. m.	'	h. m.	'		h. m.	$\gamma$	h. m.	$\gamma$	
1	04 13	1102	08 55	1056	46	16 02	63.0	04 48	50.0	13.0	06 06	754	08 57	694	60
2	10 30	1104	19 36	1058	46	17 26	63.0	20 33	52.2	10.8	14 08	735	09 05	716	19
3	10 21	1116	08 34	1054	62	09 21	64.6	08 04	49.4	15.2	10 20	743	08 19	640	103
4	07 54	1132	08 40	964	168	07 54	65.7	07 12	36.2	29.5	06 06	767	07 10	557	210
5	11 13	1126	09 27	896	230	10 38	74.4	21 55	51.0	23.4	05 53	743	09 56	505	238
6	00 07	1138	17 29	1056	82	04 12	70.3	00 12	50.9	19.4	04 11	762	04 42	711	51
7	06 56	1119	22 11	1025	94	15 55	65.9	23 48	45.2	20.7	23 33	764	08 15	707	57
8	05 35	1313	07 20	907	406	03 13	104.7	06 10	42.0	62.7	02 47	885	07 20	633	252
9	05 50	1125	20 43	1056	69	05 40	68.6	21 45	50.8	17.8	23 59	753	05 40	696	57
10	15 02	1117	08 59	1002	115	09 13	77.7	19 40	49.1	27.4	00 03	751	09 00	595	156
11	13 33	1174	11 14	626	548	12 45	125.3	07 14	40.6	84.7	23 04	781	12 02	271	510
12	01 40	1273	13 13	399	874	11 05	119.6	17 31	40.4	79.2	03 24	865	13 24	379	486
13	04 28	1228	08 42	835	393	04 26	114.6	08 44	48.3	66.3	22 44	832	05 35	553	279
14	06 16	1300	09 05	258	1042	07 49	91.8	12 40	22.9	68.9	00 48	872	09 03	386	486
15	03 57	1161	06 20	841	320	03 54	89.3	06 22	22.0	67.3	03 50	794	06 31	438	356
16	02 54	1147	09 28	902	245	02 56	82.4	06 45	37.4	45.0	02 53	826	06 32	541	285
17	04 44	1120	16 34	1060	60	05 10	65.5	21 27	52.3	13.2	06 24	761	04 58	699	62
18	13 03	1111	08 39	1045	66	08 13	67.2	06 21	49.2	18.0	03 11	753	11 44	645	108
19	00 34	1118	07 28	1033	85	08 09	67.3	00 48	52.0	15.3	06 13	781	10 52	647	134
20	15 02	1130	13 14	940	190	12 14	75.4	23 20	40.2	35.2	23 22	831	12 55	556	275
21	03 52	1125	09 50	871	254	09 48	80.5	09 35	45.3	35.2	03 55	838	09 45	518	320
22	14 53	1114	19 41	1067	47	18 04	62.5	21 43	51.1	11.4	15 26	737	15 12	717	20
23	23 59	1114	18 05	1066	48	17 04	63.6	23 59	45.8	17.8	13 53	735	13 00	715	20
24	02 04	1610	10 32	-88	1698	10 14	230.4	07 02	-12.0	242.4	00 48	955	10 22	-181	1136
25	00 45	1312	06 45	1036	276	01 09	95.4	02 39	45.8	49.6	00 58	917	10 43	703	214
26	00 40	1102	11 20	1022	80	02 16	69.3	11 07	51.7	17.6	02 09	776	11 21	646	130
27	13 35	1103	19 48	1047	56	16 51	64.0	20 20	53.3	10.7	00 01	740	09 52	693	47
28	21 41	1110	20 25	1001	109	16 10	65.0	20 27	43.2	21.8	23 41	765	20 37	688	77
29	21 10	1950	16 39	491	1459	22 35	121.4	21 10	26.6	94.8	18 48	916	22 56	63	853
30	00 45	1430	02 25	609	821	02 48	95.0	02 41	-4	95.4	02 03	849	00 36	383	466
31	09 50	1114	12 00	1044	70	16 10	66.7	20 23	54.3	12.4	09 30	746	12 01	712	34
Mean		1201		877	324		84.8		41.5	43.3		798		556	242
No. days		31		31	31		31		31	31		31		31	31

**HORIZONTAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 41 Meanook

H = 12,000  $\gamma$  +

November 1963

Hour U. T. 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	1081	1081	1083	1078	1091	1105	1088	1068	1070	1080	1080	1078	1080	1073	1068	1071	1071	1053	1046	1059	1070	1073	1071	1084	1075
2	1089	1092	1091	1091	1096	1099	1090	1082	1097	1083	1085	1090	1081	1082	1077	1069	1015	1007	1051	1065	1056	1068	1080	1088	1076
3	1071	1090	1092	1103	1092	1089	1068	1022	879	1051	1087	1082	1081	1076	1083	1083	1078	1068	1056	1057	1068	1067	1078	1083	1067
4	1091	1090	1089	1087	1082	1087	1095	1089	1084	1080	1080	1087	1082	1083	1080	1082	1074	1067	1059	1056	1059	1076	1080	1081	1080
5 Q	1082	1084	1088	1088	1084	1088	1083	1087	1085	1088	1087	1088	1087	1087	1082	1080	1071	1065	1063	1068	1074	1082	1089	1091	1082
6	1096	1090	1092	1098	1092	1095	1090	1081	1068	1060	1081	1090	1095	1078	1044	1067	1083	1071	1061	1065	1060	1075	1091	1091	1080
7 D	1097	1098	1080	1077	1044	1053	1105	1117	1083	1037	672	609	918	1019	1066	1037	929	998	1018	1074	1106	1111	1065	1146	1023
8 D	1158	1138	1100	1090	1091	1053	907	906	1033	1080	1052	732	859	984	1045	1048	1032	1060	1073	1060	1059	1076	1080	1094	1034
9 D	1090	1119	1103	1100	1100	1080	1058	828	1056	974	1033	1044	851	859	1037	1019	1009	1033	1030	1020	1049	1100	1094	1103	1033
10 D	1138	1128	1184	1123	1138	1097	1089	996	1022	871	952	1047	1033	1054	1070	1065	1049	1037	1061	1068	1067	1084	1091	1080	1065
11	1103	1092	1102	1090	1103	1085	1103	933	932	1008	978	1055	1098	1100	1091	1088	1070	1078	1056	1051	1053	1078	1087	1073	1063
12	1091	1091	1089	1095	1088	1103	1077	989	945	984	987	1065	1091	1099	1085	1060	1022	1045	1052	1071	1067	1070	1080	1083	1060
13	1091	1096	1092	1091	1097	1091	1091	1091	1085	1081	1073	1068	1069	1071	1091	1080	1080	1078	1068	1069	1074	1080	1083	1088	1082
14	1091	1092	1091	1092	1078	1103	1090	1090	1091	1091	1091	1092	1090	1090	1090	1087	1080	1074	1070	1070	1075	1080	1083	1088	1087
15	1088	1089	1091	1091	1087	1083	1083	1080	1075	1078	1095	1091	1094	1091	1091	1091	1087	1076	1069	1070	1076	1083	1091	1091	1085
16 Q	1094	1096	1090	1091	1090	1090	1089	1084	1090	1090	1091	1091	1092	1095	1092	1090	1081	1077	1071	1070	1077	1084	1090	1092	1088
17	1097	1097	1097	1097	1095	1091	1091	1096	1098	1080	1096	1097	1107	1095	1033	1056	1084	1033	1047	1089	1080	1080	1085	1091	1084
18 Q	1091	1092	1092	1092	1091	1090	1089	1087	1087	1090	1091	1090	1092	1091	1091	1090	1085	1080	1076	1070	1078	1082	1089	1091	1088
19 Q	1096	1099	1098	1096	1096	1097	1092	1091	1089	1088	1091	1094	1095	1092	1091	1090	1081	1076	1073	1077	1081	1089	1091	1092	1090
20	1102	1103	1094	1094	1097	1098	1095	1094	1092	1091	1094	1097	1097	1097	1091	1091	1089	1080	1078	1076	1080	1088	1092	1095	1091
21 Q	1102	1103	1103	1103	1102	1100	1095	1094	1092	1091	1094	1096	1097	1091	1089	1091	1090	1085	1080	1081	1084	1087	1089	1091	1092
22	1099	1099	1099	1097	1097	1096	1095	1092	1089	1090	1078	1095	1103	1111	1106	1104	1099	1091	1051	1089	1084	1080	1082	1091	1092
23	1092	1091	1089	1095	1103	1102	1096	1081	1075	1077	1091	1094	1092	1095	1096	1099	1097	1091	1085	1078	1070	1078	1088	1091	1089
24 D	1096	1102	1097	1097	1082	1083	1078	1066	1051	1004	988	981	960	822	1010	1011	975	1034	1056	1065	1094	1181	1233	1114	1053
25	1092	1085	1080	1082	1077	1039	1080	1067	1039	1009	1024	1049	1026	1032	1078	1091	1085	1090	1074	1080	1077	1080	1085	1090	1067
26	1095	1096	1095	1097	1094	1091	1091	1082	1059	1089	1091	1091	1090	1091	1095	1095	1091	1085	1077	1076	1078	1082	1085	1090	1088
27	1090	1091	1091	1090	1089	1082	1088	1073	1068	1087	1081	1088	1094	1096	1093	1090	1091	1090	1087	1088	1089	1090	1091	1094	1088
28	1095	1098	1097	1087	1088	1094	1091	1090	1090	1093	1090	1091	1090	1091	1093	1090	1090	1087	1079	1079	1082	1086	1090	1094	1090
29	1101	1099	1095	1098	1094	1086	1090	1084	1087	1089	1058	1058	1090	1094	1106	1111	1101	1089	1090	1089	1087	1082	1082	1095	1090
30	1089	1090	1097	1094	1094	1093	1098	1095	1095	1089	1061	980	797	980	1103	1105	1090	1079	1073	1076	1089	1093	1090	1091	1067
31																									
Mean	1096	1096	1096	1094	1091	1088	1083	1058	1060	1060	1052	1047	1052	1061	1080	1077	1066	1066	1063	1070	1075	1085	1090	1092	1075

**DECLINATION**  
Mean values for periods of sixty minutes; Universal Time

Table 42 Meanook

D = 23° E +

November 1963

Hour U. T. 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	24	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	58.1	58.1	58.1	58.1	58.3	60.6	55.1	59.8	56.9	57.3	59.0	59.8	59.8	60.3	62.0	63.5	63.2	59.8	53.8	51.4	53.1	54.6	55.6	55.3	58.0	
2	55.5	57.3	56.7	57.9	55.0	57.7	56.8	58.4	56.5	57.9	57.9	58.0	60.9	59.7	63.1	65.7	61.2	58.4	47.9	51.8	52.8	54.5	56.7	56.9	56.8	
3	58.3	61.2	58.4	59.7	67.3	62.9	63.1	61.0	59.2	58.5	61.4	60.5	67.9	61.0	61.0	63.6	63.1	61.4	68.7	55.7	54.7	54.5	58.2	58.2	60.2	
4	58.4	58.8	58.6	57.9	61.4	66.7	61.8	57.1	57.8	57.8	58.1	59.3	59.4	60.1	60.9	63.0	63.1	60.6	59.9	56.6	54.6	55.7	57.6	58.6	59.3	
5 Q	59.1	59.3	59.1	58.8	59.4	59.3	57.6	57.9	57.8	58.4	59.1	59.4	59.4	60.1	60.9	61.6	62.8	60.9	58.4	56.7	56.1	55.9	56.4	56.2	58.8	
6	56.0	57.0	58.2	57.8	57.8	57.7	58.2	58.0	66.4	61.2	63.0	62.4	61.3	62.9	57.8	55.1	58.0	58.7	54.8	52.9	54.3	52.9	54.6	55.8	58.0	
7 D	57.8	58.2	59.5	61.2	57.3	65.0	69.6	59.4	57.7	61.2	60.8	71.9	78.7	78.5	59.5	57.0	58.5	49.4	50.1	52.8	55.3	56.5	55.8	55.5	60.3	
8 D	75.2	52.7	70.2	60.4	59.4	85.9	66.0	71.3	64.3	61.1	61.4	53.0	58.2	52.8	58.1	57.4	54.0	56.2	56.0	54.9	55.4	57.4	56.6	55.2	60.4	
9 D	68.6	63.8	72.5	60.6	58.1	59.1	59.6	52.7	68.9	63.4	56.0	57.7	68.6	47.8	57.7	61.1	52.8	49.7	58.1	53.0	57.4	56.0	56.0	54.0	58.1	
10 D	57.6	73.6	80.8	65.5	56.3	58.0	59.3	51.1	57.6	49.7	67.4	66.9	66.0	62.0	57.6	61.8	56.6	54.3	56.1	54.4	55.8	56.4	55.8	59.8	60.0	
11	59.1	66.4	67.2	70.6	57.8	57.6	54.6	54.3	56.1	61.0	53.1	55.9	60.8	61.0	61.0	61.3	60.3	61.0	57.5	54.8	53.3	57.1	57.8	59.0	59.1	
12	59.0	57.9	58.7	67.4	65.9	61.2	60.0	57.4	54.0	64.4	60.9	58.7	59.0	58.5	59.0	59.2	46.8	48.6	53.3	54.5	54.8	55.7	54.8	56.8	57.9	
13	58.0	58.2	58.5	59.2	60.9	57.0	57.5	56.8	57.5	57.0	56.0	55.8	56.8	54.7	59.0	59.7	59.2	57.2	54.0	54.2	54.3	55.5	54.8	56.3	57.0	
14	57.4	57.9	58.4	58.8	59.8	70.8	56.2	55.8	55.8	56.7	57.5	57.9	59.0	58.5	58.5	59.7	60.9	59.5	58.4	55.8	55.0	55.3	54.7	56.2	58.2	
15	57.4	58.9	60.1	57.8	57.9	57.6	59.3	57.9	54.7	53.7	57.1	59.1	58.6	58.5	59.1	59.8	59.9	58.6	57.4	54.7	54.1	54.4	54.7	56.9	57.4	
16 Q	57.3	57.8	58.5	57.6	57.3	58.7	59.3	56.1	57.0	56.5	57.0	57.5	57.8	58.7	59.0	59.5	60.3	58.3	56.6	55.6	55.1	55.3	55.8	56.0	57.5	
17	57.2	57.7	58.0	58.5	57.3	59.2	57.7	56.5	56.5	55.6	58.5	60.8	60.7	61.7	63.7	65.6	72.3	65.7	50.4	56.8	56.0	56.5	57.2	57.3	59.0	
18 Q	57.2	57.6	58.1	57.9	57.9	57.6	58.4	58.1	57.6	57.9	58.4	58.7	58.7	58.9	59.6	60.6	60.6	60.1	58.9	57.1	56.0	55.5	56.7	57.1	58.1	
19 Q	57.2	57.4	57.4	58.1	58.1	57.7	57.2	57.4	57.2	57.6	57.2	58.4	59.1	58.9	59.6	60.4	61.9	60.6	58.4	55.9	55.5	55.5	55.5	55.7	57.9	
20	56.8	57.1	56.8	58.6	57.0	57.3	57.1	57.1	57.1	57.1	57.6	58.3	58.5	58.8	58.8	60.3	61.8	60.6	58.5	55.6	55.3	55.4	56.3	56.4	57.6	
21 Q	57.0	57.5	58.0	58.5	58.0	57.6	58.5	58.0	57.1	57.6	58.3	58.6	58.8	59.6	57.1	60.0	60.5	58.8	56.3	55.4	54.3	55.1	55.4	56.6	57.6	
22	57.0	57.9	58.4	58.2	58.4	58.4	58.4	57.4	57.0	57.9	58.2	57.9	59.2	60.7	60.9	62.1	61.9	63.4	49.8	46.8	50.0	54.5	56.2	56.3	57.4	
23	56.2	55.5	57.9	57.2	58.2	58.5	58.4	57.0	66.3	65.4	57.5	59.2	61.4	59.9	59.9	61.6	62.1	60.4	59.5	57.0	56.7	56.7	57.0	57.0	59.0	
24 D	57.0	57.0	57.4	58.7	60.2	59.4	62.6	70.8	63.4	56.2	57.2	68.8	70.8	66.1	64.9	57.0	57.2	52.0	53.0	54.5	56.9	54.2	51.0	52.7	59.0	
25	56.8	63.5	58.8	60.1	59.1	65.5	63.8	60.3	64.1	64.3	63.8	60.3	62.0	55.4	58.6	61.8	62.0	62.5	59.8	58.6	58.8	57.8	57.4	57.4	60.4	
26	57.4	57.8	58.1	58.1	57.8	58.3	58.3	58.8	59.4	61.8	59.8	59.9	61.1	59.4	59.8	60.1	59.3	59.8	58.6	57.8	57.1	56.9	56.9	57.1	58.8	
27	57.6	57.4	57.4	57.6	57.3	58.4	57.1	60.8	62.1	58.6	57.4	56.4	58.4	58.3	58.1	58.4	58.9	58.6	58.6	57.3	57.3	57.1	56.9	56.9	58.1	
28	57.5	57.7	57.7	57.6	61.9	55.8	57.0	58.5	58.3	58.2	57.7	58.4	57.7	57.3	59.3	59.8	60.2	60.0	59.0	58.2	56.8	56.1	56.3	56.0	58.0	
29	56.7	56.5	58.5	56.5	55.0	59.0	56.8	58.7	59.3	58.0	52.8	60.3	64.0	59.0	58.5	59.7	58.0	59.0	57.2	56.5	55.5	55.6	55.0	53.8	57.5	
30	54.1	56.8	56.8	57.8	58.0	58.0	56.8	57.7	58.2	60.5	59.3	60.3	65.4	60.9	62.4	61.2	59.8	59.2	55.1	54.0	53.8	55.0	56.8	56.8	58.2	
31																										
Mean	58.3	58.8	60.1	59.4	58.8	60.6	59.1	58.4	58.8	58.8	58.6	59.8	61.1	59.8	59.9	60.6	59.9	58.1	56.1	55.1	55.2	55.7	56.1	56.4	58.5	

**VERTICAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 43 Meanook

$z = 58,000 \gamma +$

November 1963

Hour U. T. 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	729	729	730	730	730	744	724	725	727	733	729	734	727	725	720	716	726	726	725	719	726	727	729	733	729
2	731	731	738	738	756	763	739	727	720	704	718	729	718	725	717	718	717	725	719	742	727	739	739	741	730
3	749	746	738	751	636	708	716	684	603	644	716	726	720	724	733	727	726	723	725	727	729	735	741	733	716
4	729	726	726	727	736	738	739	730	726	716	714	726	720	725	725	727	725	719	719	723	725	729	731	731	726
5 Q	729	727	727	727	726	724	723	726	726	726	727	727	725	726	727	727	726	724	722	726	727	729	727	725	726
6	726	725	725	725	725	725	724	723	691	656	679	698	709	693	679	683	691	707	715	718	724	737	750	730	711
7 D	729	737	745	740	654	693	697	738	711	662	471	422	442	559	667	693	647	703	747	789	821	768	740	787	681
8 D	786	793	764	753	761	577	454	537	658	715	691	522	571	635	632	679	686	730	717	726	737	760	748	750	683
9 D	774	779	760	748	715	703	678	477	667	620	674	673	574	557	629	645	704	706	737	783	786	799	783	788	698
10 D	794	782	776	791	750	707	726	647	661	515	514	632	655	709	717	715	713	726	750	740	737	738	750	751	709
11	759	759	750	755	731	702	729	552	557	622	641	680	716	724	721	722	723	725	728	735	737	749	743	735	708
12	737	735	736	728	741	748	718	655	629	615	629	723	722	725	718	711	710	704	735	737	727	728	731	731	711
13	728	729	728	727	727	725	725	725	724	715	702	701	699	701	715	722	715	714	718	723	725	724	727	725	720
14	725	725	722	725	735	714	716	715	724	724	723	722	716	718	723	724	724	724	725	727	725	725	724	723	723
15	725	729	730	725	724	725	716	711	690	695	718	715	720	716	717	718	715	715	718	723	725	727	725	725	718
16 Q	721	721	721	724	722	720	707	711	707	718	719	719	719	719	719	720	720	720	724	725	725	725	721	719	719
17	719	719	719	719	719	719	717	714	713	692	707	718	719	708	658	610	657	658	661	706	707	717	719	726	701
18 Q	720	720	720	720	719	720	719	719	720	719	721	724	722	722	725	722	720	728	722	725	728	728	728	724	722
19 Q	721	720	719	719	719	719	718	718	718	718	726	725	719	719	718	719	719	719	721	722	721	720	720	720	720
20	719	719	722	733	730	720	719	719	719	718	719	718	717	717	719	719	718	715	719	719	720	720	719	719	720
21 Q	719	719	719	719	719	719	720	719	719	719	717	719	718	712	707	707	708	708	715	719	719	719	719	720	717
22	719	719	719	718	718	718	717	715	707	696	671	702	712	715	713	708	707	707	707	703	713	708	717	725	711
23	730	734	751	738	728	722	725	731	620	681	711	720	715	719	719	712	708	713	719	719	721	722	725	721	717
24 D	720	722	724	727	732	731	718	683	675	575	529	549	577	587	612	644	671	709	719	743	772	803	792	773	687
25	757	754	752	753	728	694	731	696	651	625	660	706	666	681	696	709	719	738	730	734	731	731	731	731	713
26	727	724	724	724	724	721	719	719	682	705	713	715	712	714	719	721	719	717	717	720	722	724	722	721	718
27	721	719	719	719	719	725	707	705	703	706	708	714	719	719	718	719	719	719	719	721	722	721	722	725	717
28	725	721	724	731	759	745	728	725	718	707	714	717	718	715	715	717	718	719	719	720	720	719	719	719	722
29	719	721	725	730	740	745	730	725	721	708	676	666	690	702	692	696	708	711	708	713	717	720	722	725	713
30	727	730	728	725	725	728	730	726	727	721	702	673	547	683	715	712	718	721	724	720	722	730	728	730	712
31																									
Mean	733	733	733	733	725	718	711	693	691	682	681	687	684	697	703	705	710	716	721	729	731	735	733	733	713

MEANOOK MAGNETIC OBSERVATORY 1963



## DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 44 Meanook

November 1963

Day	Horizontal Intensity					Declination					Vertical Intensity				
	Maximum 12,000 $\gamma$ +		Minimum 12,000 $\gamma$ +		Range $\gamma$	Maximum 23° E +		Minimum 23° E +		Range '	Maximum 58,000 $\gamma$ +		Minimum 58,000 $\gamma$ +		Range $\gamma$
	h. m.	$\gamma$	h. m.	$\gamma$		h. m.	'	h. m.	'		h. m.	$\gamma$	h. m.	$\gamma$	
1	05 50	1136	18 27	1033	103	05 42	71.9	19 25	49.6	22.3	05 40	780	06 05	700	80
2	08 47	1128	16 55	952	176	14 57	68.1	17 59	38.5	29.6	05 19	782	08 52	659	123
3	04 02	1228	08 23	766	462	08 31	69.6	05 02	41.2	28.4	03 56	799	08 15	518	281
4	12 49	1112	20 24	1046	66	05 17	71.4	20 08	52.9	18.5	05 15	763	10 02	704	59
5 Q	23 59	1096	06 12	690	406	16 50	64.6	21 07	54.6	10.0	21 20	739	07 08	710	29
6	07 35	1117	14 52	1017	100	08 47	72.6	07 40	47.6	25.0	22 22	770	08 58	626	144
7 D	20 55	1310	11 21	403	907	11 23	96.0	04 20	24.2	71.8	20 38	891	11 34	335	556
8 D	00 33	1265	11 47	605	660	05 36	134.5	11 51	37.6	96.9	00 03	904	06 08	118	786
9 D	21 18	1211	07 30	616	585	00 55	89.8	07 38	30.3	59.5	19 18	877	07 26	288	589
10 D	02 06	1459	09 22	812	647	02 12	121.5	04 53	36.5	85.0	02 07	881	09 39	454	427
11	04 04	1138	08 04	805	333	03 35	82.8	04 31	40.5	42.3	04 36	795	07 39	468	327
12	13 16	1124	07 58	779	345	09 32	77.2	16 48	42.2	35.0	05 15	774	07 58	619	155
13	01 34	1112	09 53	1051	61	04 16	64.2	23 44	51.5	12.7	01 34	739	13 47	689	50
14	05 23	1145	04 55	1055	90	05 14	91.0	07 35	52.5	38.5	05 10	786	05 35	678	108
15	02 12	1103	07 22	1065	38	02 02	65.8	09 10	50.0	15.8	02 58	741	08 43	670	71
16 Q	06 16	1109	19 02	1068	41	06 36	62.4	08 06	54.0	8.4	05 06	731	06 25	687	44
17	15 47	1171	15 18	959	212	17 07	83.7	17 55	35.8	47.9	23 28	740	15 18	541	199
18 Q	00 03	1102	19 48	1062	40	16 42	62.3	21 05	54.2	8.1	00 02	731	07 05	711	20
19 Q	01 16	1105	19 37	1067	38	16 40	63.9	19 44	54.2	9.7	10 47	734	08 28	707	27
20	01 58	1111	19 34	1068	43	16 32	63.2	21 05	53.8	9.4	03 47	743	12 59	709	34
21 Q	02 14	1107	13 52	1076	31	16 04	62.2	20 26	53.4	8.8	00 11	725	15 06	698	27
22	19 47	1116	18 02	1033	83	16 44	67.1	19 10	40.7	26.4	23 55	740	10 12	650	90
23	08 11	1148	08 58	1018	130	09 23	72.6	07 57	51.6	21.0	07 59	751	08 18	575	176
24 D	22 17	1313	13 16	700	613	13 13	97.3	22 18	42.4	54.9	22 03	841	09 49	456	385
25	06 10	1128	09 11	920	208	05 50	85.0	05 25	46.7	38.3	00 50	782	09 12	565	217
26	09 46	1103	08 33	1017	86	08 56	64.8	08 30	53.6	11.2	08 06	732	08 44	636	96
27	06 16	1103	08 00	1047	56	07 26	65.3	06 10	53.1	12.2	06 02	734	06 30	688	46
28	04 36	1105	04 14	1054	51	04 25	71.8	05 13	53.6	18.2	04 50	777	09 21	700	77
29	15 04	1123	10 20	1035	88	12 08	69.9	10 25	46.9	23.0	04 45	751	10 51	643	108
30	13 41	1151	12 07	566	585	12 29	97.0	12 45	39.5	57.5	22 01	741	12 40	412	329
31															
Mean		1156		913	243		77.6		46.1	31.5		776		587	189
No. days		30		30	30		30		30	30		30		30	30

**HORIZONTAL INTENSITY**  
 Mean values for periods of sixty minutes, Universal Time

Table 45 Meanook

H = 12,000  $\gamma$  +

December 1963

Hour U. T. 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	24	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	1099	1098	1097	1094	1094	1091	1090	1089	1086	1093	1091	1097	1097	1093	1096	1081	1094	1091	1090	1088	1090	1091	1095	1098	1098	1093
2	1110	1109	1106	1102	1099	1101	1101	1081	1091	1093	1093	1091	1094	1093	1053	1054	1084	1079	1075	1087	1090	1098	1103	1110	1091	
3 D	1103	1098	1089	1096	1126	1116	1072	1012	934	1080	954	894	876	964	1026	1077	1093	1064	1055	1051	1087	1096	1104	1088	1048	
4 D	1103	1101	1103	1102	1102	1089	1021	1076	1090	1047	1057	1037	1022	1035	1083	1055	1053	1053	1079	1070	1070	1061	1079	1171	1073	
5 D	1140	1090	1087	1099	1116	1108	1091	1076	1019	981	986	1070	1083	994	981	1023	1053	1087	1062	1059	1082	1055	1077	1094	1064	
6 D	1090	1094	1102	1103	1140	1119	1089	1077	1026	1043	1076	1061	961	1025	1028	1104	1079	1075	1061	1055	1072	1077	1090	1105	1073	
7	1102	1095	1091	1099	1105	1113	1079	1059	983	935	1015	1014	902	1057	1081	1087	1076	1090	1087	1079	1072	1079	1083	1090	1061	
8	1087	1098	1101	1096	1098	1110	1093	1054	1022	1017	1016	1054	995	1045	1087	1076	1074	1081	1074	1078	1075	1079	1090	1096	1071	
9	1101	1100	1098	1096	1093	1081	1075	1030	1044	1004	996	1076	1082	1085	1100	1101	1098	1092	1090	1089	1090	1093	1096	1096	1079	
10 Q	1101	1100	1098	1096	1095	1093	1093	1095	1094	1095	1097	1100	1101	1101	1101	1100	1097	1089	1089	1089	1089	1089	1092	1098	1095	
11 Q	1101	1101	1100	1098	1096	1094	1092	1094	1095	1097	1095	1092	1100	1102	1100	1101	1096	1089	1088	1089	1092	1096	1098	1098	1096	
12	1098	1096	1100	1097	1093	1089	1087	1083	1085	1089	1093	1101	1101	1101	1101	1098	1092	1093	1090	1089	1095	1098	1089	1094	1094	
13	1089	1101	1098	1090	1103	1103	1101	1103	1093	1088	1100	1101	1095	1092	1088	1095	1100	1097	1090	1088	1083	1089	1095	1101	1095	
14	1102	1103	1101	1093	1100	1102	1101	1088	1089	1090	1094	1101	1075	1076	1064	1074	1107	1092	1089	1071	1097	1100	1103	1098	1092	
15	1101	1098	1096	1092	1090	1092	1102	1088	1097	1087	1081	1075	1071	1089	1096	1090	1089	1087	1088	1093	1095	1097	1095	1100	1092	
16	1100	1098	1101	1101	1100	1100	1098	1097	1098	1093	1092	1094	1092	1097	1101	1101	1100	1088	1082	1078	1088	1096	1095	1090	1095	
17	1096	1101	1102	1102	1101	1101	1098	1095	1094	1095	1096	1098	1100	1100	1098	1097	1093	1087	1082	1078	1081	1093	1101	1103	1095	
18 Q	1109	1102	1101	1101	1101	1100	1097	1100	1097	1094	1096	1101	1109	1105	1102	1101	1100	1090	1089	1089	1089	1097	1101	1102	1098	
19	1100	1100	1100	1101	1100	1100	1099	1098	1096	1096	1099	1100	1101	1103	1103	1101	1097	1085	1077	1080	1091	1097	1088	1086	1095	
20 D	1108	1102	1101	1103	1099	1089	948	1019	1053	1075	1053	1067	1017	972	1099	1117	1100	1087	1079	1066	1052	1077	1089	1085	1070	
21	1091	1097	1095	1092	1092	1092	1093	1086	1084	1092	1091	1094	1088	1073	1100	1103	1099	1093	1079	1077	1082	1086	1081	1077	1089	
22	1091	1101	1102	1100	1086	1072	1020	1073	1068	1065	1064	1063	1065	999	1078	1121	1108	1086	1062	1064	1088	1091	1089	1091	1077	
23	1100	1101	1100	1102	1095	1082	1088	1086	1019	1055	1100	1099	1097	1099	1100	1099	1077	1063	1065	1077	1088	1087	1086	1088	1086	
24	1088	1093	1100	1101	1097	1095	1091	1088	1089	1094	1096	1094	1091	1077	1088	1109	1102	1072	1074	1072	1077	1070	1084	1095	1089	
25 Q	1100	1100	1099	1097	1096	1096	1094	1092	1088	1074	1019	1093	1097	1100	1103	1104	1100	1089	1088	1088	1089	1093	1095	1095	1092	
26	1100	1100	1099	1092	1088	1088	1094	1094	1091	1079	1084	1089	1099	1100	1094	1093	1095	1096	1093	1091	1088	1086	1086	1087	1092	
27	1092	1095	1095	1087	1088	1086	1077	1087	1099	1099	1094	1091	1087	1092	1104	1106	1104	1100	1094	1088	1088	1091	1095	1100	1093	
28	1100	1096	1094	1096	1094	1095	1103	1100	1099	1100	1106	1100	1100	1097	1093	1097	1102	1101	1093	1084	1063	1077	1089	1100	1095	
29	1109	1108	1100	1107	1103	1101	1099	1100	1102	1100	1077	964	934	929	1027	1068	1051	1088	1077	1087	1085	1088	1087	1094	1070	
30	1110	1104	1108	1114	1101	1102	1100	1094	1089	1088	1091	1088	1091	1089	1078	1088	1097	1088	1080	1081	1084	1087	1087	1086	1093	
31 Q	1100	1102	1101	1100	1100	1097	1094	1093	1086	1089	1100	1099	1099	1096	1100	1099	1097	1091	1088	1087	1088	1089	1094	1099	1095	
Mean	1101	1100	1098	1098	1100	1097	1083	1081	1071	1072	1071	1074	1061	1066	1082	1092	1092	1086	1081	1080	1083	1087	1092	1097	1085	

**DECLINATION**  
Mean values for periods of sixty minutes, Universal Time

Table 46 Meanook

D = 23° E + ...'

December 1963

Hour U. T. 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	57.9	57.3	57.4	57.9	57.2	57.1	57.6	58.4	56.9	58.1	57.1	58.6	58.4	58.2	58.4	57.7	58.4	58.6	56.7	55.9	55.2	54.2	55.4	55.0	57.2
2	56.6	56.7	57.9	56.9	57.9	56.7	58.7	56.2	58.1	56.2	57.9	58.4	59.2	60.9	61.6	56.9	56.6	58.2	51.2	51.3	53.4	53.5	51.7	53.4	56.6
3 D	53.2	57.2	63.4	59.9	70.3	58.4	63.4	75.9	58.2	60.6	60.2	50.3	68.1	60.6	67.1	58.4	55.0	51.8	51.2	52.7	51.7	55.9	55.0	55.4	58.9
4 D	55.0	58.4	62.6	74.9	59.7	59.9	45.0	58.9	57.2	53.0	51.7	56.6	56.7	49.8	56.7	58.7	54.4	52.2	55.0	54.9	58.2	58.9	54.7	51.3	56.4
5 D	63.7	56.3	60.2	62.4	68.0	63.2	60.8	63.0	53.3	51.6	51.6	53.9	60.0	63.3	48.2	51.4	51.6	58.3	53.8	54.6	56.6	55.1	53.9	56.6	57.1
6 D	62.5	61.3	59.8	61.7	59.1	58.0	62.0	61.2	52.6	52.1	56.5	61.3	59.5	53.4	53.1	57.1	60.0	60.1	57.8	57.5	55.9	54.8	57.1	56.1	58.0
7	57.0	58.1	60.0	59.1	61.7	64.7	54.4	58.1	65.2	60.0	53.3	57.8	52.4	53.1	51.4	56.5	57.1	60.5	59.0	58.0	56.6	56.3	56.3	56.6	57.6
8	57.9	58.0	58.4	58.9	70.1	62.2	61.7	57.2	60.4	66.3	58.5	60.0	63.1	56.2	56.2	54.8	56.5	56.0	56.0	56.2	55.2	56.4	56.4	56.7	58.7
9	57.4	57.9	58.2	58.2	58.0	58.0	61.6	62.4	64.9	53.7	48.1	61.4	61.6	60.0	57.7	58.2	59.5	59.0	58.2	57.4	56.5	56.2	56.4	56.5	58.2
10 Q	57.0	57.2	57.4	58.2	58.2	58.2	57.9	58.0	57.2	56.5	56.2	57.2	56.9	57.0	57.7	58.2	59.0	58.7	58.2	57.4	56.5	56.0	56.0	56.4	57.4
11 Q	56.8	57.3	57.6	57.6	57.4	57.6	56.9	57.6	56.6	56.4	56.3	55.1	56.3	57.8	57.9	58.3	58.6	58.1	57.1	56.3	55.9	55.6	56.3	56.4	56.9
12	57.4	58.1	57.6	57.9	57.9	58.4	58.1	58.9	59.1	58.6	59.3	58.3	57.8	57.6	57.6	58.8	58.1	57.3	56.8	56.4	56.6	56.1	54.7	56.4	57.6
13	56.4	57.6	57.9	59.6	54.7	59.3	58.3	59.8	58.3	58.3	57.9	58.8	58.1	58.3	56.1	57.3	58.3	58.1	57.8	56.9	56.3	55.6	55.2	56.1	57.6
14	56.8	57.8	57.7	58.3	56.8	57.5	58.7	58.0	59.5	59.0	59.3	59.2	58.5	58.0	54.5	54.3	59.0	58.2	55.6	56.2	51.4	50.3	53.0	56.5	56.8
15	58.7	57.8	58.0	59.0	58.2	58.0	58.0	57.8	58.0	57.8	59.5	57.8	56.3	58.3	53.0	56.5	59.7	59.3	59.7	58.3	56.5	55.8	54.6	55.5	57.3
16	55.8	57.7	56.0	58.0	57.8	57.8	57.8	57.2	57.3	56.5	56.3	58.5	58.2	58.0	60.5	61.5	62.7	58.7	57.5	54.6	64.1	54.6	54.3	55.0	57.3
17	56.0	56.3	58.0	58.7	58.0	58.0	58.0	58.0	57.2	56.8	56.3	56.3	57.0	57.8	58.0	60.2	61.4	60.0	57.8	55.5	53.3	53.5	54.5	55.5	57.2
18 Q	57.5	57.7	58.0	58.0	58.2	58.0	57.8	57.2	57.3	57.7	58.0	57.7	58.0	57.8	58.0	59.5	59.2	59.5	57.7	56.7	55.1	55.0	55.6	56.2	57.5
19	56.2	57.2	58.2	58.2	58.0	58.0	57.8	57.7	57.0	56.8	56.8	57.2	58.0	58.2	58.8	59.7	61.0	59.2	56.3	54.6	53.3	53.0	53.1	49.1	56.8
20 D	49.8	55.3	58.8	59.2	58.5	58.2	55.6	73.5	61.7	61.4	56.5	64.7	64.6	53.3	59.3	64.0	59.8	54.5	52.1	53.1	52.1	47.9	49.8	53.0	57.3
21	56.2	58.1	59.6	59.2	58.7	58.4	57.9	58.6	62.1	59.9	58.1	57.9	58.7	56.2	54.5	58.6	57.9	58.1	54.9	53.7	54.0	54.3	52.9	50.7	57.1
22	54.4	57.6	58.4	59.4	59.4	62.9	59.4	63.8	59.9	54.7	62.1	63.3	60.4	50.8	53.4	56.2	58.4	54.5	55.5	54.5	53.3	53.0	54.0	56.1	57.2
23	57.4	57.7	58.1	58.7	59.1	58.6	56.7	59.6	56.9	59.9	56.7	57.9	57.2	57.1	57.9	58.4	57.4	50.8	52.7	54.5	55.0	53.7	54.0	55.7	56.7
24	57.4	58.1	58.1	57.9	58.4	57.9	57.4	57.6	57.6	57.4	57.9	57.6	57.9	53.4	53.0	59.2	59.9	59.7	57.7	53.7	53.0	54.5	54.5	56.2	56.9
25 Q	57.1	57.5	58.0	58.6	58.5	57.8	59.1	58.0	57.6	57.8	56.8	57.5	56.6	57.0	57.6	58.5	59.6	60.3	58.8	57.6	56.1	55.8	58.1	56.6	57.6
26	57.0	57.6	57.8	58.3	59.3	61.0	57.5	57.3	57.3	52.8	57.5	59.8	59.1	58.0	59.1	57.8	59.0	59.5	58.5	56.1	54.4	54.4	54.4	54.8	57.5
27	55.3	56.3	57.3	57.8	58.6	59.8	64.7	59.5	57.8	56.0	56.3	56.3	56.1	54.6	58.5	59.5	60.2	59.3	57.3	56.6	55.4	55.3	55.6	56.0	57.5
28	56.1	56.3	56.6	57.5	58.6	59.3	67.4	59.5	57.0	56.5	56.8	57.8	57.8	57.8	58.3	59.8	61.5	58.5	57.3	55.0	54.1	51.9	54.4	56.0	57.6
29	54.3	55.7	58.2	59.0	57.7	58.4	58.0	56.5	58.2	56.0	61.9	70.8	64.4	59.5	59.0	62.7	60.7	55.7	54.3	55.2	52.5	53.5	53.7	55.2	58.0
30	55.5	54.0	57.7	57.4	57.7	58.0	57.9	57.7	57.7	57.7	58.2	57.9	59.4	59.4	59.4	62.7	59.0	58.0	54.3	54.2	53.8	54.3	54.3	55.0	57.2
31 Q	55.7	56.2	57.9	58.4	58.2	58.7	58.4	58.5	58.0	57.5	57.4	57.7	57.7	56.7	57.6	59.2	60.2	59.2	57.7	56.4	55.5	55.7	55.7	55.9	57.5
Mean	56.7	57.3	58.3	59.2	59.3	59.0	58.5	59.7	58.3	57.2	56.8	58.5	58.7	57.0	57.3	58.3	58.7	57.7	56.3	55.5	54.6	54.5	54.6	55.1	57.4

**VERTICAL INTENSITY**  
**Mean values for periods of sixty minutes, Universal Time**

Table 47 Meanook

Z = 58,000  $\gamma$  +

December 1963

Hour U. T. 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	726	724	723	724	727	724	726	729	711	720	718	718	718	718	718	717	721	719	719	719	725	727	724	720	721
2	719	718	718	719	724	734	748	730	731	720	721	719	716	706	689	694	700	704	694	705	717	729	732	731	718
3 D	744	750	762	758	732	688	693	488	544	695	624	621	516	589	630	694	719	718	736	742	758	783	764	731	687
4 D	743	733	753	740	738	729	583	686	706	673	678	666	636	670	678	688	698	694	711	721	744	757	784	848	711
5 D	785	750	746	740	698	701	705	699	673	630	636	692	694	615	621	635	668	718	732	765	770	748	750	752	705
6 D	759	742	743	739	686	700	718	708	609	650	692	687	657	694	675	732	720	733	746	744	740	744	753	752	713
7	738	739	744	738	734	705	663	653	603	591	660	674	598	687	672	697	717	719	724	727	732	730	729	727	695
8	727	726	725	730	725	691	724	682	669	647	682	694	654	699	718	717	716	716	721	730	729	733	734	730	710
9	730	724	724	720	721	727	721	650	631	635	599	647	679	670	691	730	717	716	718	720	723	720	721	718	698
10 Q	718	719	719	720	718	717	718	718	718	718	718	718	718	718	718	718	718	718	719	719	720	721	720	719	718
11 Q	718	718	718	717	717	718	718	718	717	714	713	708	713	717	718	718	720	724	718	718	720	721	719	719	718
12	720	723	721	723	721	721	718	711	702	706	714	718	719	718	717	718	718	718	720	721	719	718	719	720	718
13	723	726	730	738	765	768	745	742	727	718	717	721	718	716	718	721	725	718	718	718	719	719	718	723	727
14	721	721	726	730	730	729	726	718	724	729	726	720	682	659	615	614	660	694	712	707	724	721	731	729	706
15	726	726	729	726	730	733	718	730	726	718	717	705	704	710	718	711	717	716	723	730	730	730	729	729	723
16	729	726	730	730	729	726	720	716	718	718	717	712	710	717	721	726	739	719	714	718	721	730	731	727	723
17	726	730	729	724	723	721	721	720	719	719	719	719	718	718	719	724	719	718	719	719	719	720	723	723	721
18 Q	724	723	720	720	720	720	719	717	719	718	720	717	721	718	718	718	718	718	720	719	719	719	720	720	719
19	721	719	720	720	719	720	721	719	718	719	719	718	717	718	719	723	719	717	718	718	719	717	718	731	719
20 D	738	733	724	718	717	721	649	656	682	692	660	670	650	605	655	686	706	705	706	714	739	733	732	730	697
21	727	731	731	729	727	726	725	719	683	710	727	720	707	694	706	710	711	706	718	718	721	730	731	733	718
22	730	729	727	730	731	742	680	700	695	659	655	670	659	600	653	701	706	710	730	744	742	734	732	731	704
23	729	730	729	727	726	724	697	706	611	597	705	718	718	719	720	717	710	717	727	733	734	731	730	730	712
24	745	738	733	725	718	719	718	718	719	720	719	719	712	695	682	718	716	717	724	718	727	733	730	730	720
25 Q	723	719	720	719	719	718	718	718	712	697	635	694	705	706	717	718	719	719	719	720	720	720	720	719	712
26	720	721	721	726	730	740	730	720	713	692	701	706	712	713	714	716	718	718	718	720	724	725	725	726	719
27	723	723	731	732	729	723	720	717	717	717	716	709	688	693	704	717	717	717	720	719	718	717	717	719	717
28	719	720	723	727	730	732	716	713	711	716	718	716	717	715	709	706	711	707	705	710	719	735	729	723	718
29	723	723	728	729	725	722	720	716	717	717	697	584	481	575	618	690	698	688	711	726	722	725	729	730	691
30	739	738	732	738	735	729	726	723	718	717	717	711	711	712	710	729	725	717	720	724	726	728	725	722	724
31 Q	723	728	729	724	720	720	722	717	705	701	715	717	717	715	719	723	717	717	717	717	718	720	720	722	720
Mean	730	729	730	729	725	723	711	702	692	693	695	697	682	687	693	707	713	714	719	724	727	730	731	731	713

## DAILY EXTREMES OF MAGNETIC ELEMENTS

Table 48 Meanook

December 1963

Day	Horizontal Intensity						Declination						Vertical Intensity								
	Maximum 12,000 $\gamma$ +			Minimum 12,000 $\gamma$ +			Range	Maximum 23° E +			Minimum 23° E +			Range	Maximum 58,000 $\gamma$ +			Minimum 58,000 $\gamma$ +			Range
	h.	m.	$\gamma$	h.	m.	$\gamma$		h.	m.	'	h.	m.	'		h.	m.	$\gamma$	h.	m.	$\gamma$	
1	22	28	1115	15	57	1064	51	16	01	60.1	08	18	52.0	8.1	16	28	732	08	31	693	39
2	08	36	1146	14	52	983	163	14	50	63.9	21	35	46.6	17.3	08	01	775	14	51	663	112
3 D	14	52	1198	08	05	685	513	07	27	102.1	08	05	4.8	97.3	21	31	825	07	58	165	660
4 D	23	57	1306	06	54	928	378	03	21	90.2	06	40	24.0	66.2	23	53	931	06	39	504	427
5 D	00	02	1276	13	55	891	385	04	19	93.7	14	52	39.3	54.3	19	52	886	13	56	549	337
6 D	15	03	1182	12	43	887	195	04	14	76.8	05	00	39.7	37.1	15	02	789	08	22	506	283
7	05	48	1151	09	00	786	365	08	43	74.8	12	47	41.3	33.5	00	27	753	09	00	479	274
8	05	23	1141	12	25	947	194	04	40	92.5	07	09	48.0	44.5	04	26	761	12	06	599	162
9	00	01	1115	09	52	895	220	08	25	70.8	10	45	43.2	27.6	00	02	744	10	06	578	166
10 Q	07	39	1101	09	44	1088	23	17	46	59.9	21	13	54.0	5.9	17	52	724	07	41	710	14
11 Q	13	53	1109	11	12	1078	31	15	25	59.9	11	17	53.2	6.7	22	54	729	11	13	699	30
12	13	31	1107	08	48	1074	33	08	22	62.6	23	23	53.4	9.2	23	54	730	08	13	694	36
13	07	24	1121	09	28	1072	49	07	31	63.5	04	53	50.4	13.1	04	55	802	10	07	706	96
14	16	13	1137	13	13	1029	108	15	58	64.7	15	10	45.1	19.6	20	50	745	14	43	587	158
15	15	27	1123	12	00	1051	72	08	13	64.0	12	00	51.4	12.6	06	45	752	06	07	661	91
16	15	31	1112	15	35	1071	41	17	03	64.9	20	02	52.8	12.1	16	23	746	15	36	704	42
17	22	16	1112	19	38	1068	44	16	58	63.7	20	35	52.1	11.6	15	30	737	22	06	712	25
18 Q	14	50	1112	09	13	1083	29	09	53	60.2	07	22	53.0	7.2	07	44	729	07	32	705	24
19	21	26	1113	23	05	1063	50	17	56	63.2	23	42	46.2	17.0	23	56	749	22	54	706	43
20 D	01	01	1135	06	53	805	330	07	14	89.9	06	57	37.0	52.9	20	23	769	06	54	500	269
21	15	01	1123	13	03	1053	70	08	48	65.6	23	45	48.5	17.1	23	35	745	08	37	634	111
22	15	03	1135	06	59	841	294	07	07	73.2	13	50	42.6	30.6	20	17	763	13	28	564	199
23	09	57	1123	08	56	914	209	09	18	67.6	08	55	47.0	20.6	22	59	745	09	02	471	274
24	15	40	1115	13	59	1053	62	15	40	63.1	13	53	47.1	16.0	00	44	755	14	06	650	105
25 Q	15	13	1113	10	12	976	137	10	47	63.8	10	16	49.2	14.6	22	58	729	10	25	600	129
26	12	20	1106	09	31	1065	41	04	54	64.5	09	12	50.1	14.4	05	11	753	09	32	676	77
27	15	15	1111	06	15	1065	46	06	17	75.3	13	11	51.1	24.2	06	09	739	12	22	675	64
28	06	23	1130	20	32	1048	82	06	20	74.3	21	58	50.1	24.2	06	09	745	06	28	687	58
29	11	57	1162	11	44	798	364	11	38	90.8	20	47	50.0	40.8	19	57	747	12	13	394	353
30	00	37	1123	14	45	1065	58	16	14	62.7	01	05	52.0	10.7	00	55	754	11	57	713	41
31 Q	02	10	1110	10	18	1075	35	16	03	62.6	21	03	54.5	8.1	16	05	729	09	15	688	41
Mean			1136			984	152			71.1			46.1	25.0			762			609	153
No. days			31			31	31			31			31	31			31			31	31

MEAN VALUES OF MAGNETIC ELEMENTS

HORIZONTAL INTENSITY (All Days)

Table 49 Meanook

12000  $\gamma$  +

1963

U.T.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	1087	1086	1083	1093	1110	1135	1116	1125	1101	1099	1096	1101	1103	1122	1094	1093
1-2	1087	1086	1084	1103	1107	1148	1118	1123	1108	1098	1096	1100	1105	1124	1098	1092
2-3	1088	1087	1088	1092	1116	1124	1114	1118	1105	1098	1096	1098	1102	1118	1096	1092
3-4	1091	1089	1086	1091	1113	1116	1117	1113	1109	1100	1094	1098	1101	1115	1096	1093
4-5	1086	1084	1089	1093	1105	1106	1110	1108	1091	1092	1091	1100	1096	1107	1091	1090
5-6	1082	1082	1087	1094	1087	1094	1099	1089	1063	1091	1088	1097	1088	1092	1084	1087
6-7	1073	1066	1085	1088	1045	1073	1077	1071	1065	1074	1083	1083	1074	1067	1078	1076
7-8	1058	1058	1082	1079	1067	1054	1053	1056	1030	1051	1058	1081	1061	1058	1060	1064
8-9	1028	1041	1077	1070	1046	1055	1030	1035	1002	1039	1060	1071	1046	1042	1047	1050
9-10	1017	1061	1067	1065	1035	1059	1059	1027	988	1031	1060	1072	1045	1045	1038	1053
10-11	1023	1063	1063	1069	1057	1050	1067	1045	979	1036	1052	1071	1048	1055	1037	1052
11-12	1043	1068	1062	1070	1060	1072	1056	1045	989	1047	1047	1074	1053	1058	1042	1058
12-13	1059	1053	1068	1072	1076	1085	1042	1053	1016	1061	1052	1061	1058	1064	1054	1056
13-14	1061	1059	1071	1076	1083	1086	1076	1057	1025	1062	1061	1066	1065	1075	1058	1062
14-15	1054	1075	1067	1076	1088	1090	1090	1080	1055	1077	1080	1082	1076	1087	1069	1073
15-16	1065	1078	1071	1072	1085	1090	1091	1088	1048	1077	1077	1092	1078	1088	1067	1078
16-17	1073	1072	1076	1068	1075	1082	1085	1077	1052	1062	1066	1092	1073	1080	1064	1076
17-18	1067	1069	1067	1062	1067	1074	1082	1070	1056	1060	1066	1086	1069	1073	1061	1072
18-19	1067	1067	1063	1062	1066	1068	1076	1066	1061	1066	1063	1081	1067	1069	1063	1070
19-20	1063	1066	1061	1065	1071	1070	1074	1073	1070	1066	1070	1080	1069	1072	1066	1070
20-21	1063	1071	1065	1072	1077	1078	1078	1081	1084	1074	1075	1083	1075	1078	1074	1072
21-22	1064	1077	1071	1073	1085	1085	1084	1090	1099	1084	1085	1087	1082	1086	1082	1078
22-23	1071	1078	1074	1079	1092	1103	1093	1103	1113	1081	1090	1092	1089	1098	1087	1083
23-24	1082	1080	1077	1088	1102	1118	1104	1124	1122	1092	1092	1097	1098	1112	1095	1088
Mean	1065	1072	1074	1078	1080	1088	1083	1080	1060	1072	1075	1085	1076	1083	1071	1074

## MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION (All Days)

Table 50 Meanook

23° E + ...'

1963

U T.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	59.6	60.0	57.3	55.3	53.7	53.5	53.4	56.5	56.8	54.0	58.3	56.7	56.3	54.3	55.9	58.6
1-2	60.3	60.4	58.3	56.6	55.2	54.7	55.7	57.3	58.8	56.1	58.8	57.3	57.5	55.7	57.5	59.2
2-3	60.7	60.7	58.9	58.3	56.9	56.0	56.4	58.6	59.2	56.7	60.1	58.3	58.4	57.0	58.3	60.0
3-4	61.7	61.3	59.4	58.6	59.4	56.1	57.3	58.3	59.2	57.6	59.4	59.2	59.0	57.8	58.7	60.4
4-5	63.3	61.8	60.7	60.7	59.6	58.3	59.4	58.7	60.8	57.6	58.8	59.3	59.9	59.0	60.0	60.8
5-6	62.3	61.0	59.1	60.0	59.2	58.1	58.5	59.1	58.5	58.6	60.6	59.0	59.5	58.7	59.0	60.7
6-7	62.0	59.2	60.1	59.2	58.5	58.6	59.1	57.6	56.6	57.9	59.1	58.5	58.9	58.4	58.5	59.7
7-8	62.2	57.9	61.0	58.8	58.9	57.5	56.4	57.8	55.8	59.1	58.4	59.7	58.6	57.6	58.7	59.6
8-9	58.4	56.1	60.1	59.8	56.7	58.0	55.1	58.0	53.9	60.3	58.8	58.3	57.8	57.0	58.5	57.9
9-10	58.4	59.8	60.0	60.0	57.1	58.3	57.9	55.2	54.4	61.1	58.8	57.2	58.2	57.1	58.9	58.6
10-11	61.0	59.6	59.7	61.1	58.2	58.2	57.5	56.3	57.2	64.1	58.6	56.8	59.0	57.6	60.5	59.0
11-12	61.5	62.0	61.0	60.8	59.5	60.4	58.7	58.5	61.0	60.4	59.8	58.5	60.2	59.3	60.8	60.5
12-13	61.1	61.4	61.0	62.2	62.0	62.6	60.8	60.4	63.2	58.6	61.1	58.7	61.1	61.5	61.2	60.6
13-14	59.8	60.5	60.5	63.9	64.3	64.8	63.2	65.3	66.0	58.9	59.8	57.0	62.0	64.4	62.3	59.3
14-15	57.7	60.8	60.9	64.8	66.8	66.2	66.2	67.7	64.4	58.1	59.9	57.3	62.6	66.7	62.1	58.9
15-16	59.7	62.0	61.9	65.4	67.0	67.4	67.5	67.7	64.4	59.6	60.6	58.3	63.5	67.4	62.8	60.2
16-17	61.8	61.3	63.3	64.9	65.6	66.7	67.0	66.2	62.1	60.9	59.9	58.7	63.2	66.4	62.8	60.4
17-18	60.5	59.8	62.4	63.0	63.0	63.7	63.8	62.2	59.5	60.1	58.1	57.7	61.2	63.2	61.3	59.0
18-19	59.5	58.3	60.7	59.0	59.9	59.6	59.4	57.4	55.8	58.1	56.1	56.3	58.3	59.1	58.4	57.5
19-20	58.5	57.1	57.8	56.8	56.1	55.8	55.8	52.8	54.5	56.2	55.1	55.5	56.0	55.1	56.3	56.5
20-21	58.1	56.8	56.0	55.1	53.8	53.7	52.5	51.4	54.3	55.6	55.2	54.6	54.8	52.9	55.2	56.2
21-22	57.9	57.3	55.7	53.7	53.0	51.6	50.8	51.7	53.4	54.2	55.7	54.5	54.1	51.8	54.2	56.3
22-23	58.3	58.1	55.8	54.0	52.8	52.1	51.1	52.5	55.1	55.1	56.1	54.6	54.6	52.1	55.0	56.8
23-24	59.4	59.1	55.7	54.6	53.0	52.7	51.8	54.6	56.2	54.4	56.4	55.1	55.2	53.0	55.2	57.5
Mean	60.2	59.7	59.5	59.4	58.8	58.5	58.1	58.4	58.3	58.0	58.5	57.4	58.7	58.4	58.8	58.9

MEAN VALUES OF MAGNETIC ELEMENTS

VERTICAL INTENSITY (All Days)

Table 51 Meanook

58000  $\gamma$  +

1963

U. T.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	736	734	732	732	740	744	739	741	743	738	733	730	737	741	736	733
1-2	736	733	731	729	741	743	739	739	748	744	733	729	737	740	738	733
2-3	738	730	733	732	738	732	737	739	733	744	733	730	735	736	736	733
3-4	743	727	733	729	741	742	737	735	727	736	733	729	734	739	731	733
4-5	743	726	731	725	725	725	718	728	712	732	725	725	726	724	725	730
5-6	738	725	726	721	710	714	711	711	697	727	718	723	718	711	718	726
6-7	727	709	720	716	668	691	673	691	686	706	711	711	701	681	707	714
7-8	719	698	710	695	676	676	668	675	700	696	693	702	692	674	700	703
8-9	687	690	703	683	658	675	638	657	688	689	691	692	679	657	691	690
9-10	677	700	700	676	642	668	671	648	687	679	682	693	677	657	686	688
10-11	687	706	694	682	651	663	687	651	656	671	681	695	677	663	676	692
11-12	693	710	693	689	674	675	684	668	672	681	687	697	685	675	684	697
12-13	700	707	696	688	692	689	673	679	668	692	684	682	687	683	686	693
13-14	704	705	703	695	703	696	679	681	687	698	697	687	695	690	696	698
14-15	701	713	703	698	709	703	688	696	710	709	703	693	702	699	705	702
15-16	709	717	712	699	711	706	695	705	706	718	705	707	708	704	709	710
16-17	720	719	714	702	710	707	697	708	715	718	710	713	711	706	712	715
17-18	721	721	714	707	711	709	701	710	721	725	716	714	714	708	717	718
18-19	726	722	716	708	710	709	703	710	728	730	721	719	717	708	721	722
19-20	727	725	718	710	712	713	705	710	737	734	729	724	720	710	725	726
20-21	727	727	722	716	717	723	709	716	744	734	731	727	724	716	729	728
21-22	731	730	725	719	725	731	715	729	752	734	735	730	730	725	732	732
22-23	736	731	726	722	731	741	724	734	754	728	733	731	733	732	733	733
23-24	739	732	728	726	736	746	738	733	750	737	733	731	736	738	735	734
Mean	719	718	716	708	705	709	701	704	713	716	713	713	711	705	713	716



## MEAN VALUES OF MAGNETIC ELEMENTS

Table 52 Meanook

HORIZONTAL INTENSITY (Quiet Days)

12,000  $\gamma$  +

1963

U. T.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	1080	1086	1081	1085	1101	1101	1101	1108	1100	1085	1093	1102	1094	1103	1088	1091
1-2	1081	1086	1081	1087	1101	1102	1106	1106	1094	1086	1095	1101	1094	1104	1087	1091
2-3	1080	1085	1084	1089	1098	1096	1103	1097	1098	1088	1094	1100	1093	1099	1090	1089
3-4	1079	1084	1085	1087	1091	1096	1104	1098	1099	1086	1094	1098	1092	1097	1089	1089
4-5	1077	1083	1085	1087	1092	1096	1103	1093	1098	1086	1093	1098	1091	1096	1089	1087
5-6	1076	1082	1084	1086	1091	1093	1101	1099	1100	1085	1093	1096	1090	1096	1089	1085
6-7	1076	1080	1085	1087	1092	1092	1103	1102	1102	1087	1090	1094	1091	1097	1090	1085
7-8	1076	1081	1085	1088	1094	1084	1106	1101	1101	1087	1089	1095	1090	1096	1090	1084
8-9	1075	1080	1085	1091	1091	1096	1103	1102	1094	1085	1089	1092	1090	1098	1089	1084
9-10	1075	1081	1086	1091	1092	1095	1106	1104	1094	1089	1089	1090	1090	1099	1090	1082
10-11	1077	1081	1086	1089	1095	1097	1109	1104	1095	1096	1091	1081	1092	1101	1092	1083
11-12	1078	1083	1086	1089	1096	1099	1108	1102	1100	1094	1092	1097	1094	1101	1092	1090
12-13	1080	1084	1087	1081	1100	1104	1109	1102	1102	1093	1093	1101	1095	1104	1091	1090
13-14	1082	1085	1087	1084	1099	1105	1110	1104	1100	1091	1091	1101	1095	1104	1090	1090
14-15	1083	1086	1087	1085	1099	1102	1114	1101	1097	1089	1089	1101	1094	1104	1090	1089
15-16	1083	1085	1086	1080	1094	1095	1107	1095	1086	1087	1088	1101	1091	1098	1085	1089
16-17	1080	1079	1082	1072	1084	1083	1094	1084	1074	1081	1082	1098	1083	1086	1077	1085
17-18	1075	1073	1073	1066	1072	1073	1086	1077	1065	1075	1077	1090	1075	1077	1070	1077
18-19	1072	1071	1063	1068	1066	1063	1075	1073	1074	1070	1073	1088	1070	1069	1069	1073
19-20	1073	1072	1061	1068	1072	1065	1074	1076	1073	1070	1073	1088	1072	1072	1068	1076
20-21	1074	1076	1061	1069	1077	1069	1077	1083	1088	1077	1079	1089	1077	1076	1074	1080
21-22	1075	1081	1066	1069	1083	1083	1086	1093	1092	1082	1085	1093	1082	1086	1077	1083
22-23	1078	1083	1070	1075	1088	1095	1092	1101	1099	1085	1090	1096	1088	1094	1082	1087
23-24	1080	1082	1076	1086	1096	1105	1104	1105	1111	1087	1091	1098	1093	1102	1090	1088
Mean	1078	1081	1080	1081	1090	1091	1099	1096	1093	1085	1088	1095	1088	1094	1085	1085

MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION (Quiet Days)

Table 53 Meanook

23° E + ...'

1963

U.T.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	59.6	59.4	57.6	56.8	54.9	55.2	54.4	55.7	57.9	56.1	57.6	56.8	56.8	55.0	57.1	58.4
1-2	59.9	60.2	58.4	57.9	56.7	56.8	55.6	56.5	57.7	56.2	57.9	56.8	57.6	56.4	57.6	58.7
2-3	60.5	60.4	58.7	58.5	57.0	57.5	56.9	56.3	57.8	56.0	58.2	57.8	58.0	56.9	57.8	59.2
3-4	60.9	60.5	58.9	58.8	56.9	57.6	56.8	56.2	57.8	56.6	58.2	58.2	58.1	56.9	58.0	59.4
4-5	60.8	60.4	59.1	58.8	57.2	57.7	56.8	56.1	58.0	55.9	58.1	58.1	58.1	56.9	58.0	59.4
5-6	60.9	60.2	59.2	58.8	56.9	58.1	56.7	56.5	57.7	56.5	58.2	58.1	58.1	57.0	58.0	59.4
6-7	60.5	60.2	59.5	59.0	56.9	58.1	56.4	57.3	59.1	55.9	58.2	58.0	58.3	57.2	58.4	59.2
7-8	60.6	59.8	59.5	59.0	57.0	58.2	56.5	58.0	57.4	56.3	57.5	57.9	58.1	57.4	58.0	59.0
8-9	60.7	59.6	59.7	58.9	56.8	58.2	56.0	58.4	57.3	56.7	57.3	57.3	58.1	57.4	58.2	58.7
9-10	60.8	59.9	59.7	59.6	57.5	57.1	57.1	58.9	57.1	57.4	57.6	57.2	58.3	57.7	58.4	58.9
10-11	60.9	60.0	60.1	60.7	58.5	58.0	57.4	59.5	58.4	57.8	58.0	56.9	58.9	58.4	59.2	59.0
11-12	60.6	60.4	60.1	60.7	60.7	59.9	58.5	60.4	59.8	57.7	58.5	57.0	59.5	59.9	59.6	59.1
12-13	60.8	60.8	60.5	61.3	63.3	62.6	60.9	62.5	61.8	57.4	58.8	57.1	60.6	62.3	60.2	59.4
13-14	60.8	61.0	61.0	63.8	65.3	64.6	62.8	64.6	63.2	58.1	59.2	57.3	61.8	64.3	61.5	59.6
14-15	60.9	61.4	61.9	65.7	67.0	66.1	64.6	66.2	64.7	58.7	59.2	57.8	62.8	66.0	62.7	59.8
15-16	61.6	62.2	63.3	66.5	66.9	67.3	65.7	66.5	66.7	60.3	60.4	58.7	63.8	66.6	64.2	60.7
16-17	62.0	62.5	64.9	65.7	65.1	66.4	65.8	65.4	65.3	61.0	60.6	59.3	63.7	65.7	64.2	61.1
17-18	61.2	61.5	64.5	64.0	62.5	62.9	64.1	61.0	61.7	60.4	59.7	59.2	61.9	62.6	62.7	60.4
18-19	60.7	60.2	62.4	60.5	58.5	58.5	59.8	56.4	56.6	57.7	57.7	57.9	58.9	58.3	59.3	59.1
19-20	60.1	58.9	59.4	57.9	55.1	54.5	55.5	52.8	52.5	55.5	56.1	56.9	56.3	54.5	56.3	58.0
20-21	59.2	58.1	54.8	56.4	53.0	52.7	52.0	50.6	51.8	54.0	55.4	55.8	54.5	52.1	54.2	57.1
21-22	58.9	58.3	56.2	55.5	52.1	52.5	50.6	50.7	51.9	53.8	55.5	55.6	54.3	51.5	54.4	57.1
22-23	59.4	58.9	56.2	55.0	52.4	52.8	50.0	52.5	53.3	54.6	56.0	55.9	54.8	51.9	54.8	57.6
23-24	59.6	59.5	56.5	55.1	53.5	54.0	51.3	53.6	55.0	55.3	56.3	56.3	55.5	53.1	55.5	57.9
Mean	60.5	60.2	59.7	59.8	58.4	58.6	57.6	58.0	58.4	56.9	57.9	57.4	58.6	58.2	58.7	59.0

## MEAN VALUES OF MAGNETIC ELEMENTS

## VERTICAL INTENSITY (Quiet Days)

Table 54 Meanook

58,000  $\gamma$  +

1963

U. T.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	725	729	724	718	720	730	719	717	730	730	722	721	724	722	726	724
1-2	725	728	722	716	723	729	720	716	727	730	721	721	723	722	724	724
2-3	725	726	721	716	717	726	719	712	724	729	721	721	721	718	723	723
3-4	725	725	721	716	714	725	717	711	721	731	722	720	721	717	722	723
4-5	725	724	721	716	713	723	715	710	718	733	721	719	720	715	722	722
5-6	725	725	721	717	713	717	715	710	718	734	720	719	720	714	723	722
6-7	724	724	720	715	713	714	713	712	717	733	717	719	718	713	721	721
7-8	723	724	720	714	711	687	708	706	713	730	719	718	714	703	719	721
8-9	724	723	720	714	706	706	699	710	707	713	718	714	713	705	714	720
9-10	721	720	714	711	700	711	701	707	700	716	720	708	711	705	710	717
10-11	721	721	714	709	708	714	705	709	701	725	722	700	712	709	712	716
11-12	721	719	714	714	709	716	707	708	709	724	723	711	715	710	715	719
12-13	721	720	714	707	711	718	707	706	716	727	721	715	715	710	716	719
13-14	722	722	717	708	708	719	704	706	718	725	720	715	715	709	717	720
14-15	722	723	719	711	707	716	704	707	719	726	719	718	716	708	719	720
15-16	722	723	720	711	705	712	705	707	718	726	720	719	716	707	719	721
16-17	722	723	718	711	703	712	703	706	718	726	719	718	715	706	718	720
17-18	721	721	717	712	700	712	699	703	717	724	718	719	714	704	718	720
18-19	723	721	716	712	696	711	696	698	717	728	722	719	713	700	718	721
19-20	723	722	716	712	700	711	697	700	719	725	723	719	714	702	718	722
20-21	722	723	717	714	705	714	702	703	724	727	723	719	716	706	720	722
21-22	723	723	720	716	709	718	706	710	727	728	724	720	719	711	723	722
22-23	723	723	721	718	711	724	710	712	728	727	723	720	720	714	724	722
23-24	723	723	720	720	712	730	722	714	735	727	722	720	722	720	725	722
Mean	723	723	719	714	709	716	708	708	718	727	721	717	717	710	720	721

MEAN VALUES OF MAGNETIC ELEMENTS

HORIZONTAL INTENSITY (Disturbed Days)

Table 55 Meanook

12,000  $\gamma$  +

1963

U. T.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	1131	1112	1089	1100	1114	1241	1145	1180	1066	1145	1116	1109	1129	1170	1100	1117
1-2	1140	1101	1083	1137	1119	1300	1137	1181	1152	1149	1117	1097	1143	1184	1130	1114
2-3	1135	1107	1099	1094	1150	1178	1124	1146	1142	1138	1113	1096	1127	1150	1118	1113
3-4	1164	1113	1092	1091	1167	1196	1146	1154	1127	1144	1097	1101	1133	1166	1114	1119
4-5	1132	1095	1107	1110	1154	1153	1138	1119	1027	1091	1091	1117	1111	1141	1084	1109
5-6	1121	1090	1090	1088	1048	1120	1090	1059	907	1085	1073	1104	1073	1080	1042	1097
6-7	1074	1003	1079	1092	944	995	1072	1024	963	1043	1047	1044	1032	1009	1044	1042
7-8	1007	963	1077	1087	996	929	1045	898	854	923	983	1052	984	967	985	1001
8-9	912	883	1051	1029	934	994	973	846	779	878	1049	1024	946	937	934	967
9-10	775	1004	991	1038	881	1008	1019	827	894	860	993	1045	944	934	945	954
10-11	811	1034	999	1037	976	1040	1020	885	887	855	939	1025	959	980	944	952
11-12	891	1021	942	1072	961	1056	981	918	926	941	883	1026	968	979	970	955
12-13	981	948	990	1053	1042	1063	842	941	875	973	924	992	969	972	973	961
13-14	979	994	1016	1045	1064	1053	1017	965	876	945	948	998	992	1025	970	980
14-15	958	1054	1007	1043	1073	1088	1094	1058	961	1020	1046	1043	1037	1078	1008	1025
15-16	1010	1064	1026	1053	1076	1084	1092	1081	965	1036	1036	1075	1050	1083	1020	1046
16-17	1040	1055	1052	1063	1066	1078	1073	1079	1014	974	999	1076	1047	1074	1025	1042
17-18	1030	1067	1044	1067	1066	1065	1080	1071	1058	997	1032	1073	1054	1070	1042	1050
18-19	1052	1056	1056	1070	1073	1062	1077	1051	1070	1065	1048	1067	1062	1066	1065	1055
19-20	1040	1043	1051	1062	1077	1072	1074	1072	1087	1083	1057	1060	1065	1074	1071	1050
20-21	1050	1055	1064	1075	1081	1086	1082	1081	1106	1088	1075	1075	1077	1083	1083	1064
21-22	1051	1067	1073	1075	1087	1088	1097	1093	1129	1122	1110	1073	1089	1091	1100	1075
22-23	1074	1072	1078	1087	1097	1124	1117	1128	1143	1100	1113	1068	1100	1116	1102	1082
23-24	1115	1078	1083	1098	1108	1139	1145	1196	1126	1126	1107	1108	1119	1147	1108	1102
Mean	1028	1045	1052	1073	1056	1092	1070	1044	1006	1032	1042	1065	1050	1065	1041	1045

## MEAN VALUES OF MAGNETIC ELEMENTS

DECLINATION (Disturbed Days)

Table 56 Meanook

23° E + ...'

1963

U.T.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	59.1	61.8	57.7	53.6	54.2	50.5	54.9	60.9	52.8	53.1	63.2	56.8	56.5	55.1	54.3	60.2
1-2	59.3	63.3	60.0	58.1	58.3	49.8	57.3	57.9	55.0	57.7	61.1	57.7	58.0	55.8	57.7	60.4
2-3	60.9	64.0	60.0	58.5	56.5	50.5	56.8	62.0	59.7	59.8	58.1	60.1	59.7	56.4	59.5	63.3
3-4	64.8	66.8	62.9	60.0	62.1	49.2	59.0	60.4	57.7	57.3	61.3	63.6	60.4	57.7	59.5	64.1
4-5	71.1	69.8	67.7	66.7	60.2	58.5	60.6	56.7	62.9	56.6	58.3	63.1	62.7	59.0	63.5	65.6
5-6	65.6	64.4	61.0	61.8	58.3	56.5	61.8	59.6	58.8	60.5	65.5	59.5	61.1	59.0	60.5	63.8
6-7	63.2	52.3	61.6	60.4	58.6	56.8	61.8	49.6	60.6	64.3	63.4	57.4	59.2	56.7	61.7	59.1
7-8	65.1	47.5	68.4	60.2	57.6	55.0	55.3	57.8	52.8	64.2	61.1	66.5	59.3	56.4	61.4	60.0
8-9	49.7	39.3	60.0	56.0	54.4	59.6	50.7	63.3	51.2	67.0	62.4	56.6	55.9	57.0	58.6	52.0
9-10	44.2	56.6	56.7	59.9	56.2	58.1	57.7	48.5	51.1	9.1	58.3	55.7	56.0	55.1	59.2	53.7
10-11	64.5	59.4	57.3	59.8	58.2	56.6	56.4	52.5	67.7	86.2	60.6	55.3	61.2	55.9	67.8	60.0
11-12	65.4	65.8	58.8	57.7	58.6	58.8	58.5	57.7	67.9	69.0	63.7	57.4	61.6	58.4	63.4	63.1
12-13	65.2	63.3	62.3	61.5	61.0	62.5	58.8	61.7	73.6	57.3	66.5	61.8	63.0	61.0	63.7	64.2
13-14	56.8	60.0	57.2	61.1	64.2	66.2	60.0	68.9	74.8	61.5	61.4	56.1	62.3	64.8	63.6	58.6
14-15	46.1	59.0	58.5	59.7	65.8	65.8	65.5	71.5	62.7	57.0	59.6	56.9	60.7	67.2	59.5	55.4
15-16	55.7	60.0	58.5	61.6	65.6	67.6	68.8	69.7	64.6	58.4	58.9	58.0	62.3	67.9	60.8	58.2
16-17	63.0	58.2	60.2	63.5	63.6	67.2	69.5	67.0	61.8	62.4	55.8	56.2	62.4	66.8	62.0	58.3
17-18	58.1	57.7	58.1	65.0	62.1	64.5	64.0	63.0	57.5	60.8	52.3	55.4	59.9	63.4	60.4	55.9
18-19	55.0	57.1	57.7	59.0	60.7	59.8	59.4	55.7	58.4	58.9	54.7	54.0	57.6	58.9	58.5	55.4
19-20	55.0	55.6	55.5	58.5	57.9	56.9	55.5	50.6	62.1	61.1	53.9	54.6	56.4	55.2	59.3	54.8
20-21	56.3	55.8	55.1	55.0	56.2	56.2	52.4	51.4	61.8	63.0	56.2	54.9	56.2	54.0	58.7	55.8
21-22	56.7	57.9	56.6	52.5	55.6	52.2	49.7	54.5	55.3	57.1	56.1	54.5	54.9	53.0	55.4	56.3
22-23	58.9	59.3	57.1	54.1	56.4	52.3	51.3	55.8	57.0	61.9	55.0	54.1	56.1	54.0	57.5	56.8
23-24	59.8	58.3	56.4	55.2	55.8	52.2	52.7	58.6	55.3	56.1	55.4	54.5	55.9	54.8	55.8	57.0
Mean	59.2	59.0	59.4	59.1	59.0	57.6	58.3	59.0	60.1	61.7	59.6	57.5	59.1	58.5	60.1	58.8

MEAN VALUES OF MAGNETIC ELEMENTS

VERTICAL INTENSITY (Disturbed Days)

Table 57 Meanook

58,000  $\gamma$  +

1963

U. T	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Summer	Equinox	Winter
0-1	761	768	761	747	743	734	770	757	697	731	761	754	749	751	734	761
1-2	764	761	756	733	761	737	761	738	727	772	763	742	751	749	747	758
2-3	774	749	769	740	742	671	744	738	665	754	754	746	737	724	732	756
3-4	796	732	762	733	742	757	733	745	672	702	752	739	739	744	717	755
4-5	788	727	749	714	709	704	732	726	636	705	722	714	719	718	701	738
5-6	785	717	737	703	635	723	716	742	635	692	682	708	706	704	692	723
6-7	722	625	708	717	592	620	652	699	625	628	655	670	659	641	669	668
7-8	718	581	673	692	610	604	663	627	722	598	618	647	646	626	671	641
8-9	621	595	664	632	549	656	591	595	747	617	674	643	632	598	665	634
9-10	523	672	655	657	516	651	636	591	757	626	617	668	631	598	674	620
10-11	584	695	657	657	565	671	682	570	730	582	576	658	636	622	657	628
11-12	589	697	637	662	610	674	668	602	712	637	560	667	643	638	662	628
12-13	626	685	631	657	663	677	598	631	641	664	564	631	639	642	648	627
13-14	647	679	660	664	696	676	626	642	670	640	609	635	653	660	658	642
14-15	636	700	659	654	709	705	681	690	735	656	651	652	677	696	676	660
15-16	655	704	702	660	713	710	700	714	699	665	675	687	690	709	682	680
16-17	709	719	713	682	710	711	695	718	724	692	684	702	705	708	703	704
17-18	719	732	715	700	717	710	709	721	734	726	715	714	718	714	719	720
18-19	734	733	734	704	720	712	717	723	745	743	734	726	727	718	732	732
19-20	743	739	732	708	723	724	719	744	759	758	756	737	737	728	739	744
20-21	736	747	742	723	728	750	729	746	762	744	771	750	744	738	743	751
21-22	742	745	746	723	724	763	738	754	795	729	774	753	749	745	748	754
22-23	751	747	742	729	744	775	750	762	787	672	763	757	748	758	732	754
23-24	760	750	747	742	748	777	773	736	719	715	770	763	750	758	731	761
Mean	703	708	710	697	682	704	699	696	712	685	692	703	699	695	701	702

## THREE-HOUR RANGE INDICES, MEANOOK, 1963

Table 58

January					February			
	D	H	Z	K	D	H	Z	K
1	0211 0000	0212 1101	0112 0000	0212 1101	0034 3311	1035 5212	0035 4222	1035 5222
2	0000 0100	0000 1110	0000 0000	0000 1110	0100 0100	0101 0100	0100 0000	0101 0100
3	0000 0000	0000 0000	0000 0000	0000 0000	0100 1100	0000 1100	0000 0000	0100 1100
4	1100 2111	1100 2221	0100 1210	1100 2221	0000 0110	0000 0111	0000 0000	0000 0111
5	0032 1000	0132 1100	0033 2000	0133 2100	0011 1000	0012 2100	0001 2000	0012 2100
6	0000 0100	0000 0100	0000 0000	0000 0100	0020 1100	1010 0100	0020 0100	1020 1100
7	0200 0310	0200 0320	0210 0200	0210 0320	0012 0000	0011 0000	0011 0000	0012 0000
8	0011 0000	0021 0000	0010 0000	0021 0000	0000 0000	0000 0000	0000 0000	0000 0000
9	0000 0000	0000 0000	0000 0000	0000 0000	0000 0012	0000 1013	0000 0003	0000 1013
10	0000 1110	0000 1110	0000 0000	0000 1110	3465 6232	5575 7333	5475 5322	5575 7333
11	0000 0131	0000 1121	0000 0000	0000 1131	2333 2223	3334 4333	2334 3332	3334 4333
12	0100 0111	0001 0112	0000 0001	0101 0112	2442 1232	3563 3334	2563 2222	3563 3334
13	2444 3321	2556 3332	2464 4322	2556 4332	1352 3332	3364 5542	1353 4431	3364 5542
14	1344 3333	2357 5543	1356 4532	2357 5543	1352 2210	3364 3222	2363 3221	3364 3222
15	1465 2211	1365 4322	1455 4211	1465 4322	1222 2210	1113 4211	0013 3100	1223 4211
16	2143 2322	3144 4533	2043 3332	3144 4533	0002 1100	2012 1211	1012 1100	2012 1211
17	2442 1221	2463 2322	2552 2322	2563 2322	0022 0110	0012 0100	0011 0000	0022 0110
18	1222 1113	2134 2222	1234 3213	2234 3223	0010 0000	0010 0100	0000 0000	0010 0100
19	2932 3311	2255 4421	1254 3312	2355 4422	0000 0000	0000 0021	0000 0000	0000 0021
20	1032 1000	1022 1111	1032 1000	1032 1111	0022 1111	0033 2111	0033 0001	0033 2111
21	0012 0001	0001 0000	0002 0000	0012 0001	0021 1200	1022 0112	1023 0000	1023 1212
22	0121 0110	0021 0021	0021 0000	0121 0121	0122 1110	0133 1111	0033 1000	0133 1111
23	1220 2211	1211 2211	0230 3000	1231 3211	0021 1100	0011 2110	0012 2100	0022 2110
24	0132 1112	1132 1123	0032 1003	1132 1123	0010 0100	0000 0001	0000 0000	0010 0101
25	0201 1110	1112 1111	1012 1000	1212 1111	0001 0000	1001 0000	0000 0000	1001 0000
26	0020 0000	1022 0000	0022 0000	1022 0000	0232 1000	0022 1101	0032 1000	0232 1101
27	0001 0000	0000 0000	0000 0000	0001 0000	0001 0010	1000 0000	0000 0000	1001 0010
28	0000 0000	0000 0000	0000 0000	0000 0000	0011 2000	0121 1001	0033 0000	0133 2001
29	0000 1111	0000 1111	0000 0001	0000 1111				
30	2347 4322	1466 4345	2266 5223	2467 5345				
31	5545 6521	5677 6532	5467 5531	5677 6532				
March					April			
	D	H	Z	K	D	H	Z	K
1	1352 2211	1453 3311	2343 3210	2453 3311	1343 1110	2453 1110	3444 1100	3454 1110
2	0123 1110	1112 2211	0023 2000	1123 2211	0000 1110	1000 0221	0000 0010	1000 1221
3	0131 2110	1132 1111	0042 2100	1142 2111	1221 0110	1122 0100	0232 0000	1232 0110
4	0021 0000	0022 0001	0022 0000	0022 0001	1032 2322	1132 3333	0133 3322	1133 3333
5	0010 1010	0011 1000	0011 0000	0011 1010	4533 3322	6555 4323	4554 4322	6555 4323
6	0210 0111	1100 0211	0000 0000	1210 0211	3353 3221	2255 3232	2264 2121	3365 3232
7	0200 0013	0210 0013	0110 0002	0210 0013	1243 2210	2244 3312	1255 3211	2255 3312
8	2255 4331	3257 5333	4356 5322	4357 5333	0202 3110	2103 3212	1102 3011	2203 3212
9	1423 2312	2433 4323	1444 3212	2444 4323	1320 1200	1221 2222	0331 1000	1331 2222
10	3345 4432	2356 5543	1455 5433	3456 5543	0001 1010	0011 1211	0010 0000	0011 1211
11	4432 1222	3223 3333	3333 1122	4433 3333	0002 0010	1001 0112	0002 0001	1002 0112
12	3332 1210	3333 3322	3433 3210	3433 3322	1023 1121	2133 2202	1034 1000	2134 2222
13	0021 2220	1022 3421	0022 2310	1022 3421	1122 2222	1135 4223	0134 3222	1135 4223
14	0000 0010	1000 0101	0000 0000	1000 0101	2112 2422	3104 4423	3114 4413	3114 4423
15	1000 0010	1101 0101	0000 0000	1101 0111	4243 3001	3375 5111	3354 4001	4375 5111
16	0010 0110	0011 1111	0001 0000	0011 1111	1222 1110	2122 1111	2233 1001	2233 1111
17	0000 1101	0001 1111	0000 1100	0000 1111	3111 1100	2121 1211	2132 1000	3132 1211
18	0122 1100	0032 2201	0221 2000	0232 2201	0022 2221	1013 2223	0023 2112	1023 2223
19	0220 0110	1320 0111	1321 0000	1321 0111	1431 1311	3432 1322	2532 0110	3532 1322
20	0001 1111	1012 1112	0002 0000	1012 1112	0021 2210	2232 1211	1042 2200	2242 2211
21	0220 0000	1120 0000	0030 0000	1230 0000	0001 2110	0101 2212	0001 2001	0101 2212
22	0001 0010	0000 1100	0000 0000	0001 1110	3001 1122	3001 1122	3000 0011	3001 1122
23	0014 2210	2026 4210	1025 3100	2026 4210	1342 0110	2543 1210	2453 0000	2553 1210
24	0001 2110	1001 1111	0002 2000	1003 2111	0000 1110	0000 1111	0000 0000	0000 1111
25	0000 0110	1001 0111	0000 0000	1001 0111	0210 0021	0110 0111	0110 0001	0210 0111
26	0000 0010	0000 0110	0000 0000	0000 0110	0300 1111	1200 1112	0200 0011	1300 1112
27	0000 0010	0000 0100	0000 0000	0000 0110	1222 2230	2233 3221	1334 3011	2333 3231
28	0020 0020	0020 0011	0020 0000	0020 0021	0000 1110	1001 1111	0000 0100	1001 1111
29	1112 2110	1112 3100	0002 3000	1112 3110	0200 1110	1210 0121	0200 0010	1210 1121
30	1011 0010	1011 0011	0012 1000	1012 1011	1012 0243	1012 1344	0012 1232	1012 1344
31	0111 1111	0010 1201	0010 1001	0111 1211				

THREE-HOUR RANGE INDICES, MEANOOK, 1963

May					June											
	D	H	Z	K	D	H	Z	K								
1	4444	3312	6666	4323	5556	4222	6666	4323	1134	2211	2236	2322	1236	4100	2236	4322
2	3334	2222	3446	3323	3556	4222	3556	4323	1312	2220	2323	3212	2424	4310	2424	4322
3	2242	2222	4242	3323	2342	2123	4342	3323	0232	2210	2122	2122	1222	2011	2232	2222
4	3444	1221	3567	3223	3566	2212	3567	3223	1021	1110	2130	1111	1040	0000	2141	1111
5	0333	2210	2243	2212	2453	2111	2453	2212	1000	1110	1100	0210	0000	0000	1100	1210
6	2422	1120	2321	1122	2432	0010	2432	1122	0001	1233	0100	0236	0000	0124	0101	1236
7	0123	2120	2114	1212	0024	2012	2114	2222	6653	2222	7775	4333	7675	4223	7775	4333
8	1233	1121	2254	2223	2354	2111	2354	2223	1223	2132	3224	2324	2334	3113	3334	3334
9	1224	2130	2253	3223	1254	3012	2254	3233	2332	2221	4354	2223	3444	3001	4454	3223
10	1233	1231	2244	3233	2244	2222	2244	3233	1103	2220	2114	2212	1104	2010	2114	2222
11	4422	3221	5534	4223	5545	4212	5545	4223	2311	1220	2201	1111	1301	1001	2311	1221
12	1131	2220	2241	2212	2142	2111	2242	2222	1212	1110	2122	1211	1123	1001	2223	1211
13	2534	3222	3656	6223	3645	5122	3656	6223	1012	0121	2113	2212	1123	2001	2123	2222
14	3343	2120	3465	2212	3464	3001	3465	3222	1002	2111	2002	2211	1002	2200	2002	2211
15	1340	1110	2241	1112	1241	1000	2341	1112	1431	2111	2541	1112	0541	0001	2541	2112
16	2010	1110	2000	1101	2001	0000	2011	1111	1001	0210	1000	0212	0000	0002	1001	0212
17	1012	2210	1112	1213	0003	2023	1113	2223	1232	4320	3142	5322	2143	4421	3243	5422
18	0001	1110	1001	1111	0000	0100	1001	1111	1221	3221	2331	4234	1332	4142	2332	4244
19	0010	2220	0000	1212	0011	0100	0011	2222	3211	1131	3320	1223	3320	1112	3321	1233
20	3311	1110	4320	0210	3320	0010	4321	1210	3154	2210	5366	2212	3365	3222	5366	3222
21	0001	1121	2100	1221	0000	0000	2101	1221	0322	1110	2234	1211	1344	0001	2344	1211
22	0011	1111	1111	1211	0022	1000	1122	1211	1120	1110	2221	1212	1330	1001	2331	1212
23	0012	1110	0011	1111	0012	0010	0012	1111	0111	1110	1112	0112	0012	0000	1112	1112
24	0000	1100	0000	0200	0000	0000	0000	1200	0331	1111	1111	2223	0220	1101	1331	2223
25	0002	2210	2122	2222	1001	2112	2122	2222	1443	2233	3565	3235	2464	3123	3565	3235
26	1221	1110	1211	1212	2321	0002	2321	1212	4562	2121	6574	2222	3564	2122	6574	2222
27	1211	2121	1100	1213	1100	1102	1211	2223	2433	2221	3564	3323	3554	4122	3564	4323
28	2344	2221	3466	2222	3465	3011	3466	3222	1231	2220	2254	3322	2265	2211	2265	3322
29	2341	1121	5672	3222	3462	3001	5672	3222	1130	1232	2131	2323	1141	1221	2141	2323
30	2442	2110	3562	1211	3463	1110	3563	2211	2342	1132	3344	3223	2444	3222	3444	3223
31	0222	2222	0113	3232	0023	3122	0223	3132								
July										August						
	D	H	Z	K	D	H	Z	K								
1	3221	1110	2321	1210	2231	1000	3331	1210	3422	2232	3433	3333	2533	3322	3533	3333
2	0021	1020	0021	1111	0032	0000	0032	1121	2442	2222	2365	2222	2554	1122	2565	2222
3	1001	1021	2001	0201	1001	0010	2001	1221	3322	1122	3321	1223	3432	0012	3432	1223
4	0121	2232	0122	2233	0232	2233	0232	2233	1142	3231	3234	4223	2144	4212	3244	4233
5	2451	2222	3462	2233	2452	2022	3462	2233	2422	3121	2343	4223	3444	4111	3444	4223
6	2552	2221	3574	3322	3554	2211	3574	3322	2332	3221	2453	2323	2554	2112	2554	3323
7	1224	2220	2224	3322	2344	3201	2344	3322	3322	2210	3223	3212	3334	2011	3334	3212
8	2341	2222	3463	3223	2453	1112	3463	3223	1323	3221	2223	2312	2433	3100	2433	3322
9	3443	2222	3463	3223	3454	3112	3464	3223	1333	2221	1344	2222	2444	2100	2444	2222
10	1332	2120	2343	2222	2243	1111	2343	2222	0012	2221	2102	2211	0002	1310	2112	2321
11	1231	1120	2231	1112	1341	0011	2341	1122	0012	1211	2101	1212	0000	0011	2112	1212
12	1211	1120	2110	0212	1210	0011	2211	1122	0020	2221	1112	0211	1021	0111	1122	2221
13	1121	1120	2121	1221	1131	0010	2131	1221	0000	1110	1000	1111	0000	0001	1000	1111
14	0110	1120	2111	1111	0110	0000	2111	1121	0010	1121	1000	1111	0001	0000	1011	1121
15	0001	1120	1101	1202	0000	1000	1101	1222	0001	2222	0001	2223	0000	1101	0001	2223
16	1200	1211	3210	1211	2300	0102	3310	1212	1000	1222	2101	1222	1000	1111	2101	1222
17	2345	5300	2466	6411	3356	5422	3466	6422	1231	1222	2122	1222	1123	1011	2233	1222
18	1232	3211	2224	3322	1124	3311	2234	3322	2446	6322	2476	7323	2455	6301	2476	7323
19	1021	2121	2202	2212	2010	2001	2222	2222	0211	2234	3211	2447	2130	1234	3231	2447
20	0001	2221	1200	1222	0000	0111	1201	2222	5775	5223	6886	7323	5765	4223	6886	7323
21	1244	3221	2255	4322	1255	4311	2255	4322	4446	3321	5477	3323	4466	3212	5477	3323
22	1026	5321	1257	7523	0146	6412	1257	7523	0031	2121	2253	2223	1052	2112	2253	2223
23	0342	3233	2343	3324	1343	3223	2343	3334	4556	5221	5767	6133	5656	6211	5767	6233
24	4543	3211	5756	5333	3644	3121	5756	5333	2033	3222	3254	2221	2154	2001	3254	3222
25	1441	2221	2562	2323	1562	2222	2562	2323	1212	1121	3113	0222	1244	0012	3244	1222
26	0143	2232	3254	3323	2264	2222	3264	3333	2311	1210	2222	2122	2332	1010	2332	2222
27	2443	2211	3453	4323	3454	3312	3454	4323	0011	3332	2012	2333	0023	2222	2022	3333
28	2222	1010	3122	2111	3333	1010	3333	2111	2244	3332	3346	4353	2365	5232	3346	5353
29	0000	1121	1100	1213	0010	0013	1110	1223	2125	2221	2155	3222	1145	3201	2155	3222
30	2353	5332	3474	7334	3374	6232	3474	7334	0121	2222	2113	3222	0113	2110	2123	3222
31	2322	4222	4333	5223	3333	4114	4333	5224	2332	2211	3243	4322	1443	3302	3443	4322



## PUBLICATIONS OF THE DOMINION OBSERVATORY

## THREE-HOUR RANGE INDICES, MEANOOK, 1963

September						October										
	D	H	Z	K		D	H	Z	K		D	H	Z	K		
1	2335	2211	3166	3221	3355	3110	3366	3221	0111	0100	1111	1101	0122	0000	1122	1101
2	0110	1231	2110	1233	0010	0001	2110	1233	0000	1010	0000	1210	0000	0000	0000	1210
3	1122	1211	2122	2212	2233	2100	2233	2212	0121	0100	0122	0100	0133	0000	0133	0100
4	0112	1120	2111	1222	0022	0001	2122	0022	1132	1010	1143	2101	1143	1100	1143	1111
5	2002	2221	2002	1222	2012	2101	2022	1222	0013	1110	1035	1221	0024	2010	1035	2221
6	1022	1211	2022	1223	1023	2001	2023	2223	1300	0210	2000	0200	1200	0000	2300	0210
7	0020	1111	2100	0202	0010	0011	2120	1212	0121	1212	0111	1213	0011	0002	0121	1213
8	0453	2210	1545	5212	2665	5000	2665	5212	3432	2110	4453	2222	3333	2200	4453	2222
9	0523	2210	1435	4311	1534	3200	1535	4311	0210	1110	1111	1212	0211	1011	1111	1212
10	0132	2121	1122	2123	0042	2012	1142	2123	1033	1120	1133	1221	1043	2111	1143	2221
11	1124	2231	1134	3333	1134	2232	1134	3333	0244	5211	1146	5323	1145	5212	1246	5323
12	3443	1110	3354	2211	3453	1100	3454	2211	4345	4331	4466	6432	3455	5431	4466	6432
13	0010	0122	2000	0123	0010	0013	2010	0123	1532	2223	2454	3333	2544	3223	2554	3333
14	2556	6533	3476	7744	3577	6443	3577	7744	2454	4231	4477	6442	4455	5431	4477	6442
15	3553	4332	3566	6434	3555	5334	3566	6434	2453	1222	2354	2222	1454	3122	2454	3222
16	2546	4232	3456	6334	1555	5333	3556	5334	3342	3220	3244	4231	3343	3321	3344	4331
17	3467	4322	4579	6344	4568	5332	4579	6344	0210	1010	1221	0101	0220	1000	1221	1111
18	3223	3311	3235	4322	4124	4312	4235	4322	0121	0110	0021	2111	0122	3001	0122	3111
19	3336	4321	2366	7232	3356	4320	3366	7332	0122	1210	2132	1111	1232	2211	2122	3111
20	0324	3210	2305	4412	1435	3322	2445	4422	0222	3212	1123	4313	1124	4213	1224	4313
21	1311	3542	2334	5643	2333	4431	2334	5643	1323	0000	1335	1100	2334	0000	2335	1100
22	2773	3334	5885	3457	3573	3336	5885	3457	0000	1110	1000	0110	0000	0000	1000	1110
23	4423	1120	8756	4322	6644	3111	8756	4322	0000	0011	0000	1111	0000	0001	0000	1111
24	0000	1123	0111	2236	0000	1134	0111	2236	4566	3332	6678	5434	5667	4333	6678	5434
25	5455	2322	6676	5533	7676	4422	7676	5533	4220	1111	5332	2222	4332	1001	5332	2222
26	2521	2222	2534	5334	1543	3222	2544	5334	2102	1110	2102	2211	2003	1210	2103	2211
27	4222	2243	3234	3355	4234	3244	4234	3355	0001	1111	1001	1110	0002	0000	1002	1111
28	5542	6423	6675	6544	4644	5433	6675	6544	0001	1221	1001	0232	0001	1122	1001	1232
29	3343	2222	3344	4333	3344	4122	3344	4333	1122	3545	2144	5657	1243	5566	2244	5667
30	3133	1111	2144	3112	3143	2110	3144	3112	6432	1120	7554	1111	6442	0000	7554	1121
31									0011	1100	2112	3111	0011	1000	2112	3111
November						December										
	D	H	Z	K		D	H	Z	K		D	H	Z	K		
1	0321	1211	1231	1221	0321	1111	1331	1221	0010	0101	1111	1202	0020	0101	1121	1202
2	1132	2332	1132	2433	1232	1232	1232	2433	1121	1112	2132	4322	1232	2222	2232	4322
3	2442	1121	3453	2123	1444	3112	3454	3123	3454	4322	2365	6433	2464	5333	3464	6433
4	1220	1111	2211	2201	1211	1100	2221	2211	3442	3322	2243	4425	2253	3324	3455	4425
5	0010	0100	0010	0101	0010	0000	0010	0101	3432	3322	4344	5433	4434	4442	4444	5443
6	0031	2212	1132	3222	0033	2212	1133	3222	2433	3322	2343	5433	2453	4332	2453	5433
7	1434	4333	2536	5565	1536	5444	2536	5565	2333	3221	3255	5322	2355	4311	3355	5323
8	4543	4222	5556	6334	4665	4423	5666	6434	0433	3110	1233	4211	1333	4211	1433	4211
9	4343	4333	3364	6444	3364	4434	4364	6444	0133	1100	1134	2200	1143	3100	1144	3200
10	5434	3322	6555	4333	4555	3222	6555	4333	0000	0000	0000	0100	0000	0000	0000	0100
11	3433	1221	2454	2222	2454	1122	3454	2222	0000	0000	0001	1100	0001	1000	0001	1100
12	1233	2321	1254	2322	1244	1221	1254	2322	0011	0000	0111	0001	0011	0000	0111	0001
13	0101	1100	1102	2212	0002	2110	1102	2212	1210	1000	1212	1111	0321	1100	1322	1111
14	0410	1110	1311	1111	0310	0001	1411	1111	0021	2322	0021	3322	0021	3322	0021	3322
15	2022	0010	1012	0110	1022	0000	2022	0110	1021	2210	1122	2211	1132	2111	1132	2211
16	0110	0100	1120	0110	0020	0000	1120	0110	1001	1210	1001	1211	0010	1201	1011	1211
17	0113	3431	0112	3432	0003	3431	0113	3432	0000	0111	1000	0111	1000	0101	1000	0111
18	0000	1110	1100	0110	1001	0000	1101	1110	0011	0000	1011	1100	0011	0000	1011	1100
19	0000	0110	0010	0111	0011	0000	0011	0111	0000	1211	0000	1212	0000	1102	0000	1212
20	0100	0100	1110	1110	0100	1100	1110	1110	2043	3211	2253	5222	1153	4221	2253	5222
21	0000	1100	0001	1000	0000	1000	0001	1000	0022	0211	1244	1312	1032	2211	1244	2312
22	0001	1221	0012	1331	0013	1121	0013	1331	1233	3222	2253	4322	1143	3122	2253	4322
23	1033	1110	1143	1111	2144	0000	2144	1111	0033	2211	1044	2222	0055	0111	1055	2222
24	0123	4323	0135	5435	0135	4333	0135	5435	1000	2120	1100	2312	1000	2111	1100	2322
25	2433	2200	2434	3210	2344	3200	2444	3210	0012	0110	0014	1100	0013	1000	0014	1110
26	0021	1000	0131	0100	0033	1000	0133	1000	0102	1010	0101	1011	0102	0000	0102	1011
27	0021	0000	0122	1110	0022	0000	0122	1110	0030	1000	1010	1000	1110	2000	1130	2000
28	0310	1000	1200	1010	0211	0000	1311	1010	0131	0111	1122	1122	0121	0121	1132	1122
29	1213	2111	1113	1112	1113	3201	1213	3212	1124	3211	2115	5321	1115	5221	2115	5321
30	1013	4211	2214	6322	0014	5111	2214	6322	1000	0110	1111	2211	1111	1201	1111	2211
31									0011	0200	1011	1100	0011	0100	1011	1100