N.Z. DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

APIA OBSERVATORY,

APIA, WESTERN SAMOA

ANNUAL REPORT

FOR

1940

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Minister of Scientific and Industrial Research

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APIA OBSERVATORY

Annual Report for the Year 1940

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Climatological Summary 1940

Atmospheric Electricity 1940

Resident Staff, 1940

Acting Director	H.B. Sapsford B.Sc.
Professional Assistants	C.W. Tremewan B.Sc.(until 20th September) A.B.F. Ayers B.Sc. J.D. Coulter M.Sc. (from 9th February) J.W. Hutchings M.Sc.(from 21st August)
Locally recruited staff	Miss V. Hannemann; Siaosi Sumeo; Pele Feagai; Pene Wells; Popo Tanielu; Siaki Fati (until 15th January) Fa'asi'u (from 15th January) Ma'auga (from 7th September)

Co-ordinates of Transit Pier

Latitude	13° 48' 26"	South
Longitude	171° 46' 30"	West or 11h 27m 6s west of Greenwich
Altitude	Two metres above mean sea level	

Standards of Time

Greenwich Mean Time is used in terrestrial magnetism and seismology (12h = Greenwich midday). Zone Time (165° west of Greenwich) is used in meteorology and atmospheric electricity.

Apia Observatory, Samoa

Report of the Director for the year 1940

During the year under review the geophysical programme of work at the Apia Observatory comprised the usual activity in terrestrial magnetism, seismology, meteorology, atmospheric electricity and the measurement of tides. The spectrohelioscope, which had been at the Observatory for some time on loan from the Mount Wilson Observatory, was transferred to the Carter Observatory, Wellington, New Zealand.

Staff

During the year the Observatory was under the control of Mr. H.B. Sapsford, Acting Director, except for the period from June 22nd to August 21st when Mr. C.W. Tremewan was in charge. During this period Mr. Sapsford was away in New Zealand, where he worked in the Wellington Meteorological Office and paid a short visit to the Auckland office. Mr. J.W. Hutchings arrived on August 22nd to take up professional duties at the Observatory and Mr. C.W. Tremewan left for New Zealand on September 20th. An earlier addition to the staff was Mr. J.D. Coulter who arrived on February 9th.

There were also changes in the locally recruited staff.

Buildings

At the end of January the old concrete hut, in which absolute magnetic observations had been made for many years, was demolished. The original observation piers were left standing and over them a new wooden building was constructed. All materials used were non-magnetic. In order to give better protection to the instruments the design adopted was that of two complete rooms one within the other. The inner room measures 12 ft. by 15 ft. and the space between the inner and outer walls and ceilings is about 2 feet. The new building was completed by 11th March.

General maintenance work including the painting of the anemometer tower and the large residence was carried out by the Public Works Department.

Early in the year an old building, which had been used as coolie quarters and workshop, was demolished.

Time Service

An accurate service of time was maintained throughout the year, the standard clock being Strasser and Rohde No. 381. This clock was controlled by daily radio time signals from America. The Synchronome clock, number C 603, provided time marks for the seismographs and magnetographs. A set of accumulators and a charging unit were installed at the end of May to replace the dry batteries which had been used in connection with the Synchronome clock and time-marking circuits.

Tides

In addition to the other work which is described in this report, tide measurements were made with the portable tide gauge No. 11664. The results were tabulated and forwarded to the United States Coast and Geodetic Survey in Washington.

The results of observations which have been obtained from autographic records and eye observations, together with a description of the scheme for synoptic weather reports in the South West Pacific Region and some notes on the weather, comprise the remainder of this report. Details of instruments and other relevant information in connection with terrestrial magnetism, seismology, meteorology and atmospheric electricity, will be found in the preliminary remarks which introduce the respective sections.

Terrestrial Magnetism 1940

This branch of the work consists of the continuous recording of horizontal intensity (H), declination (D), and vertical intensity (Z), together with the usual observational programme for the control and reduction of the continuous records. The results, in the form of tables, are presented in this report.

Eschenhagen variometers record horizontal intensity and declination while vertical intensity is recorded by a Godhavn balance. These instruments are still in the concrete building, the Gauss Haus, in which they have been for many years, the H and D variometers being in the eastern room and the Z instrument in the western room. The lenses of the H and D vario-

meters are at distances of 128 and 174 centimetres respectively from the recording drum and the lens of the Godhavn balance is distant 162 centimetres from its drum.

The photographic papers are changed once a day at approximately 1900 G.M.T. and the temperature inside the variometer house is read at the same time. It has been found that the diurnal variation of temperature in the Gauss Haus is almost negligible and the range throughout the year is also small. The highest temperature measured during 1940 was 28.2°C in February and the lowest 25.2°C in July.

In 1937, the temperature coefficient of the H variometer was reduced to 0.25γ/°C by adjusting the tray of control magnets under the instrument. At the same time the Godhavn balance was adjusted to give the maximum possible compensation for temperature, the final temperature coefficient being 1.8γ/°C. With these coefficients the variation of temperature in the Gauss Haus is not considered to be large enough to warrant the application of temperature corrections to the recorded values of the magnetic elements.

The sensitivity of the instruments was such that the H variometer had a scale value of about 2½ gammas per millimetre, the Godhavn balance 1¼ gammas per millimetre and the D variometer 1 minute of arc per millimetre. Accurate determinations of the scale values were made about once a week and the values adopted as a result are given at the end of this description. The values for Godhavn balance were derived throughout the year by the electrical method using a Helmholtz-Gaugain coil and after June 11th the same method was used to determine the sensitivities of the H and D variometers. Earlier in the year, determinations for the H variometer were made using the method of deflections by placing a small auxiliary magnet at a fixed distance from the suspended magnet and the scale value of the declination variometer was calculated from the geometrical constants and the torsion of the suspension fibre.

The milliameter which is used for measurement of current when making scale-value tests was in New Zealand at the beginning of the year. When it was returned in March experiments showed that the sensitivity of the Godhavn balance was the same as when last measured at the end of 1939. It was therefore assumed that there had been no change and the same scale value was adopted for January and February.

Regular absolute observations were made of horizontal intensity, declination and inclination (I), the

number of observations being 58 of H, 60 of D and 45 of I. The observations of H and D were made with the C.I.W. magnetometer No. 9 which is on loan through the courtesy of the Department of Terrestrial Magnetism, Carnegie Institute, Washington. Inclination measurements were made with Schulze earth inductor No. 2.

During January these observations were made in the old concrete absolute hut which had been in use for many years. At the end of January however, it was demolished. A new building was completed by March 11th and observations were made in it for the remainder of the year. A brief description of the new hut is given in the general introduction to this report.

The method of observation with C.I.W. magnetometer is the same as that described by D.L. Hazard in "Directions for Magnetic Measurements" (United States Department of Commerce, Serial Number 166). The measurements have been reduced to International Magnetic Standard by applying a correction of -28γ to horizontal intensity (-0.00079H) and -0.2 of a minute to declination. These corrections, which are based on comparisons with the standard C.I.W. magnetometer No. 3 at Washington, D.C., Nov. 6-10, 1934, have been applied since January 1937. The instrument was re-standardized in June 1937 by Mr. Parkinson of the Carnegie Institute and Mr. Dyer of the Observatory staff. When the results of this intercomparison are available some amendments may be necessary to the values of H, D and Z in this report. The measurements of inclination have been reduced by applying a correction of -0.2 of a minute (reckoning southerly inclination negative). This was determined by the Department of Terrestrial Magnetism after comparison of Schulze earth inductor No. 2 with C.I.W. inductor No. 48 at Cheltenham in August 1939.

The base-line values of the elements which are computed from the absolute observations are plotted on a graph. The adopted base-line values are read from a smooth curve drawn through the computed values. These are given at the end of this introduction.

There were no determinations of base-line values during the interval between the demolition of the old absolute hut and the completion of the new one. (January 20th to March 11th). Special precautions were taken to see that no disturbance happened in the variometer house during that period but a "step" appeared in the H base-line graph. It is felt that this discontinuity was due to the rebuilding.

In order to preserve continuity throughout 1940 the

adopted values for the period January 1st to March 11th were brought into line with those of the remainder of the year by projecting the base-line backward to the beginning of the year. The projection was parallel to the base-line obtained in the old absolute hut but 18γ lower. The discontinuity of 18γ in the final values of H which is considered to be due to the reconstruction now appears at the beginning of the year, instead of at the time of the rebuilding.

Indications are that values of inclination measured in the new hut are consistant with those measure in the old one: but a discontimuity of -9γ which was introduced by the change in H, occurred in the base-line values of vertical intensity. This discontinuity which affects the final values of Z has been shifted to the beginning of the year by projecting the base-line backward in a way similar to that described for H.

Measurements of declination were in agreement on both sides of the period of re-building and the base line runs smoothly and continuously across the gap. Hence there is no discontinuity in the final values of D.

In August an earthquake caused the suspension of the H variometer to untwist and the necessary adjustment caused a shift in base-line.

On May 16th the base-line value of D dropped unexpectedly and then increased fairly rapidly to values which were almost the same as those prior to the drop. This change was unexplained but was apparently real because final values of D were continuous.

The practice of measuring the ordinates on the magnetograms of H and D from the centre of the trace to the nearer edge of the base line and of Z from the centre of the trace to the further edge of the base line has been continued.

The hourly values of horizontal intensity and vertical intensity have been obtained by converting the ordinates, which were scaled in millimeters, into gammas. The results have been presented in the form of departures of hourly means from the mean of the day which itself appears in the column headed 'Mean'. The departures are based on values of the element over periods of one hour between exact hours of Greenwich Mean Time, the column headings specifying the commencement of the hourly period. Thus column 0 refers to the period 0-1h G.M.T. and so on.

In both horizontal and vertical intensity the tabular values are in gammas while in declination the values

are in tenths of a minute of arc. The values of vertical intensity shown in the tables are numerical values of the field strength, the sense of the vertical force being given by the fact that in Samoa the south pole of the magnetic needle dips.

International quiet days are indicated by a plus sign, thus:- +.

The values of the diurnal variations of the magnetic elements have not been corrected for non-cyclic change. Values of the correction N have been computed by a short method described in "Journal of Terrestrial Magnetism", Volume 44, page 75, however, and are given at the foot of the appropriate tables.

The non-cyclic change N is the difference between the second and first midnights, ($\bar{a}_{24} - \bar{a}_0$), of the mean day. Since hourly means are used and not instantaneous values the midnight values have been estimated by taking the means of the two hourly periods centred at the midnights.

The new method of measuring geomagnetic activity by means of the three-hour-range index "K" (described in Terrestrial Magnetism and Atmospheric Electricity", Volume 44 (1939), page 411) was adopted. Tabulations of the values of "K" for the year are given in this report. Only records of horizontal intensity have been considered in estimating "K", as it has been found that during disturbances the greatest range at this station is always in H.

Adopted Scale Values

Horizontal Intensity.

The values of the terms A and B, occurring in the scale-value equation $d\gamma/dn = A + Bn$ (where n = ordinate in millimetres) which were adopted during 1940 are as follows:-

Date		A	B
January	1st-31st	2.13	0.0034
February	1st-28th	2.12	0.0038
March	1st-31st	2.13	0.0040
April	1st-30th	2.20	0.0036
May	1st-31st	2.18	0.0034
June	1st-30th	2.17	0.0036
July	1st-11th Aug.	2.22	0.0032
August	11th-31st	2.12	0.0036
September	1st-30th	2.12	0.0036

Date		A	B
October	1st-31st	2.16	0.0034
November	1st-30th	2.20	0.0032
December	1st-31st	2.20	0.0032

Vertical Intensity

The scale value was assumed to be linear, the following values being adopted:-

January	1.21 γ/mm	(assumed)
February	1.21 γ/mm	(assumed)
March	1.21 γ/mm	
April	1.21 γ/mm	
May	1.21 γ/mm	
June	1.23 γ/mm	
July	1.24 γ/mm	
August	1.22 γ/mm	
September	1.23 γ/mm	
October	1.24 γ/mm	
November	1.25 γ/mm	
December	1.26 γ/mm	

Declination

The scale value remained constant and equal to one minute of arc per millimetre on the recording paper.

Adopted Base Line Values

The base line values of the magnetograms may be read from the following list in which the dates are given on which the base line assumes a new value.

Horizontal Intensity

January	1st 34750, 2nd 751, 9th 752, 18th 753, 27th 754
February	1st 34754, 5th 755, 14th 756, 23rd 757.
March	1st 34757, 2nd 758, 12th 759, 19th 760, 28th 761.
April	1st 34761, 5th 762, 14th 763, 23rd 764.
May	1st 34764, 2nd 765, 10th 766, 19th 767, 28th 768.
June	1st 34768, 5th 769, 14th 770, 23rd 771.
July	1st 34772, 10th 773, 19th 774, 27th 775.
August	1st 34775, 5th 776, 11th (from 21 hrs) 641.
September	1st 34641, October 34641, November 34641
December	34641.

Vertical Intensity

January	1st 20580, 7th 581, 18th 582, 30th 583.
February	1st 20583, 11th 584, 23rd 585.
March	1st 20585, 6th 586, 16th 587, 30th 588.
April	1st 20588, 11th 589, 23rd 590.
May	1st 20590, 5th 20591, 18th 592, 31st 593.
June	1st 20593, 10th 594, 22nd 595.
July	1st 20595, 4th 596, 16th 597, 28th 598.
August	1st 20598, 13th 599.
September	1st 20599, 12th 598, 24th 597.
October	1st 20597, 2nd 596, 11th 595, 17th 594, 23rd 593, 30th 592.
November	1st 20592, 5th 591, 12th 590, 23rd 589.
December	1st 20589.

Declination

10°+...East

January	1st 30.0'
February	1st 30.0'
March	1st 30.0', 23rd 29.9'.
April	1st 29.9', 2nd 29.8', 12th 29.7'.
May	1st 29.7', 16th 28.4', 17th 28.5', 18th 28.6', 19th 28.7', 20th 28.8', 21st 28.9', 22nd 29.0', 23rd 29.1', 24th 29.2', 25th 29.3', 26th 29.4', 27th 29.5', 31st 29.4'.
June	1st 29.3', 3rd 29.2', 4th 29.1'.
July	1st 29.1', 19th 29.0', 28th 28.9'.
August	1st 28.9', 7th 28.8', 17th 28.7', 27th 28.6'.
September	1st 28.6', 6th 28.5'.
October	28.5', November 28.5', December 28.5'.

Mean Values of Magnetic Elements, 1940

All Days

		D	H	X	Y	Z
		East	gamma	gamma	gamma	gamma
January	10°	52.3'	34878	34252	6578	20638
February		52.8'	34883	34255	6584	20639
March		53.4'	34853	34226	6585	20643
April		53.7'	34854	34226	6588	20652
May		54.1'	34866	34237	6594	20652
June		54.5'	34865	34235	6598	20656
July		55.2'	34871	34239	6606	20659
August		55.1'	34878	34247	6606	20655
September		55.4'	34872	34240	6608	20656
October		55.6'	34867	34234	6609	20653
November		56.1'	34865	34232	6614	20651
December		56.2'	34869	34236	6616	20649
Year	10°	54.5'	34868	34238	6599	20650

International Quiet Days

		D	H	X	Y	Z
		East	gamma	gamma	gamma	gamma
January	10°	52.5'	34888	34262	6582	20636
February		52.8'	34896	34269	6587	20636
March		53.7'	34903	34274	6597	20639
April		53.7'	34881	34252	6593	20649
May		54.2'	34879	34249	6597	20650
June		54.4'	34882	34252	6600	20653
July		55.3'	34881	34249	6609	20656
August		55.3'	34892	34260	6611	20656
September		55.6'	34889	34256	6613	20656
October		55.9'	34882	34249	6615	20652
November		56.1'	34881	34248	6617	20652
December		56.1'	34882	34248	6617	20648
Year	10°	54.6'	34886	34255	6603	20649

Diurnal Variation of Horizontal Intensity

International Quiet Days, 1940
Not corrected for non-cyclic change. Unit = One gamma

G.M.T.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
0- 1	+32	+26	+29	+30	+ 6	+14	+12	+16	+25	+29	+30	+28	+23
1- 2	+24	+20	+21	+21	- 1	+ 8	+ 6	+ 5	+10	+17	+19	+16	+18
2- 3	+14	+10	+ 9	+ 8	- 7	+ 1	- 1	- 5	- 1	+ 4	+ 6	+ 4	+ 3
3- 4	+ 1	- 3	- 3	- 1	-11	- 6	- 9	-11	- 8	- 5	- 6	- 7	- 6
4- 5	- 8	-11	-11	- 7	-11	- 9	-12	-14	-10	-10	-14	-12	-11
5- 6	-15	-11	-15	- 9	- 9	-12	-13	-12	-10	-13	-18	-14	-13
6- 7	-16	-11	-17	-12	- 9	-13	-11	-12	-11	-14	-17	-14	-13
7- 8	-14	-10	-17	-14	- 8	-13	-11	-14	-15	-14	-19	-14	-14
8- 9	-13	-12	-17	-16	- 7	- 11	-11	-15	-15	-16	-19	-15	-14
9-10	-13	-13	-16	-17	- 7	- 9	-11	-14	-16	-15	-19	-16	-14
10-11	-13	-14	-16	-16	- 6	- 8	-11	-14	-15	-15	-18	-16	-13
11-12	-13	-14	-15	-16	- 8	- 8	-11	-13	-15	-16	-18	-14	-13
12-13	-14	-12	-14	-15	- 9	- 9	-11	-12	-15	-16	-17	-13	-13
13-14	-13	-11	-14	-14	- 9	- 7	-10	-12	-15	-15	-15	-12	-12
14-15	-11	-10	-12	-13	- 8	- 5	- 9	-11	-13	-13	-13	- 9	-11
15-16	-10	- 9	-11	-11	- 6	- 5	- 8	- 9	-12	-12	-12	- 7	- 9
16-17	- 8	- 8	-11	- 9	- 3	- 3	- 6	- 8	- 9	- 9	- 9	- 7	- 7
17-18	- 9	- 7	- 9	- 7	+ 1	0	- 2	-3	- 7	- 8	- 6	- 7	- 5
18-19	- 8	- 6	- 7	- 3	+ 8	+ 6	+ 7	+ 6	- 1	- 3	- 2	- 2	0
19-20	- 1	+ 1	+ 5	+ 3	+13	+12	+14	+16	+10	+ 9	+10	+ 6	+ 8
20-21	+ 8	+ 9	+23	+11	+17	+15	+19	+25	+21	+23	+25	+19	+18
21-22	+21	+24	+36	+23	+22	+21	+25	+37	+32	+35	+38	+29	+29
22-23	+35	+34	+43	+35	+26	+21	+28	+40	+41	+42	+48	+38	+36
23-24	+40	+39	+41	+43	+22	+17	+29	+34	+45	+40	+47	+37	+36
R	56	53	60	60	37	34	42	55	61	58	67	54	50
N	+ 7	+12	+ 6	+11	+ 7	- 3	+11	+10	+12	+ 4	+12	+ 3	
No. of days	5	5	2	3	4	5	5	5	4	5	5	5	

Diurnal Variation of Declination
International Quiet Days, 1940
Not corrected for non-cyclic change.
Unit: 0.1 minute of arc.

G.M.T.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
0- 1	+27	+18	+ 9	0	-20	-11	-12	-13	- 5	+19	+22	+20	+ 5
1- 2	+25	+24	+14	+ 7	-12	- 4	0	- 2	+ 9	+19	+20	+20	+10
2- 3	+18	+24	+12	+10	+ 3	+ 6	+ 8	+13	+13	+15	+16	+19	+13
3- 4	+ 9	+19	+ 7	+ 8	+14	+ 9	+10	+17	+11	+10	+11	+16	+12
4- 5	+ 3	+13	+ 7	+ 7	+15	+ 8	+ 7	+13	+ 7	+ 6	+ 6	+12	+ 9
5- 6	+ 1	+10	+ 7	+ 7	+10	+ 6	+ 4	+ 8	+ 5	+ 6	+ 5	+ 8	+ 6
6- 7	+ 3	+11	+ 8	+ 7	+ 7	+ 5	+ 2	+7	+ 5	+ 6	+ 6	+ 9	+ 6
7- 8	+ 3	+10	+ 6	+ 4	+ 5	+ 4	0	+ 5	+ 5	+ 5	+ 5	+ 9	+ 5
8- 9	+ 3	+ 7	+ 3	+ 1	+ 1	- 1	- 2	+ 4	+ 3	+ 4	+ 3	+ 7	+ 3
9-10	+ 1	+ 4	+ 2	+ 1	+ 1	- 1	- 3	+ 2	- 1	+ 1	- 1	+ 5	+ 1
10-11	- 1	+ 1	0	0	+ 1	- 2	- 2	0	- 1	- 1	- 3	+ 3	0
11-12	- 2	- 2	- 1	- 1	0	- 2	- 3	0	- 1	- 2	- 3	+ 1	- 1
12-13	- 3	- 2	- 2	- 1	0	- 2	- 3	0	0	- 3	- 3	0	- 2
13-14	- 3	0	- 1	0	+ 1	- 1	- 2	+ 1	+ 1	- 3	- 1	0	- 1
14-15	- 3	0	- 3	+ 1	+ 3	+ 1	0	+ 2	+ 3	0	- 1	0	0
15-16	- 3	0	- 1	+ 2	+ 5	+ 3	+ 1	+ 4	+ 4	+ 2	0	0	+ 1
16-17	- 3	- 2	- 1	+ 2	+ 5	+ 5	+ 3	+ 6	+ 5	+ 2	- 1	- 5	+ 1
17-18	-10	- 8	- 5	+ 2	+ 6	+ 5	+ 5	+ 9	+ 6	- 7	- 9	-14	- 2
18-19	- 19	-18	-13	- 2	+ 8	+ 9	+11	+10	+ 2	-20	-20	-28	- 7
19-20	-23	-35	-25	-12	+ 3	+ 5	+ 9	0	- 9	-27	-28	-36	-15
20-21	-20	-38	-25	-17	- 4	- 2	+ 3	-13	-18	-26	-27	-30	-18
21-22	-14	-31	-13	-17	-13	-11	- 8	-22	-22	-18	-14	-19	-17
22-23	- 1	-12	- 1	- 9	-18	-18	-14	-25	-20	- 2	+ 4	- 6	-10
23-24	+12	+ 7	+13	- 2	-16	-20	-17	-24	- 8	+13	+19	+11	- 1
N	- 7	+ 4	+ 9	+ 4	+ 9	- 3	+ 1	- 9	+ 9	+ 4	+ 3	+ 1	
A - a	-	26	17	11	15	11	13	17	14	22	25	-	15
B - a	-	2	2	3	8	11	14	10	7	5	3	-	3
A - b	50	62	39	27	35	29	27	42	35	46	50	56	31
B - b	-	38	24	19	28	29	28	35	28	29	28	-	19
No. of days	5	5	2	3	4	5	5	5	4	5	5	5	

Diurnal Variation of X, 1940

International Quiet Days. Unit = One Gamma

Not corrected for non-cyclic change

G.M.T.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
0- 1	+26	+22	+26	+29	+10	+16	+14	+19	+26	+24	+23	+23	+21
1- 2	+19	+15	+18	+20	+ 1	+ 9	+ 6	+ 5	+ 8	+13	+16	+12	+12
2- 3	+10	+ 5	+ 7	+ 6	- 8	0	- 3	- 8	- 4	+ 1	+ 5	0	+ 1
3- 4	- 1	- 7	- 4	- 3	-14	- 8	-11	-14	-10	- 7	- 8	-10	- 8
4- 5	- 9	-14	-12	- 8	-14	-11	-13	-17	-11	-11	-15	-14	-12
5- 6	-15	-13	-16	-10	-11	-13	-14	-14	-11	-14	-19	-16	-14
6- 7	-17	-13	-19	-13	-10	-14	-11	-13	-12	-15	-18	-16	-14
7- 8	-15	-12	-18	-15	- 9	-14	-11	-13	-16	-15	-20	-16	-15
8- 9	-14	-13	-18	-16	- 7	-11	-11	-14	-16	-17	-20	-16	-14
9-10	-13	-14	-16	-17	- 7	- 9	-10	-14	-16	-15	-19	-17	-14
10-11	-13	-14	-16	-16	- 6	- 8	-11	-14	-15	-15	-17	-17	-13
11-12	-13	-14	-15	-16	- 8	- 8	-10	-13	-15	-16	-17	-14	-13
12-13	-13	-12	-14	-15	- 9	- 9	-10	-12	-15	-15	-16	-13	-13
13-14	-12	-11	-14	-14	- 9	- 7	-10	-12	-15	-14	-15	-12	-12
14-15	-10	-10	-12	-13	- 9	- 5	- 9	-11	-14	-13	-13	- 9	-11
15-16	- 9	- 9	-11	-11	- 7	- 6	- 8	-10	-13	-12	-12	- 7	-10
16-17	- 7	- 8	-11	- 9	- 4	- 4	- 7	- 9	-10	- 9	- 9	- 6	- 8
17-18	- 7	- 5	- 8	- 7	0	- 1	- 3	- 5	- 8	- 7	- 4	- 4	- 5
18-19	- 4	- 2	- 4	- 3	+ 6	+ 4	+ 5	+ 4	- 1	+ 1	+ 2	+ 4	+ 1
19-20	+ 4	+ 8	+10	+ 5	+12	+11	+12	+16	+12	+14	+16	+13	+11
20-21	+12	+17	+28	+14	+18	+15	+18	+28	+25	+28	+30	+25	+21
21-22	+24	+30	+38	+26	+25	+23	+27	+40	+35	+38	+40	+32	+31
22-23	+34	+35	+42	+36	+30	+25	+30	+44	+44	+41	+46	+38	+37
23-24	+37	+37	+37	+42	+25	+21	+31	+38	+46	+36	+42	+34	+35
R	54	51	61	59	44	39	45	61	62	58	66	55	52

Diurnal Variation of Y, 1940

International Quiet Days

Not corrected for non-cyclic change. Unit = One gamma

G.M.T.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
0- 1	+33	+23	+15	+ 6	-19	- 8	-10	-10	0	+25	+28	+26	+ 9
1- 2	+30	+29	+19	+11	-12	- 2	+ 1	- 1	+11	+22	+24	+23	+13
2- 3	+21	+26	+14	+12	+ 2	+ 6	+ 8	+12	+13	+16	+17	+20	+14
3- 4	+ 9	+18	+ 6	+ 8	+12	+ 8	+ 8	+15	+ 9	+ 9	+10	+15	+11
4- 5	+ 1	+11	+ 5	+ 6	+13	+ 6	+ 5	+10	+ 5	+ 4	+ 3	+10	+ 7
5- 6	- 2	+ 8	+ 4	+ 5	+ 8	+ 4	+ 1	+ 6	+ 3	+ 3	+ 1	+ 5	+ 4
6- 7	0	+ 9	+ 5	+ 5	+ 5	+ 2	0	+ 5	+ 3	+ 3	+ 3	+ 6	+ 4
7- 8	0	+ 8	+ 3	+ 1	+ 3	+ 1	- 2	+ 2	+ 2	+ 2	+ 1	+ 6	+ 2
8- 9	0	+ 5	0	- 2	0	- 3	- 4	+ 1	0	+ 1	- 1	+ 4	0
9-10	- 2	+ 1	- 1	- 2	0	- 3	- 5	- 1	- 4	- 2	- 5	+ 2	- 2
10-11	- 4	- 2	- 3	- 3	0	- 4	- 4	- 3	- 4	- 4	- 7	0	- 3
11-12	- 5	- 5	- 4	- 4	- 2	- 4	- 5	- 3	- 4	- 5	- 7	- 2	- 4
12-13	- 6	- 4	- 5	- 4	- 2	- 4	- 5	-2	- 3	- 6	- 6	- 3	- 4
13-14	- 6	- 2	- 4	- 3	- 1	- 2	- 4	- 1	- 2	- 6	- 4	- 2	- 3
14-15	- 5	- 2	- 5	- 2	+ 1	0	- 2	0	0	- 3	- 4	- 2	- 3
15-16	- 5	- 2	- 3	0	+ 4	+ 2	- 1	+ 2	+ 1	0	- 2	- 1	0
16-17	- 5	- 4	- 3	0	+ 4	+ 4	+ 2	+ 4	+ 3	0	- 3	- 6	0
17-18	-12	- 9	- 7	+ 1	+ 6	+ 5	+ 5	+ 8	+ 5	- 9	-10	-15	- 3
18-19	-21	-19	-14	- 3	+10	+10	+12	+11	+ 2	-21	-20	-28	- 7
19-20	-23	-35	-24	-11	+ 6	+ 7	+12	+ 3	- 7	-25	-26	-35	-13
20-21	-18	-36	-20	-15	- 1	+ 1	+ 7	- 8	-14	-21	-22	-26	-14
21-22	-10	-26	- 6	-12	- 9	- 7	- 3	-15	-16	-11	- 7	-13	-11
22-23	+ 6	- 5	+ 7	- 2	-13	-14	- 8	-17	-13	+ 6	+13	+ 1	- 3
23-24	+20	+15	+21	+ 6	-12	-17	-11	-17	0	+20	+27	+18	- 6
A - a	39	34	26	16	15	12	13	18	17	31	35	29	18
B - a	1	3	2	5	12	14	17	14	9	6	5	2	4
A - b	56	65	45	27	32	25	19	32	29	50	54	61	28
B - b	18	34	21	16	29	27	23	28	21	25	24	34	14

Diurnal Variation of Vertical Intensity
International Quiet Days, 1940

Not corrected for non-cyclic change. Unit = One Gamma

G.M.T.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
0- 1	- 3	0	- 2	- 2	- 4	- 4	- 3	- 6	- 3	- 2	- 5	+ 4	- 3
1- 2	- 4	- 1	- 2	- 4	- 5	- 5	- 3	- 8	- 3	- 4	- 6	0	- 4
2- 3	- 3	- 2	- 3	- 6	- 5	- 4	- 4	- 8	- 3	- 6	- 7	- 3	- 5
3- 4	- 4	- 5	- 3	- 6	- 4	- 3	- 4	- 6	- 2	- 6	- 7	- 6	- 5
4- 5	- 3	- 5	- 4	- 5	- 3	- 3	- 4	- 5	- 2	- 6	- 6	- 6	- 4
5- 6	- 3	- 5	- 4	- 3	- 3	- 2	- 4	- 4	- 2	- 4	- 5	- 5	- 4
6- 7	- 1	- 2	- 4	- 2	- 3	- 2	- 3	- 3	- 1	- 3	- 3	- 4	- 3
7- 8	0	- 1	- 3	- 2	- 3	- 2	- 3	- 2	- 1	- 2	- 1	- 1	- 2
8- 9	+ 1	0	- 2	- 2	- 2	- 1	- 2	- 2	- 1	- 1	- 1	0	- 1
9-10	+ 1	+ 1	- 1	- 1	- 1	- 1	- 2	- 1	0	- 1	+ 1	+ 1	0
10-11	+ 1	+ 2	+ 1	- 1	0	0	- 1	0	+ 1	+ 1	+ 2	+ 1	+ 1
11-12	+ 1	+ 2	+ 2	0	+ 1	0	0	+ 2	+ 1	+ 1	+ 2	+ 2	+ 1
12-13	+ 2	+ 3	+ 3	+ 2	+ 2	+ 1	+ 1	+ 3	+ 3	+ 3	+ 3	+ 2	+ 2
13-14	+ 3	+ 3	+ 3	+ 3	+ 3	+ 2	+ 2	+ 4	+ 3	+ 3	+ 4	+ 2	+ 3
14-15	+ 4	+ 4	+ 5	+ 4	+ 3	+ 3	+ 2	+ 5	+ 3	+ 4	+ 4	+ 2	+ 4
15-16	+ 5	+ 4	+ 5	+ 5	+ 4	+ 3	+ 3	+ 5	+ 5	+ 5	+ 4	+ 3	+ 4
16-17	+ 6	+ 4	+ 5	+ 5	+ 4	+ 4	+ 4	+ 5	+ 5	+ 5	+ 5	+ 2	+ 5
17-18	+ 5	+ 4	+ 5	+ 5	+ 4	+ 3	+ 4	+ 6	+ 5	+ 4	+ 4	+ 2	+ 4
18-19	+ 3	+ 2	+ 3	+ 5	+ 5	+ 4	+ 6	+ 7	+ 5	+ 3	+ 3	+ 1	+ 4
19-20	+ 1	0	+ 1	+ 4	+ 5	+ 5	+ 5	+ 6	+ 3	+ 2	+ 1	- 1	+ 3
20-21	- 2	- 2	- 1	+ 2	+ 3	+ 4	+ 3	+ 4	0	+ 1	+ 1	- 1	+ 1
21-22	- 3	- 3	- 1	0	+ 2	+ 3	0	+ 1	- 3	+ 1	+ 2	0	0
22-23	- 3	- 2	0	- 1	+ 1	- 1	- 1	0	- 6	+ 1	+ 3	+ 2	- 1
23-24	- 3	- 1	+ 1	- 1	- 1	- 4	- 1	- 3	- 7	0	+ 4	+ 3	- 1
R	10	9	8	11	10	10	10	15	12	11	12	10	10
N	+ 2	0	+ 1	0	0	- 2	+ 1	- 1	- 6	- 1	+ 7	0	
No. of days	5	5	4	5	4	5	5	5	4	5	5	5	

Diurnal Variation of Horizontal Intensity - All Days 1940

Not corrected for non-cyclic change. Unit: One gamma

G.M.T.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
0- 1	+28	+29	+30	+23	+10	+13	+13	+20	+29	+30	+30	+29	+24
1- 2	+19	+20	+19	+13	+ 5	+ 7	+ 5	+10	+14	+17	+19	+19	+14
2- 3	+ 7	+ 8	+ 5	+ 1	+ 1	0	- 1	- 1	+ 2	+ 4	+ 6	+ 7	+ 3
3- 4	- 4	- 4	- 6	-12	- 5	- 7	- 7	- 7	- 5	- 7	- 6	- 5	- 6
4- 5	- 9	-13	-15	-18	-11	-12	-12	-10	- 9	-12	-13	-11	-12
5- 6	-13	-15	-18	-19	-13	-14	-12	-10	-14	-16	-18	-15	-15
6- 7	-14	-15	-18	-19	-13	-14	-11	-11	-15	-18	-19	-15	-15
7- 8	-14	-14	-17	-20	-14	-12	-12	-14	-17	-18	-18	-14	-15
8- 9	-13	-13	-13	-18	-14	-11	-12	-14	-17	-19	-17	-14	-15
9-10	-13	-13	- 9	-14	-13	-10	- 9	-14	-16	-17	-17	-15	-13
10-11	-13	-13	- 8	-13	-12	- 9	- 9	-14	-14	-16	-15	-13	-12
11-12	-11	-11	-11	-12	-11	- 8	- 9	-14	-11	-14	-13	-11	-11
12-13	-11	-10	-10	-10	-11	- 5	- 8	-14	-12	-13	-13	- 9	-11
13-14	-10	- 8	- 8	- 8	- 9	- 5	- 6	-13	-10	-11	-10	- 7	- 9
14-15	- 9	- 6	- 7	- 4	- 6	- 7	- 6	-12	- 9	- 9	- 9	- 7	- 8
15-16	- 7	- 5	- 6	- 2	- 4	- 5	- 5	-10	- 9	- 8	- 8	- 7	- 6
16-17	- 6	- 4	- 5	0	0	- 3	- 2	- 7	- 7	- 4	- 6	- 7	- 4
17-18	- 6	- 4	- 5	+ 3	+ 4	+ 1	+ 1	- 3	- 5	- 3	- 5	- 7	- 2
18-19	- 4	- 5	- 7	+ 7	+12	+ 8	+ 7	+ 6	0	0	- 3	- 5	+ 1
19-20	+ 1	0	+ 2	+12	+16	+14	+13	+16	+10	+ 9	+ 7	+ 3	+ 9
20-21	+11	+ 9	+15	+18	+19	+17	+17	+24	+18	+23	+20	+14	+17
21-22	+24	+21	+25	+27	+23	+21	+22	+31	+28	+31	+31	+25	+25
22-23	+33	+31	+33	+33	+24	+22	+23	+32	+34	+35	+38	+33	+31
23-24	+33	+34	+33	+32	+18	+18	+21	+29	+35	+36	+38	+33	+30
R	47	49	51	52	38	36	35	46	52	55	57	48	46
N	- 1	+ 1	- 2	+ 4	+ 1	- 1	+ 2	+ 2	- 2	0	0	0	

Diurnal Variation of Declination - All Days 1940

Not corrected for non-cyclic change. Unit: One tenth of a minute of arc

G.M.T.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
0- 1	+21	+20	+16	- 2	- 9	-12	- 9	-13	+ 1	+18	+21	+18	+ 6
1- 2	+22	+24	+21	+ 3	+ 1	- 4	- 1	- 2	+11	+19	+22	+21	+11
2- 3	+21	+22	+17	+ 9	+11	+ 4	+ 8	+10	+14	+17	+20	+22	+15
3- 4	+15	+16	+12	+11	+15	+ 8	+ 9	+14	+12	+12	+16	+21	+13
4- 5	+ 9	+11	+ 6	+10	+11	+ 6	+ 6	+11	+ 8	+ 7	+12	+16	+ 9
5- 6	+ 7	+ 7	+ 4	+ 8	+ 6	+ 3	+ 3	+ 7	+ 5	+ 7	+10	+11	+ 7
6- 7	+ 8	+ 7	+ 7	+ 5	+ 3	+ 2	+ 1	+ 6	+ 4	+ 7	+10	+12	+ 6
7- 8	+ 7	+ 7	+ 5	+ 3	0	+ 1	0	+ 5	+ 3	+ 5	+ 7	+10	+ 4
8- 9	+ 5	+ 4	+ 2	0	- 2	- 1	- 1	+ 3	+ 2	+ 3	+ 4	+ 7	+ 2
9-10	+ 2	+ 3	- 1	- 1	- 3	- 2	- 3	+ 1	0	0	- 1	+ 3	0
10-11	0	+ 1	- 3	- 2	- 4	- 3	- 3	- 1	- 1	- 2	- 4	+ 1	- 2
11-12	- 1	- 1	- 3	- 2	- 4	- 3	- 4	- 2	- 2	- 1	- 5	- 2	- 3
12-13	- 3	- 1	- 3	- 1	- 3	- 3	- 4	- 3	- 1	- 2	- 5	- 2	- 3
13-14	- 4	- 1	- 2	0	- 1	- 2	- 2	- 2	0	- 1	- 4	- 2	- 2
14-15	- 5	- 1	- 1	+ 3	+ 2	0	0	0	+ 2	+ 1	- 4	- 2	0
15-16	- 5	- 1	- 1	+ 4	+ 5	+ 4	+ 2	+ 3	+ 4	+ 1	- 3	- 1	+ 1
16-17	- 6	- 1	0	+ 5	+ 5	+ 5	+ 4	+ 5	+ 6	+ 1	- 2	- 4	+ 1
17-18	-15	- 7	- 3	+ 6	+ 7	+ 6	+ 5	+ 9	+ 7	- 7	-12	-15	- 2
18-19	-24	-19	-13	+ 4	+ 9	+13	+11	+12	+ 3	-19	-24	-28	- 6
19-20	-28	-33	-24	- 8	+ 2	+10	+ 9	+ 4	- 9	-26	-33	-36	-14
20-21	-25	-35	-24	-15	- 6	+ 3	+ 1	- 7	-16	-26	-29	-31	-17
21-22	-15	-26	-16	-17	-13	- 5	- 7	-17	-20	-18	-15	-20	-16
22-23	+ 1	- 7	- 4	-13	-16	-13	-13	-20	-20	- 6	+ 2	- 6	-10
23-24	+13	+11	+ 8	- 8	-15	-16	-14	-20	-12	+ 8	+15	+ 9	- 2
N	- 1	+ 1	0	0	- 1	0	0	0	0	0	0	0	
A-a	50	59	24	13	19	11	13	17	16	21	27	24	18
B-a			3	8	13	16	15	15	9	3	3	1	4
A-b			45	28	31	21	23	34	34	45	55	58	32
B-b			24	23	25	29	25	32	27	27	31	35	18

Diurnal Variation of Vertical Intensity - All Days 1940

Not corrected for non-cyclic change. Unit: One gamma

G.M.T.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
0- 1	- 2	- 1	- 2	- 3	- 5	- 4	- 3	- 6	- 6	- 3	- 3	+ 1	- 3
1- 2	- 4	- 1	- 4	- 5	- 6	- 5	- 4	- 9	- 7	- 4	- 4	0	- 4
2- 3	- 5	- 2	- 6	- 6	- 5	- 5	- 4	- 8	- 6	- 5	- 5	- 2	- 5
3- 4	- 5	- 4	- 6	- 7	- 4	- 4	- 4	- 7	- 5	- 6	- 6	- 4	- 5
4- 5	- 5	- 4	- 7	- 6	- 4	- 4	- 4	- 5	- 4	- 5	- 6	- 4	- 6
5- 6	- 3	- 4	- 6	- 5	- 5	- 4	- 4	- 4	- 4	- 4	- 5	- 3	- 4
6- 7	- 2	- 3	- 4	- 4	- 4	- 3	- 3	-3	- 3	- 3	- 3	- 2	- 3
7- 8	- 1	- 1	- 2	- 3	- 3	- 2	- 2	- 2	- 2	- 2	- 2	- 1	- 2
8- 9	0	0	- 1	- 2	- 2	- 1	- 2	- 1	- 1	- 1	- 1	0	- 1
9-10	+ 1	0	0	0	- 1	0	- 1	- 1	0	0	0	0	0
10-11	+ 2	+ 1	+ 2	+ 1	0	0	0	0	+ 1	+ 1	+ 1	+ 1	+ 1
11-12	+ 3	+ 2	+ 3	+ 2	+ 1	+ 1	0	+ 1	+ 2	+ 3	+ 2	+ 2	+ 2
12-13	+ 3	+ 3	+ 3	+ 3	+ 2	+ 2	+ 1	+ 1	+ 3	+ 3	+ 3	+ 3	+ 3
13-14	+ 4	+ 4	+ 5	+ 4	+ 3	+ 2	+ 2	+ 3	+ 4	+ 5	+ 5	+ 3	+ 4
14-15	+ 4	+ 5	+ 5	+ 5	+ 4	+ 2	+ 2	+ 4	+ 5	+ 5	+ 5	+ 3	+ 4
15-16	+ 5	+ 5	+ 6	+ 6	+ 4	+ 3	+ 3	+ 5	+ 5	+ 6	+ 6	+ 4	+ 5
16-17	+ 5	+ 5	+ 5	+ 6	+ 5	+ 3	+ 3	+ 5	+ 6	+ 6	+ 6	+ 4	+ 5
17-18	+ 4	+ 4	+ 5	+ 5	+ 5	+ 3	+ 4	+ 6	+ 6	+ 5	+ 5	+ 3	+ 5
18-19	+ 2	+ 3	+ 3	+ 5	+ 6	+ 5	+ 5	+ 7	+ 6	+ 3	+ 3	+ 1	+ 4
19-20	0	0	+ 2	+ 4	+ 5	+ 6	+ 6	+ 7	+ 4	+ 1	+ 1	- 1	+ 3
20-21	- 2	- 2	0	+ 2	+ 4	+ 5	+ 5	+ 6	+ 2	0	- 1	- 2	+ 1
21-22	- 2	- 3	- 1	0	+ 2	+ 4	+ 3	+3	0	- 2	- 2	- 3	0
22-23	- 2	- 3	- 1	- 1	0	+ 1	- 0	0	- 2	- 2	- 1	- 2	- 1
23-24	- 2	- 2	- 2	- 2	- 3	- 2	- 2	- 3	- 4	- 3	- 1	0	- 2
R	10	9	13	13	12	11	10	16	13	12	12	8	11
N	0	0	- 1	0	0	0	- 1	0	0	0	+ 1	0	

VALUES OF "K" AT APIA FOR JANUARY 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	2	2	1	2	2	2	2	3
2nd.	3	2	3	3	2	2	1	2
3rd.	1	3	4	3	5	6	4	2
4th.	2	1	1	3	3	3	3	2
5th.	2	4	1	0	0	0	2	2
6th.	3	2	3	3	3	2	3	2
7th.	3	1	2	2	3	1	2	4
8th.	2	2	2	0	1	1	2	2
9th.	1	0	1	1	3	3	4	2
10th.	2	2	1	3	5	5	4	2
11th.	3	3	2	2	3	3	5	4
12th.	3	3	3	3	2	2	3	2
13th.	1	1	2	2	1	1	2	2
14th.	2	1	1	1	1	1	1	2
15th.	1	2	0	1	2	1	2	3
16th.	4	4	3	2	3	2	1	2
17th.	3	3	3	2	3	3	4	5
18th.	4	2	3	3	3	5	4	4
19th.	4	2	1	2	1	2	2	2
20th.	4	2	1	1	1	1	2	1
21st.	3	2	0	1	1	2	2	0
22nd.	1	0	2	2	2	2	3	2
23rd.	3	1	2	3	3	1	1	2
24th.	3	2	2	2	2	3	3	1
25th.	3	4	3	2	3	2	2	3
26th.	1	1	1	0	0	0	3	2
27th.	1	3	3	1	2	1	3	2
28th.	3	2	1	1	0	1	2	2
29th.	3	2	1	2	2	3	3	3
30th.	4	3	4	3	4	3	4	4
31st.	3	3	3	2	3	3	4	5

VALUES OF "K" AT APIA FOR FEBRUARY 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	4	3	4	3	3	3	3	3
2nd.	3	2	3	2	2	1	2	2
3rd.	2	2	1	3	3	2	1	2
4th.	1	1	0	0	1	3	2	1
5th.	2	0	0	2	3	1	3	3
6th.	1	1	2	4	3	2	4	2
7th.	3	1	2	1	3	1	1	1
8th.	2	1	2	3	1	2	2	2
9th.	2	2	2	1	0	1	1	2
10th.	1	0	0	1	0	2	2	3
11th.	1	1	2	2	2	0	2	3
12th.	2	2	2	3	3	3	2	3
13th.	2	0	1	1	3	0	3	3
14th.	2	2	1	2	2	0	1	2
15th.	0	1	2	3	3	0	2	2
16th.	2	2	1	2	0	2	1	2
17th.	1	0	0	2	2	1	2	2
18th.	1	1	1	0	1	1	1	1
19th.	0	1	0	2	0	2	1	2
20th.	5	2	4	2	2	2	2	1
21st.	2	3	3	3	3	2	1	1
22nd.	2	1	3	2	2	1	2	2
23rd.	2	1	2	2	1	0	2	2
24th.	2	1	2	3	2	1	1	3
25th.	3	3	4	3	5	3	3	2
26th.	2	1	2	1	2	1	2	1
27th.	2	3	1	0	2	1	0	1
28th.	1	1	1	2	1	1	1	2
29th.	2	2	2	2	2	3	2	2

VALUES OF "K" AT APIA FOR MARCH 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	1	2	1	2	2	0	1	1
2nd.	1	1	1	2	2	2	2	1
3rd.	0	1	1	2	0	2	1	2
4th.	2	1	2	1	2	0	1	2
5th.	1	1	0	2	1	0	1	0
6th.	0	0	1	1	1	2	3	3
7th.	3	2	1	1	2	-	-	2
8th.	2	1	2	1	2	0	3	4
9th.	3	4	3	4	2	2	2	2
10th.	1	2	1	2	1	1	2	2
11th.	2	1	1	-	-	-	-	1
12th.	1	1	1	1	2	3	5	3
13th.	3	3	3	3	-	-	-	3
14th.	2	2	4	2	1	1	2	1
15th.	2	1	0	2	2	1	1	1
16th.	1	0	2	2	2	2	2	2
17th.	1	1	2	2	2	1	0	-
18th.	-	-	-	-	-	-	-	2
19th.	2	3	3	4	3	3	3	3
20th.	3	4	3	3	3	2	3	3
21st.	3	4	2	1	1	2	1	1
22nd.	2	2	2	1	1	-	-	3
23rd.	3	2	5	5	2	3	3	5
24th.	-	-	-	-	-	-	-	5
25th.	7	6	7	7	6	2	5	5
26th.	4	4	1	1	1	1	4	2
27th.	6	4	3	3	2	-	-	3
28th.	3	3	3	3	3	2	2	2
29th.	2	1	2	4	4	7	5	6
30th.	7	6	7	6	6	3	3	4
31st.	5	5	4	7	5	4	4	4

VALUES OF "K" AT APIA FOR APRIL 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	4	5	5	5	5	3	3	3
2nd.	2	2	2	2	2	3	5	3
3rd.	7	5	5	4	4	3	5	3
4th.	3	1	2	4	3	2	3	3
5th.	2	2	2	3	2	1	2	2
6th.	2	2	1	2	2	1	3	2
7th.	2	1	1	1	1	1	2	1
8th.	1	0	1	-	-	-	-	-
9th.	-	2	1	1	2	1	0	1
10th.	1	1	1	1	1	0	1	1
11th.	0	1	2	1	-	-	-	2
12th.	1	1	2	1	1	2	1	1
13th.	2	2	2	3	2	1	2	2
14th.	2	3	3	3	3	2	2	2
15th.	2	1	3	3	3	3	3	3
16th.	2	3	2	2	2	1	3	3
17th.	2	3	2	2	0	2	1	1
18th.	2	3	1	1	1	1	2	2
19th.	3	2	2	1	2	1	2	1
20th.	1	2	3	2	2	4	4	3
21st.	4	3	3	2	2	2	2	3
22nd.	2	1	4	2	3	2	2	1
23rd.	3	2	1	1	2	0	3	3
24th.	2	2	2	2	2	2	1	2
25th.	4	7	4	3	2	3	5	4
26th.	3	3	3	3	2	1	1	2
27th.	1	1	1	3	3	2	2	1
28th.	2	2	1	3	3	3	2	2
29th.	-	-	-	-	-	-	2	1
30th.	2	2	3	3	3	3	3	3

VALUES OF "K" AT APIA FOR MAY 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	2	2	3	2	2	1	2	2
2nd.	2	1	2	0	1	2	2	0
3rd.	1	2	2	2	1	1	1	2
4th.	2	3	2	1	1	0	1	2
5th.	1	2	1	2	1	1	3	2
6th.	1	1	2	1	0	0	1	1
7th.	2	3	4	3	2	0	2	2
8th.	2	2	1	1	2	0	1	1
9th.	2	4	3	2	2	1	1	2
10th.	2	3	2	3	1	1	4	2
11th.	3	4	4	2	3	2	2	2
12th.	3	4	3	3	2	1	2	3
13th.	3	2	2	2	1	2	2	-
14th.	-	-	-	-	-	-	-	2
15th.	3	4	3	3	3	3	2	4
16th.	4	2	0	1	1	2	1	2
17th.	2	2	1	2	2	2	2	4
18th.	3	5	4	3	4	3	2	3
19th.	3	4	2	2	1	2	2	2
20th.	3	3	3	1	2	2	2	1
21st.	2	4	1	1	0	1	2	-
22nd.	-	-	-	-	-	-	-	3
23rd.	2	3	1	2	2	4	2	3
24th.	3	6	5	5	5	3	3	3
25th.	3	3	2	1	2	2	3	2
26th.	3	3	3	3	3	2	4	4
27th.	4	3	2	3	1	2	2	4
28th.	3	4	4	2	3	2	2	2
29th.	3	2	2	2	2	1	2	1
30th.	1	2	2	1	1	1	-	-
31st.	2	2	1	1	1	1	2	1

VALUES OF "K" AT APIA FOR JUNE 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	1	1	2	1	1	1	2	2
2nd.	2	3	4	0	2	2	2	2
3rd.	0	2	2	3	2	2	2	3
4th.	2	0	0	0	2	1	2	2
5th.	2	2	3	3	2	2	3	5
6th.	4	5	5	3	2	3	3	3
7th.	5	4	3	3	3	1	2	4
8th.	3	2	3	2	2	2	2	3
9th.	3	4	3	3	1	2	2	1
10th.	3	2	3	1	1	0	1	2
11th.	2	2	1	1	1	0	0	1
12th.	1	0	0	2	2	2	3	2
13th.	2	1	0	1	1	1	1	3
14th.	2	2	3	2	3	3	5	4
15th.	3	4	3	4	2	3	3	2
16th.	3	2	3	3	3	1	2	3
17th.	2	3	2	3	2	2	2	1
18th.	3	4	4	4	1	2	2	1
19th.	2	4	3	3	2	1	2	1
20th.	3	2	3	1	2	1	1	2
21st.	2	2	3	2	1	0	2	1
22nd.	2	1	2	4	2	2	2	2
23rd.	3	1	2	1	1	0	1	2
24th.	2	3	3	3	3	3	3	3
25th.	5	6	6	6	7	4	5	3
26th.	3	3	2	3	1	4	3	3
27th.	3	2	1	2	2	1	1	1
28th.	2	1	0	1	1	2	2	2
29th.	2	1	1	1	1	2	3	2
30th.	3	2	1	2	2	2	2	2

VALUES OF "K" AT APIA FOR JULY 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	2	2	2	1	2	1	2	0
2nd.	1	1	2	1	0	0	2	1
3rd.	2	3	3	2	3	2	2	5
4th.	3	4	4	3	1	2	2	4
5th.	3	1	2	2	3	2	2	3
6th.	3	3	3	2	3	1	3	2
7th.	2	0	1	1	2	2	2	2
8th.	2	2	2	1	1	1	2	3
9th.	3	3	3	1	3	3	2	3
10th.	3	3	3	4	4	2	2	2
11th.	3	3	3	2	2	1	2	2
12th.	1	2	2	1	1	0	2	1
13th.	2	2	3	5	6	3	3	3
14th.	3	4	3	3	1	3	2	2
15th.	3	3	3	2	2	1	1	2
16th.	3	1	3	1	1	1	2	1
17th.	1	0	1	1	0	1	1	1
18th.	2	1	2	1	0	0	2	1
19th.	1	1	1	0	0	1	2	2
20th.	1	1	1	1	2	2	2	2
21st.	1	1	3	3	2	3	-	-
22nd.	-	-	-	-	-	-	-	1
23rd.	3	3	2	1	2	1	2	2
24th.	2	3	2	3	1	1	2	4
25th.	3	3	4	3	1	1	0	1
26th.	2	1	2	2	1	1	1	1
27th.	2	2	2	1	2	2	1	2
28th.	2	2	2	3	1	1	2	2
29th.	1	2	2	1	2	1	3	3
30th.	2	4	2	3	3	3	3	3
31st.	3	4	2	3	2	2	2	3

VALUES OF "K" AT APIA FOR AUGUST 1940

HOUR / DATE	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
1st.	4	4	1	1	1	1	1	3
2nd.	3	2	2	1	1	2	3	3
3rd.	2	3	5	4	3	4	3	1
4th.	2	2	3	2	1	0	1	2
5th.	3	3	1	3	2	2	2	2
6th.	3	2	3	2	3	2	2	3
7th.	2	1	3	3	2	3	2	1
8th.	4	3	3	3	2	1	1	2
9th.	1	3	3	3	3	3	4	3
10th.	3	3	2	3	3	2	1	2
11th.	2	2	3	3	3	3	-	2
12th.	3	3	2	2	2	3	1	1
13th.	2	2	2	1	2	2	1	2
14th.	3	3	3	3	1	1	1	1
15th.	0	1	1	0	0	0	1	0
16th.	1	2	3	1	0	0	1	1
17th.	1	0	0	0	0	0	1	2
18th.	1	2	1	3	2	2	2	3
19th.	3	2	2	1	1	2	3	3
20th.	3	3	3	1	1	2	1	2
21st.	1	2	1	1	2	1	1	1
22nd.	1	2	2	2	2	2	2	1
23rd.	2	1	1	0	1	1	3	1
24th.	1	1	0	1	1	0	2	2
25th.	2	0	0	0	1	1	2	2
26th.	3	1	2	2	3	2	3	4
27th.	3	2	3	1	1	1	2	3
28th.	2	3	3	3	2	1	2	3
29th.	3	1	2	3	3	2	2	1
30th.	2	2	0	1	1	2	2	3
31st.	1	1	1	2	1	1	1	3

VALUES OF "K" AT APIA FOR SEPTEMBER 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	4	4	3	3	3	3	2	1
2nd.	1	2	2	3	3	2	2	3
3rd.	3	4	4	3	2	2	3	2
4th.	3	2	2	4	1	2	3	3
5th.	2	3	2	2	2	2	3	1
6th.	1	2	3	3	2	1	2	3
7th.	4	3	3	5	3	2	3	4
8th.	4	2	1	4	2	3	2	2
9th.	3	3	1	3	1	2	2	2
10th.	2	1	1	0	0	0	-	-
11th.	-	-	-	-	-	-	-	2
12th.	1	2	2	2	2	2	1	1
13th.	0	0	0	0	2	2	2	0
14th.	1	2	2	1	2	2	4	4
15th.	1	3	2	2	3	2	2	2
16th.	2	2	2	2	3	3	2	1
17th.	2	0	2	1	1	1	2	2
18th.	1	1	1	1	0	1	2	2
19th.	2	1	1	1	0	0	1	1
20th.	1	1	2	2	2	2	2	2
21st.	1	2	3	3	3	2	2	2
22nd.	1	2	3	4	3	1	2	2
23rd.	1	1	0	1	2	0	2	1
24th.	2	1	0	0	0	1	2	2
25th.	2	3	3	3	2	2	3	3
26th.	2	0	1	1	1	5	4	4
27th.	5	4	4	4	2	2	3	4
28th.	2	3	4	5	4	3	3	3
29th.	3	2	3	2	3	1	3	1
30th.	1	0	1	1	1	1	3	1

VALUES OF "K" AT APIA FOR OCTOBER 1940

HOUR / DATE	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
1st.	3	2	3	4	3	4	4	2
2nd.	2	2	2	4	2	3	2	1
3rd.	1	3	2	3	2	1	2	2
4th.	3	4	2	1	1	1	2	1
5th.	2	2	3	1	3	0	2	1
6th.	1	1	1	3	3	2	2	3
7th.	2	5	4	5	4	3	4	2
8th.	4	4	3	4	4	3	3	3
9th.	2	1	1	2	2	1	2	1
10th.	1	0	0	2	2	2	2	2
11th.	2	1	1	1	3	1	1	1
12th.	2	1	1	2	2	2	2	2
13th.	1	1	0	1	1	1	1	1
14th.	1	1	1	1	0	0	2	1
15th.	2	3	3	4	3	2	3	3
16th.	0	1	3	2	1	2	2	2
17th.	2	2	0	1	1	1	2	3
18th.	2	1	4	3	1	2	3	3
19th.	2	3	3	3	3	1	3	2
20th.	1	2	2	2	1	1	2	3
21st.	2	1	2	3	2	2	3	3
22nd.	3	2	4	4	3	1	2	1
23rd.	1	1	1	0	0	0	1	0
24th.	0	1	0	0	1	1	1	0
25th.	1	1	1	2	3	4	5	6
26th.	4	3	3	4	4	5	2	3
27th.	2	3	3	3	2	2	2	1
28th.	1	2	2	2	2	1	2	2
29th.	1	2	2	2	1	1	1	1
30th.	2	1	1	1	1	0	2	2
31st.	1	1	2	3	1	2	2	2

VALUES OF "K" AT APIA FOR NOVEMBER 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	2	3	4	3	3	1	1	1
2nd.	1	2	3	4	0	0	1	1
3rd.	1	3	3	4	2	1	2	1
4th.	2	2	3	3	2	3	3	3
5th.	3	2	3	4	2	1	3	2
6th.	2	1	3	2	2	1	2	1
7th.	1	1	3	3	3	1	2	1
8th.	1	1	1	1	2	2	2	1
9th.	1	3	3	2	4	1	2	1
10th.	1	2	0	1	0	1	1	1
11th.	2	1	1	0	1	1	1	1
12th.	1	1	3	4	3	3	5	5
13th.	6	4	6	4	2	3	3	2
14th.	2	3	3	3	2	1	3	3
15th.	3	2	3	2	1	1	3	3
16th.	3	2	1	1	2	3	3	3
17th.	2	2	0	1	2	2	3	4
18th.	2	1	1	2	2	0	2	2
19th.	2	2	3	2	2	2	2	3
20th.	2	2	2	2	3	3	3	4
21st.	4	4	5	4	3	2	2	2
22nd.	2	4	2	5	3	2	4	3
23rd.	3	4	4	4	-	-	-	3
24th.	1	1	2	1	1	1	2	2
25th.	2	1	3	3	5	5	3	3
26th.	3	4	5	3	3	2	2	1
27th.	2	2	1	1	3	2	2	1
28th.	1	2	2	2	2	1	1	4
29th.	3	4	2	3	3	3	3	3
30th.	2	3	3	3	2	2	2	2

VALUES OF "K" AT APIA FOR DECEMBER 1940

HOUR	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
DATE								
1st.	1	1	2	3	2	1	-	-
2nd.	-	-	-	-	-	-	-	-
3rd.	-	-	-	-	-	-	-	2
4th.	3	2	1	2	2	2	2	1
5th.	1	2	2	2	2	-	-	2
6th.	2	1	1	1	2	1	2	1
7th.	1	1	1	1	1	0	1	1
8th.	2	1	0	1	1	0	1	1
9th.	2	3	4	3	2	3	2	2
10th.	2	3	1	2	2	2	2	2
11th.	2	2	2	1	1	2	2	3
12th.	2	1	2	2	2	2	2	1
13th.	1	1	2	3	1	2	2	1
14th.	2	1	1	3	3	2	4	1
15th.	2	2	1	1	3	2	3	3
16th.	2	2	2	2	3	2	1	2
17th.	2	2	1	1	2	1	2	2
18th.	2	1	1	2	0	1	1	1
19th.	1	1	1	3	2	1	2	2
20th.	1	3	3	4	4	4	3	4
21st.	3	4	5	4	3	3	4	2
22nd.	2	2	2	2	3	1	3	2
23rd.	3	2	2	3	3	3	3	3
24th.	3	2	1	1	2	2	3	2
25th.	2	3	3	3	2	2	2	2
26th.	1	1	2	3	2	2	2	2
27th.	2	2	3	3	2	2	2	2
28th.	2	2	2	2	2	1	3	5
29th.	4	2	4	4	2	3	3	3
30th.	2	3	5	3	3	2	3	5
31st.	4	4	3	4	3	3	3	3

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) January 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+37	+27	+ 2	-13	-17	-22	-24	-24	-23	-19	-17	-15	-13	- 8	- 8	- 8	- 3	- 1	+ 1	+ 8	+18	+35	+44	+32	899	22 26 +47	08 11 -24	71
2	+34	+15	- 6	-11	-11	-13	-20	-27	-32	-34	-27	-23	-18	-14	-11	- 4	+ 1	+ 6	+10	+21	+34	+41	+42	+41	877	00 00 +46	09 09 -36	82
3	+62	+55	+41	+27	+16	+ 4	- 7	-19	-28	-35	-30	-24	-18	-10	+ 6	+24	+ 8	-28	-24	-19	-21	- 3	+10	+ 7	849	00 00 +65	09 16 -37	102
4	- 1	-11	-23	-26	-29	-27	-29	-29	-25	-26	-23	- 9	- 9	- 2	- 5	+ 9	+15	+18	+26	+25	+28	+43	+58	+56	848	22 35 +59	04 12 -32	91
5	+28	+21	+ 3	-20	-25	-18	-14	-12	-14	-14	-14	-12	-12	-12	-10	- 9	- 9	- 7	+ 1	+ 9	+23	+39	+47	+37	871	22 41 +48	04 10 -32	80
6	+26	+ 5	-12	-19	-26	-31	-22	-17	-12	-10	- 8	+ 1	- 3	- 3	- 8	- 6	+ 1	+ 1	+ 1	+ 9	+22	+35	+39	+41	865	23 55 +43	05 15 -32	75
7	+25	+16	+15	+ 4	- 3	- 7	-11	-11	-12	-10	-10	-14	-12	-10	0	- 7	-10	- 8	-12	+ 2	+16	+16	+16	+25	876	00 00 +32	11 25 -15	47
8	+21	+15	+ 5	-12	-19	-17	-13	- 9	- 9	- 8	- 7	- 7	- 7	- 9	- 7	- 5	- 7	- 7	- 9	0	+13	+30	+38	+38	878	22 28 +40	05 01 -22	62
9	+30	+21	+ 4	- 7	-13	-13	-11	-10	- 8	- 6	- 5	- 4	- 6	-12	-11	-13	-11	- 1	+ 3	- 4	+ 9	+14	+26	+27	885	00 00 +32	05 25 -13	45
10	+33	+22	+12	+ 3	+ 8	+ 5	+ 5	+ 8	+ 9	+ 8	+18	+23	+18	+ 6	-14	0	-15	-31	-36	-48	-36	-13	+ 3	+10	869	00 05 +40	19 21 -49	89
11	+12	+ 5	- 6	-18	-28	-20	-15	-15	-17	-15	-14	-16	-10	- 2	+ 1	+ 6	+ 4	+ 4	+27	+22	+25	+30	+25	+25	866	21 40 +36	04 17 -28	64
12	+7	- 8	-19	-26	-24	-28	-22	-15	-12	-12	-17	- 7	0	+ 4	+ 1	+ 1	+ 4	+ 6	+ 1	+ 9	+18	+30	+49	+55	866	23 41 +58	05 44 -35	93
13	+40	+28	+11	- 7	-12	-19	-21	-22	-19	-13	-12	-12	-12	-12	-10	-10	- 7	- 7	- 8	- 4	+11	+28	+37	+42	877	24 00 +46	07 46 -22	68
+14	+38	+26	+12	0	- 7	-16	-19	-16	-16	-16	-16	-16	-16	-14	-14	-12	-12	-12	-11	- 2	+14	+32	+50	+45	886	22 31 +50	12 18 -19	69
15	+32	+22	+ 6	+ 3	- 1	-10	-15	-17	-17	-19	-19	-22	-22	-22	-17	-10	- 9	- 8	- 8	- 1	+16	+47	+49	+47	889	21 58 +55	12 49 -24	79
16	+34	+31	+31	+29	+15	- 4	-11	-23	-13	-23	-30	-20	-20	-22	- 6	-12	-16	-15	-16	- 4	+10	+26	+29	+24	897	00 05 +39	10 18 -32	71
17	+28	+25	+18	+ 4	+ 4	- 7	-17	-12	- 7	- 5	- 9	- 7	-12	-21	- 9	-19	-19	- 5	- 4	+ 1	+ 7	+21	+30	+10	884	22 14 +35	13 26 -24	59
18	+23	+25	+15	+ 6	+ 4	- 2	- 8	- 6	+ 3	+ 4	+13	+11	+13	+ 9	+ 4	- 1	- 1	-28	-19	-22	-17	-12	- 6	- 6	867	00 50 +27	17 50 -36	63
19	+15	+13	+ 6	- 4	- 8	-14	-19	-16	-16	-16	-15	-16	-10	-10	- 7	- 2	- 1	- 3	- 8	- 1	+14	+30	+40	+36	846	23 02 +47	11 23 -19	66
20	+ 1	- 5	- 3	- 5	-12	-12	-12	-12	-13	-12	-12	-14	-13	-12	-12	- 9	-10	- 8	- 2	+ 5	+28	+49	+55	+47	869	22 05 +56	14 42 -14	70
+21	+30	+24	+21	+ 5	- 9	- 8	- 8	- 7	- 8	- 9	-12	-12	-14	-14	-12	-10	- 7	- 9	-14	- 9	+ 2	+21	+30	+28	873	00 00 +37	13 07 -15	52
22	+ 6	- 5	-12	-19	-20	-20	-12	-10	-10	-10	- 8	-11	-18	-19	-17	-10	- 4	- 9	- 1	+11	+24	+49	+59	+57	883	22 56 +62	12 44 -20	82
23	+32	+30	+20	+ 1	- 8	-12	-14	-16	-21	-21	- 6	-10	-10	- 6	-13	-16	-15	-14	- 7	+ 5	+16	+30	+32	+31	902	21 59 +37	09 39 -22	59
24	+37	+18	- 2	-11	-18	-16	-12	- 9	- 4	- 5	- 9	- 5	- 2	- 6	- 6	- 4	+ 3	- 3	- 9	+ 1	+ 4	+15	+23	+24	877	00 00 +48	04 10 -18	66
25	+29	+ 7	-10	-24	-23	-24	-18	-18	- 6	- 8	- 7	- 3	+ 3	+ 8	+ 3	- 4	- 2	+ 1	- 4	- 3	+10	+18	+31	+40	863	24 00 +44	05 07 -28	72
+26	+21	+10	- 5	-13	-15	-18	-15	-14	-15	-13	-12	-11	-11	-11	- 8	- 8	- 7	- 8	- 5	+ 8	+13	+24	+45	+57	886	23 41 +60	05 27 -18	78
+27	+46	+34	+21	+ 8	- 1	-18	-22	-15	-11	-12	-14	-14	-15	-13	-11	-10	- 6	- 4	- 4	- 3	+ 1	+10	+20	+22	894	00 08 +51	07 00 -23	74
+28	+26	+27	+20	+ 3	- 6	-16	-16	-16	-16	-16	-13	-13	-12	-11	- 9	-10	- 9	-10	- 6	+ 3	+10	+16	+29	+47	899	24 00 +53	08 41 -18	71
29	+62	+48	+26	+ 6	- 6	-13	-16	-16	-18	-21	-25	-29	-29	-24	-21	-15	- 8	- 1	0	+ 3	+12	+25	+31	+31	890	00 17 +63	12 52 -30	93
30	+25	+13	+16	+ 9	0	- 5	0	- 1	-10	-19	-31	-38	-35	-24	-15	-11	-10	+ 4	+12	+18	+30	+25	+30	+29	891	22 29 +38	11 12 -40	78
31	+36	+27	+10	+10	+ 6	+ 3	- 1	+ 2	- 8	- 4	- 6	- 5	-11	-12	-20	-20	-10	-12	-11	- 5	-13	+ 6	+22	+17	887	00 32 +42	15 03 -25	67
MEAN.	+28	+19	+ 7	- 4	- 9	-13	-14	-14	-13	-13	-13	-11	-11	-10	- 9	- 7	- 6	- 6	- 4	+ 1	+11	+24	+33	+33	878			

[200/7/39—17185

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) February 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+14	+ 7	+ 6	- 7	- 7	-18	-10	-12	-13	- 4	-14	- 8	-10	- 7	- 2	+ 3	+ 7	- 3	+ 1	+ 1	+ 7	+22	+21	+31	872	23 49 +34	08 12 -23	57
2	+18	+10	+ 2	- 6	-16	-13	-16	-10	- 6	-17	-17	-14	-16	-10	- 9	- 6	- 6	- 4	- 4	+ 9	+25	+34	+37	+39	878	23 28 +40	10 00 -20	60
3	+27	+19	+10	- 2	- 7	- 7	- 6	- 7	- 4	-13	-23	-22	-14	- 7	- 6	- 8	-10	-13	-10	+ 2	+14	+25	+29	+30	880	00 01 +34	10 46 -24	58
4	+23	+16	+ 5	- 8	-14	-14	-11	-10	- 9	-11	-11	-13	-13	-14	-11	-11	- 7	- 2	- 2	+ 4	+11	+23	+34	+35	883	23 10 +37	04 35 -16	53
5	+26	+22	+12	0	- 7	-10	- 9	- 8	- 8	- 9	- 9	- 5	- 9	-10	- 7	0	- 2	- 1	- 2	0	+ 5	+ 8	+12	+ 7	889	00 26 +27	14 16 -14	41
6	+11	+13	+ 4	-10	-15	-15	-13	-13	-18	-13	- 7	+ 6	+11	+ 5	- 4	- 1	+ 5	- 1	- 3	+ 1	- 6	+ 8	+28	+33	883	23 46 +35	08 51 -21	56
7	+28	+ 9	+ 8	- 5	-15	-20	-17	-14	-11	- 9	- 8	- 7	- 7	- 9	+ 2	- 1	- 2	- 5	- 5	- 2	+ 5	+20	+34	+42	882	23 48 +43	06 09 -21	64
8	+38	+24	+14	+ 1	-10	-18	-22	-22	-21	-15	- 6	- 9	- 8	- 8	- 8	- 7	- 4	- 6	- 8	- 2	+ 5	+25	+37	+30	883	00 24 +42	08 00 -24	66
9	+31	+22	+10	- 6	-18	-22	-22	-20	-15	-14	- 9	- 6	- 2	- 1	- 1	+ 1	- 1	- 2	- 3	- 2	+ 6	+18	+26	+27	869	00 04 +42	06 54 -24	66
10	+10	+ 6	- 2	-11	-16	-18	-18	-16	-15	-15	-14	-11	- 9	- 8	- 7	- 7	- 7	+ 3	+ 5	+ 7	+23	+36	+40	+44	884	24 00 +48	06 04 -21	69
11	+42	+38	+28	+ 9	- 3	-11	-12	-11	- 6	-13	-13	-11	-12	- 7	- 7	-12	-12	-13	-13	- 8	0	+11	+23	+23	887	00 00 +45	10 00 -17	62
12	+30	+20	+ 9	- 7	-27	-34	-30	-27	-24	-22	-19	- 6	- 6	- 8	- 4	- 4	- 4	0	+ 1	+ 6	+22	+33	+48	+59	881	23 33 +61	05 52 -36	97
13	+39	+27	+13	+ 3	- 6	-12	-15	-12	- 9	-14	-13	-12	-11	- 1	- 1	- 4	- 4	- 4	- 4	- 1	- 1	+13	+18	+16	888	00 00 +49	06 47 -17	66
14	+20	+17	+11	+ 1	- 6	- 6	- 6	- 4	- 9	-13	-13	-19	-13	-10	- 7	- 7	- 6	- 5	- 4	- 2	+ 3	+15	+25	+32	887	24 00 +34	11 14 -20	54
15	+26	+22	+14	+ 4	- 4	- 7	- 5	- 8	-13	-13	-15	-23	-12	- 5	- 5	- 8	- 8	- 7	- 5	+ 2	+ 7	+12	+19	+26	895	00 02 +27	11 29 -24	51
16	+27	+18	+ 6	- 1	-11	- 8	- 6	- 6	- 8	- 8	- 6	- 8	-12	-11	- 8	- 8	- 5	- 4	- 5	- 3	+ 3	+15	+19	+27	896	00 30 +30	12 04 -13	43
17	+29	+25	+12	+ 2	- 7	-10	-10	-10	-12	-13	-14	-12	- 9	-10	-10	- 8	- 9	- 7	- 6	0	+ 5	+13	+22	+32	897	23 46 +32	10 48 -15	47
18	+27	+25	+17	+ 5	- 5	- 7	-12	-14	-14	-14	-14	-14	-14	-13	-12	-11	-10	- 7	- 5	+ 7	+14	+26	+28	+28	902	22 58 +31	12 57 -15	46
19	+17	+ 6	- 2	-10	-10	- 7	- 6	- 6	- 7	-10	-12	-13	-14	-14	-14	-12	-10	- 8	- 7	0	+12	+35	+51	+50	909	23 00 +54	12 02 -16	70
20	+62	+33	- 4	-27	-29	-30	-30	-24	-11	- 6	- 4	- 1	- 7	- 6	0	- 4	- 2	- 1	0	+ 8	+ 9	+17	+27	+27	882	00 00 +69	05 07 -34	103
21	+26	+14	+ 2	-19	-21	-16	-14	- 8	- 2	- 2	-11	-16	-15	-16	- 2	- 5	0	- 2	- 5	0	+12	+26	+36	+38	869	23 24 +40	04 22 -23	63
22	+37	+26	+ 5	- 7	-18	-20	-20	-16	-11	-11	- 9	- 7	- 8	- 4	- 4	- 2	- 2	- 1	- 3	- 6	+ 6	+20	+27	+30	862	00 00 +42	07 00 -23	65
23	+27	+13	+ 2	- 5	-11	-17	-15	-13	-12	- 7	- 5	- 9	- 7	- 6	- 6	- 5	- 4	- 3	+ 1	+ 7	+17	+23	+23	+20	866	00 18 +30	06 00 -20	50
24	+26	+20	+14	- 2	-16	-25	-33	-34	-33	-29	-29	-14	- 7	0	- 2	- 1	0	+ 3	0	+ 7	+17	+30	+54	+52	856	22 29 +61	08 10 -35	96
25	+38	+14	- 4	-15	-21	-15	-25	-28	-24	-15	-12	-17	- 9	+ 5	+24	+18	+21	+15	-12	- 8	- 2	+13	+31	+39	855	00 13 +48	07 05 -37	85
26	+14	+ 9	- 5	- 8	-10	- 6	- 8	- 7	- 7	-12	-12	-10	- 7	- 6	- 7	- 7	- 5	- 5	- 5	0	+ 4	+18	+36	+49	875	23 48 +51	09 55 -14	65
27	+37	+28	+10	-12	-28	-25	-20	-18	-18	-17	-15	-12	- 9	- 6	- 6	- 5	- 5	- 8	- 6	+ 1	+13	+30	+46	+54	887	23 56 +57	04 45 -31	88
28	+42	+34	+20	+ 3	- 6	-11	-14	-16	-16	-18	-20	-17	-16	-16	-14	-13	-13	-16	-12	- 2	+16	+28	+39	+48	902	23 59 +51	10 27 -24	75
29	+53	+38	+26	+13	+ 3	- 5	-13	- 6	- 9	- 7	-13	-16	-19	-23	-23	-16	- 9	-10	-16	-11	+ 3	+15	+22	+31	895	00 00 +58	14 12 -25	83
30																												
31																												
MEAN.	+29	+20	+ 8	- 4	-13	-15	-15	-14	-13	-13	-13	-11	-10	- 8	- 6	- 5	- 4	- 4	- 5	0	+ 9	+21	+31	+34	883			

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) March 1940

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.	Maximum. H.	M.	γ	Minimum. H.	M.	γ	Range.
1	+23	+17	+ 9	- 2	- 8	-14	-21	-20	-18	-17	-18	-18	-17	-18	-16	-16	-16	-15	-10	+ 5	+22	+47	+58	+58	901	22	48	+59	06	56	-22	81
2	+48	+35	+22	+ 6	- 6	-11	-13	-15	-18	-15	-18	-20	-21	-20	-18	-14	-11	- 8	- 6	0	+12	+19	+29	+33	906	00	00	+52	13	07	-22	74
3	+32	+25	+12	+ 3	- 7	-11	-11	-11	-13	-15	-11	-16	-16	-16	-16	-11	-11	-10	- 9	+ 1	+15	+25	+38	+39	902	23	15	+45	09	47	-18	63
4	+29	+21	+10	- 3	- 9	-12	-14	-18	-21	-19	-16	-16	-16	-19	-15	-16	-16	-15	- 9	+ 5	+22	+45	+54	+45	907	22	43	+55	08	31	-21	76
5	+39	+25	+ 8	- 4	-11	-14	-15	-14	-14	-15	-16	-13	-14	-14	-15	-14	-13	-11	- 9	- 2	+15	+29	+39	+43	902	00	00	+47	10	49	-18	65
+ 6	+30	+20	+10	- 2	-10	-14	-16	-14	-13	-12	-13	-13	-13	-13	-11	-11	-13	-11	-11	+ 6	+28	+35	+36	+30	911	22	07	+41	07	03	-18	59
+ 7																																
8	+49	+30	+16	+ 1	- 7	-11	-11	-12	- 9	- 7	- 9	-12	- 7	- 5	- 5	- 5	- 5	- 7	- 7	0	+ 9	+ 7	+ 7	0	884	00	00	+55	11	48	-13	68
9	+24	+12	0	- 8	-32	-40	-39	-38	-33	-24	-12	- 6	- 8	- 5	- 2	0	0	+ 7	+ 7	+15	+26	+41	+52	+57	846	23	24	+57	05	25	-42	99
10	+27	+22	+14	+ 2	-11	-20	-22	-25	-22	-18	-17	-12	-13	-12	- 8	-10	- 8	- 6	- 4	+ 6	+17	+29	+46	+56	878	23	36	+57	07	05	-25	82
+ 11																																
12	+45	+39	+29	+18	+ 8	+ 6	+ 3	+ 2	+ 3	+ 3	+ 6	+ 8	+10	+ 7	+ 6	+ 4	+ 1	- 6	-28	-29	-41	-41	-34	-20	886	00	36	+45	21	09	-57	102
13																																
14	+28	+20	+14	+ 9	- 4	-11	-19	-33	-33	-17	-21	-19	-16	-13	-10	-10	- 9	- 5	- 2	+ 8	+16	+33	+47	+51	878	22	56	+52	08	22	-36	88
+ 15	+29	+22	+ 9	- 3	-13	-15	-19	-20	-20	-20	-19	-16	-15	-15	-13	-10	- 8	- 6	- 3	+ 5	+17	+37	+50	+51	895	22	56	+52	08	55	-21	73
16	+48	+37	+24	+ 9	- 3	-11	-13	-15	-18	-18	-18	-15	-15	-11	-11	- 8	- 6	- 5	-11	+ 1	+ 9	+15	+21	+22	893	00	00	+52	08	27	-20	72
17																																
+ 18																																
19	+73	+67	+51	+32	+14	+ 2	- 8	-11	-25	-34	-26	-13	- 7	- 7	-15	-15	-15	-20	-25	-17	- 8	- 5	+ 1	0	886	00	24	+73	09	49	-36	109
20	+15	+13	- 1	-26	-29	-24	-17	-13	-10	-13	- 2	-11	-13	-13	- 3	- 3	- 1	- 1	0	+13	+18	+32	+47	+41	861	22	58	+51	04	00	-37	88
21	+ 9	+ 2	+ 4	- 3	-21	-27	-19	-17	-14	-13	-10	-10	- 8	- 7	- 5	- 3	- 6	- 3	- 3	+ 6	+18	+33	+44	+47	882	22	57	+48	05	11	-30	78
22																																
23	+64	+52	+35	+20	+ 9	+ 8	+17	+13	- 7	-38	-18	-18	-22	-22	-25	-17	-14	- 8	- 8	0	+13	0	-17	-23	873	00	39	+65	09	22	-58	123
24																																
25	-31	-75	-84	-82	-72	-67	-90	-92	-28	+31	+11	-48	+ 6	+11	+ 8	+15	+20	+30	+45	+65	+104	+102	+117	+99	684	22	30	+144	07	48	-112	256
26	- 7	-14	-35	-47	-38	-41	-49	-38	-28	-19	-17	-11	- 6	- 5	- 3	+ 6	+12	+18	+19	+10	+44	+69	+84	+91	767	23	50	+92	06	18	-52	144
27																																
28	+11	- 4	-13	-25	-25	-16	-20	-22	-13	-12	-13	- 3	- 5	+ 1	+ 7	+ 3	+ 4	+ 2	+ 3	+ 8	+17	+31	+35	+37	824	23	16	+38	03	52	-28	66
29	+61	+51	+40	+36	+28	+27	+28	+25	+26	+22	+25	+ 7	+31	+16	+18	+10	- 2	-58	-77	-67	-58	-45	-62	-89	800	00	51	+63	23	59	-106	169
30	+44	+17	-70	-83	-110	-121	-71	-21	+12	+11	-41	- 3	-15	+17	+20	+33	+33	+36	+32	+40	+48	+49	+66	+65	694	22	49	+133	04	54	-145	278
31	-14	- 3	+14	+14	+14	+26	+32	+26	+22	+42	+87	+19	-43	-26	-24	-42	-35	-24	-41	-30	-30	-12	+ 8	+14	760	10	15	+111	13	02	-82	173
MEAN.	+30	+19	+ 5	- 6	-15	-18	-18	-17	-13	- 9	- 8	-11	-10	- 8	- 7	- 6	- 5	- 5	- 7	+ 2	+15	+25	+33	+33	853							

12/1/39—17185

Horizontal Intensity

G.M.T. (H = 34000γ + Mean +.....) April 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	-29	-29	-41	-51	-26	-24	0	- 3	+ 4	+25	0	-16	- 8	+14	+23	+18	+14	+ 9	+12	+14	+21	+21	+21	+23	776	09 49 +37	03 38 -58	95
2	-13	-16	-17	-18	-16	-15	-13	-11	- 6	- 6	- 6	- 1	- 3	- 5	+ 1	+ 2	+13	+21	+17	- 1	+11	+20	+25	+29	816	23 43 +36	03 28 -19	55
3	+65	+39	-49	-89	-82	-90	-97	-71	-70	-29	-26	-19	-13	- 8	+14	+29	+32	+43	+46	+61	+77	+81	+79	+83	787	20 07 +100	06 00 -112	212
4	+26	+15	+ 7	- 3	-13	-19	-21	-23	-26	-23	-26	-15	-17	-13	- 3	+ 5	+ 2	+ 1	+ 2	+12	+18	+29	+40	+47	836	23 48 +50	09 22 -30	80
5	+32	+22	+15	- 2	-10	-14	-17	-22	-22	-10	- 3	- 7	-12	-15	-15	-15	-12	-11	- 8	+ 5	+13	+25	+40	+49	856	23 30 +49	07 33 -24	73
6	+37	+27	+18	+ 6	- 6	-11	-22	-25	-25	-25	-28	-23	-21	-16	-13	-11	- 9	- 6	+ 1	+19	+22	+32	+39	+48	855	24 00 +50	10 36 -29	79
+ 7	+38	+27	+10	- 2	-11	-13	-14	-14	-13	-14	-14	-14	-13	-12	-12	- 9	- 8	- 6	- 2	0	+ 5	+17	+29	+40	867	23 39 +41	06 51 -15	56
+ 8																												
+ 9																												
+ 10	+23	+13	+ 4	0	- 5	- 9	-12	-16	-17	-18	-17	-16	-13	-12	-11	-10	- 7	- 5	- 3	+ 2	+12	+24	+38	+45	884	24 00 +47	09 03 -18	65
11																												
+ 12	+29	+22	+11	0	- 5	- 6	-10	-12	-17	-19	-18	-18	-19	-19	-17	-14	-11	- 9	- 3	+ 6	+17	+29	+39	+45	891	23 36 +46	12 42 -22	68
13	+47	+35	+17	+ 5	- 7	- 8	- 6	- 5	- 8	- 8	-13	-15	-13	-19	-19	-18	-15	-14	- 6	+ 1	+ 6	+16	+18	+20	880	00 00 +55	14 05 -22	77
14	+35	+25	+12	0	-10	-24	-22	-22	-22	-29	-28	-23	-17	-14	-10	- 6	- 3	+ 1	+ 8	+14	+19	+29	+39	+41	862	23 00 +44	09 55 -34	78
15	+25	+13	+ 8	- 4	- 8	-13	-22	-31	-28	-15	-13	-11	-11	- 4	- 4	+ 7	+ 3	+ 3	+ 1	+12	+19	+27	+32	+25	867	22 33 +34	07 45 -32	66
16	+14	+ 1	- 7	-14	-23	-24	-19	-23	-18	-14	-16	-12	- 7	- 4	0	+ 1	+ 2	+ 2	+ 5	+11	+19	+29	+42	+44	859	22 46 +49	05 16 -27	76
17	+32	+21	+ 8	- 6	- 6	- 8	-12	-17	-18	-18	-18	-12	-13	-13	-12	-11	- 9	- 4	+ 1	+ 4	+14	+27	+40	+40	865	23 00 +43	08 13 -20	63
18	+18	- 2	-12	-18	-12	-10	-15	-17	-17	-16	-17	-16	-12	-10	- 9	- 8	- 5	+ 1	+ 7	+14	+22	+38	+47	+51	871	23 30 +55	03 36 -19	74
19	+43	+26	+ 3	-12	-18	-19	-18	-13	-10	-11	-11	-11	- 9	- 9	-10	- 9	- 9	- 4	+ 1	+ 8	+15	+25	+29	+25	872	00 00 +50	05 53 -20	70
20	+ 3	- 6	-17	-18	-16	-16	-14	-22	-17	- 9	- 6	- 8	- 6	- 2	- 4	- 2	+ 7	+20	+22	+17	+17	+30	+30	+26	884	21 50 +39	07 33 -30	69
21	+35	+33	+16	+ 9	+ 7	- 1	+ 1	+ 1	- 1	- 2	- 8	-12	-14	-17	-20	-17	-14	- 9	- 3	+ 2	+ 7	+10	+ 8	- 3	890	00 58 +43	14 50 -20	63
22	+34	+19	+ 3	-13	-23	-29	-36	-40	-16	-18	-16	-17	-16	-11	+ 3	- 4	- 2	+ 4	+10	+17	+30	+39	+44	+43	849	22 36 +45	07 15 -45	90
23	+15	- 3	- 9	-10	-12	-10	-10	-11	-12	-11	-10	- 9	-10	- 5	- 7	- 7	- 5	- 2	+ 5	+17	+29	+34	+28	+14	872	21 33 +35	07 56 -14	49
24	+11	+ 8	+ 3	- 5	-13	-12	-13	-13	-11	-10	- 6	- 4	- 4	- 6	- 6	- 6	- 8	- 8	- 5	+ 5	+11	+20	+32	+37	868	24 00 +39	07 00 -14	53
25	+87	+86	+94	- 3	-86	-58	-39	-32	-23	-11	- 3	+ 4	+ 6	+ 7	+12	+18	+17	+16	+12	+ 3	-17	-24	-22	-39	823	02 08 +106	04 42 -97	203
26	-22	-21	-32	-27	-36	-39	-34	-37	-28	-17	- 5	0	+ 1	+ 6	+12	+17	+18	+20	+26	+28	+33	+44	+48	+37	799	22 46 +49	07 04 -42	91
27	- 4	-13	-17	-19	-17	-19	-21	-24	-26	-24	-24	-17	- 8	+ 4	+10	+ 9	+11	+16	+19	+20	+28	+35	+39	+40	830	23 44 +40	08 48 -26	66
28	+ 7	- 6	- 1	-10	- 9	- 9	-10	-10	-11	-12	- 3	- 2	- 4	- 6	0	+ 1	- 5	- 5	0	+ 4	+11	+21	+33	+26	860	22 33 +34	09 23 -13	47
29																												
30	+18	+12	+ 4	+ 1	0	+ 1	- 4	-12	-17	-18	-12	-11	-13	-13	-10	- 1	+11	+11	+15	+ 9	+13	+13	+ 9	+ 4	875	18 39 +20	09 36 -22	42
31																												
MEAN.	+23	+13	+ 1	-12	-18	-19	-19	-20	-18	-14	-13	-12	-10	- 8	- 4	- 2	0	+ 3	+ 7	+12	+18	+27	+33	+32	854			

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) May 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+11	+ 5	- 1	- 1	- 2	- 2	- 9	-17	-18	-20	-17	-11	-10	- 8	- 3	- 1	+ 4	+ 7	+17	+13	+18	+20	+18	+ 6	864	21 53 +20	09 49 -22	42
2	+ 6	+ 1	- 5	-12	-12	-14	-14	-12	- 9	- 9	- 8	- 7	- 4	- 2	0	+ 2	+ 7	+ 9	+10	+10	+10	+13	+16	+16	862	22 51 +17	05 53 -16	33
3	+ 4	- 4	- 9	- 7	- 7	- 4	- 3	- 5	- 5	- 7	- 7	-11	-11	-10	- 7	- 4	0	+ 5	+10	+11	+14	+18	+24	+18	867	22 14 +25	11 56 -12	37
4	- 1	- 6	- 9	-15	-12	- 7	- 8	- 6	- 5	- 5	- 1	- 3	- 6	- 7	- 7	- 6	- 3	+ 1	+ 8	+11	+13	+18	+23	+23	877	22 44 +26	03 33 -17	43
5	+ 3	- 2	- 8	-10	- 9	- 8	- 9	-11	- 7	-11	-11	- 7	- 8	- 9	- 9	- 6	- 3	- 1	+11	+19	+19	+22	+29	+28	885	23 15 +31	10 00 -16	47
6	+17	+12	+ 5	- 5	- 9	-12	-13	-11	- 9	- 7	- 6	- 6	- 7	- 8	- 8	- 7	- 5	- 1	+ 2	+ 5	+10	+17	+21	+19	890	22 20 +21	06 39 -13	34
7	+20	+15	+12	+14	+10	+ 3	-10	-23	-32	-27	-20	-18	-16	-13	-11	-10	- 8	- 4	+ 2	+10	+20	+27	+28	+22	880	22 03 +29	08 51 -33	62
8	+ 7	+ 3	+ 1	- 4	- 7	- 7	- 9	- 8	- 7	- 7	- 4	- 2	- 2	- 4	- 7	- 9	- 7	- 4	0	+ 5	+10	+17	+23	+22	885	22 04 +24	07 10 - 9	33
9	+26	+17	+14	- 1	-24	-33	-24	-16	-11	- 8	- 5	- 3	- 4	- 5	- 9	-10	- 8	- 3	+ 4	+ 9	+16	+25	+28	+23	872	00 00 +32	05 39 -34	66
10	+17	+17	+10	+ 8	+ 8	- 6	-15	-20	-22	-17	-14	- 1	- 6	- 8	- 6	- 4	+ 1	+10	+13	+13	+ 9	+ 3	+ 8	+ 6	876	01 27 +19	08 25 -24	45
11	+12	+ 4	- 6	-17	- 6	-15	-21	-15	- 3	- 3	- 8	-10	- 8	- 1	+ 4	+ 6	+ 6	+ 5	+ 8	+ 8	+ 8	+15	+22	+21	864	22 39 +37	06 33 -23	60
12	+12	+11	+ 8	0	-14	-21	-14	-24	-23	-23	-16	- 6	- 7	- 7	- 2	0	+ 3	+ 6	+10	+15	+19	+28	+28	+12	865	22 00 +33	07 28 -28	61
13																												
14																												
15	+33	+38	+28	+ 4	-10	-17	-20	-29	-37	-21	-25	-23	-15	-10	- 5	- 3	+ 5	+11	+18	+18	+22	+23	+20	+ 2	857	01 16 +39	08 24 -38	77
16	-24	-21	- 7	- 4	- 6	- 7	- 6	- 6	- 7	- 9	-11	-11	-11	-10	- 9	- 7	- 2	+ 3	+14	+19	+26	+33	+40	+32	872	22 27 +42	00 30 -25	67
17	+16	+13	+11	0	- 7	-11	-11	-11	-13	-14	-15	-16	-16	-14	-10	- 7	- 3	+ 5	+16	+19	+26	+24	+14	+ 5	879	20 39 +29	11 10 -18	47
18	+41	+25	+25	+16	+12	- 2	-16	-16	-16	-38	-30	-32	-45	-36	-23	-14	- 9	+ 2	+19	+27	+30	+28	+28	+20	824	00 00 +52	12 33 -50	102
19	-14	-33	-31	-24	-11	- 6	- 3	- 8	-13	- 7	- 6	- 2	- 6	- 3	- 3	- 1	+ 5	+12	+20	+27	+29	+25	+29	+25	851	20 31 +32	01 51 -39	71
20	- 4	- 9	-15	-14	- 9	-16	-14	-13	- 8	- 7	- 4	- 4	- 4	- 7	0	- 4	- 4	0	+ 5	+14	+25	+31	+33	+32	866	22 27 +34	05 22 -17	51
21																												
22																												
23	- 6	- 7	-15	-26	-27	-22	-20	-21	-22	-19	-13	-13	-13	-12	- 8	- 8	- 3	+ 3	+32	+36	+38	+48	+46	+41	876	21 46 +52	04 13 -29	81
24	+85	+75	+69	+48	-27	-38	-20	- 9	-24	-21	-40	-44	-44	-37	-25	- 9	- 5	- 1	+11	+17	+13	+ 7	+17	+ 9	836	00 53 +89	11 20 -61	150
25	-17	-16	-17	-17	-15	-11	- 8	- 7	- 5	- 1	+ 1	+ 2	+ 3	+ 6	+ 3	+ 3	+ 6	+ 3	+ 8	+ 9	+ 7	+17	+20	+24	849	23 12 +24	02 22 -22	46
26	+18	+24	+14	0	- 6	-11	- 8	-20	-12	-15	-14	-15	-13	- 9	- 6	+ 8	+14	+15	+25	+20	+ 9	+ 6	- 5	-22	856	01 24 +29	24 00 -29	58
27	-35	-23	-18	-13	-22	-16	-18	-13	-11	-11	- 9	- 4	- 4	- 4	- 3	+ 1	+ 4	+ 9	+17	+24	+34	+43	+36	+24	854	21 45 +46	00 25 -36	82
28	+24	+22	+ 9	-12	-36	-27	-31	-21	-15	-13	- 8	- 9	- 1	+ 1	+ 6	+ 3	+ 4	+ 8	+13	+15	+17	+17	+17	+15	857	00 34 +27	04 36 -38	65
29	- 7	-22	-21	-14	-12	-14	-11	-12	- 7	- 4	- 5	- 7	- 6	+ 1	+ 1	+ 2	+ 3	+ 8	+16	+19	+22	+28	+29	+22	870	22 30 +29	02 12 -24	53
30																												
31	+ 5	- 7	-15	-17	-15	-11	-11	-11	-11	-11	-11	-11	-11	- 9	- 9	- 7	- 4	0	+12	+26	+31	+36	+37	+29	881	22 15 +38	03 33 -18	56
MEAN.	+10	+ 5	+ 1	- 5	-11	-13	-13	-14	-14	-13	-12	-11	-11	- 9	- 6	- 4	0	+ 4	+12	+16	+19	+23	+24	+18	866			

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) June 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
+ 1	+12	+ 5	- 1	- 6	- 8	-10	-10	-11	- 7	- 6	- 6	- 7	- 8	- 8	- 8	- 5	0	+ 3	+11	+15	+16	+19	+18	+11	887	21 42 +21	07 51 -12	33
2	+22	+15	+ 4	-11	-20	-28	-25	-10	- 3	- 2	- 2	- 3	- 1	- 6	- 7	- 1	+ 4	+ 4	+11	+12	+13	- 5	+20	+19	868	00 00 +25	05 55 -31	56
3	+ 3	- 5	-13	-15	-15	-10	- 8	- 6	- 3	- 5	- 7	-13	-15	-19	-15	-10	- 6	+ 1	+ 1	+20	+27	+37	+39	+37	882	22 00 +41	13 36 -20	61
+ 4	+12	+ 2	- 4	- 9	-14	-14	-14	-14	-13	-13	-10	- 9	-10	- 9	- 4	- 4	- 2	0	+ 6	+12	+17	+30	+29	+24	890	21 45 +33	06 05 -15	48
5	+21	+ 9	0	+ 1	- 1	- 8	-15	-15	-15	-19	-14	-11	- 6	- 8	-10	- 5	- 3	- 1	+12	+26	+26	+28	+16	+ 1	892	21 20 +39	08 56 -22	61
6	+36	+19	+ 3	-14	-22	-37	-51	-41	-29	-18	-20	-13	- 1	+ 5	+ 5	+ 7	+16	+26	+30	+31	+30	+26	+15	+ 5	833	00 00 +48	06 06 -53	101
7	- 6	-17	-35	-50	-48	-33	-15	- 6	-14	- 6	- 8	- 9	0	+ 3	+ 3	+11	+12	+15	+19	+29	+33	+38	+43	+33	844	22 21 +45	04 53 -51	96
8	- 1	- 9	- 6	- 8	-14	-15	-11	-15	- 8	- 3	- 4	- 3	+ 1	+ 1	0	- 1	- 2	+ 1	+ 8	+11	+12	+20	+18	+21	862	23 25 +22	05 48 -17	39
9	+15	+14	+10	+ 1	-23	-19	-12	- 8	- 6	+ 1	- 8	-13	- 9	- 8	- 8	- 1	- 3	+ 1	+ 1	+ 6	+11	+16	+17	+14	867	22 40 +19	04 45 -27	46
10	- 1	- 1	+ 1	- 2	-11	-13	-19	-14	- 9	- 7	- 5	- 5	- 2	- 2	- 1	- 1	0	+ 2	+ 8	+12	+13	+16	+24	+24	875	23 07 +26	06 48 -20	46
+11	+ 7	+ 1	0	0	0	- 5	- 7	- 8	-12	-13	-11	-11	- 9	- 9	- 7	- 7	- 5	- 1	+ 5	+12	+15	+20	+22	+19	882	22 24 +24	09 22 -14	38
12	+ 2	- 4	- 5	- 8	- 9	-10	-11	-14	-16	-18	-16	-11	-11	- 8	- 7	- 5	- 2	+ 5	+15	+23	+19	+28	+28	+24	891	22 09 +31	09 18 -18	49
13	+ 9	+ 6	+ 4	+ 3	- 3	- 6	- 8	-10	-10	-11	-13	-13	-13	-13	-10	- 7	- 3	- 1	± 6	+13	+18	+21	+18	+13	897	21 37 +23	13 05 -14	37
14	+31	+30	+21	+16	+19	+21	+15	+ 9	+ 6	- 7	-10	- 3	- 7	-15	- 9	- 1	+ 4	+ 8	+10	- 5	-17	-26	-38	-49	879	01 05 +34	24 00 -56	90
15	-12	-10	-13	-21	-36	-43	-35	-32	-31	-14	- 3	-10	-11	- 4	- 2	+ 4	+ 7	+15	+26	+37	+42	+48	+49	+42	835	22 16 +50	05 43 -48	98
16	+10	- 3	-10	-11	- 9	- 6	- 6	- 6	- 3	-18	-18	-13	-13	- 9	0	+ 1	+ 3	+ 5	+13	+20	+24	+19	+17	+15	859	20 44 +25	10 17 -24	49
17	+ 8	+ 4	- 4	-17	-11	- 6	-14	-22	-22	-13	- 6	- 7	- 4	- 4	- 3	- 4	0	+ 2	+13	+17	+19	+24	+31	+31	859	22 57 +33	07 54 -28	61
18	+28	+16	+ 5	-16	-30	-34	-25	-32	-25	-20	-11	- 2	- 3	- 7	- 8	- 7	- 3	+ 2	+14	+26	+29	+37	+39	+32	855	22 06 +40	05 57 -43	83
19	+ 8	- 2	- 6	- 5	- 8	-26	-21	-12	-12	-14	-14	-10	- 3	- 4	- 5	- 7	- 6	- 3	+ 7	+18	+25	+33	+36	+35	867	22 23 +37	05 36 -27	64
20	+24	+21	+ 3	- 9	-14	-17	-15	-14	- 9	- 8	- 9	- 9	-11	- 7	- 6	- 6	- 6	- 5	+ 2	+ 9	+15	+24	+24	+19	876	01 06 +31	05 17 -19	50
21	+15	+12	+ 7	- 4	- 8	-12	-17	-16	-12	- 7	- 5	- 5	- 5	- 4	- 2	- 1	0	+ 1	+ 7	+14	+13	+14	+14	+12	876	00 00 +15	06 49 -21	36
22	+ 3	- 1	- 4	- 8	-10	-11	-16	-18	-16	-13	- 9	-10	+ 7	+ 7	0	0	+ 2	+ 5	+12	+17	+18	+20	+19	+17	885	21 33 +20	07 52 -18	38
23	+14	- 3	-10	-11	-11	-12	-12	-11	-10	- 9	- 9	- 6	- 5	- 4	- 3	- 2	- 2	+ 3	+11	+15	+20	+22	+21	+23	881	23 51 +25	06 20 -13	38
24	+37	+28	+17	+ 5	- 4	-15	-12	-10	- 8	-12	- 7	- 3	- 4	+ 4	- 5	- 7	-10	-13	-11	+ 2	+11	+17	+12	0	868	00 15 +42	08 32 -21	63
25	+65	+66	+65	+50	+18	+11	+14	+21	+29	+13	- 1	+13	+18	+17	-44	-55	-55	-51	-50	-42	-32	-23	-20	-22	804	03 03 +87	15 06 -69	156
26	-38	-34	-31	-30	-22	-22	-17	-17	-16	- 1	- 6	- 4	- 2	- 1	+ 3	+ 4	+ 7	+22	+23	+31	+33	+43	+46	+33	817	21 48 +51	00 57 -42	93
27	+ 9	+ 8	0	- 6	- 8	- 9	-11	-12	-14	-14	- 9	- 8	- 6	- 9	- 8	- 7	- 2	0	+ 5	+ 9	+15	+23	+30	+30	840	22 50 +32	08 52 -15	47
28	+ 6	- 3	- 5	- 6	- 7	- 9	-11	-11	-13	-14	-14	-11	- 9	- 8	- 7	- 2	0	0	+ 9	+16	+17	+22	+29	+33	856	23 28 +33	10 00 -15	48
29	+13	+14	+ 7	- 3	- 7	-11	-12	-11	-12	-12	-13	-13	-13	-14	-15	-13	-10	- 9	+ 8	+18	+20	+28	+27	+23	875	21 40 +29	14 20 -17	46
30	+32	+25	+ 2	- 5	- 8	- 6	- 5	- 5	- 7	- 7	-10	- 8	- 8	-11	-13	-13	-11	- 7	+ 4	+ 7	+ 9	+18	+17	+ 9	861	00 09 +35	14 30 -14	49
31																												
MEAN.	+13	+ 7	0	- 7	-12	-14	-14	-12	-11	-10	- 9	- 8	- 5	- 5	- 7	- 5	- 3	+ 1	+ 8	+14	+17	+21	+22	+18	865			

[200] 1/39—17185

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) July 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+ 1	- 7	-17	-17	-17	-16	-14	-10	- 7	- 7	- 5	- 4	- 7	- 6	- 5	- 3	0	+ 3	+12	+17	+19	+25	+29	+29	866	23 05 +31	02 26 -19	50
+ 2	+12	+ 5	- 2	- 9	-13	-12	-10	- 8	- 7	- 8	- 7	- 9	-10	-10	-10	- 7	- 5	0	+ 7	+11	+14	+22	+24	+24	875	23 58 +26	04 13 -14	40
3	+24	+15	+ 8	+ 2	- 2	-10	-21	-29	-21	-18	-18	-21	-18	-12	- 2	- 2	+ 2	+ 8	+17	+24	+34	+36	+12	- 4	870	21 12 +40	07 33 -32	72
4	- 7	-10	-14	-16	-32	-27	-17	- 9	- 8	+ 5	+ 4	+ 4	+ 3	- 2	- 2	- 1	+ 7	+11	+18	+23	+24	+21	+14	+ 4	849	20 57 +26	04 33 -35	61
5	- 7	- 3	- 3	-10	-13	-14	-14	-15	-15	- 7	- 9	- 9	- 8	+ 1	- 1	- 1	- 2	+ 1	+ 8	+13	+23	+27	+25	+27	862	22 51 +30	06 12 -17	47
6	+18	+ 5	-11	-21	-19	-23	-19	-16	-10	- 6	- 4	- 4	- 2	+ 1	0	- 2	+ 1	+ 3	+ 8	+13	+11	+20	+24	+24	865	23 20 +26	03 53 -25	51
7	+17	+10	+ 4	- 1	- 6	- 7	- 8	-10	- 9	- 9	- 9	- 7	- 6	- 5	- 2	- 2	- 5	- 6	- 1	+ 5	+ 7	+12	+14	+13	868	00 24 +17	07 26 -12	29
8	+ 8	- 1	-13	-18	-18	-15	-18	-18	-15	-13	-13	- 9	- 4	- 5	- 4	- 5	- 2	+ 1	+ 7	+13	+21	+32	+42	+47	874	23 21 +56	04 05 -19	75
9	+22	+15	+ 6	- 7	- 7	-17	-16	-20	-16	-14	-14	-14	-16	- 9	-13	- 4	+ 4	+ 5	+15	+21	+25	+30	+17	+13	882	21 14 +34	07 56 -23	57
10	+31	+17	+16	+23	-10	- 9	-11	-24	-28	-18	-31	-31	-18	- 5	- 5	- 3	+ 1	+ 4	+ 6	+11	+13	+23	+25	+26	858	00 00 +37	11 02 -35	72
11	+15	- 5	-11	-12	-18	-13	-13	-12	-12	- 4	- 7	- 7	- 9	- 7	- 4	0	+ 3	+ 5	+ 9	+13	+13	+18	+27	+29	866	23 07 +30	04 13 -25	55
12	+14	+10	0	- 6	-14	-10	-10	- 9	- 8	- 7	- 9	- 7	- 7	- 5	- 5	- 2	0	0	+ 5	+ 7	+ 7	+12	+17	+17	876	22 56 +19	04 50 -17	36
13	+40	+34	+25	+17	+19	+18	+13	+ 6	+13	+14	+21	- 1	+13	0	-24	-42	-36	-38	-30	-24	-18	- 6	- 2	- 8	849	00 00 +43	15 27 -45	88
14	- 8	-19	-12	-25	-24	-15	- 1	- 2	-12	- 4	+ 5	0	- 3	- 3	- 6	- 4	+ 4	+ 9	+14	+19	+20	+25	+25	+20	842	22 09 +27	03 58 -39	66
15	+ 3	- 3	-19	-24	-19	-11	- 8	- 9	- 1	- 3	- 1	- 5	- 5	- 3	- 1	+ 2	+ 2	+ 3	+ 8	+12	+17	+20	+20	+19	854	20 56 +21	03 27 -27	48
16	- 3	-12	-14	-14	-16	-14	-13	-10	- 5	0	- 3	- 4	- 4	- 6	- 7	- 5	0	+ 1	+ 7	+14	+19	+26	+31	+31	867	23 29 +32	02 03 -17	49
+17	+23	+10	- 2	- 8	- 9	-10	- 8	- 7	-10	-13	-11	- 9	- 8	- 7	- 6	- 6	- 6	- 3	+ 6	+12	+14	+17	+18	+17	870	00 00 +26	09 46 -15	41
+18	+ 4	- 2	- 4	-10	-12	-10	- 9	- 7	- 7	- 7	- 7	- 7	- 9	- 9	-11	- 9	- 7	- 4	+ 5	+15	+20	+26	+27	+28	878	23 53 +29	04 57 -14	43
19	+22	+13	+ 4	- 7	-12	-12	-13	-13	-14	-10	- 9	- 9	- 7	- 8	- 9	- 8	- 6	- 3	+ 4	+12	+16	+24	+27	+21	884	22 22 +30	08 19 -14	44
+20	+ 9	+ 4	- 2	-10	-14	-13	-10	-14	-14	-15	-13	-13	-12	- 9	- 8	- 8	- 5	- 1	+ 9	+18	+24	+28	+35	+35	890	23 37 +37	08 40 -16	53
21																												
22																												
23	+ 9	0	+ 3	+ 3	- 5	-14	-16	-17	-14	-11	- 8	- 8	- 5	- 3	- 4	- 5	- 2	+ 2	+ 6	+ 9	+13	+22	+24	+19	872	22 30 +27	07 01 -18	45
24	+16	+12	+ 7	- 8	-18	-16	-15	-10	-13	-17	- 6	- 4	- 3	- 5	- 4	- 5	- 3	- 3	+ 7	+15	+21	+20	+18	+ 9	873	21 00 +23	09 33 -22	45
25	- 4	- 8	- 5	0	-11	-20	-11	-27	-32	-18	- 7	- 7	- 6	- 4	- 1	+ 1	+ 3	+ 6	+13	+19	+25	+32	+34	+31	869	22 24 +34	08 16 -34	68
26	+12	+ 6	0	-11	-13	-14	-13	-12	- 7	- 5	- 6	- 8	- 8	- 6	- 4	- 4	0	+ 4	+ 8	+11	+13	+19	+23	+25	876	23 33 +26	05 27 -15	41
+ 27	+12	+13	+ 4	-10	-14	-18	-20	-20	-18	-14	-15	-15	-15	-13	-10	- 9	- 6	0	+ 9	+16	+22	+31	+37	+42	891	23 40 +45	07 22 -22	67
28	+37	+30	+20	+ 9	+ 3	- 3	- 6	-11	-16	-18	-25	-17	-20	-21	-18	-16	-12	- 6	+ 6	+18	+25	+25	+15	+ 8	889	00 00 +43	10 49 -30	73
29	+ 8	+ 5	0	-1	- 4	- 4	-12	-12	-12	-13	-17	-17	-17	-12	- 5	- 2	- 1	+ 5	+10	+20	+20	+18	+23	+29	890	24 00 +31	12 21 -18	49
30	+34	+27	+23	+15	- 7	- 8	- 2	- 4	- 7	-22	-30	-21	-14	- 9	- 6	0	+ 3	+ 7	+10	+ 7	+ 7	+ 5	- 2	- 4	885	00 01 +36	10 11 -32	68
31	+10	- 3	-18	-28	-16	-20	-10	-11	-12	- 3	- 7	- 9	-10	- 5	- 3	0	+ 4	+ 5	+13	+22	+24	+26	+33	+26	868	22 20 +35	03 29 -31	66
MEAN.	+13	+ 5	- 1	- 7	-12	-12	-11	-12	-12	- 9	- 9	- 9	- 8	- 6	- 6	- 5	- 2	+ 1	+ 7	+13	+17	+22	+23	+21	871			

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) August 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+10	0	-30	-15	- 7	- 7	- 4	- 4	- 4	- 3	- 3	- 3	- 3	- 5	- 5	- 3	- 2	0	+ 6	+15	+19	+19	+12	+ 9	873	21 00 +24	02 24 -33	57
2	+ 3	+ 3	-11	-18	-16	-12	-10	- 7	- 9	-12	-13	-12	-12	-12	-10	-10	- 5	0	+ 8	+22	+33	+36	+34	+30	882	21 57 +37	03 33 -18	55
3	+54	+53	+45	+35	+30	+17	+ 3	-26	-28	-31	-27	-38	-34	-29	-29	-29	-27	- 6	- 1	+ 1	+10	+14	+17	+17	849	00 00 +58	12 00 -43	101
4	+ 2	- 4	- 9	-12	-18	-23	-21	-23	-16	- 9	- 7	- 2	- 2	- 4	- 2	- 2	- 2	0	+ 7	+13	+22	+30	+38	+36	859	23 03 +39	05 45 -23	62
5	+17	+ 6	-10	-17	-17	-13	- 8	-10	-13	- 9	- 7	-10	-14	-13	- 8	- 6	- 3	+ 1	+11	+22	+25	+20	+26	+28	873	23 24 +30	03 33 -20	50
6	+27	+ 8	- 4	-10	-10	-10	-12	-13	- 5	-11	-13	- 8	-13	-11	- 5	- 5	- 1	+ 1	+ 9	+18	+18	+22	+25	+14	864	00 00 +32	10 28 -15	47
7	+11	+ 8	+ 6	+ 1	- 2	- 4	-13	-18	-17	- 4	-13	-17	-18	-17	-13	-12	- 9	- 3	+ 8	+16	+23	+31	+32	+32	866	22 49 +35	08 54 -22	57
8	+33	+16	- 6	-12	- 7	- 2	-14	-25	-24	-19	- 8	-14	-14	- 2	- 5	- 4	0	+ 2	+ 7	+11	+16	+21	+26	+31	858	23 44 +38	08 06 -28	66
9	+40	+32	+26	+21	+15	+ 9	- 3	+ 4	+ 3	- 1	-10	- 1	- 1	-11	-16	-15	- 8	+ 4	- 6	-14	-12	-12	-17	-16	845	00 00 +45	22 39 -21	66
10	-16	-11	-15	-20	-16	-11	-11	-12	-17	-17	- 5	- 7	- 9	- 9	- 3	- 2	0	+ 3	+10	+16	+25	+32	+40	+43	853	23 20 +45	03 21 -20	65
11																												
12	+18	+16	+ 2	-12	-18	-11	-16	-18	-12	-12	-17	-18	-18	-16	-11	- 3	+ 4	+ 7	+11	+16	+25	+30	+33	+29	862	22 45 +34	10 54 -21	55
13	+17	+11	- 4	-14	-11	-15	-16	-16	-17	-20	-20	-16	-16	-15	-13	- 9	- 5	0	+11	+24	+34	+40	+41	+39	870	22 12 +42	09 41 -21	63
14	+29	+16	- 3	-12	-17	-11	- 4	- 5	-15	-21	-26	-20	-17	-20	-17	-15	-10	- 4	+ 7	+22	+34	+41	+40	+31	876	21 12 +43	10 54 -30	73
+15	+13	+ 4	- 5	-13	-16	-14	-11	- 8	-10	-11	-10	-10	-10	-10	- 7	- 7	- 5	0	+ 8	+15	+22	+27	+28	+26	883	22 00 +28	05 18 -14	42
+16	+14	+ 7	- 4	- 9	- 8	- 7	- 9	-18	-20	-14	-12	- 9	- 9	- 9	- 9	- 8	- 4	+ 1	+11	+19	+24	+30	+31	+24	890	22 13 +34	08 12 -24	58
+17	+ 8	- 2	-11	-18	-18	-13	-10	-10	-11	-11	-11	-10	-10	-10	-10	- 8	- 8	- 2	+ 5	+15	+25	+36	+46	+41	896	22 23 +47	04 34 -19	66
18	+36	+20	+ 8	+ 4	+ 6	+ 7	+ 4	+ 1	- 5	-14	-21	-24	-17	-19	-20	-15	-15	-14	+ 5	+ 7	+12	+21	+22	+22	890	00 00 +43	11 30 -26	69
19	+18	- 2	-14	-22	-19	-14	-16	-17	-17	-14	-12	- 9	- 9	- 9	- 9	-12	- 7	- 5	+ 8	+27	+38	+45	+45	+33	878	21 24 +47	03 47 -22	69
20	+28	+10	- 6	-14	-26	-37	-38	-31	-22	-20	-16	-10	- 4	- 4	- 1	- 1	+ 1	+ 6	+12	+24	+30	+36	+41	+49	870	23 25 +49	06 29 -41	90
21	+27	+18	+11	- 3	-15	-13	-18	-15	-15	-15	-15	-18	-15	-12	-13	-11	-11	- 7	+ 1	+12	+20	+27	+33	+35	884	23 19 +37	04 22 -18	55
22	+22	+11	+ 3	- 2	- 4	- 1	- 1	- 1	- 3	- 9	-11	-11	-11	-12	-16	-19	-18	-14	- 7	+ 5	+12	+25	+32	+27	889	22 40 +34	15 04 -19	53
23	+23	+16	+ 3	-11	-18	-17	-18	-19	-17	-17	-16	-15	-13	-12	-11	-12	-10	-10	0	+18	+28	+38	+42	+44	888	23 46 +45	04 13 -19	64
+24	+31	+21	+ 8	- 4	-15	-17	-18	-20	-21	-22	-22	-22	-22	-20	-17	-15	-15	-11	- 4	+11	+23	+55	+55	+54	898	22 34 +57	09 24 -22	79
25	+48	+39	+22	+ 5	- 8	-16	-18	-21	-23	-24	-23	-23	-23	-21	-18	-14	-10	-10	- 3	+ 8	+25	+30	+33	+38	904	00 23 +51	09 45 -24	75
26	+31	+14	+ 8	+ 8	+ 4	+ 3	- 2	- 4	- 7	-15	-12	-12	-16	-20	-15	-15	-12	- 3	+ 6	+12	+23	+28	+ 3	+ 3	898	00 00 +43	13 54 -21	64
27	+12	- 4	- 6	-10	-12	-15	-13	-22	-23	-20	-18	-18	-16	-13	-11	- 6	- 4	+ 1	+14	+32	+34	+38	+43	+33	882	22 37 +47	08 08 -28	75
28	+11	+ 4	- 2	-20	-18	-14	-14	-16	-11	-16	-10	- 6	-11	-14	-10	- 6	- 4	+ 1	+10	+20	+32	+38	+33	+22	887	21 21 +39	03 48 -23	62
29	+13	0	- 5	- 6	- 9	-10	- 9	- 9	-14	-15	-15	-18	-22	-16	-14	-13	-11	- 5	+10	+25	+34	+37	+34	+28	891	21 51 +38	12 28 -22	60
+30	+12	- 3	-11	-13	-12	-11	-11	-12	-13	-13	-13	-12	-11	-11	-11	- 9	- 8	- 3	+12	+22	+29	+36	+38	+25	894	22 14 +40	03 27 -13	53
31	+12	+ 2	- 7	-11	-11	-11	-12	-14	-12	-11	-12	-16	-19	-19	-19	-16	-12	- 6	+ 6	+20	+32	+49	+50	+42	892	21 47 +55	13 44 -20	75
MEAN.	+20	+10	- 1	- 7	-10	-10	-11	-14	-14	-14	-14	-14	-14	-13	-12	-10	- 7	- 3	+ 6	+16	+24	+31	+32	+29	878			

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) September 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+53	+27	- 7	-14	- 4	- 4	-22	-22	- 9	- 7	-14	- 7	-12	- 6	-12	- 7	-14	-17	- 9	+ 6	+15	+27	+33	+33	863	00 00 +60	06 56 -26	86
2	+16	+ 4	- 3	- 5	- 7	- 5	- 5	- 7	-15	-14	- 3	-13	-20	-10	-10	-18	-16	-10	- 4	+ 7	+25	+31	+40	+37	869	22 51 +47	12 53 -21	68
3	+28	+ 9	+ 9	+ 7	+ 2	-18	-42	-36	-21	-16	-11	- 2	- 4	- 6	- 6	- 6	- 1	- 1	+ 4	+14	+18	+21	+28	+39	855	00 00 +41	06 56 -44	85
4	+31	+ 6	0	+ 4	- 7	- 9	- 6	- 9	-14	-28	-11	-11	-16	-14	-11	- 9	- 6	- 5	+ 1	+12	+22	+23	+26	+26	860	00 08 +36	09 39 -34	70
5	+12	- 1	-15	-20	-17	-16	-13	-12	-12	-15	-12	- 5	- 7	- 5	- 7	- 7	- 2	0	+ 6	+17	+24	+35	+43	+34	866	22 09 +44	03 36 -21	65
6	+41	+ 7	- 4	-11	-10	-12	-12	-20	-26	-28	-20	-20	-19	-12	-10	- 7	- 5	- 3	+ 5	+16	+25	+33	+39	+41	876	23 57 +45	09 39 -28	73
7	+63	+30	+ 3	- 9	-31	-37	-48	-43	-43	-39	-14	- 2	- 9	- 5	+ 3	- 2	+ 5	+ 8	+13	+23	+30	+30	+32	+30	846	00 00 +75	06 50 -53	128
8	+ 4	+ 9	+11	+ 2	-11	-13	-13	-16	-19	-25	-31	- 6	-14	- 8	-11	- 6	+ 2	- 1	+ 3	+13	+21	+34	+43	+44	862	23 28 +47	10 36 -37	84
9	+20	+ 1	- 4	+ 1	+ 5	- 4	- 6	- 6	-10	-15	-19	- 5	-11	-11	-10	- 9	- 4	0	0	+ 4	+13	+21	+25	+20	865	23 45 +27	10 45 -22	49
+ 10																												
11																												
+ 12	+23	+ 9	- 5	-12	- 8	- 7	- 7	-10	-16	-19	-15	-12	-12	-15	-12	-10	- 6	- 2	+ 6	+16	+22	+28	+31	+28	888	22 36 +32	09 48 -19	51
13	+ 5	- 5	- 9	-10	-13	-15	-15	-16	-15	-15	-15	-15	-13	- 9	- 5	- 9	- 5	- 1	+ 8	+15	+25	+38	+49	+46	901	22 48 +50	07 40 -16	66
14	+33	+20	+11	0	- 6	- 4	- 7	-13	-10	- 7	- 7	- 7	-10	-10	-11	-18	-16	-15	- 5	+13	+15	+25	+22	+ 8	901	00 00 +41	15 29 -20	61
15	+27	+16	+ 5	- 2	+ 6	-21	-19	-24	-27	-19	-16	-15	-16	-14	- 6	- 9	- 6	0	+ 6	+13	+23	+30	+36	+39	875	23 54 +44	07 28 -31	75
16	+34	+15	+ 1	- 4	- 8	- 8	-18	-13	-12	-11	-11	- 6	-02	- 6	-11	-10	-13	-11	- 6	- 4	+14	+21	+28	+32	877	00 00 +39	06 20 -21	60
+ 17	+16	+ 1	- 7	-12	-14	-15	-16	-18	-16	-16	-15	-14	-12	-12	-10	- 9	- 5	-4	+ 3	+16	+25	+36	+44	+52	885	23 30 +54	07 35 -19	73
18	+29	+10	- 6	-15	-16	-15	-16	-19	-19	-19	-20	-20	-19	-17	-16	-14	-14	- 9	+ 4	+22	+33	+47	+53	+55	897	23 40 +56	11 09 -21	77
+ 19	+47	+26	+10	- 1	- 9	-11	-12	-17	-16	-16	-17	-19	-19	-19	-17	-19	-17	-16	-10	+ 1	+17	+35	+49	+58	897	23 33 +59	15 18 -20	79
20	+50	+31	+17	+ 6	- 2	- 7	-10	- 7	-12	-15	-15	-20	-15	-12	-16	-27	-27	-22	-12	0	+ 8	+26	+44	+44	898	00 00 +54	16 01 -29	83
21	+51	+42	+28	+17	+ 7	- 4	- 6	-16	-21	-25	-21	-31	-11	-21	-23	-26	-21	-16	- 9	- 1	+10	+19	+30	+38	887	00 00 +55	11 33 -38	93
22	+44	+39	+32	+18	+ 3	- 7	-11	-16	-26	-20	-16	-21	-23	-21	-12	-11	-11	-11	- 4	+ 6	+13	+16	+22	+27	882	00 21 +46	09 24 -33	79
+ 23	+15	+ 5	- 3	- 6	- 8	- 8	-10	-13	-13	-13	-13	-15	-17	-13	-13	-10	-10	- 6	- 1	+ 8	+19	+30	+40	+43	886	23 49 +46	13 06 -19	65
24	+38	+26	+10	- 2	-10	-12	-16	-15	-17	-18	-19	-18	-17	-15	-15	-12	-10	- 5	+ 2	+10	+19	+31	+38	+35	888	00 00 +44	10 45 -19	63
25	+38	+22	+10	+ 5	+ 2	-12	-20	-10	- 7	-10	-15	-17	-16	-15	-10	-10	-10	- 7	- 3	0	+15	+25	+18	+25	876	00 00 +44	06 12 -25	69
26	+34	+24	+14	+ 9	+ 7	+ 5	+ 2	0	- 2	- 2	- 3	- 3	- 3	0	+ 2	0	+ 7	+ 7	-32	-39	-27	-13	0	+ 8	864	00 12 +37	18 03 -44	81
27	+21	- 9	-39	-41	-41	-46	-27	-20	-22	-10	- 5	+ 2	+ 4	+ 4	+ 6	+10	+ 4	+10	+21	+29	+36	+46	+39	+26	825	21 48 +55	03 00 -49	104
28	+17	+12	+ 1	-15	-29	-45	-29	-38	-40	-39	0	- 2	- 9	+ 4	+11	+ 7	+10	+15	+16	+27	+26	+31	+28	+33	822	23 57 +34	08 54 -50	84
29	+ 6	-11	-16	-12	-17	-21	-18	-17	-13	+19	-11	- 6	- 9	-11	- 2	- 2	- 5	- 2	+ 5	+16	+17	+28	+37	+38	850	23 57 +38	06 03 -24	62
30	+21	+22	+ 3	- 5	- 7	- 9	-10	-12	-12	-12	-12	-12	-10	-10	-10	-10	-10	- 9	0	+10	+10	+22	+36	+38	866	23 17 +40	10 45 -13	53
31																												
MEAN.	+29	+14	+ 2	- 5	- 9	-14	-15	-17	-17	-16	-14	-11	-12	-10	- 9	- 9	- 7	- 5	0	+10	+18	+28	+34	+35	872			

[200/1/39—17185

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) October 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1		+47	+23	+ 8	- 2	-13	-19	- 6	- 5	-12	0	+ 4	-13	-17	-17	- 8	- 5	+13	+10	- 2	-11	- 6	0	+16	+23	839	00 00 +63	19 20 -22	85
2		+13	+ 3	-10	-14	-19	-17	-14	-14	-14	-12	-17	+ 1	- 5	0	- 2	- 5	- 2	+ 5	- 2	+10	+21	+30	+35	+39	844	24 00 +39	10 48 -21	60
3		+41	+33	+19	+ 2	-20	-31	-32	-27	-32	-27	-25	-24	-20	-17	- 8	- 6	- 6	- 1	- 1	- 3	+33	+44	+50	+49	840	22 33 +52	06 42 -36	88
4		+25	+ 6	-15	-24	-27	-27	-13	-11	-10	- 9	- 7	- 5	- 5	0	- 2	- 4	- 5	- 4	+ 1	+ 8	+18	+27	+38	+38	854	23 03 +39	05 06 -32	71
5		+19	0	- 8	-21	-24	-23	-28	-26	-18	-17	-17	-16	-13	- 8	+ 4	+ 2	+ 3	+ 4	+ 7	+14	+29	+37	+44	+49	860	23 51 +49	05 18 -30	79
6		+35	+26	+13	+ 6	- 1	- 9	-14	-19	-19	-16	-16	-21	-24	-11	-11	-15	-16	- 9	- 4	+ 8	+21	+29	+34	+24	873	00 00 +36	07 39 -70	106
7		+60	+52	+43	+28	+ 9	-13	-32	-35	-48	-53	-27	-18	+ 3	- 9	- 3	- 3	- 6	+ 4	+ 9	+ 1	- 2	+ 7	+14	+10	816	00 00 +70	09 05 -60	130
8		+10	-14	-33	-53	-47	-51	-58	-49	-48	-40	-33	-22	- 9	+ 8	+15	+32	+36	+34	+47	+47	+59	+52	+59	+52	800	20 42 +67	06 09 -61	128
9		- 1	- 2	- 7	-15	-17	-20	-18	-20	-21	-22	-20	-22	-18	-16	-13	- 7	0	+ 5	+15	+30	+43	+52	+53	+49	854	22 36 +53	09 30 -24	77
10		+35	+23	+12	-21	- 3	- 4	- 9	-10	-11	-13	-16	-14	-14	-19	-16	-11	- 6	- 5	- 1	+ 6	+16	+26	+31	+27	863	00 00 +37	11 00 -20	57
11		+16	+ 5	- 4	-11	-16	-16	-16	-20	-19	-18	-18	-16	-19	-16	- 9	- 8	- 6	- 6	- 1	+15	+31	+45	+53	+49	868	22 52 +55	07 54 -21	76
12		+32	+18	+ 2	-10	-15	-17	-17	-17	-17	-17	-17	-24	-20	-15	-12	-10	- 7	0	+ 6	+15	+27	+35	+35	+39	879	23 49 +41	11 36 -27	68
+ 13		+30	+13	- 5	-11	-15	-15	-14	-15	-17	-12	-14	-15	-15	-17	-15	-12	- 7	- 7	- 1	+10	+25	+41	+48	+46	879	22 42 +50	08 15 -17	67
+ 14		+24	+ 9	- 4	-12	-12	-14	-14	-12	-12	-14	-14	-16	-15	-14	-14	-14	-13	-12	- 4	+12	+26	+39	+47	+47	888	23 20 +47	11 54 -16	63
15		+39	+32	+19	+19	+ 9	- 8	-21	-17	-14	- 7	- 4	-14	-19	- 9	-10	-17	-19	-20	-23	- 4	+14	+27	+28	+29	893	00 27 +41	06 33 -26	67
16		+35	+22	+10	- 1	- 7	-11	-16	-22	-17	-14	-17	-12	- 8	- 9	- 9	-12	- 8	-12	-11	- 2	+ 8	+28	+44	+45	876	22 42 +46	07 51 -24	70
17		+34	+19	+ 9	- 9	-19	-19	-19	-19	-19	-16	-16	-15	-14	-14	-14	-14	-12	- 7	+ 2	+14	+28	+43	+44	+43	888	21 57 +50	07 00 -21	71
18		+42	+28	+19	+10	+ 3	- 2	-19	-39	-32	-29	-22	-14	-12	- 8	- 7	- 2	0	- 2	- 4	0	+18	+16	+22	+33	876	00 00 +47	07 14 -46	93
19		+39	+29	+18	+ 1	- 9	-14	-19	-26	-30	-31	-24	-14	- 6	- 4	-10	- 9	- 8	- 6	+ 1	+11	+24	+22	+35	+39	868	00 00 +44	09 42 -34	78
20		+30	+18	+ 2	-12	-17	-17	-17	-15	-15	-15	-17	-15	-12	-10	-10	-10	- 9	- 7	0	+10	+23	+38	+43	+35	874	22 45 +46	09 19 -20	66
21		+31	+23	+10	0	- 8	-14	-19	-17	-17	-14	-19	- 7	-13	-11	- 7	- 8	- 4	- 4	- 7	0	+19	+23	+33	+26	876	22 15 +41	10 09 -22	63
22		+33	+24	+ 6	- 1	-13	-22	-18	-23	-26	-20	-18	- 6	- 6	-16	-16	-16	-13	-10	- 2	+10	+24	+36	+42	+48	870	24 00 +51	06 02 -36	87
+ 23		+40	+33	+18	+ 4	- 7	-14	-17	-17	-19	-19	-19	-19	-19	-18	-17	-14	-13	-12	- 5	+ 8	+21	+28	+36	+35	881	00 15 +41	11 30 -22	63
+ 24		+27	+18	+ 8	0	- 5	- 9	-12	-14	-13	-14	-13	-17	-16	-13	-12	-12	- 8	- 7	- 7	+ 3	+18	+31	+40	+36	881	22 36 +41	12 00 -17	58
25		+ 6	- 6	-11	-15	-19	-24	-24	-24	-22	-21	-24	-26	-22	-19	-11	- 2	+ 8	+20	+35	+43	+80	+59	+12	+12	905	20 36 +96	11 44 -29	125
26		+50	+42	+ 9	+14	+13	+13	+13	+17	+17	+11	- 5	- 6	+ 1	- 5	- 6	-13	+ 2	-25	-44	-31	-21	-18	-13	- 7	875	00 11 +50	18 21 -49	99
27		+17	+ 2	-11	-18	-31	-30	-20	-13	-18	-16	-11	+ 2	- 2	- 3	0	- 2	+ 2	+ 2	+ 9	+18	+29	+34	+31	+24	850	21 51 +36	04 45 -35	71
28		+ 8	- 2	-10	-11	-10	- 7	-10	-15	-17	-15	- 7	-12	-12	- 7	- 7	-10	- 7	- 7	- 5	+ 6	+20	+38	+45	+50	864	23 28 +52	08 30 -20	72
29		+37	+23	+ 2	-17	-27	-25	-22	-21	-21	-20	-17	-12	-12	-11	-12	-14	-10	- 5	+ 2	+18	+35	+46	+48	+43	874	22 06 +49	04 39 -27	76
+ 30		+22	+10	+ 1	- 8	-10	-13	-15	-14	-17	-17	-15	-13	-13	-13	- 9	- 8	- 6	- 3	+ 2	+13	+27	+35	+38	+38	882	23 03 +41	08 45 -18	59
31		+40	+28	+21	-14	+ 1	- 4	- 9	-12	-12	- 2	-12	-14	-13	- 9	-11	- 9	- 9	-13	- 9	- 4	+ 8	+ 8	+13	+45	871	00 00 +43	08 00 -14	57
MEAN.		+30	+17	+ 4	- 7	-12	-16	-18	-18	-19	-17	-16	-14	-13	-11	- 9	- 8	- 4	- 3	0	+ 9	+23	+31	+35	+36	866			

Horizontal Intensity

G.M.T. (H = 34000γ + Mean + ...) November 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+22	+15	+12	+ 6	+ 9	+12	- 6	-22	-32	-21	-16	-16	-23	-16	- 6	- 7	- 9	-11	- 7	+ 1	+14	+25	+36	+38	868	23 15 +39	08 41 -37	76
2	+25	+18	+31	- 6	-10	-12	-17	-22	-32	-32	-22	-13	-15	-12	-12	-11	- 8	- 5	+ 3	+13	+22	+36	+44	+46	879	23 18 +48	08 57 -37	85
3	+51	+42	+29	+13	- 3	-18	-16	-15	-22	-35	- 8	-19	-27	-24	-18	-13	-10	- 8	- 5	+ 2	+15	+23	+33	+38	867	00 03 +56	09 24 -37	93
4	+45	+31	+17	+ 7	- 1	-11	-20	-11	- 8	- 6	- 3	+ 2	+ 2	+ 4	- 2	- 6	-14	-20	-23	-11	- 1	+ 8	+ 9	+17	860	00 04 +47	18 00 -27	74
5	+10	+10	+ 4	-12	-22	-30	-25	-14	-25	-30	-20	- 3	+ 2	+ 7	+ 2	0	+ 2	+ 2	+ 5	+12	+16	+28	+34	+38	857	23 35 +40	09 30 -31	71
6	+21	+16	+ 8	- 5	-16	-23	-22	-22	-17	-12	-15	-17	-17	-17	-12	-10	-10	- 7	- 5	+ 4	+26	+40	+51	+58	874	23 42 +59	05 38 -25	84
7	+54	+43	+23	+ 3	-10	-18	-16	-25	-30	-23	-23	- 8	- 5	-15	-18	-15	-13	-10	- 8	0	+11	+25	+38	+43	877	00 00 +57	08 36 -32	89
+ 8	+37	+23	+ 8	- 5	-15	-20	-20	-22	-21	-22	-22	-22	-20	-18	-15	-10	- 5	+ 2	+ 3	+11	+26	+39	+49	+46	874	22 45 +50	11 00 -23	73
9	+56	+46	+32	+18	+ 8	- 5	-11	-17	-27	-32	-29	-35	-39	-19	-17	-19	-17	-19	-12	- 1	+18	+33	+46	+48	859	00 00 +59	12 36 -42	101
+10	+26	+13	- 2	-12	-17	-20	-20	-22	-20	-20	-17	-15	-15	-15	-13	-12	-10	- 6	+ 1	+13	+28	+41	+57	+59	879	23 15 +62	07 45 -22	84
+11	+36	+20	+ 7	0	-10	-15	-15	-14	-13	-14	-15	-15	-15	-15	-15	-15	-13	-13	- 7	+ 7	+20	+34	+43	+39	895	22 48 +46	12 45 -15	61
12	+48	+32	+17	+ 7	- 1	- 2	+ 2	+10	+12	- 6	-28	-30	-19	-14	-11	- 6	+ 2	+ 3	- 1	+10	+ 2	- 3	-11	-23	875	00 00 +56	11 09 -35	91
13	+13	-15	-36	-61	-80	-101	-100	-75	-36	-19	-15	- 1	+ 2	- 2	+ 3	+13	+20	+31	+40	+52	+73	+93	+103	+98	812	22 56 +108	05 23 -107	215
14	+33	+11	- 1	-12	-13	-23	-33	-31	-25	-18	-13	-13	-11	- 4	- 9	- 9	- 6	- 6	- 4	+13	+39	+41	+42	+49	858	23 51 +52	06 38 -36	88
15	+37	+42	- 6	-16	-21	-23	-28	-21	-16	-12	-12	-16	-15	-14	-14	-10	- 9	- 9	- 6	+17	+29	+38	+50	+47	868	22 54 +55	06 45 -31	86
16	+30	+22	+ 9	- 6	-14	-14	-11	-12	-11	- 8	- 6	- 6	- 4	+ 2	+ 7	+ 6	+ 1	- 4	-17	-16	- 1	+ 2	+17	+26	865	00 00 +41	19 07 -22	63
17	+23	+13	- 6	-17	-20	-18	-17	-18	-17	-17	-17	-15	-12	-10	- 7	- 1	+ 5	+12	+ 8	+ 9	+21	+33	+28	+33	869	21 12 +40	04 03 -22	62
+18	+28	+17	+ 3	-10	-17	-20	-17	-17	-17	-21	-17	-17	-15	-11	-11	-10	- 7	- 7	- 2	+ 9	+28	+40	+44	+44	869	22 13 +46	09 50 -22	68
+19	+24	+20	+12	- 3	-13	-14	-13	-18	-23	-16	-18	-21	-21	-18	-13	-13	- 8	- 8	- 5	+10	+23	+37	+48	+46	890	22 38 +54	08 42 -26	80
20	+42	+25	+11	- 2	- 4	- 9	- 7	- 2	- 4	- 7	- 7	- 4	- 2	- 4	-12	- 6	- 8	-12	-12	- 9	- 2	+ 3	+18	+16	889	00 27 +47	18 33 -15	62
21	+29	+21	+17	+15	+16	+21	+25	+12	-15	-31	-45	-34	-27	-16	-16	-14	-11	- 6	- 3	+ 7	+12	+16	+15	+10	851	00 00 +39	11 06 -51	90
22	+12	+ 6	- 1	- 6	- 9	-26	-43	-45	-39	-24	- 1	- 9	-11	-14	-11	- 6	+ 1	+11	+21	+31	+26	+36	+51	+51	841	23 57 +61	07 06 -48	109
23																												
24	+ 7	+ 2	- 8	-13	-18	-19	-15	-13	-10	-10	- 8	- 8	- 8	- 7	- 4	- 4	- 2	+ 2	+ 7	+14	+25	+31	+32	+35	855	23 59 +36	05 11 -20	56
25	+27	+17	+13	+ 7	+ 2	+ 1	+ 2	+ 2	+ 2	+ 8	+ 4	+ 6	- 2	+ 1	+18	- 2	- 7	-28	-40	-30	-11	+ 2	+ 8	+ 4	860	14 36 +39	18 33 -46	85
26	+ 9	- 1	-19	-32	-33	-23	-23	-26	+ 4	- 5	-17	-13	-11	- 8	- 3	- 3	- 1	- 1	+ 3	+13	+29	+44	+54	+56	843	23 48 +57	04 48 -35	92
27	+26	+ 8	- 9	-14	-17	-18	-17	-19	-17	-17	-14	-13	-10	- 2	-12	-15	-14	-12	- 7	+ 7	+29	+41	+54	+57	866	22 54 +59	07 30 -19	78
28	+43	+22	+ 2	-13	-26	-26	-21	-17	-16	-18	-17	-16	-13	-18	-16	-13	-13	- 8	- 1	+12	+30	+53	+50	+48	875	21 39 +61	05 00 -27	88
29	+49	+39	+32	+22	+ 2	-19	-25	-22	-23	-12	-11	- 8	-13	- 6	- 1	-11	-13	- 7	- 6	- 3	+ 9	+16	+ 9	+ 9	860	00 12 +55	08 57 -27	82
30	+ 5	- 5	-17	-26	-24	-22	-17	-15	- 8	- 1	- 3	- 9	-12	- 8	- 8	+ 1	- 3	0	+ 2	+15	+28	+42	+44	+39	857	22 00 +48	03 32 -27	75
31																												
MEAN.	+30	+19	+ 6	- 6	-13	-18	-19	-18	-17	-17	-15	-13	-13	-10	- 9	- 8	- 6	- 5	- 3	+ 7	+20	+31	+38	+38	865			

[200/1/39—17185

Horizontal Intensity

G.M.T. (H = 34000γ + Mean +.....) December 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1																												
2																												
3																												
4	+21	+21	+ 9	- 5	- 8	-12	-12	-14	-17	-15	-15	-17	- 4	- 9	- 9	- 7	-12	-12	- 9	- 2	+14	+26	+39	+42	871	23 07 +43	11 21 -20	63
5																												
+ 6	+39	+24	+10	- 8	-14	-14	-13	-12	-14	-19	-19	-19	-17	-12	- 9	- 7	- 7	- 7	+ 2	+11	+17	+21	+29	+26	876	00 21 +42	09 36 -20	62
+ 7	+19	+11	0	- 6	-13	-15	-15	-15	-15	-15	-16	-15	-15	-16	-16	-15	-13	-10	- 5	+ 5	+25	+46	+59	+56	882	22 44 +60	10 06 -18	78
+ 8	+36	+26	+16	- 1	- 9	-12	-12	-12	-12	-11	-12	-13	-17	-17	-15	-12	-12	-11	- 6	+ 3	+13	+22	+35	+36	889	00 00 +44	12 12 -17	61
9	+33	+32	+28	+16	+10	- 1	-19	-29	-37	-44	-33	-32	-27	-23	-27	-19	-15	-12	- 6	+ 9	+30	+51	+63	+64	886	23 06 +69	09 18 -48	117
10	+45	+28	+ 9	- 5	-11	-16	-21	-20	-21	-20	-20	-16	-15	-14	- 8	- 8	-12	-14	- 8	+ 9	+25	+39	+40	+32	888	00 00 +56	05 57 -24	80
11	+34	+25	+12	- 4	-14	-19	-17	-19	-22	-19	-15	-17	-17	-13	-13	-13	-12	- 8	+ 4	+14	+29	+34	+35	+40	876	23 49 +43	08 06 -24	67
12	+35	+20	+11	0	- 9	- 9	-10	-13	-18	-14	-12	-14	-13	- 7	- 7	- 5	- 4	-12	-12	- 4	+ 6	+20	+31	+36	871	00 00 +47	08 36 -19	66
13	+29	+13	- 6	-19	-21	-23	-15	-15	-15	-10	-13	-13	-13	-11	-10	-10	-11	- 8	+ 2	+15	+24	+38	+48	+53	872	23 19 +53	05 03 -24	77
14	+43	+36	+15	- 3	-13	-15	-14	- 9	- 9	-14	-15	- 4	+ 1	- 8	-11	-13	-13	- 8	-10	-15	- 3	+13	+30	+38	877	00 04 +46	06 04 -18	64
15	+34	+24	+ 4	-17	-24	-22	-19	-17	-14	-14	-13	-14	-14	-12	- 2	- 4	- 9	- 7	- 7	+ 9	+17	+34	+44	+38	876	22 12 +47	04 19 -25	72
16	+39	+31	+13	- 3	-18	-25	-20	-18	-22	-15	-16	-16	-17	-12	-11	-15	-12	-10	- 5	+ 6	+18	+35	+41	+45	879	23 57 +49	05 14 -27	76
17	+43	+35	+16	- 3	-12	-14	-13	-16	-16	-13	-13	-13	- 7	- 2	- 8	-16	-17	-18	-13	- 3	+10	+25	+29	+31	880	00 12 +48	06 40 -16	64
+18	+30	+12	- 1	- 6	-12	-16	-13	-13	-13	-13	- 9	- 6	- 6	- 6	- 6	- 3	- 6	- 7	- 6	- 2	+11	+22	+31	+30	875	00 00 +35	05 23 -16	51
+19	+14	+ 6	- 4	-14	-14	-14	-17	-17	-19	-22	-22	-17	-10	- 9	- 1	+ 1	+ 1	- 1	+ 4	+14	+27	+34	+36	+37	886	23 03 +42	09 33 -24	66
20	+54	+45	+38	+25	+18	+ 1	-10	- 5	+ 2	- 3	+16	+10	0	+15	- 3	-13	-20	-27	-29	-25	-14	-22	-22	-20	862	00 00 +58	18 35 -32	90
21	+ 8	+ 6	- 5	-20	-41	-52	-32	-15	- 7	- 4	-10	+ 6	+ 5	+ 3	+15	+15	+ 5	+ 8	+ 6	+12	+10	+22	+32	+37	837	23 48 +40	05 09 -58	98
22	+23	+14	+ 2	-10	- 9	-13	-13	- 9	- 8	-10	-10	- 7	+ 7	+12	- 4	- 3	- 3	- 3	- 3	- 2	+ 2	+ 9	+12	+14	850	00 00 +24	05 27 -15	59
23	+ 7	+ 7	+15	+ 9	+ 2	- 1	+ 1	0	- 3	-10	-12	-17	0	- 3	-10	- 8	+ 5	0	+ 2	- 1	+ 7	+12	+ 9	0	857	02 27 +15	11 12 -22	37
24	0	- 9	-18	-16	-13	-10	-11	-12	-11	- 9	- 9	-11	- 9	- 9	- 6	- 4	- 4	- 1	+ 8	+14	+28	+34	+41	+42	858	23 45 +43	02 54 -18	61
25	+31	+19	+ 8	- 2	- 4	- 7	-15	- 9	-12	-15	- 7	- 3	- 8	-12	-13	- 9	- 4	- 5	- 8	+ 1	+13	+16	+19	+19	861	00 00 +39	09 09 -18	57
26	+20	+11	+ 1	- 8	-12	-12	-11	- 8	- 9	- 1	-10	-17	-17	-15	-12	-10	- 8	- 3	+ 5	+15	+20	+28	+35	+25	857	22 48 +38	11 50 -20	58
27	+13	+ 5	- 2	-12	-17	-17	-14	-12	-17	-13	- 6	0	- 2	+ 5	- 2	+ 2	0	- 1	+ 2	+ 5	+10	+17	+21	+26	859	23 45 +28	08 18 -18	46
28	+18	+ 6	-10	-15	-11	- 7	- 6	- 6	- 6	- 6	- 5	- 4	- 4	+ 1	- 1	- 1	+ 1	+ 3	+ 4	+11	+22	+14	+14	- 9	863	20 48 +27	03 05 -16	43
29	- 2	- 3	-10	-21	-29	-37	-37	-20	-15	-14	+ 1	+ 9	0	0	+ 4	+ 6	+13	+ 7	- 2	+ 7	+19	+28	+42	+48	845	24 00 +57	06 00 -40	97
30	+45	+35	+20	- 1	- 6	- 6	- 9	-13	-15	-40	-35	-28	-23	-18	-15	-19	-18	-13	-18	- 6	+ 7	+32	+63	+76	860	22 30 +81	09 44 -44	125
31	+63	+40	+20	+12	- 3	-18	-25	-20	-20	-20	-13	- 1	- 3	- 8	- 2	- 4	-11	-17	-20	-20	- 6	+13	+35	+32	865	00 00 +73	06 07 -28	101
MEAN.	+29	+19	+ 7	- 5	-11	-15	-15	-14	-14	-15	-13	-11	- 9	- 7	- 7	- 7	- 7	- 7	- 5	+ 3	+14	+25	+33	+33	869			

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc January 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+34	+33	+28	+25	+14	+10	+ 4	+ 4	+ 2	0	0	0	+ 3	+ 2	+ 4	+ 3	+ 3	- 5	-19	-39	-47	-46	-27	+ 4	517			
2	+14	+23	+23	+18	+20	+13	+13	+11	+ 5	+ 1	0	0	- 5	- 6	- 6	- 5	- 6	-16	-25	-25	-26	-22	- 5	+ 9	517			
3	+14	+19	+20	+18	+14	+14	+13	+11	+ 4	- 5	- 7	- 6	- 7	- 8	-10	-23	-25	-15	-26	-27	-16	0	+22	+34	518			
4	+34	+22	+11	+ 5	+ 2	+ 4	+ 8	+11	+11	+ 9	+ 4	+ 3	+ 2	- 7	- 5	- 6	- 8	-14	-19	-30	-30	-17	+ 1	+20	519			
5	+26	+29	+26	+17	+10	+ 5	+10	+ 5	+ 4	+ 3	0	- 4	- 5	- 6	- 9	-13	-16	-28	-34	-36	-29	- 8	+21	+35	527			
6	+39	+29	+11	- 1	- 1	+ 8	+ 9	+10	+10	+ 8	+ 5	+ 4	- 1	- 5	-10	- 9	-10	-24	-30	-31	-29	-24	+ 1	+31	522			
7	+41	+31	+21	+14	+ 4	- 1	+ 1	+ 6	+ 5	+ 4	+ 3	+ 1	0	- 2	- 3	- 7	-12	-31	-38	-30	-20	-12	+ 6	+22	520			
8	+25	+24	+17	+12	+ 8	+ 7	+ 7	+ 5	0	- 1	- 2	- 2	- 4	- 5	- 6	- 8	-12	-23	-41	-33	-23	- 3	+27	+39	524			
9	+45	+39	+28	+10	0	- 1	+ 2	+ 5	+ 1	+ 1	0	- 2	- 8	- 9	- 9	-10	- 9	-21	-40	-40	-20	+ 3	+10	+14	522			
10	+19	+21	+30	+30	+19	+11	+11	+11	+10	+ 7	+ 3	+ 1	- 3	- 9	- 9	-19	-13	- 8	-27	-28	-30	-21	-10	+ 1	521			
11	+19	+26	+29	+24	+19	+13	+10	+17	+10	+ 8	+ 4	+ 3	+ 3	+ 3	- 1	+ 1	- 2	- 8	-21	-73	-53	-23	- 4	0	513			
12																												
13	+ 8	+ 2	+ 2	+ 3	+ 8	+ 7	+ 8	+ 9	+ 8	+ 2	+ 2	+ 2	0	0	0	+ 1	+ 1	- 8	-11	-18	-20	-15	- 2	+12	520			
14	+27	+29	+26	+26	+18	+ 7	+ 5	+ 2	+ 1	- 3	- 9	-11	-12	- 7	- 4	- 4	- 4	-13	-23	-23	-24	-22	- 3	+16	525			
15	+23	+22	+13	+ 8	+ 3	+ 3	+ 7	+ 9	+10	+ 4	+ 3	+ 2	+ 1	0	+ 1	+ 2	+ 1	-10	-17	-19	-21	-22	-11	- 7	519			
16	- 1	+10	+25	+29	+20	+14	+12	+10	+ 7	+ 1	- 1	- 1	- 3	- 3	- 4	- 3	- 4	-12	-16	-28	-29	-20	- 8	+ 2	522			
17	0	+15	+34	+22	+11	+ 9	+ 9	+ 9	+ 4	+ 2	- 5	- 6	- 7	-13	-18	-11	-17	-22	-28	-29	-18	+ 1	+23	+36	528			
18	+42	+38	+38	+30	+22	+16	+15	+14	+ 9	+ 6	+ 4	- 1	- 5	- 9	- 6	-12	-20	-30	-31	-29	-32	-31	-19	-11	519			
19	+11	+21	+31	+21	+ 2	- 2	+ 1	+ 3	+ 1	+ 1	- 2	+ 1	0	+ 1	- 1	0	- 6	-24	-22	-19	-19	-13	- 6	+10	519			
20	+19	+	-46	+41	+26	+ 8	+ 1	- 1	- 1	- 3	- 4	- 6	- 9	- 9	-10	-11	-14	-32	-40	-31	-16	- 8	+10	+19	532			
21	+15	+ 6	+10	+ 6	+ 2	+ 4	+ 6	+ 6	+ 4	+ 4	+ 3	0	- 2	- 2	- 3	- 2	0	- 8	-14	-10	-10	- 8	- 2	+ 5	526			
22	+ 5	+ 8	+ 4	- 5	- 5	0	+ 3	+ 4	+ 4	+ 3	+ 2	- 1	- 5	- 5	- 5	- 5	- 7	-15	-20	- 8	+ 3	+ 8	+13	+12	527			
23	+ 4	+ 1	+ 9	+ 7	+ 1	+ 9	+13	+10	+11	+ 9	+ 6	+ 3	+ 1	0	- 1	- 1	- 3	-16	-29	-32	-23	-12	+ 7	+17	523			
24	+16	+ 5	0	+ 1	- 4	+ 1	+ 4	+ 5	+ 2	- 3	0	- 2	- 3	0	- 3	+ 4	- 3	-13	-24	-29	-22	- 1	+28	+41	526			
25	+37	+26	+13	+ 6	+ 3	+ 8	+ 8	+ 3	+ 2	+ 2	+ 1	+ 1	+ 1	+ 2	- 1	+ 1	+ 1	- 9	-28	-40	-39	-22	0	+22	524			
26	+39	+37	+19	+ 9	+ 2	+ 2	+ 2	+ 2	+ 1	+ 1	0	- 1	- 2	- 2	- 2	- 2	- 2	-12	-25	-31	-25	-11	+ 1	+ 9	523			
27	+11	+10	+ 4	- 2	- 2	0	+ 5	+ 5	+ 7	+ 6	+ 4	+ 3	0	0	- 1	- 2	- 3	-11	-20	-24	-17	- 7	+ 6	+29	522			
28	+41	+43	+31	+ 8	- 6	- 8	- 1	+ 1	+ 1	- 1	- 1	- 1	- 1	- 3	- 5	- 5	- 4	- 5	-15	-25	-25	-21	- 7	+ 3	527			
29	+14	+23	+18	+ 8	+ 2	- 1	+ 5	+ 5	+ 5	+ 2	- 1	- 2	- 2	- 2	- 1	+ 5	+ 6	+ 1	- 5	-14	-23	-25	-20	- 2	523			
30	+ 9	+25	+33	+32	+27	+25	+18	+17	+10	- 2	- 5	-12	-12	- 5	- 5	-11	- 3	- 3	-15	-27	-33	-30	-21	- 9	525			
31	+ 2	+ 5	+16	+22	+20	+19	+22	+15	+13	+ 5	+ 2	- 5	- 5	-11	- 7	- 4	- 3	- 8	-15	-21	-21	-16	-15	-13	527			
MEAN.	+21	+22	+21	+15	+ 9	+ 7	+ 8	+ 7	+ 5	+ 2	0	- 1	- 3	- 4	- 5	- 5	- 6	-15	-24	-28	-25	-15	+ 1	+13	523			

[200/1/39—17185

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc February 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+ 1	+11	+18	+20	+17	+14	+10	+10	+ 3	+ 2	0	- 1	- 5	- 2	0	0	- 1	- 7	-13	-27	-22	-16	- 8	- 1	520			
2	- 4	- 1	- 1	- 1	+ 1	+ 7	+10	+ 9	+ 3	+ 4	+ 5	+ 4	+ 1	- 2	- 2	- 2	- 2	-11	-13	-14	-10	- 1	+ 8	+16	522			
3	+18	+19	+18	+17	+13	+ 9	+ 9	+ 9	+ 7	+ 1	- 1	- 3	- 3	- 6	-10	-13	-10	-15	-23	-30	-26	-12	+ 4	+17	523			
4	+12	+11	+ 4	0	+ 1	+ 2	+ 3	+ 1	+ 1	- 1	- 1	- 2	- 3	- 4	- 5	- 6	- 4	- 8	-17	-20	-19	- 3	+17	+30	529			
5	+32	+26	+23	+23	+17	+12	+ 8	+ 5	+ 6	+ 4	+ 2	- 1	- 1	- 3	0	+ 1	- 2	- 8	-25	-39	-42	-29	-10	+ 6	526			
6	+11	+10	+11	+10	+ 9	+ 3	+ 4	+ 3	+ 2	+ 1	- 1	- 2	- 2	- 3	- 1	0	- 1	- 9	-20	-27	-17	0	+11	+20	530			
7	+32	+35	+33	+25	+15	+ 9	+ 9	+ 8	+ 7	+ 5	+ 3	- 3	- 3	+ 3	+ 3	+ 2	+ 2	- 6	-25	-43	-46	-38	-25	- 3	525			
8	+13	+20	+22	+19	+13	+ 8	+ 6	+ 5	+ 2	+ 2	- 4	- 4	- 2	- 3	- 1	+ 1	- 2	- 7	-21	-39	-39	-24	0	+24	526			
9	+25	+27	+25	+22	+11	+ 5	+ 4	+ 4	+ 3	+ 2	+ 1	+ 1	+ 2	+ 1	+ 2	+ 2	+ 1	- 8	-24	-35	-36	-29	-16	+ 5	527			
10	+16	+21	+21	+12	+10	+ 5	+ 3	+ 7	+ 5	+ 3	0	- 1	+ 1	+ 1	+ 1	+ 2	+ 1	- 1	-15	-29	-38	-37	-13	+14	529			
11	+25	+26	+23	+17	+10	+ 6	+ 9	+10	+ 8	+ 7	- 1	- 3	- 2	0	0	+ 1	+ 2	0	-18	-29	-38	-39	-20	+ 2	528			
12	+21	+25	+29	+27	+20	+13	+ 8	+ 7	+ 7	+ 7	+ 7	+ 5	+ 4	0	- 5	- 7	0	- 1	-19	-41	-47	-41	-15	+ 7	525			
13	+21	+32	+35	+29	+18	+12	+10	+ 9	+ 7	+ 1	0	0	- 2	- 4	- 2	- 1	- 1	-12	-17	-41	-39	-32	-21	- 1	531			
14	+23	+32	+33	+26	+21	+15	+13	+13	+ 9	+ 3	- 3	- 5	- 3	+ 1	+ 2	+ 2	+ 1	- 6	-17	-38	-42	-38	-25	- 5	527			
15	+17	+29	+32	+24	+18	+11	+11	+10	+ 5	+ 2	0	0	- 1	- 1	- 2	- 1	0	- 9	-22	-39	-39	-30	-18	0	529			
16	+24	+24	+20	+13	+12	+12	+11	+10	+ 4	+ 3	+ 2	- 2	+ 1	+ 1	+ 1	+ 1	- 1	+ 1	-13	-29	-39	-36	-22	+ 2	527			
17	+14	+27	+26	+21	+14	+10	+12	+10	+ 4	+ 4	+ 3	- 1	- 1	+ 2	+ 1	+ 1	- 3	- 9	-15	-28	-35	-37	-20	- 5	529			
18	+13	+21	+22	+22	+16	+14	+11	+13	+10	+ 7	+ 3	0	- 3	- 2	- 2	0	- 1	- 5	-13	-37	-36	-34	-16	+ 3	525			
19	+16	+16	+14	+10	+ 7	+11	+12	+ 7	+ 9	+ 5	+ 4	+ 1	+ 1	+ 2	+ 2	+ 2	- 3	- 9	-26	-41	-43	-23	+ 6	+28	526			
20	+35	+35	+30	+10	- 1	+ 1	0	+ 1	+ 4	+ 3	+ 3	0	- 1	0	0	- 2	- 4	- 8	-21	-37	-39	-26	+ 3	+21	528			
21	+23	+22	+18	+11	+ 5	+ 5	+10	+12	+ 2	- 2	0	- 1	- 2	+ 5	+ 5	+ 4	+ 2	- 8	-20	-45	-48	-29	+ 2	+21	528			
22	+26	+23	+11	- 1	- 5	- 3	- 3	- 6	- 6	- 2	+ 1	+ 1	+ 1	+ 4	+ 7	+ 7	+ 6	- 2	-16	-35	-28	-12	+ 7	+23	526			
23	+25	+26	+20	+10	+ 5	- 2	- 5	- 5	+ 2	+ 1	+ 2	- 1	- 1	0	+ 2	- 1	+ 2	- 6	-23	-39	-35	-16	+ 7	+22	533			
24																												
25																												
26	+33	+38	+29	+20	+ 9	+ 3	+ 3	+ 4	+ 1	+ 1	- 2	- 1	- 1	- 2	- 1	- 2	0	- 8	-23	-35	-39	-32	- 8	+16	532			
27	+26	+26	+24	+17	+ 7	+ 1	+ 7	+ 6	+ 5	+ 2	- 1	- 3	- 4	- 3	- 3	- 3	- 2	-10	-21	-31	-33	-25	- 4	+16	534			
28	+32	+36	+34	+25	+15	+ 6	+ 6	+ 6	+ 2	- 1	- 1	- 2	- 2	- 2	- 3	- 4	- 5	-10	-20	-30	-49	-31	-14	+ 3	532			
29	+14	+19	+18	+15	+10	+ 8	+ 8	+ 7	+ 6	+ 4	+ 3	- 2	- 4	- 4	- 5	-10	- 5	- 7	-11	-23	-24	-20	-10	+ 6	533			
30																												
31																												
MEAN.	+20	+24	+22	+16	+11	+ 7	+ 7	+ 7	+ 4	+ 3	+ 1	- 1	- 1	- 1	- 1	- 1	- 1	- 7	-19	-33	-35	-26	- 7	+11	528			

[200/1/39—17285

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc March 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+15	+19	+17	+15	+ 8	+ 6	+ 5	+ 5	+ 3	0	- 2	- 3	- 3	- 3	- 2	- 3	- 3	- 4	-15	-36	-32	-13	+ 2	+15	535			
2	+18	+15	+13	+ 9	+ 4	+ 5	+ 4	+ 5	+ 4	+ 3	- 3	- 4	- 4	- 4	- 5	- 6	- 8	-12	-19	-24	-18	- 8	+ 9	+21	536			
3	+26	+25	+24	+15	+12	+ 6	+ 7	+ 6	+ 3	0	- 1	- 1	- 4	- 4	- 4	- 3	- 3	- 5	-16	-28	-32	-25	- 8	+11	536			
4	+26	+27	+22	+13	+ 6	+ 4	+ 5	+ 6	+ 4	0	- 1	0	- 2	- 5	- 3	- 3	- 4	- 6	-20	-33	-34	-22	0	+18	534			
5	+31	+29	+19	+ 9	+ 2	0	+ 6	+ 8	+ 9	+ 6	+ 2	0	+ 2	+ 1	+ 1	+ 2	+ 2	- 4	-20	-36	-33	-23	-10	+ 3	531			
+ 6	+ 7	+14	+15	+ 8	+ 3	+ 3	+ 5	+ 4	+ 2	+ 1	- 2	- 2	- 3	- 2	- 3	- 2	- 2	- 7	-14	-26	-22	- 3	+ 7	+16	535			
+ 7																												
8	+20	+12	0	-10	-17	- 8	0	+ 1	+ 6	+ 3	+ 8	+ 4	+ 5	+ 4	+ 6	+ 7	+ 5	- 2	-13	-24	-20	- 9	+ 5	+21	530			
9	+32	+31	+20	+13	+ 2	+ 2	+ 7	+ 5	+ 4	+ 2	0	+ 1	+ 1	+ 1	+ 2	+ 4	+ 4	- 2	-18	-29	-28	-25	-18	- 8	528			
10	+ 5	+ 9	+ 4	+ 1	+ 1	+ 3	+ 5	+ 5	+ 6	+ 8	+ 8	+ 8	+ 8	+11	+11	+ 9	+ 7	+ 3	- 7	-21	-27	-25	-16	- 6	527			
+11																												
12	+22	+26	+25	+18	+11	+ 9	+ 8	+10	+ 5	+ 4	0	+ 1	+ 2	- 2	- 1	- 3	- 3	- 3	-12	-32	-35	-31	-12	+ 4	534			
13																												
14																												
+15	+12	+14	+ 9	+ 7	+10	+12	+11	+ 8	+ 4	+ 3	+ 2	+ 1	- 1	- 1	- 2	0	+ 1	- 4	-11	-25	-28	-24	- 8	+ 9	538			
16	+16	+14	+ 6	0	- 2	+ 6	+ 7	+ 5	+ 3	+ 3	+ 3	+ 4	+ 2	+ 2	+ 3	+ 4	+ 4	- 3	-14	-24	-22	-14	- 2	+ 7	535			
17																												
+18																												
19	+22	+24	+19	+14	+ 6	+ 3	+ 4	+ 3	- 2	- 6	- 4	- 1	+ 1	+ 1	+ 5	+ 6	+ 2	+ 6	- 5	-22	-33	-26	-18	- 2	534			
20	+11	+18	+16	+11	+ 8	+ 9	+ 9	- 1	- 2	- 3	- 7	- 5	- 2	+ 4	+ 8	+ 6	+ 6	+ 3	-10	-22	-20	-19	-12	-10	531			
21	- 3	+ 4	+ 7	+ 4	+ 1	+ 4	+ 7	+ 5	+ 6	+ 3	0	+ 3	+ 3	+ 6	+ 5	+ 5	+ 2	- 2	- 8	-21	-23	-17	- 4	+ 6	534			
22																												
23	+15	+24	+25	+16	+14	+ 8	+ 5	+ 4	- 4	-13	- 7	- 7	- 8	- 7	- 5	- 3	- 4	- 3	- 9	-15	-17	-12	- 5	- 4	534			
24																												
25	-10	+11	+24	+35	+13	-10	+12	+15	- 3	- 4	-24	-15	- 4	- 4	- 4	- 3	- 4	-14	-16	-14	-14	- 3	+14	+23	535			
26	+22	+22	+16	+10	+ 6	0	+ 1	- 1	- 2	- 3	- 3	- 5	- 4	- 5	- 4	- 3	- 2	- 2	-18	-26	-24	-10	+ 9	+19	540			
27																												
28	+17	+18	+13	+ 8	+ 8	+ 6	+ 8	+ 1	0	- 1	- 2	- 2	- 2	+ 1	0	- 2	- 2	- 4	-12	-23	-22	-11	- 2	+ 8	541			
29	+19	+18	+16	+16	+13	+10	+ 9	+ 5	+ 4	- 1	- 4	- 3	+ 2	- 5	-11	-15	0	+13	- 1	-20	-20	-22	-17	+1	537			
30	+17	+58	+46	+30	+12	- 2	+10	+ 9	- 8	-22	-10	-17	-29	-13	-10	- 7	- 8	- 9	-19	-17	-14	- 9	0	+11	529			
31	+20	+29	+23	+22	+16	+11	+ 9	+ 5	0	- 5	-22	-23	-24	-10	- 7	- 5	+ 1	- 1	-12	-15	-14	- 5	- 2	+ 8	534			
MEAN.	+16	+21	+17	+12	+ 6	+ 4	+ 7	+ 5	+ 2	- 1	- 3	- 3	- 3	- 2	- 1	- 1	0	- 3	-13	-24	-24	-16	- 4	+ 8	534			

1500/1/39—17185

Declination

(D = 10° + Mean + ...East)

Unit = 0·1 minute of arc

G.M.T.

April 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+ 2	+10	+15	+18	+12	+12	+ 3	+ 5	+ 4	+ 3	- 8	- 8	- 7	- 9	- 6	- 1	0	- 5	- 7	- 8	- 8	- 7	- 6	+ 1	537			
2	+ 4	+ 4	+ 4	+ 4	+ 4	+ 3	- 3	0	- 1	+ 2	+ 3	+ 3	+ 2	+ 4	+ 4	+ 3	+ 5	+10	+11	- 9	-15	-16	-10	-11	534			
3	- 2	- 1	+ 6	+ 2	- 9	-14	-16	-12	- 7	- 8	- 3	- 4	- 4	- 1	+ 6	+ 8	+14	+14	+15	- 1	+ 5	+ 4	+ 5	+ 6	532			
4	+ 1	+10	+13	+13	+ 8	+ 3	+ 8	+ 4	0	- 3	- 3	- 5	0	0	+ 1	+ 2	+ 3	- 1	- 7	-19	-19	-12	- 7	+ 1	537			
5	+ 3	+ 5	+11	+11	+ 6	+ 7	+11	+ 9	+ 5	+ 3	+ 3	0	0	+ 1	+ 2	+ 2	+ 4	+ 5	- 2	-17	-20	-19	-15	- 6	535			
6	- 4	+ 2	+ 1	- 6	- 8	- 1	+ 1	0	- 2	- 3	0	+ 2	+ 2	+ 3	+ 7	+ 7	+ 6	+ 3	- 1	-12	-13	- 6	+ 2	+ 9	536			
+7	+ 8	+15	+14	+10	+10	+11	+ 8	+ 5	0	0	- 1	- 1	- 2	- 1	0	0	+ 1	+ 1	- 1	-12	-19	-19	-13	-12	540			
+8																												
+9																												
+10	- 6	+ 4	+12	+12	+ 7	+ 3	+ 4	+ 2	+ 2	+ 2	+ 1	0	0	+ 1	+ 2	+ 3	+ 3	+ 3	- 4	-16	-16	-16	- 8	+ 2	536			
11																												
+12	- 1	+ 2	+ 3	+ 3	+ 3	+ 6	+ 8	+ 6	+ 2	+ 1	+ 1	- 1	- 1	0	+ 1	+ 3	+ 3	+ 3	0	- 9	-15	-16	- 7	+ 4	536			
13	+11	+12	+ 9	+10	+10	+11	+ 3	+ 2	0	- 1	- 1	- 3	- 2	- 4	- 3	0	0	+ 1	- 1	-10	-13	-13	-11	- 8	538			
14	- 2	+ 6	+14	+19	+15	+ 8	+ 2	0	- 1	- 7	- 7	- 7	- 3	- 1	+ 1	+ 2	+ 4	+ 8	+ 4	- 7	-18	-17	- 9	- 7	536			
15	- 5	+ 6	+15	+13	+ 8	+ 7	+ 5	+ 3	- 1	- 6	- 5	- 2	- 1	+ 2	0	+ 6	+ 5	+ 5	+ 3	- 5	-14	-18	-15	- 6	534			
16	+ 1	+ 8	+13	+11	+ 3	+ 2	+ 2	0	- 2	- 2	- 5	- 2	0	0	+ 2	0	0	0	0	- 8	-16	-14	- 5	+ 6	537			
17	+ 9	+ 9	+ 9	+ 9	+ 9	+ 6	+ 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	+ 1	+ 6	+ 8	+ 8	+ 7	-10	-17	-19	-12	-10	538			
18	-12	- 8	0	+ 9	+16	+14	+ 8	+ 6	0	0	- 1	- 1	+ 2	+ 2	+ 3	+ 2	+ 1	+ 2	+ 2	- 2	- 8	-12	-12	- 9	540			
19	- 4	- 4	+ 4	+11	+10	+ 9	+ 6	+ 3	+ 2	+ 2	+ 1	+ 3	+ 3	+ 3	+ 5	+ 4	+ 5	+ 9	+ 9	- 1	-12	-21	-27	-21	538			
20	-13	- 6	+ 9	+19	+16	+10	+ 8	+ 3	- 2	- 2	0	- 1	+ 2	+ 2	+ 7	+10	+11	+17	+13	- 3	-21	-30	-25	-20	540			
21	-10	- 3	+ 8	+16	+19	+19	+14	+10	+ 5	+ 1	0	0	+ 1	0	+ 3	+ 3	+ 9	+11	+10	- 4	-24	-30	-28	-21	537			
22	-16	- 8	+ 2	+11	+17	+16	+11	+ 3	- 3	- 3	- 2	- 6	- 2	+ 4	+ 7	+ 8	+11	+14	+ 9	- 5	-16	-23	-19	-16	533			
23	-18	- 3	+ 5	+ 9	+ 9	+ 9	+ 6	+ 7	+ 5	+ 5	+ 3	+ 2	+ 1	+ 6	+ 7	+ 6	+ 8	+ 8	+ 7	-10	-22	-28	-22	- 7	539			
24	+ 2	+ 7	+11	+12	+11	+10	+ 7	+ 5	+ 1	- 1	- 2	- 1	0	- 3	- 1	- 1	0	+ 5	+ 4	-10	-13	-18	-17	-12	540			
25	0	+ 5	+15	+15	+13	+ 8	+ 7	+ 5	- 3	- 5	- 5	- 4	- 4	- 3	+ 4	+ 5	+ 5	+ 3	+ 2	- 4	-13	-21	-15	-19	542			
26	- 5	- 3	+ 6	+14	+18	+11	+ 2	- 3	- 5	- 5	- 6	- 5	- 5	- 5	+ 3	+ 9	+11	+ 7	+ 5	- 6	-14	-15	-10	- 5	533			
27	- 9	+ 2	+16	+21	+18	+12	+17	+ 2	- 2	- 6	- 9	- 7	- 3	0	+ 2	+ 5	+ 5	+ 7	+ 4	- 7	-18	-20	-14	- 7	540			
28	- 2	+ 8	+15	+16	+13	+ 6	+ 6	+ 4	+ 3	- 1	- 4	- 4	- 2	- 2	+ 3	+ 3	+ 6	+ 7	+ 8	- 5	-22	-25	-23	-14	542			
29																												
30	+ 5	+ 5	+ 8	+15	+13	+ 8	+ 5	+ 5	0	- 4	- 5	- 5	- 3	+ 2	+ 5	+ 6	+ 5	+ 5	+ 5	- 4	-13	-21	-16	-14	542			
31																												
MEAN.	- 2	+ 3	+ 9	+11	+10	+ 8	+ 5	+ 3	0	- 1	- 2	- 2	- 1	0	+ 3	+ 4	+ 5	+ 6	+ 4	- 8	-15	-17	-13	- 8	537			

[200/1/39—17185

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc May 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	- 3	0	+ 8	+14	+ 8	+ 5	+ 2	- 2	- 4	- 3	- 3	- 2	0	+ 5	+ 7	+ 6	+ 6	+ 5	+ 7	- 4	-11	-13	-13	-11	540			
2	- 5	+ 5	+13	+18	+13	+ 7	+ 4	0	- 2	- 3	- 3	- 2	- 2	0	+ 4	+ 5	+ 7	+ 6	+ 1	- 4	- 8	-13	-21	-26	540			
+ 3	-29	-21	+ 4	+21	+20	+14	+10	+ 6	0	- 1	0	- 2	- 1	0	+ 6	+ 8	+ 8	+ 8	+ 8	+ 1	- 4	-12	-20	-19	539			
+ 4	-15	-11	- 2	+ 8	+15	+10	+ 7	+ 5	+ 3	+ 1	0	0	0	0	+ 2	+ 5	+5	+ 5	+ 7	+ 4	- 6	-13	-17	-18	542			
5	-12	- 5	+ 1	+ 8	+10	+ 9	+ 9	+ 5	+ 3	+ 2	0	0	+ 3	+ 3	+ 5	+ 8	+ 8	+ 7	+14	- 1	-12	-21	-22	-14	539			
+ 6	-15	- 4	+ 6	+13	+13	+ 7	+ 5	+ 4	+ 2	+ 2	+ 3	+ 2	+ 1	+ 3	+ 5	+ 5	+ 5	+ 6	+ 7	+ 2	- 6	-16	-22	-18	542			
7	- 2	+ 7	+11	+15	+ 9	+ 7	+ 6	+ 3	- 2	0	+ 2	0	+ 4	+ 5	+ 6	+ 6	+ 7	+ 8	+ 8	+ 1	-12	-24	-31	-25	540			
8	-19	- 8	+ 8	+13	+ 8	+ 8	+ 7	+ 4	+ 3	+ 1	+ 1	- 2	- 3	- 2	- 2	+ 2	+ 4	+ 5	+ 9	+ 4	- 4	-13	-18	-18	541			
9	-15	- 5	+13	+16	+14	+12	+ 5	+ 2	0	- 1	- 6	- 7	- 9	- 9	- 5	+ 1	+ 4	+ 5	+12	+ 7	- 6	- 9	- 7	- 5	544			
10	+ 2	+10	+13	+14	+11	+ 3	- 1	- 5	- 7	- 9	- 6	- 4	0	+ 2	+ 2	+ 4	+ 4	+ 8	+ 5	- 5	-13	-16	-10	-10	545			
11	- 3	+ 2	+ 4	+ 3	+ 1	+ 1	- 2	- 1	- 3	- 3	- 4	- 2	- 3	+ 6	+ 5	+ 6	+ 7	+ 6	+ 6	- 1	- 7	-13	-12	- 4	543			
12	+ 4	+16	+21	+21	+11	+ 1	- 7	- 1	- 7	- 8	- 8	- 7	- 6	- 2	+ 2	+ 1	+ 2	+ 1	+ 5	0	- 5	- 8	- 9	-17	546			
13																												
14																												
15	- 7	+11	+20	+14	+ 5	+ 4	+ 3	+ 1	- 4	- 5	- 7	- 6	- 5	+ 1	+ 3	+ 5	+ 8	+10	+13	+ 1	-16	-22	-18	-14	544			
16	-14	+ 1	+14	+17	+13	+ 7	+ 5	0	- 1	- 1	- 2	- 3	- 2	0	+ 1	+ 4	+ 4	+ 3	+ 6	- 1	-11	-18	-17	-10	537			
17	+ 1	+19	+26	+22	+11	+ 4	+ 1	+ 1	- 1	- 1	- 1	- 2	- 2	+ 2	+ 5	+ 7	+ 7	+7	+ 7	- 8	-19	-30	-30	-25	535			
18	- 1	+12	+25	+24	+14	+ 5	- 3	-11	-24	-11	-11	-14	-14	-10	+ 7	+ 9	+ 7	+ 6	+ 4	- 5	- 6	- 5	- 3	- 1	529			
19	- 3	+ 5	+15	+17	+16	+12	+ 5	+ 5	0	- 3	- 3	- 3	- 2	+ 5	+ 5	+ 7	+ 9	+10	+11	- 5	-14	-25	-31	-30	532			
20	-20	- 5	+13	+21	+16	+13	+ 5	+ 4	+ 3	0	- 1	- 1	- 3	- 3	- 4	+ 3	+ 3	+ 9	+13	+ 3	- 9	-17	-17	-19	535			
21																												
22																												
23	- 1	- 1	+ 7	+17	+12	+ 6	+ 3	+ 1	0	- 2	- 3	- 4	- 3	- 1	0	+ 1	+ 3	+ 7	+14	+ 7	- 9	-21	-25	-20	541			
24	-15	+ 2	+17	+21	+11	+ 1	+ 2	- 9	-10	-22	-29	-19	-17	-12	- 5	+ 8	+ 8	+ 8	+23	+23	+13	+ 7	- 3	- 3	543			
25	+ 7	+11	+15	+16	+ 9	+ 1	0	- 1	- 2	- 3	- 4	- 5	- 5	- 8	- 3	0	+ 2	+ 3	+ 7	+ 3	- 2	- 9	-16	-15	543			
26	-10	+ 1	+12	+17	+11	+ 5	+ 3	+ 3	- 1	- 2	- 9	- 9	-10	- 9	- 8	- 2	- 1	+ 7	+11	+14	+ 9	+ 1	-11	-17	546			
27	- 6	- 1	+ 6	+14	+ 8	- 4	+ 2	+ 2	+ 1	0	+ 1	- 1	+ 1	+ 5	+ 5	+ 7	+ 6	+ 7	+ 8	0	- 6	-15	-19	-23	541			
28	-18	-16	- 5	- 4	+ 5	+ 1	- 6	- 9	- 4	- 4	- 4	- 4	- 3	+ 2	+ 4	+ 7	+ 9	+11	+15	+14	+ 8	+ 3	- 3	- 4	541			
29	- 3	+ 9	+15	+12	+ 6	+ 2	0	0	- 3	- 4	- 3	- 3	- 2	- 1	- 1	+ 1	+ 5	+ 7	+10	+ 4	- 5	-11	-19	-27	546			
+ 30																												
+ 31	-21	-12	+ 2	+14	+11	+ 8	+ 7	+ 3	+ 1	0	0	0	0	- 1	0	+ 2	+ 3	+ 4	+ 9	+ 7	- 1	-10	-12	-10	545			
MEAN.	- 9	+ 1	+11	+15	+11	+ 6	+ 3	0	- 2	- 3	- 4	- 4	- 3	- 1	+ 2	+ 5	+ 5	+ 7	+ 9	+ 2	- 6	-13	-16	-15	541			

[200/1/39—17185

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc June 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
+ 1	- 1	+ 3	+ 7	+10	+10	+ 8	+ 4	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 2	+ 5	+ 7	+ 7	+10	+ 5	- 8	-19	-29	-28	543			
2	-13	+ 4	+ 8	+13	+ 8	+ 5	0	- 1	- 1	- 3	- 3	- 2	- 2	- 1	+ 5	+ 7	+ 5	+ 4	+ 8	+ 7	- 4	-13	-14	-13	546			
3	- 9	+ 1	+10	+17	+11	+ 8	+ 2	0	- 1	- 1	0	0	- 1	+ 1	- 1	+ 4	+ 6	+ 8	+10	+ 7	- 3	-17	-22	-26	544			
+ 4	-21	- 8	+ 7	+ 9	+ 9	+10	+10	+ 9	- 1	- 2	- 4	- 5	- 2	- 1	+ 1	+ 1	+ 4	+ 4	+ 9	+ 7	0	-10	-20	-18	542			
5	-14	- 5	+ 5	+ 6	+ 7	+ 7	+ 3	0	- 1	- 3	- 3	- 3	- 2	+ 1	0	+ 2	+ 6	+ 9	+18	+ 9	0	- 9	-15	-22	543			
6	-18	-17	- 8	+ 1	- 5	- 5	- 7	- 7	- 9	-10	- 8	- 6	- 1	+ 3	+ 9	+12	+13	+12	+21	+21	+16	+ 8	- 8	-19	540			
7	-22	- 9	+ 2	+ 8	- 5	- 7	+ 2	+ 1	- 1	- 7	- 7	- 5	- 4	- 1	+ 3	+ 7	+ 9	+11	+21	+20	+11	+ 1	-15	-20	540			
8	-23	-14	- 8	+ 3	+ 2	0	+ 1	+ 2	+ 1	+ 1	+ 1	0	0	- 1	+ 3	+ 4	+10	+ 7	+13	+13	+ 7	0	- 8	- 9	540			
9	- 6	0	+ 7	+ 9	+ 3	0	0	- 1	- 2	- 3	- 7	- 6	- 4	- 3	0	+ 4	+ 7	+ 8	+16	+13	+ 7	- 3	-12	-18	544			
10	-13	- 8	+ 1	+10	+ 4	0	+ 1	0	0	0	0	0	0	+ 1	+ 1	+ 3	+ 3	+ 5	+10	+ 9	+ 1	- 9	-10	- 9	541			
+11	-10	- 3	+ 5	+10	+ 8	+ 1	+ 2	+ 1	0	- 1	- 1	- 1	- 1	0	+ 1	+ 5	+ 5	+ 2	+ 8	+ 1	- 5	-10	-11	-17	542			
12	-16	- 9	+ 8	+ 9	+ 7	+ 1	+ 1	0	0	0	- 1	- 1	0	0	+ 2	+ 2	+ 3	+ 5	+11	+ 9	+ 5	- 1	-10	-18	543			
13	-14	- 6	0	+ 7	+ 6	+ 5	+ 1	- 1	- 1	- 1	- 2	- 2	- 2	- 2	- 1	0	+ 2	+ 4	+ 9	+ 9	+ 4	- 1	- 7	-13	543			
14	-14	- 1	+ 5	+ 6	+ 5	+ 1	- 2	- 3	- 3	- 3	- 5	- 5	- 7	- 4	+ 2	+ 3	+ 6	+11	+21	+15	+ 6	- 3	-10	-14	547			
15	- 5	- 1	+ 4	+ 5	+ 6	+ 2	+ 1	- 4	- 3	- 4	-11	-13	-10	- 8	- 1	+ 5	+ 6	+ 7	+12	+14	+ 5	- 3	- 4	- 4	545			
16	- 3	+ 2	+ 4	+ 6	+ 3	+ 2	- 2	- 6	- 8	- 7	- 7	- 7	- 6	- 4	+ 1	+ 3	+ 4	+ 5	+15	+14	+14	+ 4	- 5	-14	548			
17	- 4	+10	+18	+17	+ 8	+ 6	+ 1	+ 1	0	- 2	- 4	- 5	-10	- 7	- 6	+ 3	+ 2	+ 4	+10	+ 7	- 1	- 8	-20	-23	545			
18	-20	-16	+ 7	+19	+19	+17	+ 1	+ 2	- 1	- 3	- 6	-11	- 8	- 6	- 3	+ 2	+ 5	+ 8	+16	+10	+ 3	- 6	-19	-22	544			
19	-21	-14	- 1	+ 8	+12	+10	+ 7	+ 6	- 3	- 4	- 3	- 4	- 8	- 3	- 2	+ 6	+ 6	+ 8	+16	+16	+ 6	- 3	-12	-14	545			
+20	-15	-13	+ 4	+ 8	+7	+ 5	+ 5	+ 4	- 2	- 2	- 2	- 1	- 2	- 1	0	+ 2	+ 4	+ 5	+ 8	+ 6	+ 4	- 5	-13	-15	546			
+21	- 8	+ 2	+ 7	+ 8	+ 6	+ 5	+ 5	+ 5	- 1	- 3	- 3	- 3	- 4	- 2	+ 3	+ 4	+ 4	+ 5	+12	+ 7	- 2	-10	-19	-21	546			
22	-17	- 2	+ 6	+10	+ 7	+ 3	+ 1	0	0	- 3	- 3	- 8	- 4	+ 1	+ 3	+10	+13	+13	+19	+13	+ 3	-10	-22	-27	551			
23	-24	-19	-17	- 7	- 5	- 1	+ 1	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 3	+ 4	+ 4	+ 4	+ 4	+12	+12	+ 6	+ 3	+ 2	- 2	549			
24	- 9	- 2	+ 3	+ 4	- 1	+ 3	+ 3	+ 2	- 2	- 3	- 1	- 2	- 4	- 7	+ 1	+ 4	+ 5	+ 6	+11	+12	+ 9	- 3	-15	-21	549			
25	-13	- 6	+ 2	+16	+14	- 2	+ 3	+ 7	+ 7	- 4	- 1	- 4	+ 8	-10	-28	-15	- 8	0	+ 8	+ 9	+ 5	+ 5	+ 2	+ 1	546			
26	+ 2	+ 1	+ 3	+ 7	+ 6	+ 5	+ 1	- 4	- 2	- 3	- 5	- 4	- 3	- 1	- 1	+ 1	+ 3	+ 7	+15	+12	+ 4	- 7	-13	-18	546			
27	-13	- 2	+ 5	+ 7	+ 6	+ 4	+ 2	+ 1	+ 1	+ 1	+ 2	- 1	- 1	0	+ 2	+ 6	+ 5	+ 5	+ 7	+ 2	- 3	-10	-14	-14	545			
28	-12	- 3	+ 5	+ 6	+ 5	+ 4	+ 3	+ 3	+ 1	0	- 2	- 1	- 2	0	+ 1	+ 3	+ 4	+ 4	+13	+11	0	- 7	-15	-17	547			
29	-13	+ 6	+12	+10	+ 4	+ 1	- 3	- 3	- 3	- 3	- 3	- 3	- 2	+ 1	+ 4	+ 5	+ 5	+ 6	+ 7	+11	+ 5	- 8	-15	-10	546			
30	- 1	+10	+14	+11	+ 4	0	+ 1	- 1	- 2	- 5	- 6	- 3	- 5	- 4	- 1	+ 2	+ 5	+ 6	+12	+10	- 2	-12	-17	-18	550			
31																												
MEAN.	-12	- 4	+ 4	+ 8	+ 6	+ 3	+ 2	+ 1	- 1	- 2	- 3	- 3	- 3	- 2	0	+ 4	+ 5	+ 6	+13	+10	+ 3	- 5	-13	-16	545			

[200/1/39—17185

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc July 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	- 6	+ 2	+16	+17	+14	+ 6	+ 4	0	- 1	- 2	- 2	- 1	- 2	+ 1	+ 4	+ 5	+ 5	+ 6	+12	+ 5	- 4	-14	-25	-37	547			
+ 2	-27	0	+11	+11	+ 5	+ 4	+ 3	- 1	- 4	- 7	- 1	- 6	- 4	- 4	- 1	+ 1	+ 3	+ 4	+14	+13	+ 6	- 3	-11	-16	550			
3	-10	- 2	0	0	+ 1	+ 2	+ 2	0	- 4	- 5	- 5	- 3	- 1	+ 2	+ 4	+ 8	+11	+13	+23	+20	+ 5	-12	-26	-20	551			
4	-18	-11	- 4	+ 2	- 1	+ 1	0	- 1	- 3	- 4	- 4	- 3	- 1	0	+ 4	+ 7	+12	+11	+21	+18	+ 8	- 2	-12	- 9	551			
5	- 2	- 1	+ 8	+ 9	+ 8	+ 2	- 2	- 1	- 3	- 2	- 2	- 4	- 2	- 2	- 2	+ 1	+ 6	+ 5	+12	+13	+ 4	- 6	-15	-19	553			
6	- 9	- 6	+ 2	- 1	+ 2	0	- 1	- 2	- 1	- 4	- 3	- 2	- 1	+ 1	+ 2	+ 4	+ 6	+ 3	+12	+12	+ 5	- 2	- 9	- 9	550			
7	- 6	0	+11	+12	+ 7	+ 2	+ 1	- 1	- 1	- 3	- 2	- 3	- 4	- 1	- 2	0	+ 3	+ 3	+10	+10	+ 3	- 8	-17	-25	548			
8	-24	-16	- 2	+ 5	+ 4	+ 1	+ 3	+ 3	0	0	- 2	- 2	- 3	- 1	+ 4	+ 6	+ 8	+11	+15	+ 8	- 1	- 5	- 6	- 5	546			
9	- 4	- 4	+ 7	+11	+10	+ 5	+ 3	+ 4	+ 1	- 1	- 4	- 6	- 5	- 6	- 5	+ 1	+ 5	+ 5	+13	+14	+ 8	- 2	-14	-25	547			
10	-26	-15	+ 5	+14	+10	+ 5	+ 2	- 1	- 1	- 5	- 7	- 8	- 5	- 3	- 4	+ 1	+ 6	+ 7	+14	+10	+ 4	+ 1	- 4	- 6	547			
11	- 4	+ 1	+ 6	+11	+ 6	+ 5	+ 1	- 1	- 3	- 7	- 5	- 6	- 4	- 1	0	+ 1	+ 2	+ 2	+ 8	+ 2	- 4	-11	- 7	- 3	550			
12	- 9	-10	0	+ 3	+ 6	+ 2	+ 1	0	0	0	0	0	+ 1	+ 1	+ 1	+ 2	+ 1	+ 2	+ 7	+ 7	+ 2	- 3	- 4	- 1	551			
13	+ 3	+ 9	+18	+16	+ 9	+ 9	+ 7	+ 5	+ 1	- 2	- 8	- 8	-18	-14	-16	- 6	- 5	- 3	+ 3	0	- 2	- 2	- 4	- 2	549			
14	+ 3	+ 7	+15	+19	+10	+ 8	+ 5	+ 2	0	- 3	- 8	-11	-15	-12	- 8	- 6	- 1	+ 2	+ 7	+ 3	- 3	- 7	-10	- 8	549			
15	- 6	+ 1	+ 4	+ 5	+ 9	+ 4	+ 4	+ 3	0	0	0	- 3	- 1	- 1	+ 3	+ 2	+ 3	+ 2	+ 7	+ 4	0	- 8	-14	- 7	549			
16	-10	- 2	+ 8	+11	+ 8	+ 2	- 1	- 2	- 2	- 3	- 4	- 3	- 3	- 2	0	+ 1	+ 1	+ 3	+ 8	+ 5	- 2	- 7	- 9	- 4	553			
+ 17	0	+ 7	+10	+10	+ 9	+ 7	+ 6	+ 2	0	- 1	- 2	- 3	- 3	- 3	- 2	- 2	+ 1	+ 4	+ 8	+ 3	- 4	-14	-20	-22	553			
+ 18	-19	-11	- 1	+ 3	+ 7	+ 3	+ 2	+ 1	0	0	- 1	- 3	- 3	- 3	- 1	+ 1	+ 3	+ 6	+10	+11	+ 7	0	- 3	- 3	552			
19	- 3	+ 2	+ 7	+ 4	0	+ 1	- 1	- 2	- 3	- 5	- 4	- 4	- 3	- 3	- 2	- 1	+ 2	+ 3	+ 7	+ 8	+ 7	+ 3	- 3	-11	554			
+ 20	- 3	+ 1	+ 9	+11	+ 8	+ 1	0	0	0	0	0	0	+ 1	+ 1	+ 2	+ 2	+ 4	+ 5	+13	+10	0	-15	-23	-26	551			
21																												
22																												
23	- 8	+ 5	+ 5	+ 3	- 1	- 1	- 1	- 3	- 4	- 3	- 3	- 2	- 3	- 3	- 2	+ 1	+ 1	+ 3	+13	+13	+ 3	- 5	- 2	-14	556			
24	-13	- 3	+ 6	+ 4	+ 1	+ 4	+ 4	+ 3	+ 1	- 1	- 3	- 4	- 5	- 3	- 2	- 1	+ 4	+ 4	+13	+13	+ 6	- 4	-11	-16	556			
25	-10	+ 7	+13	+12	+ 7	- 1	- 3	- 2	- 3	- 4	- 4	- 3	- 2	- 1	+ 2	+ 6	+ 6	+ 6	+ 9	+ 7	- 1	- 7	-14	-20	554			
26	-13	+ 1	+13	+10	+ 6	+ 5	+ 1	- 1	- 2	- 2	- 3	- 3	- 3	- 1	+ 2	+ 4	+ 6	+ 6	+11	+ 5	- 4	- 7	-12	-14	555			
+ 27	-11	+ 3	+13	+14	+ 7	+ 3	+ 1	- 4	- 5	- 5	- 5	- 4	- 4	- 1	+ 2	+ 4	+ 4	+ 5	+ 9	+10	+ 4	- 6	-14	-16	557			
28	-12	+ 1	+ 6	+ 6	+ 2	+ 4	+ 4	+ 3	+ 1	- 2	- 3	- 4	- 3	- 3	+ 3	+ 4	+ 4	+ 5	+12	+ 7	+ 1	- 7	-15	-15	555			
29	- 7	+ 5	+12	+16	+12	+ 3	0	- 3	- 5	- 5	- 4	- 6	- 3	0	0	+ 1	+ 2	+ 3	+11	+ 5	- 3	-16	-20	- 9	559			
30	+11	+16	+17	+14	+ 5	- 1	- 3	- 3	- 2	- 4	- 6	- 5	- 4	+ 3	+ 6	+ 8	+ 7	+13	+14	+ 4	- 7	-23	-29	-30	555			
31	-12	- 4	+ 2	+ 8	+ 1	- 6	- 7	0	0	- 4	- 3	- 2	- 1	+ 3	+ 8	+11	+12	+12	+14	+ 7	+ 1	- 7	-12	-13	548			
MEAN.	- 9	- 1	+ 8	+ 9	+ 6	+ 3	+ 1	0	- 1	- 3	- 3	- 4	- 4	- 2	0	+ 2	+ 4	+ 5	+11	+ 9	+ 1	- 7	-13	-14	552			

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc August 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	- 5	- 1	+ 1	+ 9	+ 8	+ 1	0	- 1	- 1	- 1	- 1	- 1	0	0	+ 1	+ 7	+ 9	+ 9	+14	+ 9	- 1	-11	-15	-20	550			
2	-16	- 4	+ 9	+15	+ 8	+ 5	0	0	- 1	- 2	- 1	- 2	0	- 1	+ 1	+ 7	+ 9	+11	+15	+13	- 1	-11	-21	-21	551			
3	-15	0	+11	+14	+13	+12	+12	+11	+ 9	+ 2	- 2	- 9	-18	-21	-19	- 9	- 5	+ 2	+ 7	+ 2	0	- 2	- 3	- 1	548			
4	- 5	- 2	+ 7	+15	+14	+ 7	+ 7	+ 6	+ 5	- 1	- 3	- 4	- 3	- 4	- 3	- 2	+ 1	+ 5	+ 6	+ 5	- 5	-16	-19	-22	553			
5	-13	- 1	+14	+21	+19	+10	+ 8	+ 7	+ 6	+ 1	- 3	- 2	- 3	- 3	- 2	+ 3	+ 7	+ 9	+12	- 4	-12	-22	-25	-24	552			
6	-18	- 8	+ 7	+15	+10	+ 8	+ 8	+ 8	+ 5	+ 1	- 1	- 7	- 4	- 4	- 3	- 1	+ 2	+ 8	+11	+ 5	- 4	-12	-13	-12	551			
7	- 7	+ 8	+13	+18	+ 9	+ 4	+ 7	+ 4	+ 3	- 1	- 2	- 7	-10	-11	-11	- 2	- 2	+ 4	+17	+11	0	-10	-11	-21	549			
8	-12	- 2	+ 8	+12	+10	+ 8	+ 8	+ 7	+ 8	0	- 2	- 1	- 1	- 4	- 3	- 2	- 1	+ 5	+ 8	+ 7	- 7	-14	-13	- 8	550			
9	+ 5	+ 9	+12	+19	+17	+10	+10	+ 9	+ 4	0	- 9	-17	-18	-21	-12	- 7	- 1	+ 8	+10	+ 3	0	- 3	-11	-21	549			
10	-13	- 3	+11	+16	+14	+10	+12	+11	+10	+ 3	+ 2	+ 1	- 4	+ 1	+ 2	+ 1	+ 2	+ 7	+ 8	+ 2	- 9	-24	-29	-28	546			
11	-11	+ 2	+11	+10	+ 5	+ 3	+ 3	+ 4	+ 3	+ 2	+ 1	- 2	- 3	- 5	- 7	0	+ 2	+11	+16	+11	0	-19	-19	-19	547			
12	-14	- 5	+ 6	+12	+ 7	+ 4	+ 4	+ 7	+ 7	+ 3	- 1	- 5	- 7	- 3	+ 3	+ 3	+ 5	+ 8	+13	+ 3	- 7	-17	-18	-19	545			
13	-17	+ 2	+20	+20	+15	+11	+10	+ 5	0	0	- 1	- 1	- 1	- 1	+ 1	+ 3	+ 9	+10	+12	+ 5	-10	-30	-32	-34	548			
14	-29	- 3	+17	+19	+16	+ 7	+ 7	+ 2	- 2	- 4	-12	- 3	- 5	- 3	0	+ 5	+ 6	+ 7	+17	+ 8	- 3	-11	-13	-12	551			
+ 15	- 3	+ 2	+12	+17	+16	+ 8	+ 8	+ 6	+ 5	+ 3	0	- 1	- 1	0	0	+ 2	+ 7	+ 8	+ 9	- 3	-18	-27	-22	-19	550			
+16	-16	- 4	+14	+18	+14	+ 6	+ 4	+ 3	+ 1	- 3	- 3	- 5	- 4	0	+ 3	+ 4	+ 4	+ 5	+ 9	+ 4	- 6	-11	-17	-26	554			
+17	-20	-10	+10	+20	+16	+10	+10	+ 9	+ 9	+ 7	+ 4	+ 4	+ 4	+ 5	+ 5	+10	+10	+10	+13	+ 1	-19	-31	-40	-33	547			
18	-26	-10	+ 7	+16	+14	+ 8	+ 4	+ 4	+ 4	- 1	- 5	- 5	- 6	- 2	+ 3	+ 5	+13	+22	+24	+12	- 6	-25	-26	-25	553			
19	-15	- 5	+ 6	+12	+15	+10	+ 7	+ 6	+ 6	+ 6	+ 3	0	- 3	- 3	0	+ 5	+ 6	+ 8	+16	+ 7	- 6	-22	-24	-24	551			
20	-22	- 9	+ 8	+ 8	+ 6	+ 6	+ 6	+ 3	+ 1	- 1	- 1	- 2	- 2	- 1	+ 3	+ 7	+ 7	+ 8	+12	+ 7	- 3	-12	-14	-14	550			
21	- 3	+ 8	+12	+ 7	+ 6	+ 6	+ 7	+ 6	+ 6	+ 5	+ 3	- 1	- 1	0	+ 4	+ 6	+ 4	+ 7	+ 7	0	-12	-22	-26	-28	550			
22	-25	-14	+ 6	+15	+14	+ 7	+ 6	+ 5	+ 5	+ 5	+ 3	+ 3	+ 4	+ 4	0	+ 5	+ 7	+15	+15	+ 5	-12	-23	-30	-27	552			
23	-26	- 7	+ 4	+13	+12	+ 7	+ 5	+ 6	+ 4	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 5	+ 5	+ 9	+12	+ 2	- 7	-24	-21	-17	554			
+24	-11	- 2	+10	+11	+ 9	+ 5	+ 3	+ 2	+ 1	0	0	0	0	0	0	0	+ 1	+ 9	+10	0	-10	-18	-16	-13	557			
25	- 6	+ 1	+ 5	+ 6	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 3	+ 3	+ 2	+ 2	+ 4	+ 4	+ 4	+ 8	+ 9	+ 3	- 6	-18	-25	-25	553			
26	-17	+ 3	+15	+14	+13	+ 4	+ 4	+ 3	+ 3	+ 1	- 2	+ 1	+ 2	+ 3	+ 4	+ 3	+ 3	+ 5	+ 6	+ 1	-15	-19	-24	-20	554			
27	- 6	+ 2	+ 6	+ 5	+ 1	- 3	+ 2	- 2	- 4	- 3	- 3	0	+ 1	+ 2	+ 3	+ 6	+ 6	+ 9	+11	0	- 4	- 8	- 6	- 5	550			
28	- 1	+ 4	+ 6	+ 5	+ 4	+ 5	+ 4	+ 3	0	- 2	0	- 2	- 2	+ 2	+ 4	+ 4	+ 6	+ 9	+11	- 1	- 6	-15	-15	-12	552			
29	- 7	+ 3	+13	+13	+12	+ 4	+ 3	+ 3	+ 2	- 2	- 6	- 6	- 3	+ 3	+ 3	+ 5	+ 4	+ 9	+11	- 5	-13	-19	-17	-21	553			
+30	-15	+ 2	+19	+20	+12	+10	+10	+ 7	+ 2	+ 1	+ 1	+ 1	0	+ 1	+ 1	+ 3	+ 9	+11	+10	- 2	-10	-25	-29	-29	555			
31	-20	- 2	+10	+11	+11	+ 7	+ 7	+ 4	+ 2	0	- 1	- 4	- 4	- 5	- 2	0	+ 2	+ 9	+ 9	0	- 5	-10	-10	- 8	556			
MEAN.	-13	- 2	+10	+14	+11	+ 7	+ 6	+ 5	+ 3	+ 1	- 1	- 2	- 3	- 2	0	+ 3	+ 5	+ 9	+12	+ 4	- 7	-17	-20	-20	551			

Declination

(D = 10° + Mean + ...East)

Unit = 0·1 minute of arc

G.M.T.

September 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+ 2	+12	+13	+13	+ 8	+12	+ 8	+ 2	+ 2	0	- 5	-10	- 8	- 9	- 7	0	+ 1	+ 5	+ 6	- 1	- 7	- 9	-12	- 8	554			
2	0	+ 7	+ 7	+ 8	+ 8	+ 9	+ 7	+ 7	+ 7	+ 7	- 3	- 3	- 3	+ 1	+ 5	+ 7	+ 9	+16	+16	- 2	-22	-33	-33	-18	549			
3	+ 3	+12	+13	+12	+ 8	+10	+ 8	+ 4	+ 2	+ 1	- 2	- 4	- 7	- 2	+ 2	+ 3	+ 4	+12	+ 7	- 8	-18	-24	-24	- 8	554			
4	+11	+22	+28	+22	+12	+ 3	+ 3	+ 3	+ 2	+ 1	- 6	- 7	- 8	- 2	+ 1	+ 2	+ 2	+ 2	+ 2	- 8	-18	-21	-29	-28	554			
5	-16	+ 9	+26	+27	+18	+13	+12	+ 8	+ 5	+ 4	+ 4	+ 3	+ 2	- 5	+ 4	+ 4	+ 4	+ 6	+ 4	- 6	-17	-34	-37	-35	552			
6	-15	+ 9	+15	+13	+11	+ 8	+ 4	+ 3	+ 3	+ 3	0	- 7	- 1	+ 1	+ 2	+ 2	+ 3	+ 5	+ 3	- 6	- 8	-17	-17	- 4	552			
7	+18	+27	+31	+27	+ 8	0	+ 1	- 2	- 3	-11	-11	- 9	- 4	- 4	- 4	- 2	+ 1	+ 1	- 3	-12	-14	-13	-13	- 3	548			
8	0	+14	+23	+19	+13	+ 6	+ 4	+ 4	+ 4	- 5	- 6	- 5	- 5	- 6	- 5	0	0	+ 4	+ 4	- 6	-11	-16	-20	-17	551			
9	- 7	+ 7	+ 6	+ 9	+ 2	+ 6	+ 7	+ 8	+ 3	0	0	- 1	- 1	- 1	0	+ 3	+ 4	+ 8	+ 2	-11	-15	-10	- 7	-11	546			
10																												
11																												
12	+ 6	+12	+13	+10	+ 8	+ 3	+ 2	+ 1	+ 1	- 4	- 4	- 2	+ 2	+ 2	+ 2	+ 2	+ 3	+ 3	+ 4	+ 1	-10	-17	-18	-17	- 8	553		
13	+ 1	+10	+ 7	+ 2	+ 3	+ 4	+ 3	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 4	+ 4	+ 6	+11	+ 3	- 8	-15	-18	-18	-12	553		
14	- 1	+ 7	+ 8	0	- 1	0	- 1	- 1	- 1	- 1	- 1	- 1	- 1	0	0	+ 1	+ 7	+ 9	+10	+ 9	- 2	-10	-11	- 7	557			
15	+ 7	+14	+21	+22	+13	+ 9	+ 4	+ 3	+ 3	+ 2	+ 2	+ 1	- 5	+ 2	+ 2	+ 4	+ 4	+ 3	+ 1	-12	-26	-30	-28	-26	552			
16	-16	+ 4	+19	+12	+10	+ 6	+ 1	+ 1	0	0	0	0	+ 1	+ 1	+ 8	+11	+11	+15	+10	- 2	-10	-20	-29	-30	552			
17	-18	+ 1	+13	+14	+11	+ 6	+ 5	+ 6	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 7	+ 7	+ 7	+11	+ 3	- 8	-15	-23	-28	-15	554			
18	- 4	+ 6	+ 6	- 2	- 2	+ 4	+ 2	+ 2	+ 2	- 3	- 3	- 1	- 1	0	+ 4	+ 5	+ 6	+ 7	+10	- 4	- 4	- 5	-13	-14	559			
19	- 6	+10	+16	+16	+ 9	+ 4	+ 4	+ 4	+ 2	- 4	- 4	- 4	- 4	- 2	0	+ 3	+ 4	+ 4	+ 3	- 7	-15	-16	-16	- 7	561			
20	+ 3	+ 6	+10	+ 5	+ 1	+ 2	+ 4	+ 4	+ 2	- 5	- 5	- 6	- 5	0	+ 4	+ 4	+ 8	+14	+14	0	- 7	-16	-17	-16	561			
21	- 2	+ 2	+ 8	+14	+17	+ 6	+ 8	+ 7	+ 2	- 1	- 2	- 2	- 2	- 2	- 1	+ 7	+ 8	+ 8	+ 2	- 8	-16	-22	-22	-15	557			
22	- 7	+ 6	+10	+10	+ 4	+ 6	+ 8	+ 8	0	- 1	- 1	0	0	+ 4	+ 9	+ 9	+11	+11	+ 7	-10	-20	-26	-29	-18	555			
23	0	+11	+10	+ 5	+ 2	+ 6	+9	+ 9	+ 8	+ 4	+ 4	+ 2	0	+ 1	+ 2	+ 4	+ 8	+ 6	0	-13	-26	-30	-20	- 1	555			
24	+15	+24	+16	+ 6	+ 1	- 2	- 2	+ 1	+ 1	+ 3	+ 4	+ 4	+ 3	+ 1	+ 4	+ 4	+ 5	+ 2	- 5	-15	-19	-20	-14	- 5	561			
25	+ 6	+ 7	+ 6	+ 4	+ 3	- 5	- 4	- 2	- 2	- 1	- 2	- 4	- 1	+ 1	+ 3	+ 5	+ 6	+ 6	+ 3	+ 5	-13	-14	-13	+ 2	559			
26	+20	+24	+22	+19	+10	+ 8	+ 6	+ 4	+ 1	+ 1	+ 1	0	0	+ 1	+ 1	+ 6	+ 9	+ 8	- 8	-33	-31	-39	-30	- 8	555			
27	+12	+22	+23	+11	+ 6	+ 2	+ 2	+ 1	- 1	- 8	- 7	+ 1	+ 1	+ 1	+ 3	+ 4	+ 9	+11	+ 2	-19	-29	-28	-19	- 9	554			
28	+ 5	+ 7	+ 5	+14	+14	+ 3	- 5	- 7	-14	- 7	- 4	- 5	- 4	- 1	- 4	+ 5	+ 6	+ 5	+ 5	- 4	- 5	- 9	- 5	- 4	550			
29	+ 7	+ 7	+ 7	+ 8	+ 9	+ 8	+ 7	+ 7	+ 4	+ 3	+ 6	+ 7	+ 6	+ 6	+ 7	+ 8	+ 8	+ 1	-12	-25	-31	-23	-13	- 2	548			
30	+ 4	+13	+14	+13	+13	+ 6	+ 5	+ 7	+ 5	+ 4	+ 4	+ 3	+ 3	+ 3	+ 5	+ 3	+ 3	- 3	-16	-27	-27	-26	-13	+ 3	552			
31																												
MEAN.	+ 1	+11	+14	+12	+ 8	+ 5	+ 4	+ 3	+ 2	0	- 1	- 2	- 1	0	+ 2	+ 4	+ 6	+ 7	+ 3	- 9	-16	-20	-20	-12	554			

200/1/39—171

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc October 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+11	+20	+12	+10	+ 3	+ 2	+ 1	0	+ 1	- 1	- 8	- 9	- 9	- 7	+ 4	0	+ 2	- 4	-10	-20	-10	- 9	0	+10	555			
2	+15	+21	+23	+15	+ 6	+ 3	+ 4	+ 3	+ 5	+ 5	+ 1	0	+ 1	+ 3	+ 2	+ 4	+ 4	- 3	-14	-25	-34	-26	-14	+ 5	560			
3	+19	+29	+25	+18	+ 9	+ 2	+ 3	+ 3	0	- 3	- 7	- 1	- 1	- 1	+ 1	0	+ 1	- 3	-20	-27	-30	-21	-11	+ 4	556			
4	+18	+24	+28	+18	+ 7	- 1	+ 3	+ 5	+ 1	- 1	0	0	+ 1	- 1	0	- 1	0	- 1	-10	-22	-23	-22	-20	- 7	556			
5	+10	+14	+ 9	+ 1	0	[illegible]	+ 6	+ 6	+ 5	+ 4	0	+ 1	0	0	+ 4	+ 1	0	- 2	-10	-18	-18	-10	- 3	+ 1	555			
6	+10	+11	+11	+ 7	+ 4	+ 9	+10	+ 6	+ 4	+ 1	0	0	- 1	0	0	- 3	- 8	-10	-17	-20	-18	-10	0	+20	555			
7	+31	+25	+18	+16	+11	+10	+ 1	0	- 6	-10	- 9	- 9	-10	-10	-10	-10	- 9	-10	-10	-11	-11	- 9	+ 1	+12	555			
8	+22	+23	+23	+22	+14	+ 4	- 7	-14	- 9	-15	-15	- 7	- 5	+ 3	+ 5	+11	+12	+ 4	- 8	-18	-21	-19	-13	0	552			
9	- 3	+ 5	+15	+17	+14	+ 7	+ 7	+ 7	+ 2	- 2	- 4	- 3	- 3	- 3	- 2	+ 5	+ 3	- 3	-12	-20	-17	-16	- 7	+ 5	558			
10	+11	+11	+11	+11	+11	+11	+11	+ 7	+ 2	+ 1	+ 1	+ 1	0	+ 1	+ 1	+ 2	+ 7	- 1	-18	-30	-30	-21	- 9	+ 8	554			
11	+17	+18	+18	+13	+ 8	+ 8	+ 8	+ 1	0	- 2	- 2	- 3	- 6	- 2	- 2	- 2	+ 2	- 2	-12	-22	-22	-12	- 2	+ 9	557			
12	+18	+12	+ 8	+ 4	+ 6	+ 7	+ 8	+ 7	0	- 1	- 2	- 2	- 2	- 2	0	+ 2	+ 5	- 2	-12	-18	-22	-20	- 5	+12	557			
+ 13	+26	+25	+18	+17	+ 8	+ 7	+ 8	+ 2	0	0	0	- 1	- 1	- 1	+ 1	+ 4	+ 7	- 2	-18	-30	-32	-30	-12	+ 6	557			
+ 14	+13	+23	+19	+12	+ 3	+ 3	+ 3	+ 3	+ 3	+ 2	+ 1	- 2	- 3	- 3	+ 2	+ 2	+ 3	- 6	-17	-18	-21	-23	- 9	+ 3	562			
15	+16	+25	+27	+25	+15	+15	+11	+ 6	+ 5	- 5	- 5	- 5	- 4	+ 5	+ 5	+ 5	+ 3	- 5	-24	-33	-35	-33	-16	- 4	560			
16	+17	+20	+19	+ 9	+ 9	+ 9	+ 9	+ 4	- 1	- 4	- 3	- 1	- 1	- 1	- 1	- 1	- 2	-18	-21	-24	-21	- 9	+ 3		556			
17	+10	+17	+17	+15	+ 7	+ 7	+ 7	+ 7	+ 7	+ 4	+ 2	- 2	- 2	- 2	- 1	+ 2	- 1	-10	-23	-24	-22	-13	- 3	+ 6	558			
18	+10	+ 9	+10	+ 1	0	+10	+ 8	0	0	+ 1	0	0	0	+ 2	+ 7	+ 6	+ 4	- 9	-20	-29	-30	-15	+ 8	+25	555			
19	+35	+31	+27	+16	+ 9	+11	+10	+ 1	+ 1	- 8	- 4	- 1	0	+ 1	+ 1	+ 2	+ 3	- 9	-27	-36	-38	-29	-11	+11	554			
20	+25	+28	+26	+18	+ 8	+ 8	+ 8	+ 8	+ 5	+ 2	0	+ 1	+ 1	+ 4	+ 5	+ 6	+ 8	- 3	-22	-37	-41	-32	-19	- 2	557			
21	+21	+24	+19	+10	+ 7	+10	+11	+10	+ 9	+ 8	+ 1	0	+ 1	+ 1	+ 1	+ 2	+ 9	- 6	-20	-35	-39	-29	-15	+ 3	554			
22	+15	+16	+14	+12	+ 5	+ 5	+ 3	+ 5	+ 4	+ 4	+ 4	+ 4	- 1	+ 3	+ 4	+ 4	+ 4	- 6	-17	-26	-30	-26	- 8	+ 8	551			
+23	+15	+16	+15	+ 8	+ 7	+ 7	+ 8	+ 6	+ 5	+ 1	- 2	- 3	- 4	- 4	0	+ 1	- 1	-11	-22	-23	-23	-14	- 3	+16	559			
+24	+24	+17	+15	+ 8	+ 6	+ 6	+ 6	+ 6	+ 6	+ 1	- 3	- 2	- 3	- 3	0	+ 3	+ 3	- 5	-20	-30	-32	-21	- 4	+16	559			
25	+28	+28	+18	+12	+ 8	+ 8	+ 8	+ 8	+ 7	+ 2	- 2	- 1	- 1	- 2	- 1	+ 1	- 2	-12	-24	-31	-27	-30	-10	+ 9	557			
26	+20	+25	+24	+10	+ 7	+11	+15	+11	+ 7	+ 7	- 3	- 3	- 7	- 5	-11	-13	-14	-22	-26	-25	-17	- 5	+ 7	+19	558			
27	+30	+23	+20	+11	+ 8	+ 3	+10	+ 6	+ 3	+ 2	+ 1	- 1	- 4	+ 1	+ 1	+ 1	0	-12	-28	-28	-24	-14	0	+ 3	554			
28	+ 2	+ 9	+10	+ 9	+ 8	+ 8	+ 9	+ 9	+ 6	+ 3	- 1	- 1	0	0	- 1	- 1	- 2	-11	-21	-27	-20	- 3	+ 7	+ 9	556			
29	+ 6	+ 2	+ 1	+ 2	+ 3	+10	+12	+11	+10	+ 9	+ 6	+ 4	+ 3	+ 3	+ 4	+ 3	+ 1	-13	-28	-37	-28	- 8	+ 6	+18	553			
+30	+18	+15	+ 7	+ 5	+ 5	+ 7	+ 7	+ 7	+ 6	+ 1	- 1	- 3	- 3	- 2	- 1	- 2	- 3	-13	-25	-33	-23	- 3	+16	+26	558			
31	+33	+25	+16	+11	+ 9	+12	+13	+ 9	+ 3	+ 1	+ 1	+ 2	+ 2	+ 3	+ 3	+ 3	+ 3	-10	-29	-43	-38	-28	-14	+ 7	552			
MEAN.	+18	+19	+17	+12	+ 7	+ 7	+ 7	+ 5	+ 3	0	- 2	- 1	- 2	- 1	+ 1	+ 1	+ 1	- 7	-19	-26	-26	-18	- 6	+ 8	556			

[200/1/39—17185

Declination

(D = 10° + Mean +...East)

G.M.T. Unit = 0·1 minute of arc November 1940.

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+21	+31	+28	+21	+15	+12	+12	+11	+ 7	+ 1	+ 1	- 7	- 7	- 6	+ 1	+ 1	- 1	-15	-29	-37	-37	-22	- 2	+11	554			
2	+17	+24	+26	+17	+ 8	+ 7	+ 7	+ 6	- 2	- 3	- 3	- 5	- 6	- 5	- 4	- 3	- 3	-13	-21	-24	-23	-12	+ 7	+17	558			
3	+27	+29	+30	+21	+12	+12	+12	+11	+ 9	+ 1	- 9	- 9	-10	- 9	- 8	- 5	- 7	-19	-29	-35	-29	- 9	+ 4	+20	554			
4	+23	+22	+22	+22	+19	+18	+ 8	+ 8	+ 6	0	- 2	- 2	- 3	-12	-12	-12	-11	-12	-12	-27	-30	-18	- 2	+ 8	557			
5	+ 7	+15	+17	+17	+13	+ 8	+ 9	+ 6	- 1	- 3	- 3	- 6	- 5	- 3	- 3	- 3	- 3	-13	-19	-24	-23	-13	+ 5	+17	558			
6	+18	+19	+23	+19	+18	+11	+10	+ 8	+ 8	- 1	- 2	- 2	- 2	- 2	- 2	- 2	- 2	-12	-21	-28	-26	-22	-12	+ 7	557			
7	+24	+27	+24	+20	+14	+14	+ 8	+ 4	+ 3	- 3	- 5	- 6	- 6	- 6	- 6	- 5	- 5	- 9	-22	-26	-26	-17	- 6	+ 4	561			
+8	+16	+16	+15	+11	+ 5	+ 5	+ 5	+ 4	- 1	- 4	- 4	- 5	- 5	- 5	- 3	- 3	- 3	- 5	-15	-24	-24	- 7	+15	+24	560			
9	+22	+19	+16	+ 9	+ 9	+15	+16	+ 8	+ 2	- 4	-12	-12	-11	- 5	- 6	- 3	- 2	-11	-22	-28	-22	- 8	+ 8	+19	557			
+10	+25	+24	+15	+ 9	+ 5	+ 5	+ 5	+ 5	+ 4	- 1	- 5	- 5	- 5	- 5	- 4	- 3	- 4	-13	-22	-24	-15	- 5	+ 7	+18	560			
+11	+18	+14	+14	+14	+13	+ 8	+ 5	+ 4	+ 4	0	- 4	- 4	- 4	- 3	- 2	0	- 3	-12	-24	-27	-26	-16	+ 4	+24	561			
12	+36	+32	+21	+ 8	+ 6	+ 6	+ 6	+ 6	+ 6	- 4	-13	-12	- 4	- 4	- 4	- 2	- 4	-13	-23	-33	-24	-10	+ 6	+16	559			
13	+19	+18	+15	+ 8	+ 8	+12	+ 9	+ 8	+ 8	+ 5	+ 2	- 2	- 1	- 2	- 2	+ 4	+ 2	-12	-32	-38	-32	-18	- 1	+11	557			
14	+13	+13	+13	+13	+13	+ 4	+ 3	+ 3	+ 2	- 6	- 8	- 7	- 5	- 1	- 1	- 3	- 6	- 7	-17	-25	-17	+ 1	+13	+21	562			
15	+19	+11	+ 8	+ 8	+ 6	+ 2	+ 1	+ 1	+ 1	+ 1	+ 1	0	- 2	+ 1	+ 1	+ 1	+ 1	- 9	-27	-39	-29	- 2	+18	+31	564			
16	+26	+19	+ 9	+ 9	+ 9	+11	+11	+ 9	+ 6	0	- 1	- 4	- 1	- 1	- 1	0	+ 9	- 7	-22	-41	-39	-21	- 1	+24	566			
17	+27	+27	+25	+16	+15	+ 8	+ 6	+ 6	+ 5	- 4	- 4	- 4	- 5	- 5	- 4	+ 1	+ 3	- 4	-22	-33	-32	-23	- 3	+12	569			
+18	+25	+24	+23	+14	+ 5	+ 3	+ 6	+ 5	+ 3	+ 3	+ 2	- 1	- 3	+ 2	+ 2	+ 3	+ 3	- 7	-17	-31	-36	-26	- 8	+12	562			
+19	+24	+24	+15	+ 7	+ 4	+ 4	+11	+ 8	+ 4	- 1	- 5	- 1	+ 1	+ 4	+ 4	+ 4	+ 4	- 6	-23	-36	-35	-16	+ 3	+13	561			
20	+14	+20	+19	+17	+11	+10	+11	+10	+ 5	+ 2	+ 1	0	- 2	- 3	- 4	- 5	0	- 8	-19	-31	-32	-21	- 9	+ 8	564			
21	+14	+23	+30	+30	+24	+21	+20	+14	+ 4	-11	-15	-16	- 6	+ 3	+ 1	+ 4	- 2	-16	-36	-44	-36	-17	- 6	+ 6	561			
22	+17	+17	+17	+18	+21	+21	+17	+ 7	+ 6	- 3	- 9	-13	-13	- 3	- 3	- 2	- 4	-20	-23	-33	-23	-11	+ 7	+14	558			
23																												
24	+27	+26	+29	+21	+14	+10	+10	+ 6	+ 4	+ 1	0	0	0	0	- 1	0	0	-10	-30	-40	-38	-24	- 6	+10	565			
25	+25	+22	+18	+16	+15	+12	+15	+15	+10	- 4	- 4	- 4	-12	-23	-23	-22	-13	-13	-14	-23	-14	- 3	+ 8	+24	559			
26	+23	+26	+23	+20	+18	+14	+12	+12	+ 3	+ 2	- 6	- 7	- 3	- 2	+ 1	- 2	- 2	-14	-28	-38	-38	-28	- 8	+13	563			
27	+25	+32	+25	+16	+15	+14	+15	+ 6	+ 5	+ 4	+ 4	+ 1	- 1	- 2	- 3	+ 3	+ 1	-14	-34	-46	-45	-24	+ 1	+10	560			
28	+ 9	+16	+18	+18	+13	+ 8	+ 8	+ 7	+ 3	- 1	- 2	- 3	- 4	- 5	- 3	- 2	- 2	-11	-22	-32	-28	-11	+ 7	+20	567			
29	+26	+26	+19	+17	+17	+17	+16	+16	+ 7	- 2	- 4	- 6	-12	- 6	-14	-13	- 4	-13	-22	-33	-30	-13	+ 6	+17	568			
30	+26	+31	+28	+25	+16	+10	+15	+ 7	+ 6	- 4	- 5	- 6	- 5	- 4	- 5	- 4	- 4	-16	-33	-43	-33	-14	+ 6	+17	569			
31																												
MEAN.	+21	+22	+20	+16	+12	+10	+10	+ 7	+ 4	- 1	- 4	- 5	- 5	- 4	- 4	- 3	- 2	-12	-24	-33	-29	-15	+ 2	+15	561			

Declination

(D = 10° + Mean + ...East)

G.M.T. Unit = 0·1 minute of arc December 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1																												
2																												
3																												
4	+20	+25	+26	+27	+19	+17	+17	+16	+11	+ 8	+ 5	- 1	- 2	- 3	- 4	- 5	-11	-19	-32	-39	-34	-30	-13	- 3	558			
5																												
+ 6	+23	+18	+16	+ 8	+ 7	+ 7	+ 9	+11	+ 8	+ 7	+ 5	+ 3	0	+ 2	+ 2	- 1	- 3	-15	-31	-38	-33	-22	- 3	+16	558			
+ 7	+19	+23	+32	+24	+13	+ 6	+11	+12	+ 9	+ 3	+ 3	+ 2	+ 1	+ 2	+ 2	+ 2	- 3	-17	-37	-47	-36	-17	- 6	+11	562			
+ 8	+14	+12	+ 9	+ 8	+ 5	+ 8	+ 9	+ 9	+ 9	+ 5	+ 1	- 1	- 1	- 1	- 2	- 3	- 9	-14	-22	-31	-21	- 7	+ 5	+19	566			
9	+29	+25	+23	+15	+13	+11	+ 8	+ 9	+ 5	+ 4	- 1	- 5	- 6	-13	- 6	- 5	-14	-24	-34	-35	-24	- 9	+ 5	+25	560			
10	+32	+31	+26	+23	+14	+13	+13	+10	+ 4	+ 4	+ 3	+ 2	0	+ 2	+ 1	+ 3	+ 2	-11	-37	-57	-49	-27	-10	+ 4	562			
11	+20	+25	+26	+18	+ 9	+ 4	+ 9	+ 9	+ 3	+ 7	+ 9	+ 9	+ 8	+ 9	+ 9	+ 9	+ 8	- 4	-27	-48	-50	-40	-21	-11	556			
12	- 4	- 4	- 3	- 2	- 4	- 3	+ 6	+ 4	+ 3	+ 3	+ 5	+ 5	+ 5	+ 4	+ 5	+ 6	+ 5	- 4	-15	-22	-15	- 4	+ 8	+18	559			
13	+28	+24	+17	+ 8	+ 6	+ 1	+ 8	+ 8	+ 7	- 1	+ 1	+ 4	+ 4	+ 5	+ 4	+ 5	- 3	-13	-33	-33	-24	-13	- 4	+ 2	558			
14	- 1	+ 8	+21	+22	+12	+ 8	+14	+15	+ 8	+ 4	+ 3	- 2	- 3	- 2	+ 1	+ 2	+ 1	-10	-22	-32	-28	-16	- 9	+ 9	557			
15	+17	+25	+25	+25	+15	+12	+14	+ 9	+ 8	+ 5	+ 2	- 3	- 1	+ 2	+ 4	+ 5	+ 4	-15	-34	-45	-39	-32	-15	+ 1	560			
16	+12	+22	+33	+35	+25	+16	+16	+13	+ 6	+ 1	- 3	+ 1	+ 4	+ 3	+ 4	+ 6	+ 4	-12	-25	-42	-44	-42	-24	0	559			
17	+14	+18	+23	+22	+24	+12	+14	+ 8	+ 6	+ 4	+ 4	+ 4	+ 4	+ 3	+ 2	- 1	- 5	-16	-33	-39	-36	-25	- 6	+ 8	561			
+18	+25	+22	+18	+16	+12	+ 6	+ 6	+ 6	+ 6	+ 7	+ 5	+ 3	- 1	- 2	- 3	0	- 3	-12	-24	-34	-28	-20	-11	+ 6	559			
+19	+18	+23	+22	+23	+22	+13	+12	+ 7	+ 4	+ 3	+ 1	- 1	- 1	- 2	- 1	0	- 5	-10	-27	-32	-32	-27	-15	+ 3	562			
20	+12	+22	+23	+27	+22	+13	+12	+12	+10	+ 2	- 8	-13	- 9	-16	- 9	-12	- 8	-18	-19	-27	-18	- 9	- 5	+13	563			
21	+20	+20	+29	+39	+39	+19	+18	+16	+ 8	0	- 2	- 9	-11	-10	-10	- 9	-10	-20	-30	-40	-38	-29	-10	+ 9	565			
22	+12	+15	+19	+20	+20	+12	+12	+12	+12	+ 2	0	- 6	- 8	- 9	- 8	- 6	- 8	-18	-24	-22	-15	- 8	- 8	+ 2	563			
+ 4	+10	+10	+14	+16	+15	+20	+15	+14	+13	+ 4	+ 3	+ 4	+ 2	- 2	- 6	- 5	-14	-26	-36	-35	-22	- 6	+ 4	561			
+ 7	+17	+24	+27	+26	+17	+16	+ 8	+ 7	+ 4	- 1	- 3	- 3	- 3	- 3	- 3	- 4	-13	-23	-41	-34	-23	- 3	+ 7	568			
25	+19	+19	+19	+12	+10	+10	+10	+10	+ 1	0	- 1	- 5	- 5	- 4	- 5	- 5	-10	-20	-20	-19	-11	- 6	0	+11	565			
26	+16	+26	+27	+27	+21	+11	+ 9	+ 8	+ 7	- 3	- 7	-13	-12	- 5	- 4	- 4	-13	-24	-34	-34	-24	- 6	+ 7	+19	568			
27	+28	+29	+30	+27	+18	+11	+12	+10	+ 7	+ 4	+ 1	0	- 3	- 1	- 5	- 2	- 7	-21	-34	-40	-35	-26	-10	+10	565			
28	+21	+20	+20	+13	+10	+10	+10	+ 8	+ 7	0	0	0	- 1	- 1	- 1	0	- 3	-19	-32	-40	-32	-20	0	+19	565			
29	+26	+21	+17	+16	+ 7	+ 7	+11	+ 7	+ 7	+ 5	- 3	- 3	- 3	- 3	- 3	- 3	- 4	-14	-23	-33	-34	-22	- 1	+19	568			
30	+36	+38	+36	+28	+27	+21	+18	+11	0	- 2	- 3	- 9	-11	- 7	- 8	-10	-12	-23	-33	-37	-33	-23	-12	+ 7	567			
31	+11	+19	+25	+31	+31	+26	+14	+11	+ 3	+ 2	- 2	- 8	- 8	- 8	- 7	- 4	- 3	-17	-28	-38	-39	-27	+ 2	+13	573			
MEAN.	+18	+21	+22	+21	+16	+11	+12	+10	+ 7	+ 3	+ 1	- 2	- 2	- 2	- 2	- 1	- 4	-15	-28	-36	-31	-20	- 6	+ 9	562			

Vertical Intensity

G.M.T. (Z = 20000ϒ + Mean + ...) January 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1		+ 4	+ 4	- 1	- 3	- 6	- 6	- 5	- 2	- 1	+ 1	+ 3	+ 3	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 3	0	- 6	- 7	- 5	- 3	633			
2		- 7	-12	-15	-14	-12	- 9	- 7	- 3	0	+ 2	+ 4	+ 5	+ 7	+ 7	+ 7	+ 8	+ 7	+ 7	+ 5	+ 4	+ 4	+ 4	+ 2	0	634			
3		- 1	+ 1	- 2	- 3	- 8	- 9	- 8	- 8	- 7	- 4	- 1	+ 2	+ 3	+ 4	+ 5	+ 7	+ 3	- 2	- 1	+ 2	+ 2	+ 5	+ 9	+13	640			
4		+ 6	+ 3	0	+ 2	0	- 2	- 2	- 2	- 1	+ 2	+ 3	+ 6	+ 5	+ 4	+ 4	+ 5	+ 3	0	0	- 7	-13	-12	- 3	- 1	645			
5		+ 1	0	- 6	-11	-11	- 9	- 6	- 4	- 1	0	+ 2	+ 4	+ 4	+ 5	+ 4	+ 4	+ 2	0	- 2	- 4	- 2	+ 1	+ 8	+12	643			
6		+11	+ 6	- 1	- 2	- 6	- 5	- 3	- 2	0	+ 1	+ 3	+ 5	+ 4	+ 4	+ 3	+ 4	+ 4	+ 1	- 3	- 7	- 8	- 6	- 6	- 3	644			
7		+ 5	+ 2	+ 4	+ 3	0	- 2	- 2	- 1	0	+ 2	+ 2	+ 3	+ 4	+ 5	+ 8	+ 5	+ 4	0	- 6	- 6	- 8	-11	- 8	- 2	640			
8		+ 3	+ 5	+ 3	- 2	- 5	- 4	- 2	- 2	- 1	0	0	+ 1	+ 3	+ 3	+ 5	+ 5	+ 5	+ 3	- 2	- 4	- 5	- 6	- 4	- 1	639			
9		+ 4	+ 6	+ 3	- 1	- 4	- 2	- 2	- 1	- 1	- 1	0	0	0	0	+ 3	+ 3	+ 5	+ 5	+ 1	- 5	- 4	- 6	- 5	- 7	639			
10		- 4	- 9	-10	-10	- 4	- 3	0	+ 2	+ 3	+ 3	+ 6	+ 7	+ 7	+ 6	+ 3	+ 6	+ 7	+ 8	+ 5	+ 2	- 5	-10	- 9	- 3	632			
11		- 6	- 4	- 4	- 5	- 3	0	+ 2	+ 4	+ 2	+ 2	+ 2	+ 2	+ 5	+ 6	+ 7	+ 8	+ 7	+ 6	+ 5	+ 1	- 6	-13	-13	- 5	638			
12		- 6	- 6	- 3	- 1	+ 1	- 1	+ 1	+ 2	+ 1	+ 1	- 1	+ 2	+ 2	+ 3	+ 3	+ 4	+ 4	+ 5	+ 3	+ 2	- 3	- 4	- 6	- 2	641			
13		+ 4	- 1	- 4	- 4	- 3	- 2	- 1	+ 1	+ 2	+ 3	+ 3	+ 3	+ 3	+ 4	+ 4	+ 6	+ 7	+ 7	+ 4	+ 1	- 2	- 4	-11	-14	636			
14		-14	-15	-12	- 9	- 6	- 3	- 1	+ 1	+ 1	+ 3	+ 3	+ 3	+ 4	+ 5	+ 5	+ 6	+ 8	+ 8	+ 6	+ 5	+ 4	+ 3	+ 3	+ 1	634			
15		- 5	- 7	- 9	-10	- 7	- 4	- 2	- 1	+ 1	+ 1	+ 2	+ 2	+ 2	+ 2	+ 3	+ 6	+ 6	+ 6	+ 3	+ 3	+ 4	+ 6	+ 4	+ 4	636			
16		+ 1	- 1	- 5	- 6	- 6	- 6	- 5	- 4	- 1	- 3	- 3	+ 1	+ 1	+ 1	+ 4	+ 2	+ 1	+ 2	+ 2	+ 5	+ 7	+ 7	+ 2	- 1	638			
17		- 5	- 9	-10	- 9	- 2	0	0	+ 2	+ 5	+ 6	+ 5	+ 6	+ 5	+ 2	+ 3	+ 3	+ 3	+ 6	+ 1	- 4	- 4	+ 1	+ 3	+ 1	637			
18		- 2	- 7	- 6	- 4	- 2	- 1	- 1	+ 1	+ 3	+ 4	+ 6	+ 5	+ 5	+ 4	+ 4	+ 3	+ 3	- 4	0	+ 3	0	- 2	- 5	-11	640			
19		-16	-21	-22	-14	- 5	- 3	- 1	+ 3	+ 7	+ 8	+10	+10	+13	+13	+13	+13	+12	+ 8	+ 4	+ 1	- 3	- 4	- 7	-15	637			
20		-23	-28	-24	-19	-12	- 5	- 1	+ 1	+ 4	+ 6	+ 8	+ 9	+10	+10	+10	+10	+ 9	+ 6	0	0	+ 5	+ 8	+10	+16	635			
21		+ 8	+ 4	+ 3	- 2	- 6	- 6	- 4	- 4	- 3	- 2	- 1	+ 1	+ 2	+ 3	+ 3	+ 4	+ 3	+ 1	- 3	- 2	- 1	+ 3	+ 2	+ 4	642			
22		+ 3	0	- 3	- 4	- 7	- 4	- 3	- 2	- 2	0	+ 1	+ 1	+ 1	+ 2	+ 3	+ 4	+ 3	0	- 4	- 5	0	+ 3	+ 4	+ 2	643			
23		+ 1	0	+ 3	+ 2	+ 1	0	- 1	- 3	- 3	- 3	+ 1	+ 1	+ 1	+ 3	+ 2	+ 1	+ 1	- 1	- 4	- 4	- 4	+ 1	0	- 3	644			
24		0	- 1	- 4	- 2	- 4	- 2	- 1	0	0	0	0	+ 1	+ 3	+ 4	+ 5	+ 7	+ 7	+ 5	- 1	- 5	- 7	- 6	- 1	+ 4	640			
25		+ 7	+ 2	- 2	- 5	- 3	0	+ 1	0	+ 1	+ 1	+ 1	+ 2	+ 5	+ 7	+ 8	+ 7	+ 8	+ 8	+ 5	0	- 6	-15	-20	-12	638			
26		- 2	0	- 1	- 1	0	0	+ 2	0	0	0	- 1	0	0	+ 2	+ 4	+ 5	+ 7	+ 5	+ 3	- 1	- 8	-10	- 8	- 3	636			
27		+ 1	+ 1	+ 1	0	0	0	+ 1	+ 4	+ 4	+ 4	+ 1	+ 1	+ 1	+ 1	+ 4	+ 5	+ 6	+ 6	+ 4	0	- 6	- 8	-12	-15	635			
28		-10	- 9	- 7	- 7	- 5	- 4	- 1	0	+ 1	+ 2	+ 1	+ 1	+ 2	+ 2	+ 2	+ 3	+ 6	+ 6	+ 7	+ 5	+ 1	- 1	+ 1	0	633			
29		- 2	+ 1	- 3	- 5	- 7	- 5	- 3	- 2	- 1	- 1	- 1	- 2	- 2	- 1	+ 2	+ 3	+ 7	+ 8	+ 8	+ 7	+ 6	+ 3	+ 1	- 2	637			
30		- 4	- 6	- 3	- 3	- 6	- 6	- 1	0	- 1	- 3	- 3	- 4	- 2	+ 2	+ 3	+ 2	+ 4	+ 7	+ 8	+ 8	+ 5	+ 2	- 1	- 6	637			
31		- 8	-13	-15	-12	- 6	- 2	0	+ 3	+ 1	+ 4	+ 4	+ 4	+ 3	+ 1	+ 1	+ 1	+ 5	+ 4	+ 4	+ 4	0	+ 6	+ 9	+ 5	636			
MEAN.		- 2	- 4	- 5	- 5	- 5	- 3	- 2	- 1	0	+ 1	+ 2	+ 3	+ 3	+ 4	+ 4	+ 5	+ 5	+ 4	+ 2	0	- 2	- 2	- 2	- 2	638			

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Vertical Intensity

G.M.T. (Z = 20000γ + Mean + ...) February 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	0	+2	+4	+1	0	−4	−3	−1	−1	+2	+1	+2	+1	+2	+4	+4	+2	0	+2	0	−1	−4	−4	+1	640			
2	0	−1	−4	−6	−7	−7	−6	−2	−1	−1	0	+1	+1	+3	+3	+3	0	−1	−1	+1	+3	+3	+6	+10	641			
3	+8	+5	+3	0	−2	−3	−3	−5	−3	−5	−3	−2	+2	+2	+2	0	−1	−1	−1	−3	−2	0	+2	+2	642			
4	+4	+5	+1	−4	−6	−7	−6	−4	−3	−1	0	+1	+2	+4	+4	+4	+5	+4	+1	−1	−3	−3	−1	−1	640			
5	0	+1	−1	−3	−2	−2	−2	−2	−1	0	+1	+3	+4	+5	+6	+9	+8	+5	+1	−5	−8	−7	−6	−3	636			
6	−3	−2	−3	−6	−6	−4	−3	−3	−3	−1	+2	+5	+7	+7	+7	+8	+9	+5	+2	−4	−10	−8	−2	+2	637			
7	+1	−1	+3	+3	+1	−1	−1	+1	+1	+2	+2	+3	+4	+6	+8	+8	+8	+7	+3	−2	−7	−14	−19	−17	638			
8	−16	−18	−15	−13	−9	−7	−2	0	0	+3	+4	+5	+7	+8	+9	+11	+11	+10	+7	+3	−1	−2	−1	+5	637			
9	0	0	0	0	−2	−2	−2	−2	−1	−1	0	+2	+3	+4	+4	+5	+5	+5	+3	0	−1	−5	−7	−6	642			
10	−2	0	+1	−2	−4	−4	−1	0	0	0	−1	−1	0	+1	+3	+4	+5	+6	+6	+4	0	−4	−5	−2	641			
11	+3	+3	+4	+1	−1	−2	−1	0	+1	0	−1	0	+1	+3	+4	+4	+4	+5	+1	−2	−8	−12	−8	−1	642			
12	+1	+2	+1	0	−5	−5	−4	−2	0	0	+1	+2	+1	+1	+1	+1	+3	+4	+3	+1	+2	+1	−2	−2	645			
13	+3	+1	0	0	−2	−3	−2	+1	+2	+1	+2	+2	+2	+3	+5	+5	+5	+5	+2	−2	−4	−4	−6	−6	640			
+14	−4	−4	−2	−5	−6	−4	−1	0	+1	+1	+1	+1	+4	+5	+5	+5	+6	+6	+5	+1	−1	−4	−5	−5	636			
15	−3	−4	−5	−6	−6	−5	−3	−2	0	+1	+1	+1	+3	+4	+4	+4	+4	+4	+6	+4	+2	+1	+2	+4	634			
16	+7	+5	+1	0	−3	−3	0	+1	+2	+2	+3	+2	+3	+3	+3	+3	+3	+3	+2	0	−4	−7	−10	−6	635			
+17	−2	0	−2	−3	−5	−8	−5	−3	−2	+1	+2	+3	+3	+3	+3	+3	+3	+3	+2	0	−2	−3	0	+2	634			
+18	+1	+1	0	−3	−5	−5	−4	−3	−1	0	+2	+2	+2	+3	+3	+3	+2	+2	+1	+1	+1	+2	+2	+2	635			
+19	+3	−2	−5	−6	−3	−2	0	0	+1	+1	+2	+3	+4	+4	+4	+4	+4	+3	0	−3	−8	−8	−3	+2	634			
20	+3	+3	−1	−8	−9	−8	−7	−5	0	+1	+3	+4	+4	+5	+6	+5	+5	+4	0	−1	−3	−5	−3	−2	637			
21	−2	−2	−5	−6	−7	−6	−3	−2	−1	0	−1	+1	+4	+6	+9	+9	+9	+6	+3	−1	−1	−3	−2	0	637			
22	0	−2	−4	−4	−5	−4	−4	−3	−2	0	+1	+2	+5	+6	+7	+7	+7	+6	+3	0	−2	−2	−3	−3	640			
23	0	−2	−2	−2	−2	−3	−2	−1	0	+1	+1	+1	+4	+6	+8	+9	+10	+9	+5	0	−5	−7	−8	−9	638			
24	−9	−4	−2	−3	−3	−4	−3	−3	−2	−2	−1	+3	+6	+8	+9	+12	+13	+2	+7	+3	−2	−9	−9	−10	640			
25	−12	−13	−12	−10	−9	−2	−1	+3	+3	+3	+3	+5	+15	+19	+15	+9	+4	+2	+2	−2	−4	−4	−8	−9	639			
26	−10	−7	−4	−1	+1	+1	+2	+3	+3	+1	+1	+1	+1	+1	+2	+3	+6	+6	+4	+1	−1	−2	−3	−2	640			
+27	+2	−1	−3	−6	−7	−6	−2	0	+3	+3	+2	+2	+2	+2	+3	+3	+4	+4	+2	0	0	0	−2	−4	639			
28	−6	−11	−11	−12	−11	−9	−5	−1	0	+1	+1	+1	+2	+1	+2	+2	+2	+3	+6	+6	+7	+10	+11	+12	636			
29	+8	+6	+4	−1	−3	−5	−5	−3	−2	−1	−1	−2	−2	−2	−2	−2	+3	+2	+2	+3	+2	+1	+1	+1	640			
30																												
31																												
MEAN.	−1	−1	−2	−4	−4	−4	−3	−1	0	0	+1	+2	+3	+4	+5	+5	+5	+4	+3	0	−2	−3	−3	−2	638			

Vertical Intensity

G.M.T. (Z = 20000γ + Mean +.....) March 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+2	-1	-2	-4	-6	-6	-6	-2	-1	0	+2	+2	+2	+2	+2	+2	0	+2	+3	+3	+2	+2	+5	+7	639			
2	+7	+2	-1	-5	-6	-5	-2	-1	0	+1	+2	+2	+4	+4	+4	+4	+4	+2	+2	-1	-2	-4	-2	-1	637			
3	-2	-3	-4	-5	-5	-5	-5	-3	-2	0	+2	+3	+4	+4	+4	+6	+6	+4	+2	0	0	-2	+1	+2	635			
4	0	-1	-3	-5	-6	-7	-7	-6	-5	-3	-1	0	+1	+3	+4	+4	+4	+3	+3	+3	+3	+5	+8	+6	638			
5	+6	+4	-1	-3	-3	-5	-5	-3	-2	-2	-1	+1	+3	+4	+4	+4	+4	+3	+1	-1	-5	-5	-3	-2	638			
+6	0	0	0	-1	-3	-4	-5	-4	-3	-1	0	+2	+3	+5	+6	+6	+6	+6	+3	+1	-3	-3	-1	0	637			
+7	-1	-1	-1	-5	-7	-7	-6	-5	-5	-3	-1	0	+1	+3	+5	+5	+5	+5	+3	+1	+1	+3	+5	+5	637			
8	+5	+2	0	-3	-4	-3	-1	0	+1	+1	+2	+2	+3	+5	+6	+7	+7	+6	+3	0	-3	-9	-9	-11	637			
9	-13	-11	-8	-5	-7	-7	-4	-1	0	+2	+5	+6	+6	+7	+9	+11	+11	+12	+9	+4	-1	-5	-6	-6	638			
10	-5	-2	-3	-6	-5	-5	-2	-1	0	+1	+3	+4	+5	+6	+8	+8	+8	+8	+6	+4	-2	-7	-8	-12	639			
+11																												
12																												
13																												
14																												
+15	-4	-5	-7	-5	-4	-3	-3	-1	+1	+1	+2	+2	+2	+2	+3	+3	+4	+4	+4	+3	+1	-3	-3	-3	640			
16	-2	-4	-8	-7	-7	-6	-3	-2	-1	+2	+3	+4	+4	+4	+4	+5	+5	+5	+3	+3	-1	-2	-3	-3	640			
17	-3	-3	-3	-4	-4	-2	-1	-1	0	0	+2	+3	+4	+4	+4	+4	+4	+5	+5	+2	-1	-3	-4	-4	640			
+18	-3	-3	-3	-3	-2	-2	-2	-1	0	+1	+3	+3	+4	+4	+4	+4	+3	+3	+1	-1	-3	-3	-1	0	640			
19	-2	-2	-5	-8	-12	-12	-11	-8	-7	-6	0	+5	+6	+7	+6	+6	+4	+5	+5	+7	+7	+6	+5	+2	639			
20	-5	-3	-3	-5	-5	-4	-3	-4	-2	0	+2	+3	+5	+6	+8	+7	+6	+5	+1	-3	-5	-4	-3	-5	643			
21	-7	-8	-7	-7	-8	-7	-3	-2	-1	+1	+3	+5	+6	+9	+9	+9	+8	+5	+3	-1	-1	-1	+1	0	640			
22	-3	-6	-8	-8	-5	-4	-4	-4	-4	-2	0	+1	+3	+5	+6	+7	+7	+6	+3	+2	+1	-2	0	+1	643			
23	+7	+4	0	-2	-3	-3	-3	-4	-9	-14	-4	-2	0	+3	+5	+9	+9	+10	+8	+7	+3	-4	-8	-9	641			
24																												
25																												
26	-12	-10	-9	-10	-6	-5	-4	0	+2	+3	+2	+2	+2	+2	+3	+5	+7	+8	+6	+2	+3	+2	+1	-1	661			
27	+2	-5	-10	-9	-9	-5	-1	+2	+3	+5	+5	+3	+3	+3	+3	+5	+5	+6	+5	+1	-1	-5	-5	-7	655			
28	-8	-12	-12	-13	-9	-4	-2	-1	+2	+3	+3	+5	+5	+7	+7	+5	+5	+5	+5	+4	+3	+2	+1	-3	653			
29	0	-6	-9	-8	-8	-6	-4	-1	+1	+2	+2	0	+7	+2	+1	0	+2	-4	-3	+5	+12	+11	+3	-5	649			
30	-15	-15	-34	-30	-30	-24	-5	+12	+17	+10	+5	+12	+5	+16	+16	+15	+11	+10	+4	+5	+4	+1	+1	-1	684			
31	-1	-1	-1	-1	-1	+1	+1	+1	+1	+5	+11	0	-11	0	+1	-1	+1	+5	0	-1	-3	-4	-4	-7	662			
MEAN.	-2	-4	-6	-6	-7	-6	-4	-2	-1	0	+2	+3	+3	+5	+5	+6	+5	+5	+3	+2	0	-1	-1	-2	643			

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Vertical Intensity

G.M.T. (Z = 20000γ + Mean + ...) April 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	-19	-18	-17	-13	- 5	- 2	+ 3	+ 4	+ 7	+10	+ 3	+ 1	+ 5	+ 9	+10	+ 9	+ 6	+ 4	+ 3	+ 3	+ 3	0	+ 1	+ 3	658			
2	0	- 3	- 4	- 6	- 6	- 4	- 2	- 1	0	+ 2	+ 3	+ 4	+ 4	+ 4	+ 5	+ 4	+ 5	+ 6	+ 5	- 3	- 3	- 4	- 4	- 7	659			
3	- 6	- 9	-22	-23	-19	-17	-16	- 6	- 4	+ 6	+ 8	+ 9	+ 9	+ 9	+13	+14	+12	+12	+ 8	+ 6	+ 6	+ 4	+ 2	+ 2	661			
4	+ 4	- 1	- 5	- 9	- 9	- 7	- 4	- 3	- 3	- 1	+ 4	+ 2	+ 4	+ 5	+ 8	+ 8	+ 7	+ 4	+ 3	+ 2	- 2	- 3	- 1	- 1	654			
5	+ 1	0	0	- 2	- 2	- 3	- 2	- 3	- 2	0	+ 3	+ 3	+ 3	+ 4	+ 4	+ 5	+ 6	+ 5	+ 4	0	- 3	- 6	- 5	- 5	652			
6	- 9	-11	- 7	- 6	- 6	- 5	- 4	- 4	- 2	- 1	0	+ 2	+ 5	+ 7	+ 8	+10	+10	+ 8	+ 7	+ 5	+ 1	- 2	- 5	- 5	651			
+ 7	- 5	- 6	-10	-10	- 9	- 5	- 4	- 3	- 3	- 1	0	+ 2	+ 3	+ 6	+ 6	+ 7	+ 8	+ 7	+ 8	+ 6	+ 3	+ 2	+ 2	+ 2	650			
+ 8	0	- 2	- 4	- 4	- 2	- 2	- 1	- 1	- 1	- 1	- 1	0	+ 1	+ 2	+ 4	+ 4	+ 4	+ 5	+ 4	+ 2	0	- 4	- 7	- 6	651			
+ 9	- 3	- 7	- 7	- 6	- 6	- 3	- 2	- 2	- 1	- 1	- 1	0	+ 3	+ 3	+ 4	+ 5	+ 6	+ 6	+ 5	+ 5	+ 3	+ 2	+ 2	+ 2	648			
+10	- 1	- 2	- 3	- 2	- 2	- 2	- 2	- 2	- 1	- 1	- 1	+ 1	+ 2	+ 3	+ 4	+ 5	+ 5	+ 5	+ 5	+ 2	+ 1	- 2	- 3	- 4	648			
11	- 3	- 5	- 5	- 5	- 6	- 5	- 4	- 2	0	+ 1	0	+ 1	+ 3	+ 3	+ 5	+ 6	+ 7	+ 6	+ 5	+ 3	+ 2	+ 1	+ 1	+ 2	645			
+12	- 2	- 3	- 7	- 6	- 5	- 2	- 1	- 1	- 2	- 1	- 1	- 1	- 1	- 1	+ 2	+ 3	+ 4	+ 4	+ 5	+ 3	+ 2	0	+ 2	+ 3	648			
13	+ 4	+ 1	- 4	- 2	- 4	- 4	- 2	0	0	0	- 1	- 1	0	- 1	0	+ 1	+ 3	+ 4	+ 4	+ 3	+ 1	0	- 4	- 4	647			
14	- 6	- 7	-11	-11	- 9	- 9	- 6	- 5	- 3	- 3	- 1	0	+ 3	+ 4	+ 5	+ 5	+ 5	+ 8	+ 8	+ 8	+ 6	+ 6	+ 6	+ 5	648			
15	- 1	- 6	- 8	-11	- 8	- 7	- 6	- 5	- 2	+ 3	+ 4	+ 5	+ 5	+ 6	+ 5	+ 9	+ 6	+ 5	+ 4	+ 4	+ 2	- 1	- 2	- 5	648			
16	-10	-11	- 9	- 8	- 9	- 6	- 5	- 4	- 1	0	+ 1	+ 3	+ 5	+ 5	+ 5	+ 5	+ 3	+ 3	+ 3	+ 2	+ 1	+ 3	+ 6	+ 7	651			
17	+ 3	- 1	- 6	- 9	- 7	- 8	- 9	- 9	- 7	- 3	- 2	+ 2	+ 2	+ 2	+ 3	+ 3	+ 3	+ 3	+ 4	+ 5	+ 6	+ 6	+10	+ 9	654			
18	+ 5	0	- 3	- 4	- 2	- 2	- 4	- 6	- 3	- 2	0	+ 2	+ 3	+ 4	+ 4	+ 3	+ 3	+ 2	+ 2	0	- 2	- 2	- 3	- 3	654			
19	- 1	- 3	- 5	- 6	- 6	- 6	- 6	- 6	- 4	- 1	0	+ 2	+ 5	+ 5	+ 6	+ 5	+ 5	+ 3	+ 3	+ 3	+ 2	+ 2	0	- 4	651			
20	- 5	- 8	- 8	- 3	- 3	- 4	- 4	- 8	- 5	- 3	0	+ 1	+ 3	+ 6	+ 7	+ 8	+ 8	+ 9	+ 8	+ 4	+ 2	+ 1	- 3	- 4	650			
21	+ 1	+ 1	- 1	- 2	- 1	- 1	- 2	- 2	- 2	- 2	- 2	- 2	+ 1	+ 3	+ 4	+ 5	+ 6	+ 6	+ 6	+ 5	+ 1	- 2	- 5	- 7	647			
22	- 9	- 8	- 9	- 8	- 8	- 5	- 7	- 8	- 3	- 2	- 2	0	+ 2	+ 4	+ 9	+ 8	+ 9	+ 9	+ 9	+ 7	+ 4	+ 2	+ 1	0	650			
23	- 4	- 5	- 4	0	0	0	- 1	- 2	- 2	- 2	- 2	- 2	- 1	+ 1	+ 1	+ 2	+ 4	+ 5	+ 6	+ 6	+ 5	+ 2	- 2	- 4	653			
24	- 1	0	0	- 3	- 3	- 3	- 1	- 1	- 1	- 1	- 1	0	0	0	+ 1	+ 2	+ 2	+ 3	+ 5	+ 5	+ 2	- 1	- 4	- 8	652			
25	- 5	- 5	- 1	-18	-25	-13	- 3	+ 2	+ 4	+ 5	+ 6	+ 6	+ 6	+ 6	+ 8	+ 9	+ 9	+ 9	+10	+ 6	- 1	- 6	- 6	- 9	649			
26	-12	-10	- 9	- 7	- 7	- 7	- 5	- 4	- 1	+ 3	+ 5	+ 5	+ 4	+ 5	+ 7	+ 7	+ 5	+ 7	+ 7	+ 5	+ 3	+ 4	+ 3	+ 1	656			
27	- 5	- 6	- 5	- 4	- 4	- 6	- 7	- 6	- 5	- 2	- 1	0	+ 1	+ 4	+ 5	+ 2	+ 2	+ 4	+ 4	+ 4	+ 6	+ 5	+ 4	0	659			
28	- 2	- 7	- 6	- 5	- 5	- 5	- 5	- 2	0	+ 1	+ 4	+ 4	+ 4	+ 2	+ 4	+ 4	+ 2	+ 4	+ 5	+ 6	+ 6	+ 4	+ 1	- 4	653			
29	- 7	-10	-11	- 9	- 8	- 5	- 4	- 3	0	+ 1	+ 2	+ 3	+ 4	+ 4	+ 6	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 3	+ 1	0	651			
30	+ 2	0	- 1	- 3	- 5	- 5	- 5	- 3	- 3	- 3	0	+ 3	+ 3	+ 4	+ 5	+ 6	+ 8	+ 6	+ 6	+ 4	+ 3	- 1	- 3	- 6	649			
31																												
MEAN.	- 3	- 5	- 6	- 7	- 6	- 5	- 4	- 3	- 2	0	+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 6	+ 5	+ 5	+ 4	+ 2	0	- 1	- 2	652			

Vertical Intensity

G.M.T. (Z = 20000γ + Mean + ...) May 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	- 6	- 6	- 5	- 3	- 2	- 3	- 5	- 5	- 2	- 1	+ 2	+ 4	+ 5	+ 6	+ 6	+ 6	+ 6	+ 6	+ 8	+ 3	0	0	- 2	- 5	649			
2	- 6	- 8	-11	-10	- 7	- 7	- 6	- 4	- 1	0	+ 3	+ 4	+ 5	+ 6	+ 7	+ 7	+ 7	+ 6	+ 6	+ 6	+ 4	+ 1	0	0	648			
+ 3	- 8	-12	- 8	- 2	- 1	- 1	- 1	- 1	- 2	- 1	- 1	+ 1	+ 2	+ 4	+ 5	+ 5	+ 5	+ 5	+ 5	+ 5	+ 3	+ 1	- 1	+ 3	650			
+ 4	+ 2	+ 1	- 1	- 5	- 4	- 4	- 5	- 5	- 5	- 4	- 1	- 1	0	0	+ 1	+ 1	+ 1	+ 1	+ 4	+ 5	+ 4	+ 4	+ 4	+ 2	653			
5	- 2	- 2	+ 2	+ 3	+ 3	+ 2	0	- 2	- 2	- 2	0	+ 1	+ 2	+ 2	+ 3	+ 3	+ 3	+ 3	+ 4	+ 3	- 2	- 4	- 4	- 5	652			
+ 6	- 4	- 3	- 3	- 4	- 4	- 4	- 3	- 1	- 1	0	+ 1	+ 1	+ 2	+ 4	+ 4	+ 5	+ 5	+ 5	+ 5	+ 4	+ 1	- 1	- 3	- 6	648			
7	- 9	- 6	- 3	0	- 1	- 3	- 5	- 6	- 7	- 5	- 3	- 1	+ 1	+ 4	+ 5	+ 6	+ 7	+ 7	+ 7	+ 7	+ 5	+ 1	- 1		648			
8	- 5	-12	-12	- 7	- 4	- 3	- 1	0	0	0	0	0	+ 1	+ 1	+ 2	+ 4	+ 5	+ 5	+ 6	+ 6	+ 5	+ 5	+ 5	+ 1	648			
9	- 5	-11	-12	-12	-12	- 9	- 5	- 1	0	+ 1	+ 1	+ 1	+ 1	+ 2	+ 4	+ 6	+ 7	+ 7	+ 8	+ 7	+ 5	+ 5	+ 1	- 1	648			
10	- 4	- 4	- 6	- 4	- 3	- 4	- 6	- 6	- 6	- 4	- 3	+ 1	+ 1	+ 2	+ 3	+ 4	+ 7	+ 9	+ 9	+ 8	+ 5	+ 2	+ 1	- 3	651			
11	- 8	- 9	- 7	- 4	0	0	0	+ 1	+ 3	+ 3	+ 1	+ 1	+ 1	+ 3	+ 4	+ 4	+ 4	+ 4	+ 4	+ 3	0	- 3	- 4	- 9	652			
12	- 9	- 8	- 6	- 5	- 6	- 6	- 5	- 2	- 1	0	+ 2	+ 4	+ 3	+ 3	+ 4	+ 5	+ 5	+ 5	+ 6	+ 8	+ 9	+ 8	+ 3	- 9	650			
13	-15	-15	-11	- 7	- 5	- 5	- 4	0	+ 1	+ 1	+ 2	+ 2	+ 3	+ 3	+ 3	+ 2	+ 3	+ 4	+ 6	+ 7	+ 7	+ 6	+ 4	+ 1	652			
14	- 5	- 9	- 9	- 8	- 7	- 5	- 4	- 3	- 2	+ 1	+ 4	+ 3	+ 2	+ 3	+ 3	+ 3	+ 4	+ 4	+ 6	+ 8	+ 7	+ 7	+ 6	+ 3	652			
15	- 2	0	+ 1	- 5	- 8	-11	-10	- 8	- 7	- 2	- 2	0	+ 3	+ 3	+ 3	+ 4	+ 4	+ 4	+ 5	+ 7	+ 9	+ 7	+ 7	+ 4	655			
16	- 2	- 4	- 2	- 1	- 1	- 3	- 2	- 2	- 1	0	0	+ 2	+ 2	+2	+ 2	+ 2	+ 2	0	+ 2	+ 2	0	- 1	- 2	- 6	656			
17	- 4	- 7	- 7	- 5	- 6	- 7	- 6	- 4	- 2	- 1	+ 1	+ 3	+ 4	+ 5	+ 5	+ 5	+ 5	+ 5	+ 5	+ 4	+ 4	0	- 2	- 5	649			
18	- 6	- 7	- 7	- 7	- 6	- 9	-10	-10	- 9	- 5	0	+ 1	+ 1	+ 5	+11	+12	+11	+10	+10	+ 4	+ 1	0	0	0	649			
19	- 5	- 2	+ 2	+ 2	+ 4	+ 2	0	- 1	- 2	- 1	0	+ 1	+ 2	+ 5	+ 6	+ 5	+ 5	+ 4	+ 2	- 1	- 5	-10	- 9	- 7	655			
20	- 5	- 4	- 4	0	0	- 3	- 3	- 4	- 3	- 3	0	0	+ 1	+ 3	+ 4	+ 4	+ 4	+ 6	+ 4	+ 3	+ 1	0	0	+ 1	653			
21	+ 1	+ 1	+ 3	- 2	- 4	- 2	- 2	- 2	- 2	- 2	- 2	0	+ 1	+ 3	+ 4	+ 4	+ 6	+ 6	+ 7	+ 4	+ 2	- 3	- 7	-11	653			
22	-10	- 8	- 5	- 4	- 4	- 7	- 7	- 5	- 4	- 3	- 2	+ 4	+ 4	+ 4	+ 6	+ 7	+ 9	+ 8	+10	+10	+ 6	+ 1	0	- 2	653			
23	- 6	- 8	- 9	- 6	- 3	- 3	- 1	- 1	- 1	- 1	- 1	- 3	- 1	0	+ 1	+ 2	+ 3	+ 5	+ 9	+ 8	+ 7	+ 6	+ 5	+ 3	654			
24	+ 4	+ 1	+ 1	- 3	-17	-16	-10	- 5	- 7	- 7	- 9	- 7	- 4	- 2	+ 3	+ 9	+ 9	+ 9	+14	+13	+ 9	+ 3	+ 3	+2	653			
25	- 2	- 1	0	0	0	0	0	+ 1	+ 1	+ 1	+ 1	0	0	- 1	- 1	0	+ 1	+ 2	+ 4	+ 2	- 1	- 1	- 4	- 6	655			
26	- 4	- 1	- 4	- 6	- 8	- 8	- 5	- 4	- 1	- 1	- 1	- 1	- 1	- 1	0	+ 3	+ 5	+ 6	+ 8	+ 8	+ 7	+ 6	+ 2	- 3	654			
27	- 4	- 3	- 3	- 1	- 3	- 4	- 1	+ 1	+ 2	+ 2	+ 2	+ 2	+ 1	+ 1	+ 1	+ 1	+ 1	+ 2	+ 3	+ 2	+ 3	+ 3	0	- 5	654			
28	- 7	- 6	- 3	- 4	- 7	- 6	- 6	- 2	+ 2	+ 3	+ 4	+ 3	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 3	- 1	- 2	- 8	652			
29	- 9	-10	- 9	- 3	- 1	- 2	- 2	- 1	+ 1	+ 2	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 4	+ 4	+ 3	+ 2	+ 1	- 6	652			
+ 30																												
+ 31	- 5	- 7	- 6	- 5	- 4	- 5	- 4	- 3	- 1	0	+ 1	+ 2	+ 4	+ 4	+ 4	+ 4	+ 5	+ 5	+ 6	+ 7	+ 6	+ 5	+ 2	- 4	650			
MEAN.	- 5	- 6	- 5	- 4	- 4	- 5	- 4	- 3	- 2	- 1	0	+ 1	+ 2	+ 3	+ 4	+ 4	+ 5	+ 5	+ 6	+ 5	+ 4	+ 2	0	- 3	652			

Vertical Intensity

G.M.T. (Z = 20000Υ + Mean + ...) June 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
+ 1	- 7	- 9	- 8	- 7	- 4	- 4	- 3	- 2	- 1	+ 2	+ 3	+ 4	+ 4	+ 4	+ 5	+ 5	+ 5	+ 4	+ 5	+ 5	+ 5	+ 4	- 1	- 4	649			
2	-12	- 9	- 6	- 5	- 6	- 7	- 6	- 1	+ 1	+ 2	+ 2	+ 4	+ 5	+ 5	+ 5	+ 6	+ 6	+ 5	+ 6	+ 6	+ 4	+ 1	+ 4	+ 2	652			
3	- 1	- 7	-10	-10	- 7	- 5	- 5	- 3	- 2	- 2	- 1	- 1	0	0	+ 1	+ 3	+ 3	+ 3	+ 4	+ 5	+ 6	+ 8	+ 6	+ 5	653			
+ 4	+ 2	- 1	- 2	- 1	- 1	- 2	- 3	- 3	- 3	- 3	- 2	- 1	- 1	+ 1	+ 2	+ 3	+ 3	+ 2	+ 2	+ 2	+ 2	+ 1	+ 2	+ 2	655			
5	+ 3	+ 2	+ 2	+ 2	0	- 2	- 4	- 4	- 4	- 6	- 3	- 2	- 1	0	0	+ 2	+ 2	+ 2	+ 4	+ 4	+ 4	+ 5	+ 3	- 3	654			
6	- 9	- 8	- 8	- 9	- 8	-10	-13	- 7	- 4	- 2	- 1	+ 1	+ 4	+ 6	+ 7	+ 8	+ 9	+ 9	+ 9	+ 9	+ 8	+ 6	+ 1	- 7	655			
7	-10	- 7	- 8	- 7	- 7	- 2	+ 3	+ 3	0	- 1	- 1	- 1	+ 1	+ 3	+ 4	+ 6	+ 6	+ 5	+ 5	+ 6	+ 4	+ 3	+ 1	- 4	658			
8	- 7	- 6	- 4	0	0	- 1	- 1	- 1	- 1	- 1	- 3	- 3	- 1	- 1	0	+ 1	+ 2	+ 2	+ 5	+ 4	+ 4	+ 4	0	+ 2	657			
9	+ 1	+ 1	+ 1	0	- 8	-15	- 3	- 2	0	0	- 3	- 4	- 3	- 3	- 2	+ 2	+ 2	+ 2	+ 3	+ 5	+ 6	+ 8	+ 8	+ 5	657			
10	- 1	- 2	- 1	- 1	- 3	- 2	- 2	0	+ 2	+ 2	+ 2	0	0	- 1	0	0	+ 2	+ 3	+ 3	+ 4	+ 2	- 1	- 2	- 4	655			
+11	- 8	- 8	- 6	- 5	- 4	- 3	- 1	0	+ 1	+ 1	+ 1	+ 1	0	0	0	+ 1	+ 2	+ 2	+ 5	+ 6	+ 6	+ 5	+ 1	- 4	652			
12	- 9	- 9	- 5	- 3	- 3	- 3	- 2	- 2	0	0	+ 1	+ 2	+ 2	+ 2	+ 2	+ 1	+ 2	+ 3	+ 4	+ 7	+ 4	+ 4	+ 4	+ 3	651			
13	- 5	- 6	- 4	- 2	- 2	- 4	- 4	- 2	- 1	0	+ 1	+ 1	+ 1	0	0	0	0	0	+ 2	+ 5	+ 6	+ 5	+ 2	- 1	653			
14	- 6	- 7	- 6	- 8	- 7	- 6	- 4	- 3	- 1	- 1	+ 1	+ 3	+ 2	+ 2	+ 3	+ 4	+ 4	+ 4	+ 8	+ 5	+ 4	+ 3	+ 2	+ 3	650			
15	- 7	- 6	- 6	- 7	- 9	- 9	- 7	- 6	- 2	+ 4	+ 4	+ 4	+ 4	+ 5	+ 5	+ 5	+ 4	+ 4	+ 4	+ 7	+ 5	+ 4	+ 5	+ 4	660			
16	+ 4	+ 4	+ 3	- 1	- 2	- 2	- 4	- 4	- 4	- 5	- 4	- 1	+ 1	+ 3	+ 5	+ 4	+ 3	+ 1	+ 3	+ 5	+ 4	0	- 4	- 8	659			
17	- 5	- 4	- 4	- 4	- 2	- 3	- 4	- 4	- 3	+ 1	+ 2	+ 3	+ 4	+ 4	+ 6	+ 6	+ 4	+ 3	+ 4	+ 3	- 1	- 3	- 2	- 2	656			
18	- 5	- 8	- 7	- 7	- 5	- 5	- 5	- 5	- 3	- 2	+ 1	+ 3	+ 3	+ 4	+ 4	+ 6	+ 6	+ 7	+ 7	+ 8	+ 6	+ 3	- 2	- 3	656			
19	- 8	- 9	- 8	- 4	- 2	- 4	- 3	- 2	- 3	- 3	- 2	0	+ 1	+ 3	+ 3	+ 5	+ 5	+ 5	+ 5	+ 5	+ 2	+ 2	+ 2	+ 1	657			
+20	+ 1	- 2	- 2	- 1	- 1	- 1	- 2	- 2	- 1	- 2	- 2	- 1	+ 1	+ 2	+ 3	+ 3	+ 4	+ 4	+ 4	+ 4	+ 4	+ 1	- 7	-12	656			
+21	- 8	- 4	- 3	- 3	- 3	- 2	- 3	- 2	- 2	- 2	- 1	- 1	- 1	+ 2	+ 3	+ 3	+ 4	+ 4	+ 5	+ 7	+ 4	+ 3	+ 2	- 1	655			
22	- 6	-11	-10	- 4	- 3	- 2	- 2	- 2	- 2	- 2	0	+ 2	+ 1	+ 1	0	+ 2	+ 3	+ 5	+ 7	+ 8	+ 7	+ 6	+ 2	0	658			
23	- 2	- 2	- 3	- 2	0	0	+ 2	+ 2	+ 2	0	- 1	- 1	- 1	- 1	0	0	+ 2	+ 2	+ 3	+ 4	+ 4	+ 2	- 3	- 3	661			
24	- 2	0	- 8	- 9	- 8	- 5	- 3	0	- 2	0	+ 1	+ 2	+ 1	+ 1	+ 1	+ 1	+ 2	+ 2	+ 5	+11	+11	+10	+ 3	- 2	658			
25	- 1	- 4	- 2	- 1	- 6	- 7	- 1	+ 4	+ 9	+ 2	+ 2	+ 1	+ 9	+ 1	-13	- 9	- 5	0	+ 2	+ 7	+ 5	+ 7	+ 5	0	654			
26	- 9	- 9	-10	- 7	- 2	- 1	+ 1	+ 1	+ 2	+ 3	+ 2	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 4	+ 4	+ 8	+ 7	+ 6	+ 2	- 1	662		
27	+ 3	+ 3	0	- 1	- 4	- 2	- 4	- 2	0	0	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 3	+ 3	+ 3	+ 1	- 2	-10	660		
28	- 9	-10	- 9	- 7	- 5	- 4	- 3	- 1	+ 1	+ 1	+ 2	+ 2	+ 2	+ 3	+ 3	+ 3	+ 3	+ 2	+ 4	+ 7	+ 4	+ 3	+ 2	- 3	657			
29	- 2	- 4	- 5	- 5	- 5	- 6	- 6	- 4	- 2	- 1	0	+ 1	+ 2	+ 2	+ 2	+ 2	+ 3	+ 2	+ 4	+ 7	+ 6	+ 4	0	- 4	654			
30	- 8	- 2	- 2	- 4	- 6	- 6	- 4	- 1	0	+ 1	+ 1	+ 3	+ 4	+ 3	+ 3	+ 3	+ 4	+ 4	+ 5	+ 5	+ 4	+ 3	- 1	- 5	660			
31																												
MEAN.	- 4	- 5	- 5	- 4	- 4	- 4	- 3	- 2	- 1	0	0	+ 1	+ 2	+ 2	+ 2	+ 3	+ 3	+ 3	+ 5	+ 6	+ 5	+ 4	+ 1	- 2	656			

G.M.T.

Vertical Intensity

(Z = 20000γ + Mean + ...)

July 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	659	13 659	06 655	4
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	662	13 662	06 659	3
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	663	13 663	06 659	4
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	662	13 662	06 659	3
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	660	13 660	06 658	2
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	656	13 656	06 656	0
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	656	13 656	06 656	0
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	658	13 658	06 658	0
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	657	13 657	06 657	0
MEAN.	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659			

Vertical Intensity

G.M.T. (Z = 20000γ + Mean + ...) August 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1		- 4	- 4	- 5	0	+ 1	- 3	- 3	- 3	- 3	- 1	0	+ 1	+ 2	+ 4	+ 4	+ 5	+ 5	+ 4	+ 5	+ 6	+ 5	0	- 3	- 4	653			
2		- 6	- 4	- 5	- 4	- 3	- 3	- 3	- 3	- 2	- 3	- 1	+ 1	+ 2	+ 3	+ 6	+ 6	+ 8	+ 7	+ 7	+ 8	+ 5	+ 1	- 3	- 4	652			
3		- 4	- 5	- 5	- 5	- 3	- 4	- 4	- 9	- 8	- 6	- 4	- 5	- 2	+ 1	+ 5	+ 9	+ 9	+13	+12	+ 8	+ 6	+ 2	+ 1	+ 1	652			
4		- 9	-10	- 8	- 4	- 5	- 4	- 1	- 1	0	0	0	+ 1	+ 1	+ 2	+ 5	+ 5	+ 6	+ 6	+ 6	+ 5	+ 2	0	- 1	- 4	658			
5		- 4	- 7	- 9	- 7	- 3	- 1	+ 1	+ 1	- 1	- 1	- 2	- 2	- 2	- 1	+ 3	+ 4	+ 7	+ 8	+ 8	+ 8	+ 4	+ 1	- 1	- 2	656			
6		- 3	-11	-10	- 4	0	+ 1	+ 1	+ 2	+ 4	+ 2	0	0	0	+ 1	+ 4	+ 6	+ 8	+10	+10	+ 8	+ 6	- 1	-10	-12	653			
7		-12	-16	-17	-12	- 7	- 5	- 3	- 1	0	+ 2	- 1	- 2	- 3	- 2	0	+ 3	+ 5	+ 8	+13	+14	+13	+10	+ 5	+ 2	655			
8		- 2	- 8	-13	-10	- 7	- 3	- 3	- 3	- 2	+ 1	+ 2	+ 1	+ 2	+ 1	+ 1	+ 2	+ 3	+ 4	+ 8	+10	+ 9	+ 7	+ 4	+ 3	656			
9		- 3	- 3	- 4	- 5	- 5	- 5	- 4	- 1	+ 1	0	- 3	- 1	- 4	- 3	- 1	0	+ 2	+ 7	+ 7	+ 5	+ 5	+ 6	+ 3	+ 2	658			
10		+ 1	+ 1	- 1	- 5	- 2	- 1	0	+ 1	+ 1	+ 2	+ 4	+ 2	0	0	+ 1	0	0	0	+ 2	+ 2	+ 1	- 1	- 4	-10	659			
11		-11	-15	-16	-17	-14	-10	- 4	- 1	0	+ 4	+ 2	+ 2	+ 4	+ 5	+ 4	+ 4	+ 5	+ 5	+ 7	+11	+13	+12	+10	+ 6	653			
12		+ 2	- 1	- 7	-11	-11	- 7	- 5	- 3	- 1	0	0	+ 2	+ 2	+ 3	+ 4	+ 5	+ 5	+ 4	+ 6	+ 6	+ 5	+ 4	+ 4	+ 2	655			
13		- 2	- 6	-11	- 9	- 6	- 6	- 6	- 5	- 3	- 2	- 1	+ 2	+ 3	+ 4	+ 4	+ 5	+ 5	+ 5	+ 8	+ 9	+ 8	+ 6	+ 4	+ 2	656			
14		- 2	- 7	- 7	- 4	- 3	- 3	- 3	- 3	- 4	- 4	- 4	+ 1	+ 2	+ 3	+ 4	+ 4	+ 4	+ 4	+ 5	+ 5	+ 5	+ 2	- 1	- 3	657			
+ 15		- 4	- 6	- 7	- 6	- 5	- 4	- 2	- 1	- 1	0	+ 1	+ 3	+ 4	+ 5	+ 6	+ 6	+ 6	+ 6	+ 6	+ 5	+ 1	- 4	- 4	- 5	655			
+ 16		- 6	-10	- 9	- 5	- 5	- 4	- 4	- 5	- 5	- 3	- 1	+ 1	+ 2	+ 5	+ 6	+ 6	+ 7	+ 7	+ 7	+ 5	+ 1	+ 1	+ 2	- 3	654			
+ 17		- 8	-11	-11	- 9	- 5	- 3	- 2	0	0	- 2	0	+ 1	+ 3	+ 5	+ 6	+ 7	+ 8	+ 8	+ 9	+ 8	+ 6	+ 2	+ 1	- 4	653			
18		-12	-16	-11	- 9	- 5	- 3	- 3	- 3	- 3	- 4	- 5	- 4	0	+ 1	+ 4	+ 6	+ 7	+10	+13	+13	+11	+ 6	0	- 4	654			
19		-12	-16	-15	-10	- 5	- 2	- 1	- 1	- 1	0	0	+ 1	+ 1	+ 3	+ 4	+ 5	+ 7	+ 7	+10	+12	+10	+ 6	0	- 8	655			
20		-12	-16	-17	-11	- 7	- 6	- 4	0	+ 2	+ 4	+ 4	+ 5	+ 5	+ 6	+ 7	+ 8	+10	+10	+12	+10	+ 6	+ 2	- 1	- 9	654			
21		-18	-17	-10	- 6	- 4	- 2	- 1	0	+ 1	+ 1	+ 1	0	+ 1	+ 3	+ 4	+ 5	+ 5	+ 6	+ 7	+ 6	+ 5	+ 4	+ 4	- 1	655			
22		+1	-17	-13	- 7	- 3	- 2	- 1	- 1	- 1	- 2	- 2	- 2	- 1	- 1	- 1	+ 2	+ 4	+ 7	+ 9	+ 9	+ 8	+ 7	+ 2	- 4	657			
23		-10	-12	-12	- 9	- 6	- 5	- 4	- 1	0	+ 1	+ 2	+ 2	+ 3	+ 3	+ 3	+ 5	+ 5	+ 6	+ 8	+10	+ 7	+ 5	+ 1	+ 1	659			
+ 24		0	- 5	- 8	- 8	- 7	- 4	- 3	- 2	0	+ 1	+ 2	+ 2	+ 2	+ 2	+ 3	+ 3	+ 3	+ 4	+ 7	+ 7	+ 6	+ 3	0	- 4	658			
25		- 5	- 5	- 4	- 5	- 6	- 6	- 5	- 2	- 1	0	0	+ 1	+ 1	+ 3	+ 3	+ 3	+ 4	+ 5	+ 6	+ 7	+ 7	+ 7	+ 3	- 1	655			
26		- 6	-11	- 7	- 6	- 5	- 3	- 2	- 1	0	0	+ 1	+ 4	+ 4	+ 4	+ 5	+ 5	+ 5	+ 6	+ 9	+10	+ 8	+ 3	- 6	- 7	650			
27		-13	-14	-10	- 8	- 5	- 4	- 3	- 2	- 2	+ 1	+ 3	+ 5	+ 5	+ 5	+ 5	+ 6	+ 5	+ 5	+ 7	+ 8	+ 6	+ 5	+ 6	0	653			
28		- 5	- 3	- 2	- 5	- 3	- 3	- 3	- 3	- 1	- 1	+ 2	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	0	- 2	0	0	656			
29		0	- 3	- 1	- 1	- 2	- 3	- 2	- 1	- 1	0	+ 2	+ 3	+ 3	+ 6	+ 6	+ 6	+ 5	+ 5	+ 5	+ 3	- 2	- 6	- 7	- 9	656			
+ 30		-14	-10	- 6	- 4	- 4	- 4	- 4	- 4	- 3	- 3	0	+ 2	+ 3	+ 5	+ 5	+ 5	+ 3	+ 5	+ 6	+ 6	+ 5	+ 5	+ 3	- 1	659			
31		- 6	- 3	0	+ 2	0	- 3	- 3	- 5	- 4	- 3	- 1	- 1	0	+ 2	+ 2	+ 3	+ 3	+ 3	+ 5	+ 3	+ 2	0	- 1	- 6	659			
MEAN.		- 6	- 9	- 8	- 7	- 5	- 4	- 3	- 2	- 1	- 1	0	+ 1	+ 1	+ 3	+ 4	+ 5	+ 5	+ 6	+ 7	+ 7	+ 6	+ 3	0	- 3	655			

[200/1/39—17185

Vertical Intensity

G.M.T. (Z = 20000γ + Mean + ...) September 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	- 7	- 7	-10	- 9	- 4	- 2	- 5	- 4	- 2	0	0	+ 1	+ 3	+ 6	+ 7	+ 9	+ 7	+ 7	+ 7	+ 6	+ 3	+ 2	0	- 2	656			
2	- 6	- 8	- 5	- 4	- 3	- 1	- 1	- 3	- 4	- 3	- 1	- 1	0	+ 5	+ 6	+ 5	+ 7	+ 8	+10	+ 8	+ 6	+ 1	- 3	- 5	657			
3	-11	-16	-13	- 8	- 5	- 7	- 7	- 4	- 2	0	+ 1	+ 3	+ 4	+ 6	+ 8	+ 9	+11	+12	+12	+11	+ 7	+ 3	- 2	- 4	656			
4	- 6	- 9	- 9	- 4	- 3	- 1	0	+ 2	+ 1	- 3	+ 1	0	+ 1	+ 2	+ 5	+ 7	+10	+10	+11	+ 8	+ 5	0	- 9	-15	657			
5	-21	-22	-19	-11	- 3	0	+ 2	+ 3	+ 5	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 6	+ 7	+ 8	+11	+12	+10	+ 2	- 3	- 9	657			
6	- 9	- 9	- 8	- 9	- 5	- 3	0	0	+ 1	+ 1	+ 2	+ 1	+ 2	+ 2	+ 3	+ 3	+ 4	+ 6	+ 7	+ 6	+ 3	+ 1	- 2	- 3	656			
7	- 3	-12	-14	- 9	-11	- 8	- 6	- 2	0	+ 2	+ 8	+ 9	+ 6	+ 6	+ 8	+ 6	+ 9	+ 9	+10	+ 9	+ 5	- 2	- 9	-16	654			
8	-23	-20	-15	-12	-10	- 7	- 3	- 1	+ 1	- 1	+ 1	+ 7	+ 4	+ 5	+ 4	+ 5	+ 8	+ 8	+ 9	+10	+10	+ 9	+ 8	+ 3	655			
9	- 6	- 5	- 3	- 1	- 1	- 1	- 1	0	+ 1	+ 1	+ 2	+ 5	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 1	- 1	- 1	- 1	- 4	657			
+ 10																												
11																												
+ 12	- 1	- 2	- 3	- 3	- 2	- 2	- 2	- 2	- 2	- 2	+ 1	+ 3	+ 4	+ 4	+ 5	+ 7	+ 5	+ 5	+ 4	+ 1	- 3	- 7	- 8	- 8	654			
13	-10	- 5	- 1	0	0	- 3	- 3	- 4	- 3	- 1	0	+ 1	+ 2	+ 3	+ 5	+ 5	+ 3	+ 3	+ 5	+ 2	0	- 1	+ 2	- 6	656			
14	- 6	- 5	- 4	- 4	- 5	- 5	- 5	- 4	- 3	- 1	0	+ 1	+ 2	+ 2	+ 3	+ 2	+ 2	+ 2	+ 5	+ 7	+ 2	+ 3	+ 2	- 1	656			
15	- 4	- 4	- 2	0	- 4	- 5	- 4	- 5	- 4	- 1	+ 1	+ 2	+ 2	+ 4	+ 6	+ 6	+ 7	+ 7	+ 6	+ 4	0	- 4	- 7	-12	657			
16	-16	-23	-18	- 8	- 4	- 3	- 3	0	+ 2	+ 3	+ 3	+ 4	+ 7	+ 7	+ 8	+ 9	+ 9	+ 9	+ 8	+ 7	+ 6	+ 2	0	+ 1	655			
+ 17	- 4	- 4	- 3	- 3	- 3	- 2	- 1	- 2	- 3	- 2	- 1	- 1	+ 2	+ 2	+ 3	+ 4	+ 5	+ 5	+ 5	+ 5	+ 4	+ 2	- 1	- 3	659			
18	- 6	- 6	- 2	- 2	- 2	- 1	- 1	0	0	- 1	- 1	0	+ 1	+ 3	+ 4	+ 5	+ 5	+ 6	+ 6	+ 4	0	- 1	- 3	- 5	658			
+ 19	- 3	- 4	- 1	+ 1	- 1	- 3	- 3	- 3	- 1	0	0	+ 1	+ 2	+ 2	+ 3	+ 5	+ 6	+ 7	+ 7	+ 3	0	- 5	- 9	-10	656			
20	-16	-18	-16	-12	-10	- 7	- 4	0	0	- 1	- 1	- 1	+ 1	+ 2	+ 4	+ 4	+ 5	+ 7	+10	+10	+ 9	+10	+10	+ 7	657			
21	+ 2	+ 2	- 1	- 3	- 5	- 5	- 4	- 4	- 5	- 4	- 3	- 3	+ 1	- 1	+ 1	+ 2	+ 3	+ 6	+ 7	+ 7	+ 6	+ 2	+ 3	+ 4	660			
22	+ 5	+ 7	+ 6	+ 1	- 3	- 4	- 4	- 5	- 5	- 5	- 3	- 3	- 3	- 2	+ 2	+ 2	+ 2	+ 3	+ 6	+ 6	+ 3	+ 1	- 2	- 5	661			
+ 23	- 3	- 3	- 5	- 4	- 2	0	+ 1	+ 2	+ 3	+ 3	+ 3	+ 2	+ 2	+ 3	+ 3	+ 3	+ 3	+ 4	+ 3	+ 2	- 2	- 3	- 7	- 8	655			
24	- 6	- 6	- 6	- 7	- 7	- 6	- 3	- 2	+ 1	+ 3	+ 3	+ 4	+ 5	+ 5	+ 5	+ 5	+ 5	+ 5	+ 4	+ 2	- 2	- 3	- 4	- 4	653			
25	- 5	- 4	- 4	- 2	- 2	- 6	- 6	0	+ 1	+ 2	+ 2	+ 2	+ 4	+ 4	+ 4	+ 4	+ 2	+ 4	+ 4	0	- 1	- 4	- 6	- 4	656			
26	0	- 2	0	0	- 2	- 4	- 5	- 4	- 3	- 2	+ 1	+ 2	+ 2	+ 2	+ 3	+ 3	+ 3	+ 3	- 3	- 8	+ 1	+ 6	+ 4	+ 3	654			
27	- 7	-11	-15	-13	-11	-10	- 5	- 1	- 1	+ 4	+ 6	+ 9	+10	+10	+ 9	+ 7	+ 6	+ 6	+ 6	+ 1	- 2	- 1	- 4	- 2	656			
28	- 5	- 3	- 3	- 6	- 8	-11	- 7	- 7	- 6	- 2	+ 8	+ 8	+ 8	+10	+10	+ 9	+ 9	+ 6	+ 5	+ 3	- 1	- 2	- 5	- 3	657			
29	+ 1	- 1	0	0	- 1	- 2	- 2	- 2	- 1	0	+ 1	+ 4	+ 5	+ 6	+ 7	+ 6	+ 5	+ 4	+ 1	- 2	- 7	- 9	- 6	- 6	656			
30	- 2	- 5	- 6	- 6	- 3	- 2	- 1	- 1	0	+ 2	+ 3	+ 4	+ 6	+ 8	+ 9	+ 9	+ 8	+ 6	+ 3	- 2	- 7	- 7	- 6	- 6	652			
31																												
MEAN.	- 6	- 7	- 6	- 5	- 4	- 4	- 3	- 2	- 1	0	+ 1	+ 2	+ 3	+ 4	+ 5	+ 5	+ 6	+ 6	+ 6	+ 4	+ 2	0	- 2	- 4	656			

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Vertical Intensity

G.M.T. (Z = 20000γ + Mean + ...) October 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1		-12	-13	-13	-11	- 8	- 6	- 1	+ 1	- 1	+ 2	+ 2	+ 1	+ 3	+ 5	+10	+10	+14	+10	+ 5	+ 1	+ 2	+ 2	+ 4	+ 4	656			
2		- 2	- 2	- 2	- 2	- 2	- 1	- 1	- 1	- 1	- 1	- 2	+ 3	+ 2	+ 4	+ 6	+ 6	+ 6	+ 7	+ 3	+ 2	- 2	- 5	- 6	- 8	661			
3		- 7	- 8	-10	-11	-11	- 8	- 5	- 2	- 1	- 1	0	0	+ 1	+ 5	+ 8	+ 9	+ 9	+ 9	+ 9	+ 9	+ 6	+ 1	- 3	- 8	659			
4		- 6	- 8	- 8	- 7	- 3	- 1	+ 4	+ 4	+ 4	+ 3	+ 3	+ 3	+ 3	+ 3	+ 4	+ 5	+ 5	+ 7	+ 7	+ 4	+ 2	- 2	- 8	-18	655			
5.		-20	-16	-12	-11	- 6	- 4	- 1	+ 1	+ 3	+ 3	+ 3	+ 1	+ 3	+ 4	+ 6	+ 5	+ 5	+ 5	+ 5	+ 4	+ 4	+ 4	+ 4	+ 4	653			
6		+ 6	+ 1	- 4	- 5	- 4	- 3	0	0	+ 1	+ 2	+ 2	0	0	+ 3	+ 3	+ 2	+ 2	+ 3	+ 5	+ 3	+ 3	0	- 3	- 9	651			
7		-15	-12	-10	- 9	- 9	-10	-10	- 6	- 6	- 6	+ 4	+ 6	+ 9	+ 6	+ 6	+ 6	+ 6	+ 7	+ 9	+ 7	+ 5	+ 9	+ 7	+ 6	653			
8		- 5	-10	-13	-13	-10	-10	- 8	- 5	- 2	+ 1	+ 5	+ 9	+10	+11	+11	+14	+13	+10	+ 8	+ 1	- 1	- 5	- 5	- 5	659			
9		- 3	- 3	- 3	- 3	- 3	- 4	- 4	- 3	- 1	0	+ 1	+ 2	+ 3	+ 3	+ 3	+ 5	+ 5	+ 5	+ 2	0	0	- 1	- 1	0	657			
10		+ 5	+ 4	+ 3	0	- 1	- 1	- 1	- 1	0	+ 1	+ 3	+ 4	+ 4	+ 4	+ 5	+ 6	+ 6	+ 4	+ 1	- 5	-10	-11	- 9	- 7	653			
11		- 6	- 5	- 5	- 5	- 5	- 5	- 4	- 4	- 2	- 1	0	+ 3	+ 3	+ 5	+ 6	+ 6	+ 5	+ 5	+ 4	+ 1	0	+ 1	+ 4	+ 5	652			
12		+ 4	+ 2	- 1	- 3	- 4	- 4	- 4	- 4	- 3	- 2	- 1	- 1	+ 2	+ 4	+ 5	+ 5	+ 5	+ 4	+ 3	- 1	- 2	- 4	- 3	+ 1	654			
+13		- 1	- 2	- 3	- 4	- 4	- 3	- 2	- 3	- 4	- 2	- 1	+ 1	+ 2	+ 3	+ 4	+ 4	+ 5	+ 3	+ 3	+ 2	+ 1	+ 2	+ 2	- 1	654			
+14		- 5	- 7	- 7	- 7	- 7	- 5	- 4	- 3	- 2	- 2	0	+ 1	+ 2	+ 3	+ 4	+ 4	+ 4	+ 4	+ 4	+ 6	+ 6	+ 4	+ 6	+ 6	655			
15		+ 8	+ 8	+ 7	+ 5	+ 4	+ 1	- 4	- 2	- 2	- 1	- 1	+ 1	+ 2	+ 5	+ 4	+ 4	+ 3	+ 2	- 2	- 3	- 6	- 9	- 9	- 8	654			
16		- 6	- 5	- 3	- 3	- 3	- 4	- 3	- 4	- 1	- 1	- 1	+ 1	+ 2	+ 4	+ 5	+ 6	+ 7	+ 6	+ 4	+ 1	- 3	- 3	- 3	- 1	651			
17		- 2	- 3	- 5	- 5	- 5	- 5	- 3	- 2	- 2	- 1	- 1	- 1	0	+ 2	+ 3	+ 4	+ 5	+ 5	+ 4	+ 3	+ 3	+ 4	+ 2	- 1	652			
18		- 1	- 4	- 3	0	- 1	0	- 4	- 6	- 3	0	+ 1	+ 4	+ 5	+ 7	+ 7	+ 8	+ 8	+ 7	+ 2	- 1	- 4	- 8	- 9	- 5	650			
19		- 3	- 3	- 3	- 4	- 5	- 4	- 3	- 3	- 1	- 1	+ 1	+ 4	+ 6	+ 7	+ 7	+ 8	+10	+ 8	+ 6	+ 1	- 4	-10	-10	-10	650			
20		- 8	- 8	- 7	- 5	- 4	- 3	- 2	+ 1	+ 1	+ 1	+ 1	+ 2	+ 3	+ 3	+ 5	+ 6	+ 7	+ 8	+ 7	+ 3	+ 2	+ 2	- 3	- 5	649			
21		- 5	- 6	- 8	- 6	- 5	- 3	- 3	0	+ 2	+ 4	+ 1	+ 4	+ 2	+ 4	+ 5	+ 5	+ 7	+ 7	+ 5	+ 2	0	- 3	- 4	- 3	650			
22		- 1	- 2	- 6	- 8	- 8	- 7	- 4	- 1	+ 1	+ 3	+ 3	+ 4	+ 3	+ 2	+ 2	+ 2	+ 2	+ 3	+ 3	+ 3	+ 2	- 1	- 3	- 3	653			
+23		- 2	- 4	- 5	- 7	- 7	- 5	- 4	- 2	0	0	+ 1	0	+ 1	+ 1	+ 1	+ 1	+ 2	+ 1	+ 1	+ 2	+ 3	+ 4	+ 6	+ 3	653			
+24		+ 3	- 2	- 6	- 6	- 5	- 4	- 2	- 1	0	+ 1	+ 3	+ 1	+ 3	+ 3	+ 4	+ 4	+ 3	+ 3	0	- 1	0	+ 1	0	- 1	650			
25		- 2	- 4	- 4	- 5	- 7	- 7	- 5	- 4	- 1	+ 1	+ 1	+ 3	+ 4	+ 4	+ 4	+ 5	+ 5	+ 4	+ 3	+ 3	+ 6	- 2	- 7	- 2	650			
26		+1	- 1	0	-14	-11	- 7	- 5	- 1	0	+ 3	+ 1	+ 3	+ 5	+ 3	+ 3	0	+ 3	- 2	- 6	0	+ 3	+ 4	+ 6	+ 6	650			
27		+ 3	+ 1	- 3	- 3	- 4	- 3	- 1	+ 2	+ 2	+ 2	+ 5	+ 7	+ 5	+ 7	+ 7	+ 5	+ 4	+ 2	- 3	- 7	- 9	- 9	- 9	- 8	652			
28		- 3	- 2	- 2	- 1	0	0	- 1	- 1	- 1	0	+ 4	+ 4	+ 5	+ 6	+ 6	+ 5	+ 5	+ 3	- 1	- 5	- 6	- 3	- 1	0	651			
29		- 2	- 2	- 3	- 4	- 4	- 2	- 2	- 2	- 2	- 1	+ 2	+ 4	+ 4	+ 5	+ 5	+ 5	+ 5	+ 5	+ 4	+ 2	- 2	- 2	- 2	- 2	652			
+30		- 3	- 4	- 7	- 8	- 5	- 4	- 2	0	0	0	+ 2	+ 3	+ 5	+ 7	+ 9	+11	+11	+ 8	+ 5	+ 1	- 3	- 5	- 7	- 8	647			
31		- 9	- 9	- 8	- 8	- 8	- 6	- 3	- 2	- 1	- 1	- 1	+ 1	+ 4	+ 7	+ 9	+12	+12	+10	+ 8	+ 2	- 3	- 7	- 6	- 3	646			
MEAN.		- 3	- 4	- 5	- 6	- 5	- 4	- 3	- 2	- 1	0	+ 1	+ 3	+ 3	+ 5	+ 5	+ 6	+ 6	+ 5	+ 3	+ 1	0	- 2	- 2	- 3	653			

[200/1/39—17185

Vertical Intensity

G.M.T (Z = 20000γ + Mean + ...)

November 1940.

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	- 6	- 6	- 5	- 5	- 1	+ 1	0	- 1	- 3	- 1	+ 1	0	0	+ 4	+ 8	+ 9	+ 9	+ 8	+ 4	0	- 5	- 7	- 7	- 7	648			
2	- 6	- 6	- 6	- 6	- 5	- 2	- 1	0	- 1	- 1	+ 1	+ 2	+ 2	+ 4	+ 5	+ 8	+ 9	+ 9	+ 8	+ 5	+ 1	- 2	- 4	- 5	647			
3	- 9	-10	- 7	- 5	- 3	- 3	0	+ 1	0	- 2	+ 3	- 1	- 1	+ 1	+ 4	+ 7	+ 8	+ 7	+ 5	+ 3	- 1	- 2	- 1	- 1	648			
4	- 4	- 9	-11	- 9	- 7	- 5	- 5	- 1	+ 1	+ 2	+ 2	+ 3	+ 2	+ 2	+ 1	+ 1	+ 1	+ 1	+ 5	+ 6	+ 6	+ 5	+ 3	+ 5	650			
5	- 3	- 3	- 4	- 7	- 7	- 5	0	+ 3	+ 3	+ 3	+ 4	+ 7	+ 7	+ 7	+ 5	+ 5	+ 5	+ 4	+ 3	0	- 1	- 4	- 5	- 6	651			
6	- 7	- 6	- 6	- 7	- 6	- 6	- 4	- 3	0	+ 3	+ 3	+ 3	+ 3	+ 3	+ 4	+ 4	+ 4	+ 4	+ 3	0	0	- 1	0	+ 3	651			
7	+ 5	- 2	- 8	-12	-12	-11	- 8	- 7	- 4	+ 1	+ 3	+ 7	+ 7	+ 5	+ 5	+ 6	+ 6	+ 5	+ 3	+ 3	+ 3	+ 5	+ 6	+ 5	649			
+ 8	- 4	- 7	- 9	- 9	- 8	- 7	- 4	- 3	- 2	+ 1	+ 2	+ 2	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 2	+ 6	+10	+10	+ 8	654			
9	+ 7	+ 4	- 1	- 3	- 2	- 3	- 3	- 3	- 3	- 3	- 1	+ 1	+ 2	+ 7	+ 7	+ 5	+ 7	+ 5	+ 3	+ 2	- 2	- 6	- 9	-12	653			
+10	-10	- 5	- 5	- 5	- 4	- 2	- 1	0	+ 2	+ 3	+ 3	+ 4	+ 5	+ 5	+ 5	+ 5	+ 5	+ 3	0	- 2	- 4	- 2	0	0	652			
+11	- 3	- 5	- 3	- 4	- 5	- 5	- 5	- 4	- 3	- 3	0	+ 1	+ 3	+ 4	+ 4	+ 4	+ 4	+ 3	+ 1	0	0	+ 4	+ 6	+10	651			
12	+10	+ 7	+ 5	+ 1	- 3	- 3	- 2	0	+ 1	- 4	- 6	- 3	+ 2	+ 6	+ 7	+ 8	+ 8	+ 6	+ 2	- 2	-10	-13	-12	- 6	649			
13	-12	-12	-11	-12	-12	-10	- 8	- 1	+ 8	+10	+10	+12	+11	+11	+12	+14	+14	+11	+ 6	0	- 5	- 6	- 8	-14	655			
14	-10	-13	-12	-10	- 8	- 8	- 5	- 3	0	+ 1	+ 4	+ 5	+ 8	+10	+10	+10	+10	+ 8	+ 6	+ 4	+ 1	- 4	- 2	+ 4	649			
15	- 1	- 5	- 7	- 7	- 6	- 5	- 3	- 2	0	+ 1	+ 1	+ 1	+ 1	+ 3	+ 5	+ 7	+ 8	+ 8	+ 5	+ 4	+ 1	- 1	- 1	- 0	656			
16	0	+ 1	0	- 2	- 2	- 1	0	+ 1	- 1	- 1	0	0	+ 1	+ 4	+ 5	+ 7	+ 9	+ 7	0	- 3	- 6	- 9	- 6	- 3	656			
17	0	0	- 2	- 3	- 5	- 3	- 2	- 1	- 1	- 1	- 2	- 1	0	0	+ 3	+ 5	+ 8	+ 9	+ 4	+ 1	0	- 2	- 6	-10	656			
+18	- 5	-10	-13	-10	- 8	- 5	- 2	+ 1	+ 1	+ 1	+ 2	+ 2	+ 4	+ 5	+ 6	+ 7	+ 8	+ 8	+ 7	+ 6	+ 5	+ 1	0	+ 1	649			
+19	- 2	- 2	- 5	- 7	- 7	- 6	- 2	- 1	- 1	+ 1	+ 1	+ 1	+ 1	+ 2	+ 3	+ 3	+ 4	+ 4	+ 3	+ 1	- 1	- 1	+ 1	- 1	652			
20	+ 1	- 5	-12	-15	-13	- 9	- 4	0	+ 1	0	+ 1	+ 1	+ 1	+ 1	+ 1	+ 2	+ 4	+ 5	+ 6	+ 7	+ 8	+ 8	+10	+10	649			
21	0	0	+ 2	0	0	+ 2	+ 2	0	- 4	- 6	- 6	- 1	+ 3	+ 5	+ 5	+ 5	+ 5	+ 5	+ 2	- 2	- 5	- 7	- 7	- 7	651			
22	-10	-10	-11	- 8	- 6	- 6	- 6	- 4	0	+ 5	+ 8	+ 6	+ 5	+ 6	+ 6	+ 6	+ 5	+ 4	+ 4	+ 2	- 1	- 1	+ 2	- 2	651			
23	- 5	- 8	- 8	- 8	-10	-10	-14	-10	- 5	0	0	+ 3	+ 5	+ 8	+ 8	+ 6	+ 5	+ 5	+ 4	+ 4	+ 5	+10	+13	+ 9	650			
24	+ 3	- 2	- 6	- 6	- 6	- 6	- 4	- 2	0	+ 3	+ 4	+ 5	+ 6	+ 5	+ 5	+ 5	+ 4	+ 4	+ 2	0	- 1	- 2	- 2	0	650			
25	+ 3	0	- 4	- 6	- 7	- 7	- 5	- 4	- 1	+ 2	+ 3	+ 5	+ 4	+ 2	+ 8	- 1	+ 3	- 2	- 5	- 4	0	+ 3	0	+ 3	650			
26	- 2	- 2	- 2	- 5	- 3	- 3	- 3	- 1	+ 4	+ 3	+ 2	+ 4	+ 5	+ 7	+ 8	+ 7	+ 7	+ 3	- 1	- 5	- 8	- 8	- 6	- 2	651			
27	+ 6	0	- 4	- 6	- 4	- 3	- 2	- 2	- 1	0	+ 2	+ 4	+ 6	+ 9	+ 8	+ 7	+ 7	+ 6	0	- 4	- 8	- 8	- 8	- 2	646			
28	0	- 2	- 3	- 3	- 4	- 5	- 4	- 4	- 3	- 2	0	+ 2	+ 4	+ 5	+ 7	+ 7	+ 7	+ 6	+ 5	+ 1	- 2	- 2	0	+ 2	648			
29	- 3	- 1	0	0	+ 1	0	- 1	- 1	- 3	0	0	+ 1	+ 1	+ 6	+ 6	+ 6	+ 6	+ 7	+ 5	- 3	- 5	- 5	- 5	- 4	653			
30	- 6	- 2	- 2	- 2	- 1	- 1	0	- 1	0	- 1	- 2	- 3	- 2	0	+ 1	+ 5	+ 5	+ 5	+ 4	+ 3	+ 1	+ 3	+ 3	+ 3	655			
31																												
MEAN.	- 3	- 4	- 5	- 6	- 6	- 5	- 3	- 2	- 1	0	+ 1	+ 2	+ 3	+ 5	+ 5	+ 6	+ 6	+ 5	+ 3	+ 1	- 1	- 2	- 1	- 1	651			

Vertical Intensity

G.M.T. (Z = 20000γ + Mean + ...) December 1940

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.	Maximum. H. M. γ	Minimum. H. M. γ	Range.
1	+ 8	+10	+ 9	+ 5	+ 4	+ 4	+ 4	+ 3	+ 3	0	0	+ 2	- 1	0	+ 2	+ 3	+ 4	+ 4	+ 3	- 1	- 7	-16	-19	-17	653			
2	-10	- 6	- 5	- 7	- 6	- 2	0	+ 2	+ 3	+ 4	+ 7	+ 4	+ 3	+ 3	+ 4	+ 7	+ 7	+ 6	+ 3	- 1	- 2	- 2	- 5	- 1	649			
3	0	+ 1	- 1	0	+ 1	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 1	+ 1	0	0	+ 1	+ 3	+ 3	0	- 2	- 7	-12	-11	- 7	648			
4	- 2	- 6	-12	-13	-11	- 7	- 3	- 1	+ 1	+ 2	+ 2	+ 2	+ 4	+ 3	+ 3	+ 3	+ 3	+ 3	+ 3	+ 4	+ 4	+ 3	+ 4	+ 2	645			
5	- 5	- 5	- 6	- 5	- 5	- 3	- 1	0	+ 2	+ 3	+ 3	+ 3	+ 2	0	+ 2	+ 2	0	0	- 1	- 2	- 2	0	+ 6	+ 9	649			
+6	+10	+ 6	+ 1	- 3	- 4	- 3	- 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	- 1	- 1	- 2	- 2	- 2	- 2	- 2	- 2	650			
+7	+ 1	- 1	- 6	- 8	- 8	- 6	- 4	- 1	+ 1	+ 2	+ 2	+ 4	+ 4	+ 4	+ 2	+ 2	+ 2	+ 2	+1	- 4	- 5	- 1	+ 2	+10	647			
+8	+10	+ 9	+ 5	- 1	- 4	- 5	- 4	- 3	- 1	0	+ 1	+ 1	+ 1	0	0	0	- 1	- 3	- 4	- 5	- 6	- 3	+ 5	+ 5	652			
9	+ 7	+ 7	+ 6	+ 2	- 1	- 4	- 7	- 7	- 6	- 4	- 1	+ 2	+ 3	+ 3	+ 3	+ 5	+ 3	+ 1	- 4	- 9	-11	- 4	+ 1	+ 5	650			
10	+ 2	+ 3	+ 3	+ 3	+ 1	- 2	- 3	- 4	- 4	- 2	- 1	+ 1	+ 1	+ 2	+ 3	+ 3	+ 2	+ 1	- 2	- 2	- 1	- 2	- 2	- 2	650			
11	- 1	- 1	- 1	- 2	- 5	- 5	- 4	- 4	- 4	- 1	0	+ 1	+ 3	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 3	+ 1	0	0	+ 3	648			
12	+ 2	+ 2	+ 2	+ 1	+ 1	- 2	- 3	- 4	- 4	- 3	- 1	- 1	+ 2	+ 3	+ 3	+ 5	+ 3	+ 1	+ 1	+ 1	+ 1	- 2	- 3	- 3	650			
13	- 1	- 4	- 7	- 7	- 6	- 5	- 2	- 2	- 2	- 1	0	+ 1	+ 3	+ 4	+ 4	+ 5	+ 4	+ 4	+ 3	0	0	0	0	0	648			
14	+ 2	+ 1	0	0	- 1	- 1	- 1	0	- 1	- 3	- 1	+ 1	+ 2	+ 4	+ 4	+ 5	+ 6	+ 8	+ 5	- 3	- 6	- 6	- 4	0	647			
15	+ 1	+ 1	+ 1	+ 1	0	0	0	0	- 1	- 1	- 1	0	+ 1	+ 3	+ 5	+ 5	+ 5	+ 4	0	- 5	-10	- 7	- 6	- 5	648			
16	- 2	- 3	- 3	- 3	- 3	- 3	- 3	- 2	- 3	- 3	- 3	- 2	0	+ 3	+ 3	+ 4	+ 4	+ 4	+ 4	+ 3	+ 3	+ 3	+ 3	+ 4	649			
17	+ 7	+ 7	+ 4	+ 3	0	- 1	0	- 1	- 1	- 2	- 2	- 1	0	+ 2	0	+ 2	+ 2	0	+ 2	- 2	- 3	- 7	- 3	- 2	649			
+18	+ 1	- 4	- 4	- 6	- 4	- 4	- 2	+ 1	+ 2	+ 2	+ 3	+ 4	+ 4	+ 3	+ 4	+ 6	+ 6	+ 6	+ 2	- 2	- 4	- 4	- 2	- 4	645			
+19	- 4	- 8	-11	-11	-11	- 9	- 7	- 4	- 2	- 2	- 1	+ 1	+ 2	+ 3	+ 4	+ 6	+ 6	+ 6	+ 7	+ 7	+10	+ 8	+ 7	+ 4	645			
20	+ 1	+ 1	0	- 1	- 2	- 2	- 2	- 1	0	0	+ 4	0	+ 1	+ 3	0	- 2	0	- 1	0	- 1	- 2	- 6	- 2	+ 1	648			
21	+ 1	0	- 3	- 5	- 5	- 7	- 2	+ 4	+ 5	+ 5	+ 4	+ 6	+ 4	+ 4	+ 5	+ 4	+ 1	+ 1	0	0	- 2	- 3	- 5	- 3	651			
22	- 2	- 7	-11	-12	- 8	- 7	- 3	- 1	+ 1	+ 2	+ 2	+ 5	+ 7	+ 6	+ 2	+ 3	+ 2	+ 1	+ 1	+ 1	+ 3	+ 5	+ 5	+ 3	650			
23	- 1	- 2	- 4	- 4	- 3	- 1	+ 2	+ 2	+ 3	+ 3	+ 5	+ 5	+ 8	+ 6	+ 3	+ 3	+ 6	+ 3	- 1	- 4	- 6	- 4	- 6	- 4	650			
24	- 4	- 7	- 9	- 8	- 5	- 3	- 3	- 3	0	+ 1	+ 4	+ 4	+ 5	+ 6	+ 5	+ 4	+ 4	+ 2	+ 1	- 2	- 3	- 2	+ 1	+ 4	651			
25	+ 1	- 1	- 2	- 5	- 5	- 3	- 3	- 1	- 2	- 2	+ 1	+ 2	+ 1	+ 2	+ 2	+ 2	+ 1	- 1	- 3	- 1	+ 2	+ 2	+ 2	+ 4	654			
26	+ 8	+ 8	+ 3	- 1	- 2	- 5	- 5	- 3	- 3	- 2	- 2	- 1	+ 2	+ 4	+ 4	+ 4	+ 3	+ 1	- 2	- 3	- 2	- 2	+ 2	+ 3	654			
27	+ 9	+ 8	+ 4	0	- 1	- 3	- 4	- 4	- 4	- 3	0	+ 4	+ 4	+ 6	+ 4	+ 5	+ 4	+ 1	- 3	- 4	- 4	- 6	- 8	- 4	652			
28	0	- 2	- 6	- 5	- 2	- 2	- 2	- 1	0	0	+ 2	+ 3	+ 6	+ 7	+ 8	+ 8	+ 8	+ 6	+ 2	- 3	- 3	- 5	- 3	- 7	649			
29	-12	-10	- 5	- 5	- 4	- 4	- 2	+ 2	+ 2	+ 3	+ 5	+ 5	+ 4	+ 4	+ 5	+ 7	+ 9	+ 5	+ 2	- 1	- 5	- 7	- 5	- 4	653			
30	0	- 1	- 4	- 5	- 4	- 4	- 1	- 1	- 3	- 5	- 3	- 1	+ 3	+ 6	+ 5	+ 5	+ 5	+ 5	+ 1	+ 4	+ 4	+ 4	0	- 5	652			
31	- 6	-11	-11	- 9	- 6	- 6	- 5	- 1	0	+ 1	+ 4	+ 5	+ 4	+ 4	+ 7	+ 8	+ 9	+ 8	+ 7	+ 7	+ 3	- 5	- 4	- 2	648			
MEAN.	+ 1	0	- 2	- 4	- 4	- 3	- 2	- 1	0	0	+ 1	+ 2	+ 3	+ 3	+ 3	+ 4	+ 4	+ 3	+ 1	- 1	- 2	- 3	- 2	0	649			

SEISMOLOGY

The following summary of earthquakes recorded at Apia is based on the quarterly bulletins which have already appeared in print. The preliminary identification of phases given in the quarterly bulletins has sometimes been revised after comparison with reports received from other observatories. As a general rule, the positions of epicentres given by the Jesuit Seismological Association or the United States Coast and Geodetic Survey have been used; but in some cases, more especially for near earthquakes, the position of the epicentre has been calculated at the Observatory.

The lithological foundation is coral sand on volcanic rock. The instruments in use are a Wiechert 1000 kilogram horizontal seismograph for the east and north components and a Wiechert 80 kilogram seismograph for the vertical component. Time breaks on the records at the commencement of minute intervals are put on by electrical contact from a Synchronome clock. The clock is rated daily and its correction known to 0.1 second. On the horizontal seismograph rollers there is a device which assists in smooth running between the minute breaks. It is considered that cumulative errors may result in final times being in error by an amount not exceeding one second.

Due to the construction of the seismograph room, the temperature conditions inside are remarkably uniform (See Annual Report 1939).

The sorting of past records which was begun towards the close of 1939 was completed in August.

In deducing epicentral distances the following tables and charts have been in use:-

H. Jeffreys and K.E. Bullen, Revised Travel-Time Tables (1935)
H. Jeffreys, Tables of P. & S. (1932)
J.B. Macelwane, Preliminary Table of Observed Travel-Times (1933)
B. Gutenberg and C.F. Richter, Materials for the Study of Deep-focus Earthquakes (1936)
G.J. Brunner and J.B. Macelwane, The Brunner focal depth-time-distance chart.

Abbreviations used in the report are as follows:-

U.S.C.G.S. = United States Coast &.Geodetic Survey
J.S.A. = Jesuit Seismological Association
H = hypocentral time.

RF = Rossi-Forel scale of intensity.

Other symbols have their usually accepted meanings: see page 500 of Volume 25, Part II, Handbuch der Experimentalphysik (Wien-Harms), "Seismik" by O. Meisser and Krumbach - Leipzig 1931.

The seismograph constants were as follows:-

January 20th, 1940

E-W Free period = 11.6 seconds; static magnification = 160; coefficient of friction (cms/sec^2) = 0.0018; damping ratio = 6.7; total friction 2.8 dynes.

N-S Free period = 11.3 seconds; static magnification = 175; coefficient of friction = 0.0016; damping ratio 8.3; total friction 2.2 dynes.

Z Free period 4.5 seconds; static magnification = 53; coefficient of friction = +0.0030; damping ratio 2.1; total friction +7.6 dynes.

\+ On the 26th January 1940 for the Z:- Coefficient of Friction = 0.0015; Total friction = 3.8 dynes.

February 15th 1940

E-W Free period 11.9 seconds; static magnification = 152; coefficient of friction = 0.0017; damping ratio = 6.4; total friction 2.9 dynes.

N-S Free period = 11.2 seconds; static magnification = 176; coefficient of friction 0.0013; damping ratio = 6.2; total friction 1.6 dynes.

Z Free period = 4.6 seconds; static magnification = 53; coefficient of friction = 0.0014; damping ratio = 2.2; total friction = 3.6 dynes

March 9th 1940

E-W Free period = 11.9 seconds; static magnification = 154; coefficient of friction = 0.0021; damping ratio = 8.0; total friction = 3.4 dynes

N-S Free period = 11.2 seconds; static magnification 167; coefficient of friction = 0.0016; damping ratio = 8.1; total friction 2.3 dynes

Z Free period = 4.6 seconds; static magnification = 53; coefficient of friction = 0.0014; damping ratio = 2.1; total friction 3.6 dynes.

6th April 1940

E-W Free period 12.2 seconds; static magnification = 156; coefficient of friction = 0.0020; damping ratio 6.5; total friction 3.3 dynes

N-S Free period = 11.1 seconds; static magnification = 175; coefficient of friction = 0.0024; damping ratio = 6.9; total friction = 3.2 dynes

Z Free period = 4.6 seconds; static magnification = 53; coefficient of friction = 0.0094; damping ratio = 2.2; total friction = 2.4 dynes.

4th May 1940

E-W Free period 10.2 seconds; static magnification = 154; coefficient of friction = 0.0014; damping ratio = 3.9; total friction = 2.4 dynes.

N-S Free period = 10.3 seconds; static magnification = 172; coefficient of friction = 0.0018; damping ratio = 4.5; total friction = 2.4 dynes

Z Free period = 4.5 seconds; static magnification = 55; coefficient of friction = 0.0015; damping ratio = 2.3; total friction 3.5 dynes.

28th June 1940

E-W Free period = 10.2 seconds; static magnification = 164; coefficient of friction = 0.0015; damping ratio = 4.0; total friction = 2.3 dynes

N-S Free period = 10.3 seconds; static magnification = 176; coefficient of friction = 0.0012; damping ratio = 6.0; total friction = 1.6 dynes

Z Free period = 4.5 seconds; static magnification = 52; coefficient of friction = 0.0015; damping ratio = 2.1; total friction = 3.9 dynes.

19th July 1940

E-W Free period = 10.0 seconds; static magnification = 161; coefficient of friction = 0.0015; damping ratio = 6.1; total friction = 2.3 dynes

N-S Free period = 10.0 seconds; static magnification = 180; coefficient of friction = 0.0027; damping ratio = 6.5; total friction = 3.3 dynes

Z Free period = 4.5 seconds; static magnification = 52; coefficient of friction = 0.0015; damping ratio = 2.1; total friction = 3.9 dynes.

31st August 1940

E-W Free period = 10.0 seconds; static magnification = 156; coefficient of friction = 0.0021; damping ratio = 8.2; total friction = 3.5 dynes.

N-S Free period = 11.1 seconds; static magnification = 174; coefficient of friction = 0.0020; damping ratio = 9.2; total friction = 2.7 dynes.

Z Free period = 4.5 seconds; static magnification = 66 ; coefficient of friction = 0.0015; damping ratio = 2.9; total friction = 2.4 dynes.

28th September 1940

E-W Free period = 10.0 seconds; static magnification = 178; coefficient of friction = 0.0019; damping ratio = 6.4; total friction = 2.4 dynes

N-S Free period = 11.1 seconds; static magnification = 171; coefficient of friction = 0.0017; damping ratio = 6.3; total friction = 2.3 dynes

Z Free period = 4.4 seconds; static magnification = 55; coefficient of friction = 0.0021; damping ratio = 2.0; total friction = 4.6 dynes.

29th October 1940

E-W Free period = 10.0 seconds; static magnification = 178; coefficient of friction = 0.0024; damping ratio = 6.6; total friction = 3.0 dynes

N-S Free period = 10.9 seconds; static magnification = 172; coefficient of friction = 0.0023; damping ratio = 6.4; total friction = 3.0 dynes

Z Free period = 4.4 seconds; static magnification = 55; coefficient of friction = 0.0015; damping ratio = 2.1; total friction = 3.8 dynes

21st December 1940

E-W Free period = 10.0 seconds; static magnification = 175; coefficient of friction = 0.0020; damping ratio = 6.4; total friction = 2.5 dynes

N-S Free period = 10.9 seconds; static magnification = 172; coefficient of friction = 0.0017; damping ratio = 6.5; total friction = 2.7 dynes

Z Free period = 4.5 seconds; static magnification = 44; coefficient of friction = 0.0020; damping ratio = 2.1; total friction = 4.1 dynes.

Earthquakes, 1940

January

1st 1P 12h 17m 08s, 1S 18m 37s. Dilatation azimuth 243°. Distance 7.9°, H = 12h 15m 13s; Epicentre (U.S.C.G.S.) 17.2°S., 178.7°W.; depth (U.S.C.G.S.) 550 km.

4th (i) i_E 01h 15m 14s; epicentre (U.S.C.G.S.) 34°S 162°W.
(ii) eP 09h 47m 28s, eS 45s, distance 1.5°, H = 09h 47m 07s.

6th 1P 14h 07m 38s, 1S 11m 04s, 1SS 11m 23s, depth (U.S.C.G.S.) 90 km. Distance 19.1°, H = 14h 03m 21s. Dilatation azimuth 240°. Epicentre (U.S.C.G.S.) 21.9°S.,171.0°E.

7th eP 10h 55m 03s, 1S 17s; Distance 1.2°, H= 10h 54m 46s.

8th Slight local tremor 01h 40m. Felt locally R.F. II.

9th e 13h 49m 15s (ca).

11th e 18h 55.3m.

14th eP_{NE} 13h 15m 08s, eE 32s, i_{NE} 41s, $e(S?)_{NE}$ 17m 39s, i 18m 21s.

17th (i) iP_Z 01h 23m 54s, $1S_N$ 31m 11s, 1SS ca 34m 32s, $e_{NEZ}L_R$ 43.3m. Distance 51°. Epicentre (U.S.C.G.S.) 17.2°N, 148.2°E.

19th 1P 13h 53m 55s, 1S 54m 32s. Compression from NW or SW. Distance 3.3°, H = 13h 53m 08s. Epicentre (U.S.C.G.S.) 11°S, 173½°W. Felt locally R.F.III.

20th eS_{NE} 10h 14m 08s, e(SS?) 18m 14s. Epicentre U.S.C.G.S.) 52.5°S, 134½°W.

24th eP_E(?) 01h 33m 18s, e_E 35m 30s, e_{EZ} 36m 11s, i 37m 01s (in time gap).

26th (i) eP_E 06h 46m 26s, 1S 50m 20s, eL 51.4m. Distance 21.3°. Epicentre (U.S.C.G.S.) 14½°S, 167½°E.
(ii) Weak trace of an earthquake commences at 07h 5.8m.

Slight Tremors: 4d 9h 47m; 7d 10h 55m.

February

8th Earthquake commencing about 12h 30m. Trace very faint due to poorly smoked paper.

12th $1P_{NEZ}$ 08h 23m 26s S_{NE} 25m 11s. Dilatation from SW. Distance 9.4°. Epicentre (U.S.C.G.S.) 23.0°S 177.7°W Depth (U.S.C.G.S.) 200 Km.

14th e_N ca 10h 49m eE 49.7m all long waves.

15th eP_{NE} 07h 44m 48s eS_E 45m 23s eS_N 27s e_Z 33s Distance ca 3.3°.

18th (1) 1P 07h 29m 25s $e(S?)_{NE}$ 30m 24s 1_{NE} 32m 49s 1_N 33m 18s 1_E 28s Distance 5.2° H = 07h 28m 11s.
(2) P07h 41m 44s $1(S?)_E$ 42m 42s 1 45m 18s 1_{NE} 26s Distance 5.1° H = 07h 40m 31s.
(3) eP_{NE} 13h 36m 53s e_E 37m 17s $e_{EN}(S?)$ 56s e_{EN} 38m 28s e_{EN} 40m 26s e_{ZE} 43s.
All are probably from the same focus, and deeper than normal.

20th (1) 1P 02h 22m 48s $1sP_{NEZ}$ 23m 50s 1S 26m 25s Using depth 200 Km. (U.S.C.G.S.) distance 1s 20.9° and H = 02h 18m 20s. Compression azimuth 286° Epicentre (U.S.C.G.S.) 14.2°S 167.4°E
(2) e 20h 47.5m chiefly long waves.

21st 1P 07h 54m 48s 1S 55m 07s Distance 1.5°

24th (1) eP 00h 48m 30s 1S 49s Distance 1.5° H = 00h 48m 05s
(2) 1P 03h 35m 45s 1S 36m 08s Distance 1.9° H = 03h 35m 14s

Slight Tremors: 9d 19h 44m 24d 00h 49m 24d 13h 31m

March

12th 1P 00h 48m 37s 1S 49m 20s Distance 3.7° H = 00h 47m 41s U.S.C.G.S. give epicentre 18°S 171°W or 13°S 175°W. The P phase was considerably larger on the N-S record than on the E-W record, and this is evidence in support of the first epicentre.

14th ePP 18h 34.6m e(PS?) 39.6m eSSS 45.4m eL_Q 47.9m L_R 50m Epicentre (U.S.C.G.S.) 54½°S 147°E Depth (U.S.C.G.S.) 170Km.

22nd eP 19h 22m 31s 1E 25m 19s 18?N 25m 49s

25th 1P 07h 34m 35s 1S 35m 18s Distance 3.8°

27th 1N 12h 50m 45s eN 13h 01m (approx). Distant shock

31st 1P 11h 19m 53s 1S 13s Distance 1.6° Felt locally, R-F III.

Slight Tremors: 2d 06h 27m; 29d 06h 00m

April

3rd 1P 11h 27m 53s eS 35m (approx) e(L_g or SS) 42m Epicentre (U.S.C.G.S.) 3.3°S, 139.7°E

7th P 05h 45m 06s S 27s Distance 1.8°

14th 1P 09h 34m 17s 1S 34m 59s Depth (U.S.C.G.S.) about 200 Km Distance 3.3° Felt locally, R-F II. First wave compression Epicentre 17°S 174°W

16th eN 06h 27m 47s eLNZ 38.1m Horizontal components not functioning satisfactorily. Epicentre (U.S.C.G.S.) 51.8°N 173.1°[illegible]. Depth normal.

20th eP 16h 58m 13s 1S 58m 34s Distance 1.8° Felt locally, R-F II.

22nd P 08h 14m 19s S 14m 44s Distance 2.2°

25th iP 10h 20m 26s 1S 21m 36s First wave dilatation Distance 6.2° Epicentre (U.S.C.G.S.) 8½°S 176°W Depth normal.

27th Confused record of distant earthquake commencing 18h 10m Probably shock with U.S.C.G.S. epicentre 5½°S 166½°E.

30th eP 12h 11m 01s (in time gap) S 11m 18s Distance 1.5° Felt locally, R-F II.

Slight Tremor: 14d 05h 17m

May

7th 1P 19h 57m 43s 1S 57m 59s Distance 1.4°

10th iP 16h 37m 33s 18 37m 39s Felt locally R-F III
Distance about 0.5°.

11th 1P 02h 37m 18s 1S 37m 38s Felt locally R-F II
Distance 1.7° Epicentre 14.7°S 173.2°W.

18th 1P 04h 29m 58s 1S 30m 42s Distance 4.0°

18th P 04h 58m 17s S 59m 02s (in time gap) Distance 4.0°

19th e 04h 55m 41s e 57m 40s e 05h 05m 30s e 08m

21st P_n 18h 51m 14s 1 51m 22s S_n 52m 24s 1 52m 56s S_g 53m 00s Distance 6.0° H ≡ 18h 49m 48s

24th 1P 16h 47m 07s 1S 57m 46s L 17h 15¾m Epicentre (U.S.C.G.S.) 10.2°S 77.4°W Destructive in Western Peru.

24th Weak trace of distant earthquake commencing 22h 22m. Other phases at 22h 28m and 22h 40m.

27th Weak record of distant earthquake commencing 08h 20m

27th Weak record of distant earthquake commencing 11h 45m 43s

28th iP 09h 49m 40s eS 57m 00s (in time gap) eL 10h 05½m Distance about 51° Epicentre (U.S.C.G.S.) 2.3°S 139.1°E

28th Weak record of seismic disturbance commencing at 20h 20½m.

31st eP 00h 41m 37s 1S 42m 06s Distance 2.4°

31st 1P 02h 32m 56s 1S 33m 36s Distance 3.4°

Slight Tremors: 8d 01h 08m 17d 15h 43m 20d 08h 30m
22d 00h 54m 24d 22h 11m 28d 20h 16m
28d 20h 19m 29d 13h 01m 30d 07h 23m

June

5th 1P 02h 45m 37s S 44m 00s Distance 1.7°
/th 1P 08h 06m 24s S 06m 55s Distance 2.6°

8th eP 04h 00m 37s S 01m 02s Distance 2.0°

11th Very weak disturbance commencing about 08h 59m

12th P 02h 38m 00s 1S 38m 54s Distance 4.8°

17th eN 10h 42m 02s (in time gap) 1N 44m 33s
eN 45m 51s. Very poor record on E-W component.

19th Weak record of distant earthquake commencing 19h 18m 48s

19th Weak record of distant earthquake commencing 20h 31m 49s

22nd Weak trace of near earthquake commencing 11h 47m

22nd eP 11h 55m 55s PP 57m 02s (in time gap) e 12h 4½m Distance 35.4° Weak record

24th ePn 01h 42m 37s 1P_g 42m 53s eSn 43m 28s
1Sg 43m 46s Distance 4.0°

24th eP 04h 29m 42s 1S 30m 22s Distance 3.5°

24th eP 04h 55m 20s 1S 55m 47s Distance 2.4°

Slight Tremors: 18d 06h 14m 20d 16h 23m 22d 10h 58m
24d 07h 53m

<u>July</u>

2nd eP 19h 09m 50s 1S 11m 13s Distance 7.2°
Record on vertical component only. Horizontal seismograph out of action.

3rd P 03h 30m 02s (in time gap) eS 31m 39s
Distance 8.7°

4th Weak disturbance commencing 06h 39m. Waves of period about 13 seconds.

5th eP 14h 04m 50s 1 05m 14s 1S 05m 30s Distance 3.5°

10th eP 06h 01m 01s eS 10m 11s eSP? 14.7m Very weak trace. Epicentre (U.S.C.G.S.) 44.3°N 130.2°E Depth about 600 Km.

13th eP 11h 24m 51s eS 25m 27s? Distance 3.2°?

14th eP 06h 03m 44s eS 12m 27s Distance about 66° Clock correction uncertain by as much as 6 seconds. Epicentre (U.S.C.G.S.) 51.7°N 178.5°E Depth about 80 km.

14th 1F 15h 51m 52s 1S 52m 10s Distance 1.6° Felt locally, R-F III. Clock correction uncertain by as much as 6 seconds.

16th 1F 22h 06m 42s 1S 07m 22s Distance 3.5° H = 22h 05m 52s Epicentre 16.0°S 174.5°W

18th eP 02h 12m 24s 1S 13m 15s Distance 4.5°

18th Very weak seismic activity commencing about 11h 41m.

20th 1P 01h 54m 22s 1S 54m 43s Distance 1.5° H = 01h 54m 01s First wave dilatation. Felt locally R-F III. Epicentre 15.0°S 172.7°W

20th Shocks about 02h 31m and 02h 33m Phases masked by earlier earthquake.

20th P 02h 38m 02s (in time gap) S 38m 21s Distance 1.4°

20th P 04h 20m 19s S 20m 36s Distance 1.3°

20th P 07h 41m 48s S 42m 08s Distance 1.4°

27th P 16h 58m 00s e 58m 23s 1S 58m 39s Distance 2.4°

28th Very weak local disturbance commencing about 22h 21m 36s.

Slight Tremors: 7d 00h 34m 9d 23h 28m 14d 22h 02m
15d 23h 49m 22d 02h 58m 22d 22h 19m 23d 00h 32m
24d 14h 21m 27d 03h 57m

<u>August</u>

1st P 00h 47m 45s S 48m 10s Distance 2.2°

1st eP 11h 54m 23s S 54m 57s Distance 3.0°

1st eP 12h 42m 45s eS 45m 16s i(strong) 45m 25s e 50m (ca) e 53m 50s. Distance 14.4° Epicentre (U.S.C.G.S.) 26.3°S 179.8°E Depth 490 Km. Northwest of Kermadec

1st eP 15h 19m 53s eS 29m 32s eSSS 38m 03s L 41.5m Distance 73.3° Epicentre (U.S.C.G.S.) 44.7°N 138.8°E Depth about 50 Km. Off Western Hokkaido Island, Japan

5th eP 13h 47m 36s eS 48m 27s Distance 4.3°

10th eP 11h 25m 00s S 25m 23s Distance 2.0°

11th iP 16h 47m 17s iS 47m 38s Distance 1.5° Felt locally R-F IV. First wave compression Epicentre 14.7°S 173.0°W H = 16h 46m 52s

18th eP 05h 58m 03s (in time gap) eZ 06h 00m 44s eE 49s e 02m 15s Very weak trace

20th eP 17h 37m 13s ePP 38m 32s eSSS 46.4m eL 49.4m Weak record Epicentre (U.S.C.G.S.) 6½°S 149°E Depth normal. Off eastern New Guinea.

22nd iP 03h 38m 09s iS 46m 57s eSSS 54m (ca) Epicentre (U.S.C.G.S.) 53°N 165°W Depth about 60Km

22nd Weak seismic activity commencing about 15h 25m

24th iP 13h 31m 36s iS 32m 25s Distance 4.2° Felt locally R-F II. First wave dilatation. Azimuth 257° Epicentre 14.7°S 175.9°W

27th eP 06h 54m 27s e 54m 45s eS 55m 37s Distance 6.2° Weak record, interpretation doubtful

28th eP 12h 30m 26s eS 31m 58s Distance about 8°

28th eP 18h 48m 56s S 49m 16s Distance 1.7°

29th Weak record of distant earthquake commencing about 01h 49.6m

Slight Tremors:

7d 00h 00m	7d 00h 02m	7d 00h 15m	7d 03h 21m	7d 07h 51m
7d 07h 53m	10d 00h 55m	10d 00h 59m	12d 13h 10m	13d 21h 25m
14d 08h 16m	15d 08h 22m	21d 02h 13m	24d 15h 17m	24d 18h 18m
26d 07h 29m	27d 09h 57m	29d 14h 42m		

September

3rd Very weak records of seismic activity commencing at 00h 50.5m and 01h 25m

11th iP 14h 47m 01s iS 47m 20s Distance 1.7°

12th iP 09h 22m 52s iS 23m 54s Distance 5.5°

12th Weak record of local earthquake commencing 12h 20m

12th eP 13h 24m 01s e? 26m 11s eS 29m 45s eL 32.1m Epicentre (U.S.C.G.S.) 4½°S 150½°E (approx) Depth about 80 Km H = 13h 17.1m

19th eP 18h 24m 02s e? 24m 11s eS 27m 22s L? 28m First wave dilatation Epicentre (U.S.C.G.S.) 23.5°S 170.9°E Depth about 75 km.

20th Weak record of distant earthquake commencing 00h 11m

21st Weak record of local earthquake commencing 15h 18m

22nd eP 22h 12m 22s iS 12m 51s Distance 2.5°

26th iP 04h 01m 12s ? 01m 34s S 05m 02s (in time gap) First wave dilatation Distance about 22° Epicentre (U.S.C.G.S.) 12.0°S 166.5°E Depth 150 km.

30th eP 07h 20m 08s iS 20m 26s Distance 1.6° Felt locally, R-F II

30th e 11h 19m 00s e 19m 36s e 22m (approx). Probably record of earthquake near Kermadecs Epicentre (U.S.C.G.S.) 27°S 178°W Depth 100-150 km.

30th eP 14h 16½m (start very indefinite) e 17m 08s e 19m 21s

Slight Tremors: 1d 06h 27m 1d 08h 02m 2d 16h 35m
2d 16h 35m 4d 00h 45m 6d 02h 22m 6d 16h 53m
9d 22h 23m 12d 12h 20m 14d 22h 17m 19d 20h 18m
24d 15h 37m 29d 02h 38m

<u>October</u>

1st Tremor during first few hours. Distance 2.0° Unable to determine times - traces overlapping

2nd iP 04h 06m 54s iS? 07m 23s Distance 2.5°

2nd Weak record of medium distance earthquake commencing at 10h 29m 52s

2nd Weak record of near earthquake commencing at 17h 58m

4th Weak record of distant earthquake commencing at 08h 39m 50s Probably L waves

7th iP 11h 04m 29s S 05m 02s (in time gap) Distance 2.9°

7th eP 22h 10m 33s iS 10m 54s Distance 1.8°

11th Commencement lost in changing records eSSS? 19h 15m 21s e 17m 06s eL 21m 24s Distance about 87° Epicentre (U.S.C.G.S.) 41°S 73°W

12th iP 05h 18m 33s iS 18m 50s Distance 1.2°

12th Weak record of distant earthquake eL 12h 15½m (ca)

19th Weak record commencing 10h 59m 25s

22nd P 20h 51m 03s iS 51m 24s Distance 1.8°

24th iP 23h 25m 38s iS 25m 55s Distance 1.5°

26th Weak record commencing at 15h 29m

27th Distant earthquake eL 06h 17.2m Beginning obscured by microseisms

28th eP 00h 56m 44s iS? 58m 45s Distance 10.8° H = 00h 54m 12s

Slight Tremors: 3d 15h 42m 13d 00h 54m 29d 11h 51m 29d 11h 53m

November

2nd eP 00h 32m 46s S 33m 03s Distance 1.5°

3rd Weak record of seismic disturbance commencing at 11h 14m

8th iP 10h 38m 48s i 39m 11s eS? 42m 55s Epicentre (U.S.C.G.S.) 16.0°±S 168.7°±E Depth normal distance from this epicentre about 19°

8th iP 11h 43m 37s iS 44m 36s Distance 2.5°

9th Very weak seismic activity at 01h 21m and 01h 27m

10th PKP 01h 58m 32s e 25.5m Epicentre according to Bucharest 45.9°N 26.6°E Destructive in Bucharest and Roumania Depth about 150 km Distance 144°

10th P 21h 37m 02s (in time gap) eS 38m 53s Distance 10° (ca) H = 21h 34m 40s (ca)

12th eP 15h 42m 26s iS 43m 13s Distance 4.2°

20th iP 19h 58m 32s iS 58m 49s Distance 1,5°

27th eS 14h 54m 41s eSS 57m 14s eL 15h 00.5m Epicentre (U.S.C.G.S.) 3.3°S 151.0°E Distance 39° Weak record

30th eP 04h 21m 32s S 22m 02s (in time gap) Distance 2.4°

Slight Tremors: 4d 03h 23m 4d 04h 07m 9d 07h 05m
9d 22h 58m 11d 23h 08m 14d 04h 29m 28d 16h 25m
28d 16h 30m 29d 13h 05m

December

3rd eP 11h 02m 48s S 03h 02s (in time gap) Distance 1.2°

8th eP 12h 30m 56s iS 31m 30s Distance 3.0°

8th eP 23h 48m 14s eS 48m 35s Distance 1.8°

17th eP 05h 04m 15s iS 04m 31s Distance 1.2°

22nd Good trace of earthquake near Fiji Islands but no time marks. Epicentre (U.S.C.G.S.) 17°S 178°W H = 12h 31m 38s

25th eP 08h 02m 55s eS 03m 13s Distance 1.6°

30th eP 15h 49m 39s iS 50m 05s Distance 2.3°

Slight Tremors: 18d 17h 53m 20d 09h 28m 20d 10h 46m
27d 14h 24m

Meteorological Report, 1940

Notes on Instruments and Observations

Eye observations of the meteorological elements and instruments were made regularly at 0.30 a.m., 8.0 a.m., 9.0 a.m., noon, 2.0 p.m., 3.0 p.m., and 7.0 p.m. Only the 9.0 a.m. and 3.0 p.m. observations which continue the series for climatological purposes are published in this report. The noon readings were used mainly to provide an additional check on the self recording instruments while the observations at the four remaining times were for synoptic purposes.

Autographic records of air temperature, pressure, humidity, rainfall and the direction and velocity of the wind were obtained with instruments which are described in the separate sections below.

Cloud.

The form and the amount of high, medium and low cloud, together with the height of low cloud, were recorded every day at the times mentioned above.

The observations of cloud form are in accordance with International classification. The cloud form given in the tables which appear later in this report, is the predominating cloud at each level: thus an observation of Cumulus 4, Strato-cumulus 2, is shown under low cloud as "Cu 6".

The cloud amount was found by estimating the proportion of the sky covered by cloud, the result being expressed in terms of the numerical scale ranging from 0, cloudless, to 10, completely overcast. The symbol 9+ has been used to indicate that the sky was not completely overcast but was more than 9/10 covered. When computing monthly means of cloud 9+ has been counted as 9.

Weather and State of Sky.

The usual Beaufort letter notation has been used in the tables to describe the weather and the state of sky. In addition the letters i, j, and n, have been used before letters denoting some form of precipitation to indicate that the precipitation was intermittent, within sight but not actually falling at the station, and of slight intensity, respectively. When there are only

small quantities of cloud or blue sky present, c is not used unless the sky is more than a quarter covered, and b unless there is more than a quarter of the sky free from cloud.

A line slightly inclined means "within the hour preceding the observation," thus:-

c/r = cloudy sky after rain which has fallen in the last hour.

Capital letters denote heavy intensity and repetition of letters denotes continuity.

Visibility.

The visibility has been determined by reference to a system of visibility objects, the letter corresponding to the most distant object that can be seen clearly being recorded. The reference objects and their letters of indication are as follows:-

D Platform in lagoon

E Lagoon House

F Watson's Island

G Pilot Station, 1½ miles

H Tree on sky line to west, 2¾ miles or huts to north-west, 2 miles

J House at Tapatapao, 5¾ miles

K Saluafata promontory, 12½ miles or Mount Tofua, 13 miles

M Promontory of Savai'i and Punga Hill, 35 miles

This method of determining visibility is in accordance with that described in the Observer's Handbook of the Meteorological Office, London. It was introduced at the beginning of 1935 to replace an old system of six grades ranging from "bad" to "very good" (see Annual Report for 1931) which was based on the appearance of the neighbouring island of Savai'i.

The correspondence between the old and the new systems is given below.

Old System.	New System.
1. Very good 2. Good 3. Fair 4. Indifferent.	M

	Old System	New System
5.	Poor visibility greater than four miles but Savai'i not visible.	J or K
6.	Bad: visibility less than four miles.	D,E,F,G, or H.

Wind

The wind speed and direction have been measured as in former years by means of a Dines pressure tube anemometer. The vane is at an elevation of 80 feet above the ground in order to avoid the sheltering influence of the trees.

Pressure

The standard barometer in use is a Kew pattern marine barometer (No. M.O. 2233). The corrections for temperature, gravity, index error and reduction to mean sea level are made by means of the Gold Slide, Mark III, No 91 which is attached to the barometer. The standard temperature of the instrument is 285.8°a at 1000 mb. The height of the cistern above mean sea level is 6½ feet.

A continuous record of pressure was obtained with Grand Model barograph No 102030, which was made by Jules Richard of Paris. The barograms were scaled at exact hours of zone time, the readings being instantaneous values at these hours, and suitable corrections were applied. The corrections were known at the times of control readings (seven per day) and it was assumed that the change in the correction between control readings was linear.

Temperature

The Stevenson screen in which the standard thermometer (Fuess No 652) is exposed has additional protection in the form of a thatched shelter and two louvered walls. The maximum and minimum as well as the wet and dry bulb thermometers are also exposed in this screen. In addition a duplicate set of thermometers were exposed in a

Stevenson screen of approved pattern. Their readings have not been given in this report but the comparison of the readings in the two screens may be seen elsewhere.(*)

The minimum temperature on the grass was recorded by a spirit thermometer, set on two small wooden pegs, with its bulb at a height of one or two inches above the ground. This thermometer is read at 9.0 a.m. and set in the early evening. The maximum and minimum thermometers are read and set at 9.0 a.m. each day. The entries in the tables of this report are made in such a way that readings at 9.0 a.m. of maximum temperature are credited to the preceding day while minimum readings are entered to the day on which they are read.

The thermograph was exposed in a Stevenson screen of approved pattern. The thermograms were scaled at exact hours of zone time and corrections were applied in the same manner as for pressure. The charts are changed once a week.

Humidity

The humidity of the air has been computed from the readings of the wet and dry bulb thermometers using Jelineks "Psychrometer-Tafeln," Leipzig 1903. Vapour pressure is expressed in millimetres in these tables but the values were converted to millibars before being tabulated for publication. A continuous record of humidity has also been obtained by means of a hair hygrograph which is exposed in a Stevenson screen of approved pattern together with the thermograph. The chart is changed once a week and instantaneous values are read from the chart at exact even hours of Zone Time. Corrections to the hygrograph readings were applied only when they were different from those given by the wet and dry bulb thermometers by more than five per cent.

Rain

A self recording rain gauge, Dines tilting syphon pattern (M.O. 28/37), was in operation throughout the year. The diameter of the collecting rim is 11.31 inches and the height of the rim above the ground is 28 inches. The records of this gauge are controlled by means of the standard gauge.

(*) See "Exposure of Thermometers in Samoa," by H.B. Sapsford, New Zealand Journal of Science and Technology, Vol. XXII, No. 3B, pp. 136B-143B, 1940.

The standard gauge, which was constructed by Fuess, has a rim 15.95 centimetres in diameter. Its height above the ground is 65 centimetres (25½ inches). The rain collected in the inner vessel is measured each morning at 9.0 a.m. by means of a glass measuring cylinder, the readings being in millimetres. The rainfall measured at 9.0 a.m. is credited to the previous day in the tables.

Another gauge, of the pattern used by the Meteorological Office, London, is in use as a check on the older German gauges. The rim of this gauge, which is 5 inches in diameter, is at a height of one foot above the ground. Like the standard gauge, its capacity is not adequate for the torrential downpours of rain which sometimes occur in Samoa. In order to avoid loss of records on such occasions measurements are also obtained by a tropical Fuess rain-gauge which has a very large internal capacity. The standard and tropical gauges are of the Snowdon type in that they have not splayed bases like the pattern used by the Meteorological Office, London.

The rain-gauges are placed in an open grass plot and are free from shielding.

Sunshine.

The sunshine recorder, M.O. 265, was mounted on a new platform distant 36½ feet to the W.N.W. of the position used in previous years. It was moved to this new position in July 1939. The exposure is now very satisfactory, there being no loss of record due to shielding apart from that which occurs when the sun sets behind the low-lying hills to the west. Since the sunshine is seldom sufficiently intense to burn when the sun is so low in altitude, the loss may be considered negligible.

In one column of the table which occurs later the recorded sunshine has been expressed as a percentage of the possible duration of sunshine. In this computation the possible duration of sunshine is based on the intervals between sunrise and sunset during a year which is half way between two leap years. Since 1940 is a leap year, the value for February has been appropriately adjusted.

Evaporation

The instrument in use to measure evaporation is a Piche evaporimeter which is exposed in a small

Stevenson screen. It consists of a graduated tube filled with water and hanging mouth downwards. Evaporation takes place from a small disc of absorbent paper which is clamped over the mouth of the tube and the fall of level of the water inside the tube is measured. The area effective for evaporation is approximately 12½ square centimetres.

The volume of water evaporated has been divided by the exposed area of the paper disc (1250 square millimetres) to give the equivalent depth of water evaporated and the depth has been entered in millimetres and tenths in the tables.

The amount of evaporation in 24 hours, ending at 9.0 a.m., has been credited to the preceding day.

Miscellaneous Notes

Non-cyclic change

In the tables of diurnal changes of temperature and pressure the departures from the mean of the day have been adjusted for non-cyclic change. A short method of computing the correction has been employed. The value at midnight at the beginning of the month has been subtracted from the value at midnight at the end of the month and the difference has been divided by the number of days in the month. Necessary modifications were made when there were missing days. The number so obtained has been divided proportionately assuming that the non-cyclic change comes in at a uniform rate.

Time

The time standard, upon which all the meteorological tables that follow are based, is that of the meridian 165° west of Greenwich. (i.e. zone time, which is 11 hours slow on Greenwich Time).

Seasons

In tables where seasonal means are given for the Wet and Dry Seasons the means have been derived from the following grouping of months:-

Wet Season - November 1939 to February 1940 (inclusive)
Dry Season - May 1940 to August 1940 (inclusive)

Normals

The normal values of temperature, pressure, and rainfall are based on the period 1890 to 1935. Sunshine normals are based on eighteen years as follows:- 1905, 1906, 1917, 1919, 1924 and 1925 to 1933 inclusive, and 1935 to 1938.

Meteorological Instruments in use during 1940

Anemometer: Dines pressure tube No. 233 supplied by R.W. Munro of London, 1933. The vane is 80 feet above the ground.

Barograph : Grand Model No. 102030 made by Jules Richard of Paris.

Barometers: (i) Kew marine pattern, M.O. 2233 made by S & A Calderara. This instrument is used as the standard.
(ii) Kew station pattern by Fuess No. 1469
(iii) In August 1940, a new Kew station pattern barometer was brought to Apia from Meteorological Office, Wellington. The number of this instrument is G3939.

Evaporimeter: Piché

Hygrograph : Casella No. 1141 (M.O. 195/32)

Raingauges : (i) Casella No. 1593/32 M.O.
(ii) Fuess Standard gauge
(iii) Dines Tilting Syphon Rain-gauge M.O. 28/37
(iv) Tropical size gauge for exceptional precipitation.

Sunshine Recorder: Campbell Stokes pattern by J. Hicks, London M.O. 265/30; sphere M.O. 355/30

Thermograph : Short and Mason.

Thermometers: Grass minimum Casella 36182.

(In tropical screen)
Standard Fuess No. 652
Dry Bulb Calderara No. 34490
Wet Bulb Calderara No. 34491
Maximum Casella No. 17250
Minimum Calderara No. 34686

(In Stevenson screen of standard pattern)
Dry Bulb Negretti No. W. 31863
Wet Bulb Negretti No. W. 31864
Maximum Calderara No. W. 34492
Minimum Negretti No. W. 20818

Synoptic Meteorology in the South West Pacific Region

The system of collecting weather reports and re-broadcasting them in issues of the Continental or National type was continued throughout the year. Twenty stations distributed through the Phoenix, Tokelau, Samoan, Cook, Manahiki, Society, Marquesas and Gambier Islands were collected and rebroadcast at 0230 and 2030 G.M.T. The observations in these main collectives were made, in most cases, at 0100 and 1900 G.M.T. respectively. In addition reports from a few stations which made observations at 0600 and 1130 G.M.T. were collected and rebroadcast from Apia at 0815 and 1220 G.M.T.

For the benefit of shipping, weather reports from a few selected stations were broadcast at 0100 and 0920 G.M.T. During the hurricane season, which is considered to extend from November to April, inferences and warnings of cyclones were added to these bulletins when necessary. The weather reports in these issues were in the International Code of Copenhagen, 1929 in the abridged form known as "Weather Shipping" and the inferences and warnings were in plain language.

Daily weather reports and a local forecast were displayed at two conspicuous points in Apia during the hurricane season for the benefit of local residents. Business firms and individuals continued to make frequent requests by telephone for additional information about meteorological conditions.

As a general routine, two synoptic charts based on observations, in most cases, within one hour of 0000 and 1800 hours G.M.T. were drawn and analysed each day. For a short period, from June 10th to August 31st., only one map was drawn each day.

The synoptic charts are drawn on Mercator's projection to a scale of 1: 20,000,000 in latitudes 25°N and 25°S and cover the region bounded by latitudes 25°N and 50°S and longitudes 110°E through 180° to 130°W. It was not until March that arrangements were made for the reception of Australian reports: and reports from north of the Equator were not received until towards the end of the year. The network of reporting stations is rather open, reports from about one hundred stations being plotted on each map. These are mainly from Australia, New Zealand and the islands grouped in the centre of the region covered by the chart. The reports were received and rebroadcast in the International Code, Form F12 in the Pacific and Form F113 in New Zealand and Australia.

During the first part of the year, upper winds at Apia were determined once a day by means of pilot balloons. In September, regular ascents twice a day at 1000 and 2300 G.M.T. were commenced. Details of the flights are published later in this report.

Notes on the Weather of 1940 at Apia Observatory

January

Although the weather during January was mainly fair to cloudy the duration of bright sunshine was much larger than normal. This apparent anomaly is due to the fact that the predominating cloud was cirrus of one form or another which did not appreciably affect the intensity of the sunshine.

The value for the duration of bright sunshine, which amounted to 233 hours, is the highest that has ever been recorded at Apia for January: and the amount of precipitation, 3.32 inches, is the least that has ever been registered for this month. Thunder and lightning was also unusually frequent. The temperature varied between a maximum of 90.0°F on the 5th to a minimum of 72.5°F on the 17th. Easterly winds prevailed throughout the month.

Anticyclonic conditions were experienced over the greater part of the south-west Pacific region during the first week. On the 7th a weak frontal region, in latitude 10°S, appeared on the synoptic charts. This moved gradually until by the 10th., it had assumed a position lying north-west and south-east through the Tokelau and Rarotongan Islands. Two shallow depressions developed in this frontal region but there were no reports of strong winds associated with them. The outstanding features of the synoptic charts towards the end of the month were the weak pressure gradients and light winds in the tropical regions while severe cyclonic conditions were experienced over New Zealand. The complete absence of tropical storms in this region during January is also worthy of notice.

February

Although, during the first part of February, much high cloud was observed on most days, and occasional light showers were experienced, conditions were mainly fair or fine with much bright sunshine. Heavier showers

and rain occurred on the afternoon of the 2nd. About the 12th a general change in the weather was noticed, cloudy periods with squalls and showers becoming quite frequent. These conditions, interspersed with fair sunny days, were experienced until the end of the month.

The rainfall was slightly less than normal and the average daily temperature was higher. The temperature varied between a maximum of 89.2°F. on the 6th and a minimum of 72.9°F on the 29th. The prevailing winds were easterly.

There were several minor depressions which were thought to be associated with waves of cold air moving along a large scale front which extended from near Santa Cruz Islands to north of Samoa and thence in a south-easterly direction towards the Cook Islands. These depressions were often accompanied by increased cloudiness and precipitation.

A centre of low pressure affected conditions over Tahiti and the Cook Islands on the 6th. Manihiki reported strong north-westerly winds on the same day. On the 7th., a depression appeared north-east of New Hebrides and gales were reported from Vila. This disturbance moved southward and filled up. A further cyclonic disturbance developed near Funafuti on the 15th., moved in a south-westerly direction towards the New Hebrides, and then turned towards the south-south-west.

<u>March</u>

The total amount of sunshine during March was the greatest amount yet recorded for this month at Apia. Due to the amount of high cloud present on many days, which, however, did not diminish appreciably the intensity of sunlight, few days could be classified as clear. On the other hand, many days, particularly after the 8th., were fair and sunny, although squally showers were experienced in the early morning and in the evening.

The rainfall was slightly greater than normal and the average daily temperature was higher. The temperature varied between a maximum of 90.0°F on the 12th and a minimum of 72.7°F on 30th.

During March, the most significant feature of the synoptic charts, was the continued existence of a low pressure area covering a large portion of the south west Pacific Ocean to the north of Samoa, while a series of anti cyclones moved across New Zealand. In consequence of these there was apparently a well defined frontal region during a great part of the month, ex-

tending in a general direction from the Solomon Islands to the Cook Islands. Only very shallow depressions developed during the month and these quickly filled up or moved off the chart in a south easterly direction.

April

Unsettled conditions were experienced during the first ten days of April and these were followed, until the 15th., by a period of fair weather with some showers. After this a general improvement occurred with fair to fine weather and isolated showers early in the day.

The duration of bright sunshine recorded was slightly more and the amount of rain less than was normal. The average daily temperature was higher than is usual for April. The absolute maximum was 89.4°F on 5th and the absolute minimum of 73.4°F occurred on 17th.

At the beginning of the month an extensive frontal region existed near Samoa in a general WNW-ESE direction. This contributed towards the unsettled conditions experienced over the Pacific Islands especially in the Samoan, Tongan and southern Cook Groups. Several shallow depressions associated with waves in this front moved over these islands.

May

The weather in May was fair to cloudy except for several squally periods, especially in the last week, during which most of this month's rainfall occurred.

Conditions were drier, warmer, and also more sunny than usual. The temperature varied between a maximum of 88.2°F on 10th and 70.9°F on 15th.

Between the 4th and 9th of May the persistance of a low pressure area over New Zealand influenced conditions in the Pacific Islands. Variable winds were experienced during this period with precipitation especially over the Tongan and Southern Cook Islands. These groups together with Tahiti and the southern islands of French Oceania were affected from time to time by the passage of fronts between the high pressure units that moved from West to East during most of the month.

Samoa and the northern islands were not appreciably influenced by these, and generally there existed a pressure gradient associated with easterly winds.

June

The weather of the first week in June was fine and sunny but after this there commenced a period of cloudy weather with showers and rain at times. These unsettled conditions prevailed during the remainder of the month and in consequence the normal amount of sunshine was not recorded while the rainfall was approximately 40% higher than usual.

The temperature varied between extreme values of 86.9°F on 6th and 69.8°F on 24th while the mean value for the month was 79.6°F.

The synoptic charts generally showed a steady pressure gradient associated with easterly winds throughout the south west Pacific area. At times, however, frontal conditions associated with depressions in more southerly latitudes affected the weather in some part of this region.

July

The first ten days of July were mainly cloudy to overcast but during the remainder of the month, generally fair to fine weather was experienced.

The rainfall amounted to 1.79 inches which is 1.45 inches less than normal. The range in temperature was between 86.0°F on 31st and 68.7°F on 3rd.

The weather of Samoa and the northern islands of the south west Pacific region was not influenced to the same extent as that of the Tonga, Fiji and Cook Groups by the passage from west to east of fronts between high pressure areas centred further South.

For much the greater part of the month, there existed a pressure gradient associated with easterly winds. In the case of Samoa, the cloudy period early in July was due to the approach of a front from the north.

August

The weather during August was for the most part fine and sunny there being twenty-two days with more than seven hours sunshine. Rainfall was less than normal.

Temperatures ranged between 87.3°F on the 17th and 70.5°F on the 29th and 30th., the mean temperature for the month being 78.49 as compared with the normal 78.06

The weather in Samoa and over the northern groups of the South Pacific Islands was controlled largely by disturbances on the extratropical front: but Tonga and Fiji shared largely in the rainfall associated with active frontal conditions moving from the west across Australia and then on eastward.

For the greater part of the month pressure gradients associated with easterly winds persisted, varied only by the northerly winds with the approach of the extratropical front.

September

The first week of September was characterized by dull and showery conditions with heavy thunderstorm activity in the hills, most of the rain falling at night. As the month progressed, the weather became fine and although much cloud was still present, an average of about 6 hours sunshine was recorded for the month. A dry spell from the 10th to 25th resulted in the considerable rainfall deficit of 1.42 inches. Temperatures varied from 86.7°F on the 27th to 71.1°F on the 3rd the greatest daily range being 14.5 and the least 3.4°F.

The winds were mainly from an easterly quarter with speeds averaging about 10 miles per hour, although the gusts in an easterly squall on the 3rd., reached 34 miles per hour.

The synoptic charts showed a few shallow wave disturbances on the eastern front but these passed slowly eastwards towards Rikitea. The most important feature of the month was the formation of a well defined wave cyclone near Fiji the circulation first being pronounced at 1900 G.M.T. September 8th. The cyclone moved southeastward along the slowly moving cold front and occluded, giving very general rain from Fiji to Tonga.

October

During the early part of the month conditions were mainly fair to cloudy with very light showers, but during the latter part the showers became heavier and more frequent, rain being recorded on all days from the 21st to the end of the month. There were, however, a few fine sunny days on which a total of over ten hours' sunshine was recorded. Rainfall totalled 6.80 inches, falling on 17 days, which is slightly above the normal for the month.

The winds were mainly from an easterly direction and light to moderate in force, but occasional gusts of over 30 miles per hour occurred in squalls which came mainly from the north-east. Temperatures varied between 87.6°F and 69.3°F while the greatest daily range amounted to 15.4°.

The synoptic charts showed the South Pacific semi-permanent anticyclone particularly well developed with the eastern front clearly defined. As yet, however, the front showed no tendency to instability and consequent wave-formation, unsettled conditions being due, in most cases, to the advance of well-occluded depressions from the west.

November

Although the weather conditions during November were of a predominantly showery nature with a distinct thundery tendency the total rainfall was very much less than normal. The cloud was mainly in the form of passing cumulonimbus.

Bright sunshine totalled over 220 hours for the month. Temperature extremes were 87.4°F and 70.2°F while the greatest and least daily ranges were 15.7 and 7.2°F respectively. Throughout the month light to moderate winds from an easterly quarter predominated. Conditions were associated with brief periods of northerly to northwesterly winds. There were also easterly squalls which reached 39 miles per hour.

On the synoptic charts the South Pacific anticyclone appeared to be well developed, but the eastern front remained fairly stable, most of the wave formation being in quasi-stationary cold front occlusions arriving from the west. Most noteworthy, were two such waves which persisted from the 27th to the end of the month and caused a period of unsettled weather in the Cook Islands.

December

The general weather conditions for December were mainly cloudy with light showers there being comparatively few days on which no rain fell. The showers were mainly light to moderate in intensity and short in duration although a few heavy falls were recorded; consequently the rainfall deficit was nearly 6 inches and the month predominantly dry.

Temperatures ranged between 88.5°F on the 28th and 72.5°F on the 17th the greatest daily range amounting

to 14.4 while the least daily range was 5.1°F. Winds were predominantly light to moderate easterly but during occasional squalls from the east (due to a passing depression to the north) the gusts reach 42 miles per hour.

The eastern front showed much evidence of instability and cyclonic depressions were common on the synoptic chart giving rise to unsettled conditions around Samoa and south-eastwards to the Cook Islands. The most noteworthy feature of the month however, was the formation of a small tropical hurricane near Suwarrow Island which was responsible for heavy rain and strong winds in the northern Cook Islands. This began as a wave depression on the eastern front and travelled as far as Penrhyn when it suddenly deepened and curved southwestwards as a tropical cyclone. It gradually filled up and passed to the south between Niue and Palmerston Island, the lowest pressure reported being 997.3 mb. at the latter station.

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS. 9 a.m. January 1940

Day of Month.	CLOUD. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed; Height Ratio.
1	Cu	-	Ci	1	7	3500		cprocbc	bc	M	E	3	1010.2	29.2	24.7	67	27.2			
2	Cu	-	Cs	1	10	3500		c	c	M	E	3	1010.1	29.4	24.9	67	27.5			
3	Cu	Ac	Ci	6	8	4000		c bc c	c	M	ExS	4	1011.3	28.3	25.2	76	29.2			
4	Cu	-	Ci	2	8	3000		cbcqrc	c	M	NW	1	1011.0	28.3	25.2	76	29.2			
5	Cu	-	Ci	1	6	3000		c bc	bc	K	SE	2	1008.9	30.0	24.7	63	26.5			
6	Sc	Ac	Ci	4	9+	5000		bclcprc	c	K	E	4	1008.5	28.7	25.6	77	30.0			
7	Cu	Ns	Ci	1	8	4500		corbcc	c	M	ESE	1	1008.9	28.9	25.4	74	29.3			
8	Cu	Ac	Ci	1	8	3000		cbcbbcc	c	M	ESE	1	1008.8	28.8	26.0	78	30.9			
9	Cu	-	Ci	2	9+	3000		bcbbcc	cjpr	M	ExS	4	1009.2	29.3	26.1	76	30.9			
10	Cu	-	Ci	1	1	2500		b	b	M	E	4	1009.5	30.0	26.3	73	30.8			
11	Cu	As	Ci	Tr.	9+	5000		bcctlprc	c	M	SExE	1	1009.0	28.1	25.8	82	31.1			
12	Cu	Ac	Ci	1	6	3000		bctbbc	bc	M	CALM	0	1007.9	28.6	25.8	79	30.7			
13	Cu	-	Ci	1	9	3000		cbcbbcc	c	M	CALM	0	1006.0	28.5	25.4	77	29.6			
14	Sc	-	-	10	10	4000		cprbcc	c	M	NWxN	2	1006.1	27.4	24.9	81	29.2			
15	Sc	-	Ci	8	9	3000		cbcbbcc	c	M	CALM	0	1005.6	27.5	23.8	72	26.1			
16	Sc	-	Ci	8	9	8000		bc c	c	M	SW	1	1007.0	27.3	24.0	75	26.8			
17	Cu	-	Ci	0	9	4000		b bc	c	M	E	1	1008.1	27.6	23.6	70	25.6			
18	Cu	-	Ci	1	9	2500		bc c	c	M	E	1	1007.7	27.7	23.7	70	25.7			
19	Cu	-	Ci	0	1	4000		bc b	b	M	E	2	1007.7	29.0	24.4	67	26.5			
20	Cu	-	Ci	2	7	2500		bc	bc	M	ESE	3	1008.0	29.3	25.1	69	28.1			
21	Sc	-	-	8	8	4500		c	c	M	SExS	1	1009.1	28.8	25.1	73	28.5			
22	Sc	Ac	Ci	2	9	2500		bc c	c	M	ENE	1	1008.6	28.3	25.1	76	28.9			
23	Sc	Ac	Ci	7	9+	3000		cprlc	c	M	CALM	0	1008.1	27.4	24.8	80	28.9			
24	Sc	-	Ci	1	9	2000		clrrprc	c	M	ESE	2	1008.7	28.0	25.1	78	29.2			
25	Sc	-	Ci	7	9+	6500		cjprc	c	L	CALM	0	1010.6	27.0	24.8	83	29.2			
26	Sc	-	Tr	9	9	2000		c bc c	cjpr	M	W	1	1009.9	27.3	25.1	83	29.7			
27	Cu	-	Ci	3	9	3000		bc c	c	M	NNE	1	1009.9	28.0	25.1	78	29.2			
28	Cu	-	Ci	3	4	4000		ctc bc	bc	M	CALM	0	1010.2	28.2	24.3	71	26.9			
29	Cu	As	Ci	1	9+	3500		clrrc	c	M	CALM	0	1010.7	27.2	25.4	86	30.7			
30	Cu	Ac	Ci	1	8	3000		crrc	c	M	E	1	1010.0	29.0	25.4	74	29.2			
31	Cu	-	Cs	3	6	3000		c bc	bc	M	CALM	0	1008.9	28.5	25.2	75	29.1			
Means	-	-	-	3.0	7.8	3581		-	-	-	-	1.5	1008.8	28.4	25.0	75	28.7			

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METEOROLOGICAL OBSERVATIONS. 3 p.m. January 1940

Day of Month.	Cloud. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (° C).	Wet Bulb (° C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Sc	-	Ci	3	8	3500		bc c	c	M	E	5	1007.3	30.3	26.0	69	29.7			
2	Cu	-	Cs	1	10	3500		c	c	M	ExS	4	1008.9	30.0	25.7	69	29.2			
3	Cu	-	Ci	1	8	3000		c bc c	c	M	ExS	4	1008.8	30.3	26.0	69	29.7			
4	Cu	-	Ci	2	9	3000		c	c	K	E	5	1007.4	30.1	26.0	70	29.9			
5	Cb	As	Cs	2	4	3000		bcbbcy	bc	K	ExS	4	1006.0	31.2	26.0	64	29.1			
6	Cu	As	Cs	2	10	2000		c	c	M	E	3	1007.1	29.2	26.0	76	30.7			
7	Cu	As	Ci	1	9	5000		cqrc	c	M	ExS	2	1007.7	29.8	25.6	70	29.1			
8	Cu	-	Ci	2	6	3000		c bc	bc	M	E	3	1007.4	30.3	26.2	70	30.3			
9	Cu	-	Ci	4	9+	3000		cqprc	c	M	E	4	1008.1	30.4	26.9	75	32.3			
10	Cu	-	Ci	2	8	4000		b bc	bc	M	ExS	4	1007.5	31.8	27.2	68	32.0			
11	Cu	-	Ci	3	9+	3000		c	c	M	ENE	3	1007.4	30.4	26.9	75	32.3			
12	Cu	-	Ci	5	9	3000		bcctlpc	cjpr	K	CALM	0	1005.5	30.0	25.9	70	29.7			
13	Cu	-	Ci	3	8	3000		bccprc	c	M	CALM	0	1003.5	29.8	26.2	74	30.7			
14	Sc	-	Cs	8	8	2500		cpr	cjpr	M	NNE	1	1004.1	29.0	25.1	71	28.4			
15	Sc	-	Ci	7	9+	3500		c	cjpr	M	E	5	1005.0	28.4	25.0	75	28.5			
16	Cu	-	Ci	3	7	2500		bc	bc	L	ENE	4	1005.1	29.6	25.1	67	27.9			
17	Cu	-	Ci	1	9	3000		c	c	M	E	2	1006.6	29.4	24.2	63	25.6			
18	Sc	-	Ci	3	9	2500		c	c	M	E	3	1005.0	29.3	24.2	63	25.7			
19	Cu	-	Ci	4	9	2000		bc	c	M	E	3	1005.8	29.8	25.2	67	28.1			
20	Cu	Ac Tr.	Ci	2	9	3500		c	c	M	ENE	2	1006.7	29.6	25.5	70	28.9			
21	Sc	-	Ci	8	9+	3500		cbcc	cjp/t	M	ESE	2	1007.0	29.2	25.0	69	27.9			
22	Sc	-	Ci	8	9+	2000		prctpr	c	M	E	2	1007.1	27.5	24.9	80	29.1			
23	Sc	-	Ci	3	9	2500		c	c	M	E	1	1005.5	29.9	25.9	71	29.9			
24	Sc	-	Ci	3	9+	2000		cprc	c	M	W	3	1008.3	28.5	25.2	75	29.1			
25	Cu	-	Ci	1	9	3000		ctrrc	c	M	N	1	1008.8	28.0	24.9	77	28.7			
26	Cb	-	Ci	7	9	4000		ctjprc	cjpr	M	S	1	1008.8	26.4	24.0	81	27.6			
27	Cu	Ac	Cs	4	9	3000		ctc	c	M	NNE	2	1007.8	29.1	25.0	70	28.0			
28	Cu	Ac Tr.	Cs	3	8	2500		bccprcc	c	M	ExS	2	1008.2	30.2	26.8	76	32.1			
29	Cb	-	Cc	6	9	4500		ctc	cjpr	M	NE	1	1008.6	29.7	26.0	73	30.3			
30	Cu	As	Ci	1	9+	2000		cprc	cpr	M	S	2	1008.5	25.2	23.9	89	28.3			
31	Cu	As	Ci	2	9	3000		cjpr	cjpr	M	S	1	1006.0	28.8	25.9	78	30.7			
Means	-	-	-	3.4	8.6	3016		-	-	-	-	2.6	1007.0	29.4	25.6	72	29.3			

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METEOROLOGICAL OBSERVATIONS.

January 1940

Day of Month.	Thermometers. Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)	Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
1	30.9	24.4	22.5		nil	10.7		3.0
2	30.2	23.6	21.8		nil	10.9		3.0
3	30.6	25.8	23.7		6.2	10.4		2.2
4	31.1	24.8	23.4		nil	11.8		3.0
5	32.2	24.8	22.5		1.1	10.6		3.0
6	29.6	25.2	24.0		10.0	1.5		1.9
7	30.0	24.8	23.4		1.2	6.0		2.0
8	31.0	24.9	23.8		nil	7.6		2.3
9	31.0	24.0	22.4		2.7	8.8		2.4
10	32.0	24.0	23.2		14.9	10.7		2.2
11	30.9	25.2	24.0		0.2	5.1		1.8
12	30.3	24.6	23.4		0.2	7.0		1.4
13	30.9	24.6	23.4		2.5	8.8		2.1
14	29.6	24.8	23.8		trace	5.5		2.5
15	30.0	23.9	21.5		nil	4.9		2.2
16	29.8	23.6	21.8		nil	8.4		2.7
17	30.1	22.5	20.8		nil	11.8		3.0
18	29.6	22.9	20.7		nil	11.2		3.4
19	31.1	22.7	21.1		nil	10.4		2.7
20	30.7	24.0	22.9		trace	8.9		2.8
21	31.5	25.0	23.7		nil	6.0		2.9
22	29.0	24.5	23.8		1.8	3.7		1.8
23	30.1	23.7	22.0		16.8	6.7		1.9
24	29.1	24.8	23.7		4.6	5.5		1.1
25	28.9	24.6	23.6		0.8	1.5		1.7
26	29.1	25.0	23.7		nil	4.6		1.7
27	30.7	23.6	22.5		nil	8.0		2.4
28	30.2	24.3	23.0		6.2	8.1		1.9
29	30.4	24.5	23.5		5.2	4.8		1.7
30	29.6	24.2	23.0		9.8	6.4		1.7
31	30.2	24.5	23.4		nil	6.4		1.7
Sum	-	-	-		84.2	232.7		70.6
Mean	30.3	24.3	22.9		-	-		2.28

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

9 a.m. February 1940

Day of Month.	Cloud. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (° C).	Wet Bulb (° C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed ; Height Ratio.
1	Cu	-	Ci	3	4	2000		c bc b	b	M	CALM	0	1008.8	28.8	25.1	73	28.5			
2	Cu	-	-	2	2	2500		cbcbbcb	b	M	NE	1	1008.8	29.0	25.7	76	30.0			
3	Cu	-	Ci	2	3	3000		crrbcb	b	M	E	1	1008.8	28.8	25.3	74	29.1			
4	Cu	Ac	Ci	3	8	3500		bbcproc	c	M	E	2	1008.6	28.8	25.8	78	30.4			
5	Cu	-	Ci	1	9	4000		bcblbcc	c	M	NE	1	1009.0	28.9	25.2	73	28.7			
6	Cu	-	-	1	1	3000		cbclb	b	M	N	1	1008.3	28.0	23.4	66	24.8			
7	Cu	-	Ci	1	2	3000		cbcb	b	M	E	2	1006.8	29.7	24.0	59	24.7			
8	Cu	-	Cs	0	9	4000		bclbbcc	c	M	S	1	1006.5	27.0	24.0	77	27.1			
9	Cu	-	Cs	1	9	3000		bcblbcc	c	M	WSW	1	1006.7	28.9	24.2	66	26.1			
10	Cu	-	Cs	2	3	3500		bcbbc	bc	M	NE	1	1006.7	28.2	24.3	71	26.9			
11	Cu	-	Ci	2	7	3500		bc	bc	M	ESE	3	1006.1	28.8	25.0	72	28.3			
12	Cu	-	Ci	1	6	3500		b bc	bc	M	ESE	1	1006.0	28.7	24.6	69	27.3			
13	Cb	-	Ci	2	7	3500		cbcbbc	bc	M	CALM	0	1006.7	29.3	25.0	68	27.9			
14	Sc	Ns	-	8	10	2000		bbccprc	cjr/q	K	NE	4	1007.4	27.8	26.1	87	32.1			
15	Sc	Ns	-	7	10	2500		cprc	cjr	K	E	3	1008.6	27.5	25.7	86	31.2			
16	Cu	-	Ci	3	10	3000		cprcorrc	c	K	SSE	2	1008.4	27.5	25.8	87	31.5			
17	Cu	-	Ci	5	7	3000		cprcbc	bc	M	E	4	1009.7	29.2	26.0	76	30.7			
18	Cu	-	Cs	1	10	3000		bccpro	c	M	ExS	3	1009.8	29.2	26.0	76	30.7			
19	Cu	Ac	Cs	3	10	3000		clbcprc	c	M	SE	2	1010.0	28.8	26.6	83	32.7			
20	Cu	Ac	Ci	2	9	3000		cprc	c	M	E	4	1009.2	29.9	27.0	79	33.5			
21	Cb	Ac	-	3	4	3000		bcpr	bc	M	SE	2	1008.8	29.2	25.9	76	30.4			
22	Cu	-	Ci	2	9	3000		bcprc	c	M	SE	1	1008.9	28.6	25.4	76	29.5			
23	Cu	Ac	Cc	1	9	3000		bcprc	c	M	ESE	2	1010.2	29.2	25.9	76	30.4			
24	Cb	As	Cs	2	9+	3000		crtlc	c	M	SE	2	1010.3	26.6	24.7	85	29.3			
25	Sc	As	-	3	10	4000		orrc	c	M	S	1	1010.7	25.6	24.2	89	28.8			
26	Cu	Ac	-	1	9+	3500		cprc	c	M	SExE	1	1011.0	28.0	25.2	79	29.5			
27	Cu	Ac tr.	Ci	1	6	3000		c bc	bc	M	CALM	0	1011.9	28.5	24.6	71	27.5			
28	Cu	-	Ci	1	5	4000		c bc	bc	M	E	4	1012.0	29.0	26.0	78	30.8			
29	Cu tr.	Ac tr.	Ci	trace	6	5000		bc pr	bc	M	CALM	0	1011.1	27.9	24.3	72	27.2			
30																				
31																				
Means	-	-	-	2.2	7.0	3207		-	-	-	-	1.7	1008.8	28.5	25.2	76	29.2			

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METEOROLOGICAL OBSERVATIONS.

3 p.m. February 1940

Day of Month.	CLOUD. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	WEATHER. Since previous Observation.	At Time.	Visibility.	WIND. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	TEMPERATURE AND HUMIDITY. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	UPPER CLOUD. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Cu	As	Ci	3	9	2500		bccpr	c	M	SW	1	1006.3	29.3	26.2	77	31.2			
2	Cu	As	Cs	2	9+	3000		cpr	c	M	NW	1	1007.1	28.0	25.6	82	30.5			
3	Cu	-	Ci	1	2	2500		b	b	M	E	4	1006.6	30.1	26.3	73	30.8			
4	Cu	-	Ci	6	7	2000		bc	bc	M	E	1	1006.8	29.9	26.0	72	30.1			
5	Cu	As	Ci	2	9	3000		cjprtc	cjpr	M	E	3	1006.6	30.4	26.3	71	31.9			
6	Cu	Ac	Ci	7	9	3000		cpr.c	cjpr	M	ESE	3	1005.9	31.3	25.8	63	28.4			
7	Cu	-	Cs	3	7	3500		bccprbc	bc	M	E	5	1004.5	30.1	25.9	70	29.6			
8	Cu	As	Cs	2	9+	3000		c	cpr	M	S	2	1004.2	27.9	25.5	82	30.5			
9	Cu	Ac	Ci	1	7	3500		c bc	bc	M	ESE	1	1004.3	29.2	25.0	69	27.9			
10	Sc	-	Ci tr.	8	8	3000		cjpr	c/pr.	M	Var.	1	1004.7	29.1	25.6	74	29.6			
11	Cu	-	Ci	1	9+	3500		bc c	c	M	E	3	1003.9	30.4	25.5	66	28.3			
12	Sc	-	Ci	6	9+	3500		c	c	M	E	4	1003.9	30.2	25.9	69	29.6			
13	Cu	-	Ci	3	9	3500		bc c	cjpr	M	E	6	1004.4	30.0	26.9	78	32.7			
14	Sc	-	Cs	5	10	3500		cqprc	c	K	NExN	3	1005.6	28.7	26.3	82	31.9			
15	Sc	Ns	-	6	10	2000		cqrcpr	cpr.	K	SxW	1	1007.1	24.4	24.0	95	29.2			
16	Cu	-	Cs	9	10	3000		c	cqr	K	NExE	5	1006.8	28.7	26.2	81	31.6			
17	Cu	-	Cs	4	9	3000		cqrc	c	K	ExS	4	1007.4	30.7	27.3	77	33.5			
18	Cu	-	Cs	3	10	3000		c	c	K	ExS	6	1007.6	31.0	27.4	75	33.7			
19	Cu	Ac	Cs	2	9+	3000		cprc	cjpr/qr	K	E	3	1007.4	28.6	26.6	85	32.9			
20	Cu	Ac	Ci	3	6	3000		bc t	bcjpr	M	E	4	1006.7	29.9	26.2	73	30.7			
21	Cu	Ac tr.	Ci tr.	4	4	3500		bc	bc	M	ExN	3	1006.4	30.8	26.7	71	31.3			
22	Cu	Ac	Ci	2	7	3000		c bc	bc	M	ENE	2	1007.0	30.0	25.9	70	29.7			
23	Cu	As	Ci tr.	3	9+	3000		ctc	c	M	ESE	2	1008.4	29.4	26.1	76	30.8			
24	Sc	As	-	6	9+	4500		cprc	cjpr	K	NE	4	1008.8	28.0	25.6	82	30.5			
25	Fr.Nb.	As	-	4	10	3000		cqrcr	cjpr/ir	K	CALM	0	1009.1	27.1	25.0	83	29.6			
26	Cu	Ac	Ci	2	9+	4000		c	c	M	E	3	1009.0	30.1	26.2	72	30.5			
27	Sc	Ns tr.	Ci	6	9	3000		bccproc	cjr	M	CALM	0	1010.1	28.0	26.0	85	31.6			
28	Cb	Ac tr.	Ci	5	6	3000		bcjpr	bc/pr	K	E	3	1009.5	29.9	26.8	77	32.3			
29	Cu	-	Ci	1	5	4000		bc	bc	M	NE	1	1008.4	29.4	24.6	65	26.7			
30																				
31																				
Means	-	-	-	3.8	8.1	3138		-	-	-	-	2.7	1006.7	29.3	26.0	76	30.6			

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METEOROLOGICAL OBSERVATIONS.

February 1940

Day of Month.	Thermometers. Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)	Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
1	30.0	24.0	22.5		trace	9.0		2.1
2	30.0	24.6	23.5		26.6	6.4		1.0
3	30.6	23.8	22.8		trace	11.4		2.8
4	30.8	24.8	23.5		nil	8.7		2.5
5	31.1	24.8	23.6		nil	10.4		2.4
6	31.8	23.7	21.9		nil	7.8		3.0
7	31.1	25.3	23.9		trace	11.2		3.3
8	31.1	23.5	21.5		trace	8.7		2.7
9	31.3	23.5	20.5		nil	9.9		2.9
10	30.8	23.6	21.3		trace	8.8		2.9
11	31.0	23.7	22.2		nil	11.3		3.0
12	30.8	23.6	21.8		nil	10.8		3.1
13	31.5	24.2	22.7		10.7	9.6		2.5
14	29.1	25.4	24.4		43.0	0.7		0.7
15	28.2	24.9	24.2		53.1	0.0		0.0
16	30.1	24.2	23.0		15.6	3.6		1.1
17	30.9	24.5	23.6		3.0	8.9		2.2
18	31.4	24.4	23.2		8.9	6.5		1.5
19	30.9	25.3	24.0		0.6	5.1		2.8
20	31.5	26.8	25.0		0.8	8.7		2.5
21	31.0	24.8	23.4		0.2	8.5		2.6
22	30.9	25.0	23.4		0.3	10.8		2.4
23	30.8	24.6	23.2		53.4	6.3		0.4
24	28.7	23.9	23.0		42.8	1.9		0.8
25	28.8	23.6	22.5		26.3	0.0		0.6
26	30.5	23.2	22.7		nil	3.3		2.2
27	29.2	24.2	22.8		7.7	5.8		1.4
28	31.0	23.9	22.5		0.2	9.9		2.4
29	30.2	22.7	20.9		35.2	11.3		1.8
30								
31								
Sum	-	-	-		328.4	215.3		59.6
Mean	30.5	24.3	22.9		-	7.4		2.06

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METEOROLOGICAL OBSERVATIONS.

9 a.m. March 1940

Day of Month.	Cloud. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Lumidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Cu	Ns	-	2	10	3000		bccqr	crr	K	SxW	2	1012.2	24.0	23.6	97	28.5			
2	Cu	Ac	Ci	1	8	3000		orrcprc	c	M	ExS	3	1012.7	28.4	25.9	81	31.1			
3	Cu	-	Ci	1	4	4500		bcclbc	bc	M	CALM	0	1011.1	28.9	25.3	73	29.1			
4	Cu	Ac	Cs	tr.	9+	3000		crrlqr	c	M	W	2	1009.1	26.4	24.5	85	28.9			
5	Cu	-	Ci	1	9	2000		bcblbcc	c	M	CALM	0	1008.3	27.9	24.7	76	28.3			
6	Cu	-	Cs	1	9	2000		bcblbcc	c	M	CALM	0	1007.3	28.1	25.9	83	31.3			
7	Cu	-	Ci	1	9	2500		bcblbcc	c	M	CALM	0	1006.3	28.1	25.1	77	29.1			
8	Cu	-	Ci	1	2	3000		cbcb	b	M	ESE	1	1006.1	29.1	26.0	77	30.8			
9	Cb	-	Ci	3	4	3000		cbcbbc	bcjpr	M	ExN	1	1005.8	29.1	26.0	77	30.8			
10	Sc	-	Ci	6	8	3500		circjr	c	M	ESE	1	1007.7	26.6	25.1	88	30.8			
11	Cu	-	Ci	tr.	2	2000		bcprob	b	M	ExS	2	1008.5	29.3	25.7	74	29.7			
12	Cb	-	-	2	2	3500		bcltb	b	M	ESE	1	1008.2	29.3	25.8	74	30.0			
13	Sc	As	Cs Tr.	3	9	3000		cprc	c	M	ExS	5	1008.3	28.1	26.1	85	30.8			
14	Cb	Ac Tr.	Ci	2	5	2000		cprcbc	bc	M	ESE	2	1009.4	28.2	25.8	82	30.9			
15	Cu	-	Cs	1	3	2000		b c b bc	bc	M	ESE	1	1009.9	28.8	24.6	69	27.2			
16	Cu	-	Ci	tr.	6	1500		bc b bc	bc	M	E	3	1009.3	28.5	25.0	74	28.5			
17	Cu	-	Ci	1	2	3000		clrbcb	b	M	CALM	0	1009.7	29.0	25.4	74	29.2			
18	Fs	As	-	5	10	3000		cprroc	cpro	K	W	2	1010.3	25.8	24.8	92	30.3			
19	Cu	As	-	1	10	2000		croroc	6	M	SW	1	1009.4	26.1	24.3	85	28.7			
20	Sc	Ac	Ci	1	6	3000		clprbc	bc	M	ESE	1	1009.4	27.5	25.0	80	29.3			
21	Fs	As	-	4	10	3000		cpqlbcc	c/pr	M	S	1	1010.0	24.6	23.9	94	28.8			
22	Sc	Ac	Cc	2	7	4500		cbc	bc	M	ESE	1	1011.0	29.1	25.9	77	30.5			
23	Cu	-	Ci Tr.	2	2	3500		bbcbw	b	M	E	3	1010.2	30.0	26.8	77	32.3			
24	Sc	As	Ci	7	9	3000		bccprc	c	M	S	2	1011.5	27.3	25.4	85	30.5			
25	Sc	Ac	-	6	8	4000		coprqc	c	K	ExS	6	1012.1	29.2	26.1	77	30.9			
26	Cu	-	Ci	3	4	3000		bcprbc	bc	K	ExS	4	1011.3	29.6	26.5	77	31.7			
27	Cu Tr.	-	Ci	tr.	7	3000		bccprbc	bc	K	ESE	4	1010.8	28.9	25.2	73	28.7			
28	Cb	Ac	Ci	3	8	4000		bccprqr	cpro	K	ESE	2	1011.0	26.3	25.0	89	30.3			
29	Cb	-	Ci	6	7	3000		bccprbc	bcjpr	M	ESE	2	1011.1	28.8	26.2	80	31.6			
30	Cu	Ac	Ci	2	8	2500		cprtliRcc		M	ESE	1	1009.2	26.7	25.1	87	30.3			
31	Cu	-	Cs	2	8	3000		bccproc	c	M	CALM	0	1007.4	28.5	26.0	81	33.9			
Means	-	-	-	2.3	6.6	2935		-	-	-	-	1.7	1009.5	27.9	25.4	81	30.0			

1,000/7/32—3011] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS. 3 p.m. March 1940

Day of Month.	Cloud. Form. Low.	Cloud. Form. Medium.	Cloud. Form. High.	Cloud. Amount of Low.	Cloud. Total Amount.	Cloud. Height of Base.	Cloud. How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Temperature and Humidity. Wet Bulb (°C).	Temperature and Humidity. Relative Humidity (%).	Temperature and Humidity. Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Upper Cloud. Direction whence coming	Upper Cloud. Speed : Height Ratio.
1	-	Ns	-	0	10	3000		cpr.or	orr	F	NxW	2	1010.6	25.8	25.0	93	30.7			
2	Cu	Ac	Ci	1	7	2500		c bc	bc	M	E	3	1010.4	29.9	26.4	75	31.2			
3	Sc	-	Cs	6	9	2000		bcctpr	cjpr	K	SE	1	1009.2	26.8	25.8	92	32.1			
4	Cb	Ac	Cs	1	9	2500		c	c	M	ENE	1	1006.8	30.0	25.4	67	28.4			
5	Sc	-	Ci	2	9	2000		c	c	M	E	1	1005.5	29.4	26.7	80	32.5			
6	Cb	As	Ci	2	9	2000		cprc	c	M	ENE	2	1003.9	30.0	26.1	72	30.3			
7	Cu	-	Ci	3	9	2500		c	c	M	NExE	1	1003.6	30.0	26.8	77	32.3			
8	Cb	Ac	Ci	4	8	3000		bc c	cjprt	M	NxE	2	1003.4	29.7	26.1	74	30.5			
9	Cb	-	-	6	6	2000		bcjpr	bcjpr	M	NxE	1	1003.8	28.9	26.0	78	30.9			
10	Cu	Ac	Cc Tr.	2	7	3500		cjprcbc	bc	M	NExE	1	1005.5	29.6	25.3	69	28.4			
11	Cb	-	Ci	3	4	2500		btbc	bcjr	M	E	3	1006.0	31.3	26.2	65	29.5			
12	Cu	-	Ci	4	8	3000		b bc c	c	M	ExS	4	1005.5	30.4	27.2	77	33.5			
13	Cu	As	-	4	10	2000		cprcqrc	cjr	K	NExE	4	1007.5	28.1	25.8	82	31.1			
14	Cu	Ac Tr.	Ci	1	4	3000		bc	bc	M	E	4	1007.1	29.2	24.8	68	27.3			
15	Cu	Ac	Cs	3	7	3000		bccprobc	bc	M	E	3	1007.6	30.3	25.1	64	27.3			
16	Cu	Ac	-	3	9	2500		bccjpr	cjpr	M	NE	1	1007.7	29.8	25.9	72	29.9			
17	Cu	-	Ci	5	9+	3000		b bc c	c	M	E	1	1007.3	30.3	26.3	71	30.7			
18	Cb	As	-	1	10	3000		c	cpro	K	ENE	1	1008.3	27.8	24.8	77	28.5			
19	Cb	As	-	3	10	2000		c	cjpr	M	WNW	1	1007.9	28.1	25.0	77	28.8			
20	Cb	As	-	3	9+	3000		ctprcc	cjpr	M	ESE	2	1007.2	26.2	24.1	83	28.0			
21	Cb	As	Ci	3	8	3000		cpr.	c/pr	M	NE	1	1007.7	28.9	25.6	76	29.9			
22	Cb	Ac Tr.	Ci Tr.	1	2	2000		bc	b	M	E	5	1008.2	30.3	27.0	76	32.5			
23	Cb	-	Cs	4	8	3500		bbccpro	c	K	ExS	4	1008.3	31.1	27.7	77	34.5			
24	Sc	-	Ci	2	10	3000		c	c	M	E	3	1009.6	30.6	26.4	70	30.7			
25	Cu	Ac Tr.	Ci	4	6	3500		c bc	bcpro	M	E	4	1009.8	30.4	26.9	75	32.3			
26	Cu	Ac	Ci Tr.	6	8	2500		b bc	c/qpr	K	ExS	4	1008.9	28.2	26.0	83	31.5			
27	Cu	Ac Tr.	Ci	1	6	4000		bc	bc	M	ExS	5	1009.1	30.0	26.0	71	30.0			
28	Cu	Ac Tr.	Ci	3	4	3000		cpr bc	bc	M	E	4	1008.2	30.4	26.8	74	32.0			
29	Cu	-	Ci	3	4	3500		bc	bcjpr	M	E	3	1007.7	30.8	27.2	75	32.1			
30	Cu	Ac	Ci	Tr.	7	3000		cbccbc	bc	M	E	3	1005.8	29.8	26.5	76	31.6			
31	Cu	Ac Tr.	Ci	3	7	3000		cbc	bc	M	NW	3	1004.5	29.4	26.4	78	31.6			
Means	-	-	-	2.8	7.5	2774		-	-	-	-	2.5	1007.2	29.4	26.0	76	30.7			

METEOROLOGICAL OBSERVATIONS.

March 1940

Day of Month.	Thermometers. Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)	Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter.
1	28.6	23.7	22.9		29.8	-		0.3
2	30.5	23.6	22.5		nil	9.2		2.1
3	30.8	24.6	23.4		67.8	8.0		0.6
4	31.0	22.7	22.2		nil	8.8		2.3
5	30.3	24.0	22.9		nil	6.8		1.9
6	30.6	24.6	22.9		nil	7.2		2.1
7	30.2	24.7	23.1		nil	9.2		2.2
8	30.2	24.7	23.7		3.0	7.9		1.9
9	30.4	24.7	23.1		15.2	7.4		1.3
10	30.7	24.6	23.7		Trace	6.6		1.9
11	31.4	24.6	23.3		nil	10.7		2.4
12	32.2	24.4	23.3		7.8	9.7		2.5
13	30.0	25.8	24.4		8.7	2.0		1.8
14	30.9	24.0	22.9		nil	9.8		3.0
15	31.1	23.5	21.7		Trace	9.7		2.8
16	30.8	23.6	22.1		21.3	10.3		2.2
17	30.9	23.8	22.7		3.5	10.9		2.4
18	28.2	24.1	23.4		5.3	-		1.1
19	28.5	24.0	23.0		7.5	1.1		1.6
20	29.2	23.6	22.6		9.0	5.0		1.4
21	29.3	23.9	22.9		0.7	5.5		1.5
22	31.0	24.5	23.4		nil	9.9		2.6
23	31.7	24.7	23.4		3.0	8.4		2.2
24	30.9	25.3	24.4		59.2	8.4		1.2
25	31.2	24.4	23.7		2.2	6.4		2.3
26	31.1	25.7	23.7		5.0	9.7		2.4
27	30.7	25.0	23.3		10.8	9.7		1.5
28	30.8	24.2	22.9		4.0	8.5		1.9
29	31.1	25.3	24.2		77.6	10.4		0.5
30	30.5	22.6	22.4		Trace	8.0		1.7
31	29.8	25.0	23.7		28.4	9.1		2.2
Sum	-	-	-		369.8	234.3		57.8
Mean	30.5	24.3	23.1		-	7.6		1.86

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

9 a.m. April 1940

Day of Month.	Cloud. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed; Height Ratio.
1	Sc	As	-	7	10	3500		clorrciro	ciro	K	SSE	1	1008.5	24.8	24.2	95	29.5			
2	Cb	As	-	3	10	3000		clproc	cpro	M	SSW	1	1009.4	26.0	25.1	93	30.8			
3	Cu	Ac	Ci	1	9+	3000		c	c	M	SE	1	1010.7	28.1	25.9	83	31.3			
4	Cu	Ac	Ci Tr.	1	9+	3000		cproc	c	M	CALM	0	1008.9	27.6	25.7	85	31.2			
5	Cu	Ac	Ci	3	9+	2000		cbcrc	c	M	SSW	1	1010.0	27.9	24.7	76	28.3			
6	Cu	Ac	Ci	3	8	2500		cproc	c	M	ESE	3	1011.0	29.2	25.2	71	28.5			
7	Sc	Ns	-	9	10	3000		corr	cjr/cro	K	SE	1	1010.0	26.0	25.0	92	30.5			
8	Sc Tr	Ns	-	Tr.	10	2500		cprlorr	orr	F	W	4	1008.9	24.8	24.3	96	29.7			
9	Fr St	As	-	7	10	1500		cproc	c/pro	M	WxS	1	1009.2	26.4	25.2	90	30.8			
10	Cu	Ac Tr	Ci	1	4	3000		c bc	bc	M	CALM	0	1010.7	27.2	25.9	90	32.0			
11	Cb	Ac Tr	Ci	5	6	3000		bcprcrr	bcjpr	M	SW	1	1010.0	26.6	25.6	92	31.7			
12	Sc	As	-	2	9+	4500		bcbbcc	c/pro	M	CALM	0	1010.3	28.0	25.6	82	30.5			
13	Cb	-	Ci	2	5	3000		croprbc	bc	M	CALM	0	1009.6	28.5	26.0	81	31.2			
14	Cu	Ac	Ci	2	7	4000		bccrcbc	bc	M	SSW	1	1011.5	28.4	26.4	85	32.4			
15	Cb	Ac	Ci	2	9	3000		cbcc	c	M	SSE	1	1011.6	29.2	26.4	79	31.9			
16	Fr St	As	-	2	10	3000		cprltc	c	K	ESE	1	1011.6	26.7	25.1	87	30.3			
17	Sc	-	-	2	2	2000		cbc b	b	M	SE	1	1012.3	27.7	23.9	71	26.3			
18	Sc	-	-	1	1	3000		cbcb	b	M	NW	1	1013.8	27.9	24.2	72	26.9			
19	Cu	-	Ci	3	5	3000		cbcbbc	bc	M	E	1	1012.8	29.0	25.2	72	28.7			
20	Sc	-	Ci	2	3	3000		cbcbbc	bc	M	S	1	1011.6	28.4	25.1	75	28.9			
21	Sc	Ac Tr	Ci	3	6	4500		bccprbc	bc	M	ESE	3	1011.8	28.1	25.3	79	29.7			
22	Cu	Ac Tr	Ci	1	9	3000		cbcc	c	M	ESE	3	1011.8	29.0	25.8	76	30.3			
23	Cu	-	Ci	2	8	3000		cbcc	c	M	SE	1	1011.5	28.7	25.8	78	30.5			
24	Cu	-	Cs	1	9	3000		cbcbbcc	c	M	ESE	3	1011.7	29.3	26.2	77	31.2			
25	Cu	-	Ci	1	6	3000		cpr°bc	bc	M	CALM	0	1011.3	29.1	25.4	73	29.1			
26	Sc	-	Ci	6	7	3500		cRcjpr	c	M	ESE	2	1011.5	27.3	25.5	86	30.8			
27	Cu	-	Ci	1	8	3000		c	c	M	CALM	0	1012.2	26.6	24.7	85	29.3			
28	Sc	As	Ci	2	9	4000		bcpr°oRqc	c	M	CALM	0	1011.5	26.2	25.2	92	30.9			
29	Cu	-	Ci	2	9	3000		cljrbcc	c	M	E	1	1010.2	28.4	25.8	80	30.8			
30	Cu	Ac	Ci	3	5	3000		cprbc	bc	M	SSE	1	1011.1	27.5	24.9	80	29.1			
31																				
Means	-	-	-	2.7	7.4	3000		-	-	-	-	1.2	1010.9	27.6	25.3	82	30.1			

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1.000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

3.0 p.m. April 1940

Day of Month.	Cloud. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (° C.	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Fr Nb	As	-	3	10	3000		cr_or_o	cr_or_o	K	CALM	0	1006.5	25.9	24.7	90	29.9			
2	Cu	As	Ci Tr	3	10	3000		c	c	M	NNW	1	1007.7	28.5	25.3	76	29.3			
3	Cb	Ac	Ci Tr	3	9+	2500		c	c	M	NE	1	1008.1	29.3	26.0	76	30.5			
4	Cb	Ac	Ci	2	9+	3000		ctc	cjpr	M	S	2	1006.7	26.7	24.3	81	28.1			
5	Cu	Ac	Ci	2	9	2000		c	c	M	SSW	3	1007.4	31.2	25.8	63	28.4			
6	Sc	Ac	Ci Tr	6	7	2500		cpr_oc	bc	M	ExS	5	1008.5	29.0	25.9	77	30.5			
7	Cu	Ac Tr	Cs	4	9+	2500		cr_oc	c	M	NExN	1	1007.8	28.6	25.8	79	30.7			
8	Fr St	As	-	7	10	2000		cr_o	cr_or_o	M	CALM	0	1007.4	26.8	25.1	86	30.1			
9	Sc	As	-	4	10	4500		$crrcr_o$	c	M	WNW	1	1007.1	26.0	25.0	92	30.5			
10	Cu	-	Ci	2	3	3000		bc	bc	M	NNW	1	1008.2	29.2	26.2	78	31.2			
11	Cu	-	Ci	2	3	3000		bcprbc	bc	M	CALM	0	1008.1	30.0	26.3	73	30.8			
12	Cu	Ac	Ci	2	9	3000		c	c	M	ENE	1	1006.4	29.3	26.3	78	31.5			
13	Sc	-	Ci	1	6	2500		bc	bc	M	NW	2	1007.6	29.6	26.1	75	30.7			
14	Cu	-	Ci	1	9	2500		bcc	c	M	NWxN	3	1009.2	29.3	26.5	79	32.0			
15	Cb	Ac	Ci	4	7	3000		c	cjpr	M	NNW	2	1009.3	28.4	26.0	82	31.3			
16	Sc	Ac	Ci	6	9	2000		c	c	M	WNW	1	1009.0	28.7	25.1	74	28.7			
17	Sc	Ac	-	8	9	2500		bcc	c	M	E	5	1009.4	29.0	25.0	71	28.1			
18	Cb	Ac	Ci Tr	6	8	3500		bcc	c	M	E	3	1009.8	30.4	25.8	67	29.1			
19	Cu	As	Ci	4	8	2500		bcc	c	M	E	4	1009.3	30.0	26.9	78	32.7			
20	Cu	Ac	Ci Tr	4	5	3000		bcbbc	bcjpr	M	E	5	1009.1	30.0	26.6	76	31.7			
21	Cu	Ac	Ci	1	9+	3000		bc c	c	K	E	2	1009.3	29.8	26.3	75	31.1			
22	Cu	Ac Tr	Ci	2	9	3000		c	c	M	E	3	1009.1	30.4	26.8	74	32.0			
23	Cu	Ac Tr	Ci	1	8	3000		c	c	M	E	2	1009.5	30.5	26.2	70	30.1			
24	Cu	Ac Tr	Ci	2	8	3000		cpr_oc	c	M	ExN	2	1009.0	30.6	26.8	73	31.7			
25	Fs	-	Ci	8	9	2500		bc	cpr_o/ct	M	SSW	3	1009.2	27.4	24.7	79	28.7			
26	Cu	Ac	Ci	1	9	3000		cjpr	c	M	E	4	1008.7	29.3	25.8	74	30.0			
27	Cu	Ac	-	3	6	3000		cbcc	bc/pr_o	K	E	5	1009.3	29.7	26.5	77	31.6			
28	Cu	Ac Tr	Cs	3	10	3000		cbccjpr	c	M	ExN	2	1008.8	30.4	26.8	75	32.7			
29	Cb	Ns	Ci	3	9	3500		cpr_ocjr	cpr	M	ExN	5	1007.6	27.6	25.4	83	30.4			
30	Cu	-	Ci	2	9	2000		c	c	M	E	4	1008.4	30.0	27.0	78	33.3			
31																				
Means	-	-	-	3.3	8.2	2817		-	-	-	-	2.4	1008.4	29.1	25.9	77	30.6			

METEOROLOGICAL OBSERVATIONS.

April 1940

Day of Month.	Thermometers. Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)	Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
1	26.1	24.2	23.7		4.7	0.0		0.7
2	29.2	24.3	23.5		1.0	0.9		1.4
3	30.2	25.1	24.0		Trace	6.1		1.8
4	30.6	25.4	24.4		1.4	5.1		2.0
5	31.9	25.8	24.3		0.6	5.4		2.1
6	30.4	24.9	23.9		54.2	6.1		1.4
7	29.8	24.3	23.9		36.8	1.6		1.4
8	28.1	24.6	23.8		4.3	0.0		0.6
9	27.5	24.0	23.6		9.8	0.0		0.7
10	29.8	24.3	22.8		7.5	9.3		1.8
11	30.4	25.1	24.0		5.5	8.7		1.7
12	30.4	24.8	23.7		5.5	6.0		1.7
13	30.0	24.8	23.9		13.0	10.9		2.2
14	30.9	25.3	24.4		-	9.8		2.1
15	29.8	25.0	23.5		6.6	9.0		1.6
16	29.9	24.6	23.8		Trace	6.4		2.2
17	30.0	22.9	20.9		-	7.6		2.6
18	31.4	23.5	21.5		-	10.8		2.7
19	30.9	24.8	23.4		-	10.8		2.1
20	31.3	24.7	23.4		0.4	8.6		2.0
21	29.9	24.6	22.9		-	6.9		2.2
22	31.1	24.4	22.8		-	9.4		2.3
23	31.1	24.6	22.9		-	9.9		2.3
24	31.3	24.8	23.4		1.4	10.3		2.4
25	31.3	24.3	22.7		23.7	7.4		1.6
26	30.2	24.3	23.0		-	4.0		1.8
27	30.2	24.3	23.1		21.8	7.5		1.7
28	30.5	24.8	23.5		-	6.5		1.4
29	30.2	24.6	23.2		7.8	4.9		1.6
30	30.3	23.6	22.5		0.7	10.5		2.1
31								
Sum	-	-	-		206.7	200.4		54.7
Mean	30.2	24.6	23.3			6.7		18.23

1,000/7/32—3011] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

9 a.m. May 1940

Day of Month.	CLOUD. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (° F.).	Wet Bulb (° F.).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed ; Height Ratio.
1	Cb	-	Cs	1	9+	2500		cbclprc	c	M	NE	1	1012.2	27.8	25.0	78	29.1			
2	Cu	Ac Tr	Ci	1	6	2000		clbccbc	bc	M	SE	1	1012.6	28.6	25.6	78	30.1			
3	Cu	-	Ci	3	4	3000		bcbbc	bc/pr	K	ESE	5	1011.6	29.0	26.3	80	31.7			
4	Sc	Ac	Ci	3	9	2000		bclbbcr	c	M	ESE	2	1008.8	29.0	25.8	76	30.3			
5	Cu	Ac	Cc	2	5	3000		bccprc	bc	M	CALM	0	1009.8	26.8	25.6	90	31.6			
6	Cu	-	Ci	1	3	3000		bbc	bc	M	CALM	0	1010.2	28.2	25.2	77	29.3			
7	Cu	Ac	Cs	1	9	3500		bcbbcc	c	M	CALM	0	1010.4	26.7	24.7	84	29.2			
8	Cu	-	Ci	1	2	2000		bc b	b	M	ESE	1	1009.8	28.8	25.4	75	29.3			
9	Cu	-	-	1	1	2000		b	b	M	ESE	2	1009.5	28.8	25.3	74	29.1			
10	Cu	Ac Tr	Ci Tr	1	1	3000		b	b	M	CALM	0	1009.8	28.3	24.1	69	26.3			
11	Cu	-	Cs	1	7	3000		bcbbc	bc	M	CALM	0	1008.7	28.7	24.3	68	26.5			
12	Cu	Ac	Cc	1	6	4000		cprbc	bc	M	SxW	2	1009.5	27.7	23.6	70	25.5			
13	Cu	-	Ci	1	7	3000		bcbbc	bc	M	CALM	0	1011.1	27.6	22.2	61	22.1			
14	Cu Tr	-	Ci	Tr.	10	2000		cbcc	c	M	SE	1	1012.7	26.7	22.1	66	22.5			
15	Cu	-	Ci	1	9	3000		c	c	M	ESE	4	1012.3	27.7	23.2	67	24.5			
16	Sc	Ac Tr	Ci	1	2	3000		cbcb	b	M	E	5	1012.1	28.2	23.8	68	25.6			
17	Cb	Ac	Ci	3	9	3000		bcproc	cjpr	M	ESE	4	1012.5	28.4	25.3	77	29.5			
18	Cu	-	Ci	1	8	3000		c	c	M	ESE	3	1011.5	28.6	25.1	74	28.7			
19	Sc	Ac	-	6	8	4500		c	c	M	ESE	4	1009.8	27.9	25.4	81	30.1			
20	Cu	-	Ci	3	5	3000		bcbbcc	bc/pr	M	ESE	2	1009.5	28.2	25.1	77	29.1			
21	Cu	-	Ci	1	8	2500		bcbbcc	c	M	CALM	0	1010.7	27.1	24.0	76	27.1			
22	Cu	Ac	Ci	5	9+	3000		bcjprc	c	M	S	1	1011.2	26.3	24.1	82	28.0			
23	Fr St	Ac	-	7	10	2500		cprtcrr	cjp/qr	K	E	5	1012.2	28.0	25.6	82	30.5			
24	Cu	Ac	Ci	1	10	2500		clc	c	M	SSE	1	1013.3	26.1	24.1	84	28.1			
25	Cu	Ac	Cs	1	9	3000		c	cjr	M	CALM	0	1011.1	27.1	24.9	83	29.3			
26	Fr Nb	Ac	Ci Tr	7	8	4000		bbccprq	cjr	K	ESE	3	1011.5	26.6	24.3	82	28.3			
27	Cu	Ns	-	Tr.	10	3000		coltrr	ojpr	G	ESE	3	1013.5	24.6	24.2	97	29.6			
28	Cu	-	Ci	4	10	3000		clproc	c	K	E	5	1013.7	29.1	26.0	77	30.8			
29	Cb	-	-	10	10	3000		cpro	c/pr	K	SE	1	1013.0	26.4	25.3	91	31.1			
30	Cu	Ac	Ci	1	10	3000		cbclrrc	c	M	SSW	1	1013.1	26.1	25.0	91	30.5			
31	Cu	Ac	Ci	1	5	3000		cprobc	bc	M	SE	1	1012.3	27.2	25.1	84	29.9			
Means	-	-	-	2.3	7.1	2903		-	-	-	-	1.9	1011.3	27.6	24.7	78	28.5			

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

3 p.m. May 1940

Day of Month.	Cloud. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (° C).	Wet Bulb (° C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed: Height Ratio.
1	Cb	Ac Tr	Ci	2	9+	3000		c	c	M	E	4	1009.5	29.4	26.4	78	31.6			
2	Cb	-	Ci	3	6	2500		bc	bc	M	E	4	1010.0	30.3	27.1	77	34.0			
3	Cu	-	-	4	4	2000		bc	bc	M	ESE	4	1008.0	30.2	27.3	79	33.6			
4	Cu	As	Ci Tr	1	9	2000		bccpr	cjr	K	NNE	2	1007.2	27.8	25.9	85	31.6			
5	Cu	Ac Tr	Ci Tr	1	2	3000		bc b	b	M	NNE	2	1007.2	29.3	25.5	72	29.2			
6	Cu	-	Ci	1	4	3000		bc	bc	M	NNE	1	1008.3	29.4	26.0	75	30.5			
7	Cu	Ac	-	2	7	3000		cbc	bc	M	ENE	2	1007.4	30.0	26.2	73	30.5			
8	Cu	-	Ci Tr	2	2	3500		b	b	M	E	3	1008.1	30.3	26.3	71	30.7			
9	Cu	-	-	2	2	3000		b	b	M	E	4	1006.8	30.3	26.4	72	30.9			
10	Cu	-	Ci	3	4	3000		bbc	bcjpr	M	ExN	4	1006.7	30.5	26.5	71	31.1			
11	Cu	-	-	8	8	3000		bcjpr	cqr	G	S	4	1006.7	26.8	25.4	89	30.9			
12	Cu	Ac	Ci	1	7	3000		bc	bc	M	SSW	3	1006.8	29.2	23.5	60	24.0			
13	Cu	-	Cs	3	10	3000		bc c	c	M	SSW	4	1009.4	28.7	23.0	60	23.2			
14	Sc	Ac	Ci	4	10	3000		c	c	M	WSW	1	1009.7	28.9	23.1	60	23.2			
15	Sc	-	Ci	2	9	3000		bc c	c	M	E	3	1009.6	29.8	23.7	58	24.0			
16	Sc	Ac Tr	Ci	1	7	3500		cbcbbc	bc	M	E	4	1009.7	29.8	25.0	66	27.5			
17	Sc	Ac	Ci	4	10	2500		c	c	M	E	4	1009.9	29.8	26.2	74	30.7			
18	Cu	-	Cs	2	10	3000		c	c	M	ExN	3	1008.6	29.8	26.2	74	30.7			
19	Cu	Ac	-	2	3	3000		cbc	bc	K	E	4	1007.2	29.8	25.6	70	29.1			
20	Cu	-	Ci	1	4	4500		bc	bc	M	E	3	1007.4	30.3	26.0	69	29.7			
21	Cu	-	Ci	1	3	3500		cbc	bc	M	E	5	1007.8	29.7	25.8	72	29.7			
22	Cu	Ac	Ci Tr	2	9	3000		cjpr	c	M	E	6	1008.7	29.3	26.0	76	30.5			
23	Cu	As Tr	Ci	1	8	3000		c	c	M	ExN	3	1010.4	30.0	25.8	70	29.5			
24	Cb	As	Ci	2	9	2500		c	c	M	ESE	1	1009.8	29.0	25.6	75	29.7			
25	Sc	Ac	Ci	4	8	3000		c	cjr	M	E	4	1008.5	30.3	25.8	68	29.2			
26	Cu	Ac	Ci	3	10	3000		cprqc	cjpr	K	ExS	5	1009.3	28.8	25.8	78	30.4			
27	Cu	As	-	1	10	2000		otrrcpro	c	M	SE	3	1010.9	26.8	24.1	79	27.5			
28	Cu	-	Ci	4	10	3000		c	c	K	E	5	1011.5	30.0	26.8	76	32.3			
29	Cu	-	Cs	2	10	3000		bcpro	c	K	E	3	1010.2	29.7	27.0	80	33.9			
30	Cb	Ac	Cs	3	10	3000		c	cjpr	M	E	4	1008.9	28.7	25.7	78	30.3			
31	Cu	-	Ci	2	3	3000		bc	bc	M	E	3	1009.3	29.9	26.4	75	31.2			
Means	-	-	-	2.4	7.0	2952		-	-	-	-	3.4	1008.7	29.4	25.7	73	29.7			

METEOROLOGICAL OBSERVATIONS.

May 1940

Day of Month.	Thermometers. Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)	Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
2	30.0	24.0	23.0		Trace	9.8		1.9
3	30.7	25.0	23.9		17.2	9.9		2.4
4	30.7	24.7	23.4		8.6	5.8		1.1
5	29.7	24.4	23.4		-	9.4		1.0
6	29.5	24.4	23.0		-	11.3		2.0
7	30.6	23.1	21.2		-	8.6		2.3
8	30.7	24.4	22.7		-	11.3		2.1
9	31.0	23.5	21.4		-	10.9		2.6
10	31.2	23.2	21.2		-	9.9		2.6
11	30.0	25.1	22.5		9.1	6.8		2.5
12	29.9	24.5	22.2		-	9.5		2.3
13	29.9	23.9	20.6		-	8.7		3.6
14	29.0	22.4	19.6		-	6.1		2.7
15	29.9	21.6	19.5		-	10.3		2.3
16	30.0	21.9	19.9		Trace	8.8		3.0
17	30.0	24.6	22.8		-	7.4		2.5
18	30.3	24.4	22.9		-	8.3		2.1
19	30.1	24.3	22.5		Trace	6.9		2.2
20	30.6	23.4	21.3		-	10.5		2.2
21	31.0	22.6	20.5		-	10.9		2.6
22	30.1	23.4	21.6		20.4	6.6		2.1
23	30.4	24.0	23.2		-	6.9		2.1
24	30.7	23.5	21.9		-	6.0		1.6
25	30.9	22.9	21.3		0.2	8.3		2.2
26	29.3	23.7	22.9		44.2	5.4		1.1
27	29.1	24.3	22.5		11.8	0.0		1.4
28	30.9	24.0	23.5		1.7	10.3		2.2
29	30.6	25.4	22.9		15.6	5.9		1.5
30	29.9	24.7	-		Trace	5.0		1.8
31	30.2	25.4	23.0		-	8.1		1.8
Sum	-	-	-		128.8	248.3		66.8
Mean	30.3	23.9	22.1			8.0		2.2

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

9 a.m. June 1940

Day of Month.	CLOUD. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	WEATHER. Since previous Observation.	At Time.	Visibility.	WIND. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	TEMPERATURE AND HUMIDITY. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	UPPER CLOUD. Type observed.	Direction whence coming.	Speed: Height Ratio.
1	Cu	-	Ci	1	9+	3000		bcbbcc	c	M	SE	1	1012.4	27.7	25.0	79	29.2			
2	Cu	-	Ci	1	4	3000		bc	bc	M	CALM	0	1012.2	27.2	22.9	67	24.1			
3	Sc	Ac Tr.	-	3	3	3000		bc	bc	M	CALM	0	1010.5	27.5	24.7	79	28.5			
4	Cu	-	Cs	1	6	2000		bc b bc	bc	M	CALM	0	1009.9	26.9	24.1	78	27.5			
5	Cu	-	Ci	1	8	2500		bcbbcc	cjpr	M	SE	1	1011.0	27.2	24.5	79	28.3			
6	Cu	Ac Tr.	Ci	5	6	3000		bcpr	bc/pr	M	SExS	1	1011.2	27.2	25.8	89	31.7			
7	Cu	As	Cs	3	9+	3000		bc c	c	M	S	1	1012.3	26.6	25.0	87	30.1			
8	Cu	-	-	2	2	3000		cbcprob	b	K	ExS	3	1012.5	28.2	25.2	77	29.3			
9	Sc	-	-	8	8	4000		bbcpr	cpr$_o$	K	ESE	4	1011.6	27.0	25.6	89	31.3			
10	Sc	Ac	Ci	3	10	2500		cprtc	c	M	E	4	1011.4	27.1	25.0	83	29.6			
11	Cu	-	Ci	Tr	9+	2000		corrc	c	M	ENE	1	1009.6	27.1	25.2	85	30.3			
12	Sc	-	Ci	3	6	3000		cprobc	bc	M	SW	1	1012.3	27.4	25.1	84	29.9			
13	Sc	Ac	Ci	4	9+	3000		c	c/pr$_o$	K	S	1	1014.8	27.0	25.1	85	30.0			
14	Sc	Ac	-	7	9+	3000		clc	c	K	ESE	4	1013.1	26.9	23.9	76	26.8			
15	Sc	Ac	Ci	2	9+	3000		c	c	M	ESE	6	1012.1	28.1	25.1	77	29.1			
16	Fr St	Ns	-	2	10	3000		cltorq	oRR	H	SSE	2	1015.0	23.2	22.5	94	26.4			
17	Cb	As	-	3	10	3000		cprltir$_o$	cjpr/pr	K	ESE	3	1012.6	27.3	25.8	88	31.7			
18	Sc	-	Cs	3	9+	4000		orrqltc	c	M	ESE	4	1014.1	27.0	23.7	75	26.4			
19	Cb	Ac	Cs Tr.	7	8	3000		cqprc	cjpr/pr$_o$	K	ExS	5	1011.8	27.4	25.3	84	30.3			
20	Cu	-	Ci	3	6	3000		bccbcjpr	bc	M	ESE	3	1011.0	28.1	25.0	77	28.8			
21	Cu	-	Ci	2	5	3000		cbcw	bcw	K	ExS	3	1011.5	28.0	24.6	74	27.9			
22	Cu	-	Ci	3	7	3000		bc	bc	M	ESE	5	1012.9	27.0	23.4	72	25.6			
23	Cu	-	Ci	2	5	3000		cbcw	bcw	M	CALM	0	1013.2	26.0	23.2	78	25.9			
24	Sc	Ac Tr	Ci	3	6	3000		cbc	bc	M	SE	3	1011.3	24.6	22.1	80	24.4			
25	Sc	Ac	Ci	2	8	3000		bccproc	c	M	SSW	1	1009.5	27.0	24.4	80	28.1			
26	Sc	Ac	Ci	3	9	3000		cproc	c	M	NE	1	1010.8	27.4	25.1	82	29.7			
27	Sc	Ac	Ci	2	9+	3000		cbcc	c	M	ESE	4	1011.2	26.4	24.0	81	27.6			
28	-	Ns	-	-	10	3500		cproc	cr$_o$	M	SW	2	1010.1	25.2	24.1	91	28.8			
29	Sc	As	Ci	3	9+	3000		c	c	M	SW	1	1011.1	25.2	24.1	91	28.8			
30	Sc	Ac	Ci	7	9	4500		cpr c	c	M	ExS	6	1010.7	27.8	23.9	71	26.1			
31																				
Means	-	-	-	3.0	7.6	3030		-	-	-	-	2.4	1011.8	26.9	24.4	81	28.4			

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

3.0 p.m. June 1940

Day of Month.	Cloud. Form. Low.	Cloud. Form. Medium.	Cloud. Form. High.	Cloud. Amount of Low.	Cloud. Total Amount.	Cloud. Height of Base.	Cloud. How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Temperature and Humidity. Wet Bulb (°C).	Temperature and Humidity. Relative Humidity (%).	Temperature and Humidity. Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Upper Cloud. Direction whence coming.	Upper Cloud. Speed ; Height Ratio.
1	Cu	-	Ci	1	5	3500		bc	bc	K	E	5	1009.4	29.5	26.5	78	31.9			
2	Cb	-	Cc	1	5	3000		bc	bc	K	E	4	1008.6	29.7	25.9	72	30.0			
3	Cb	Ac Tr	Ci Tr	3	3	3000		b bc	bcjpr	M	E	5	1007.2	29.3	25.8	74	30.0			
4	Cu	-	Ci	3	4	3000		bc	bc	M	E	4	1007.9	29.7	26.7	78	32.1			
5	Cu	-	Cs	2	4	3000		c bc	bc	M	E	4	1008.1	29.8	26.2	74	30.7			
6	Cu	Ac Tr	Ci	4	7	3000		bc	bc	M	E	3	1009.7	30.3	27.0	77	32.9			
7	Cu	Ac	Ci	3	9+	3000		cjpr	c	M	ExS	4	1009.8	29.3	26.4	78	31.7			
8	Cu	-	Ci Tr	1	1	3500		b	b	K	E	4	1009.7	29.7	26.2	75	30.8			
9	Fr St	As	Ci Tr	7	9+	200		cpr	cpr	K	E	3	1009.8	26.2	25.6	95	32.0			
10	Cu	Ac	Ci	1	9+	3000		cpr.c	c	M	E	2	1008.0	29.5	26.0	74	30.4			
11	Sc	-	Cs	4	9+	3000		c	c	M	NNE	1	1008.3	28.3	26.0	82	31.5			
12	Sc	Ac	Ci	7	9+	3000		bccjpr	cjpr	K	ExS	3	1010.0	28.7	26.2	81	31.6			
13	Sc	-	Ci	4	9	3000		cjpr	c	M	E	6	1011.0	29.0	25.2	72	28.7			
14	Sc	-	Ci	8	9+	3000		c	c	M	ESE	5	1010.4	28.0	24.3	72	27.1			
15	Sc	Ac	Ci	2	9+	3000		c	c	M	E	4	1010.2	29.0	25.1	71	28.4			
16	Fr St	Ac	Ci	1	9+	2500		oRRc	c	M	ESE	3	1010.7	26.7	24.3	81	28.1			
17	Fr Nb	As	Cs Tr	4	10	3000		tcpr	cpr	K	E	4	1010.0	26.2	24.9	90	30.1			
18	Sc	Ac	Cs	3	10	3500		c	c	M	ExS	4	1009.8	28.6	24.8	72	27.9			
19	Cu	-	Ci	2	7	3000		bcpr.	bc	L	ExS	5	1009.3	28.8	25.2	73	28.8			
20	Cu	-	Ci	2	9	3000		bc c	c	K	ExS	5	1009.0	29.7	26.0	73	30.3			
21	Sc	-	Ci Tr	5	5	3000		bc	bcjpr	K	E	5	1009.0	29.3	25.7	74	29.7			
22	Sc	Ac	Ci	4	10	3500		c	c	M	SExE	4	1010.7	26.9	23.8	76	26.7			
23	Cu	-	Ci	2	8	3500		bc c	c	K	ExS	6	1010.3	28.1	23.7	68	25.5			
24	Sc	-	Ci	5	6	3500		bc	bc	M	ESE	5	1008.3	28.1	24.1	70	26.4			
25	Sc	Ac	Ci	4	9	3000		c	c	K	ENE	4	1007.2	29.0	26.1	78	31.1			
26	Sc	Ac	Cs	3	9+	3000		c	c	K	E	4	1008.5	28.1	24.4	72	27.2			
27	Sc	Ac	Ci	3	9+	3000		c	c	K	E	4	1007.5	29.0	25.1	71	28.4			
28	Fr St	Ns	-	1	10	3000		corrt	crr	G	SE	1	1008.9	24.1	23.6	96	28.4			
29	Cu	Ns	-	3	10	5000		cpr.ir	cr.	K	SSW	2	1009.8	24.7	22.5	82	25.2			
30	Sc	Ac	Cc	2	7	5000		c bc	bc	M	ESE	4	1008.8	29.0	24.3	66	26.3			
31																				
Means	-	-	-	3.2	7.6	3123		-	-	-	-	3.9	1009.2	28.4	25.3	77	29.3			

METEOROLOGICAL OBSERVATIONS.

June 1940

Day of Month.	Thermometers. Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)	Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator	Evaporimeter (mm.)
1	29.9	24.1	21.9		-	10.6		2.3
2	30.0	22.5	19.5		-	10.9		2.5
3	30.0	24.3	-		-	10.3		1.9
4	29.9	23.2	20.5		-	10.8		2.2
5	30.3	23.5	21.1		3.8	10.0		2.2
6	30.5	25.4	22.8		-	8.0		1.8
7	30.4	24.8	22.7		Trace	2.6		1.5
8	29.9	24.6	22.5		0.3	10.8		1.8
9	29.6	23.9	21.7		14.5	4.8		0.6
10	29.8	24.4	22.9		26.7	7.2		1.1
11	29.2	24.7	22.5		Trace	3.8		1.3
12	29.8	24.7	22.5		-	3.8		1.4
13	30.1	24.8	22.6		Trace	8.7		2.6
14	28.8	24.5	22.7		-	3.4		2.7
15	29.9	24.0	22.0		12.0	7.7		0.6
16	27.8	23.2	21.9		13.5	0.6		1.9
17	28.2	22.5	21.6		45.3	0.1		0.9
18	29.5	23.3	-		10.2	1.3		3.0
19	29.6	24.6	22.7		Trace	8.1		2.7
20	29.8	24.4	22.2		-	8.1		2.2
21	29.4	23.9	21.8		-	9.1		3.3
22	28.7	25.0	21.8		Trace	8.8		2.7
23	28.7	21.7	-		-	10.3		2.8
24	29.1	21.0	18.1		Trace	9.1		2.4
25	29.8	24.4	22.9		0.1	5.6		1.8
26	29.1	25.4	23.1		-	2.9		2.1
27	29.4	24.0	22.0		4.7	3.8		2.0
28	26.1	24.5	-		47 3	0.0		0.4
29	27.8	23.4	22.0		5 7	0.1		4.2
30	30.1	24.0	22.8		-	5.5		2.6
31								
Sum	-	-	-		184.1	186.8		61.5
Mean	29.4	24.0	22.0			6.2		2.1

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METEOROLOGICAL OBSERVATIONS.

9 a.m. July 1940

Day of Month.	CLOUD. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	At Time.	Visibility.	Wind. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Cu	-	Ci	1	9+	3000		bcbbcc	c	M	CALM	0	1010.6	24.3	21.9	80	24.1			
2	Cu	Ac	Ci	7	9	3000		cprc	cjpr	K	SSE	2	1010.9	26.4	22.7	69	24.0			
3	Cu	Ac Tr.	Ci	Tr.	9+	4000		c	c	K	SE	2	1010.8	24.3	19.8	64	19.2			
4	Cu	Ac	-	1	9+	3000		cproc	c	M	CALM	0	1009.7	23.6	21.1	79	22.8			
5	Fr Nb	As	-	2	10	3000		cproc	c	M	SSE	2	1008.9	24.1	22.0	83	24.5			
6	Sc	Ns	-	2	10	2500		croro	cirr	K	ESE	3	1008.3	25.0	23.8	90	28.3			
7	Sc	Ac	Ci	5	9	3000		bc c	c	M	CALM	0	1010.2	25.4	23.5	85	27.2			
8	Sc	As	-	1	10	3000		cproc	c	M	S	1	1010.6	25.9	22.1	71	23.2			
9	Sc	As	-	5	9+	3000		c	c	M	WSW	1	1013.0	25.4	22.0	73	23.5			
10	Sc	Ac	Ci	2	9+	2500		cproc	c	M	ESE	2	1015.2	25.5	22.7	78	25.1			
11	Cu	As	Ci	1	9+	3000		c	cjpr	M	SE	1	1016.0	24.9	22.3	79	24.5			
12	Cu	Ac	-	1	4	3000		bcbbc	bc	M	S	1	1014.9	24.0	22.6	88	26.0			
13	Sc	-	Ci Tr	2	2	3000		bcbbccbcb	b	M	SE	1	1014.6	25.4	23.0	80	25.9			
14	Cu	-	Ci Tr	6	6	3500		bw	bcw	M	CALM	0	1013.7	25.8	22.9	77	25.2			
15	Cu	-	Ci	1	2	3500		bcbw	bw	M	CALM	0	1013.3	24.6	22.0	79	24.1			
16	Cu	-	Ci	2	9	3000		bcbbc	c	M	CALM	0	1015.1	25.5	22.7	78	25.1			
17	Cu	-	-	1	1	3500		bw	bw	M	SExE	1	1014.9	26.8	23.0	71	24.7			
18	Sc	-	-	2	2	3500		cbc	b	M	ESE	4	1014.5	25.8	22.7	76	24.8			
19	Cu	Ac Tr	Ci	1	9+	3500		bbcw	cw	M	SExE	1	1013.3	25.9	23.4	80	26.5			
20	Cu	Ac	Ci	1	6	3000		clbcbbc	bc	M	CALM	0	1013.9	25.5	23.4	83	26.8			
21	Fr St	Ac	Cc	4	7	3500		cbcbbc	bc	M	CALM	0	1014.3	26.3	23.8	80	27.2			
22	Cu	Ac	Ci	3	7	3000		cbcbbcc	bc	M	ESE	5	1015.5	26.0	22.4	72	23.9			
23	Fr Cu	-	Ci	2	3	3000		cbcbbccbc	bc	K	E	6	1014.6	26.1	22.0	68	22.8			
24	Cu	-	Ci	2	3	3000		bccbcbbc	bc	K	ESE	5	1014.0	27.1	23.1	70	24.7			
25	Sc	Ac Tr	Ci	4	7	3000		bccpmbc	bc	M	SE	2	1014.5	25.6	23.1	80	26.0			
26	Cu	-	Ci	Tr.	9	3000		bcproc	c	M	ESE	3	1015.0	26.4	22.2	68	23.1			
27	Sc	-	Ci	5	9	3000		cbcproc	c	M	ESE	6	1013.9	27.0	22.0	63	22.1			
28	Cu	-	Ci	2	3	3500		b bc	bc	M	ESE	4	1013.6	27.0	22.0	63	22.1			
29	Sc	As	-	7	10	3500		bc c	c	M	ESE	2	1013.5	25.7	22.0	71	23.2			
30	Cu	-	Ci Tr	3	3	3000		cbcjpr	bc	M	ExS	3	1011.5	27.2	24.2	77	27.5			
31	Sc	-	Ci	7	8	3000		cprc	c	K	SE	2	1012.3	26.1	24.8	90	30.0			
Means	-	-	-	2.7	6.8	3129		-	-	-	-	1.9	1013.1	25.6	22.6	76	24.8			

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METEOROLOGICAL OBSERVATIONS. 3 p.m. July 1940

Day of Month.	CLOUD. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	WEATHER. Since previous Observation.	WEATHER. At Time.	Visibility.	WIND. Direction.	WIND. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	TEMPERATURE AND HUMIDITY. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	UPPER CLOUD. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Fr Nb	Ac	Cs	3	9+	2500		c	c/pr	M	ExS	1	1007.9	26.8	24.2	80	27.7			
2	Cu	Ac	Cs	1	9+	3000		c	c	M	S	3	1008.3	26.0	21.0	62	20.5			
3	Sc	-	-	10	10	2500		c	c	M	SExE	3	1008.9	25.0	20.9	68	21.2			
4	Sc	-	-	9+	9+	3000		c	c	M	E	5	1007.1	27.3	23.1	69	24.5			
5	Sc	As	-	8	9+	3000		c	c	M	NW	1	1006.5	26.5	23.1	74	25.2			
6	Fr Nb	As	-	9	10	500		cirrcjpr	crr	H	NExN	2	1008.2	24.8	24.1	94	29.2			
7	Fr Cu	As Tr	-	9	9	2500		cpr c	cjpr	K	WNW	1	1008.2	26.7	24.1	80	27.6			
8	Sc	-	Ci	7	9+	3000		c	c	M	SSW	3	1008.9	27.2	22.9	67	24.1			
9	Sc	As	-	7	10	3000		c	c/pro	M	CALM	0	1011.7	24.0	22.1	84	24.8			
10	Sc	Ac	Ci	1	9+	3000		jpriroc	c	M	E	4	1013.7	26.8	23.2	72	25.2			
11	Sc	-	Ci	2	4	3000		c bc	bc	K	ESE	5	1011.8	27.6	23.6	70	25.6			
12	Sc	Ac Tr	Ci	5	6	3000		bc	bc	M	E	3	1011.9	28.2	24.0	69	26.1			
13	Cu	Ac	Ci	3	10	4000		bbcc	c	M	E	5	1011.6	27.7	24.7	77	28.4			
14	Sc	-	Ci	3	9	3500		bbcc	c	M	E	3	1010.0	28.9	24.0	65	25.6			
15	Sc	-	Cs	7	8	3000		bc c	c	M	E	5	1011.4	27.4	23.3	69	24.9			
16	Cu	-	Ci	2	8	3000		c	c	M	ExS	4	1012.4	28.6	23.3	62	24.0			
17	Sc	-	-	5	5	3500		b bc	bc	M	E	5	1012.7	28.3	24.0	69	26.0			
18	Cu	-	Ci	1	2	3500		b bc	b	M	ExN	4	1012.0	28.1	23.4	66	24.7			
19	Cu	Ac	Ci	1	9+	4000		c	c	M	NWxN	2	1012.2	28.2	24.2	70	26.7			
20	Cu	-	-	2	2	3500		b	b	M	NWxN	2	1011.5	27.7	24.2	74	27.1			
21	Cu	Ac	-	3	6	2500		bc c	bc	K	E	5	1012.3	28.4	24.5	71	27.2			
22	Sc	Ac	Ci	4	9	3000		cbcc	c	M	E	5	1014.1	27.2	23.1	69	24.5			
23	Fr Cu	Ac	-	5	6	3000		bc	bc	K	ESE	5	1012.9	27.8	23.0	65	23.9			
24	Cu	-	Ci	1	3	4000		bc	bc	M	E	3	1011.8	28.1	23.3	65	24.4			
25	Cu	-	Ci	2	4	3000		bc	bc	M	E	5	1013.2	28.7	24.1	66	26.0			
26	Cu	-	Ci	2	8	3000		c	c	M	E	5	1013.0	28.2	24.0	69	26.1			
27	Sc	-	Cc	6	8	3500		cbcc	c	K	ExS	6	1010.7	28.3	22.8	60	23.1			
28	Cu	Ac	Ci	4	7	3500		bc	bc	K	E	5	1010.9	28.4	23.2	63	23.9			
29	Fr St	As	-	8	10	3000		cjpr	cjpr	M	ESE	4	1010.6	27.6	23.3	68	24.8			
30	Sc	-	-	9	9	3000		bc c	c	K	E	5	1009.3	28.0	25.2	79	29.5			
31	Cu	-	Ci	4	8	3000		cbcc	c	M	ExS	4	1009.5	29.7	26.1	74	30.5			
Means	-	-	-	4.6	7.5	3194		-	-	-	-	3.6	1010.8	27.5	23.5	71	25.6			

METEOROLOGICAL OBSERVATIONS.

July 1940

Day of Month.	Thermometers. Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)	Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
1	29.1	22.9	20.3		Trace	5.1		2.8
2	28.2	24.3	22.4		-	7.7		3.0
3	27.5	20.4	18.2		Trace	4.5		2.4
4	28.0	21.0	-		Trace	4.9		2.3
5	27.8	21.9	20.2		1.2	1.1		1.8
6	25.7	23.7	22.0		39.7	0.0		0.1
7	28.4	22.4	21.0		Trace	2.9		2.0
8	28.0	24.0	22.9		-	3.7		3.1
9	25.6	23.6	22.5		Trace	0.0		1.7
10	27.2	23.6	21.5		Trace	0.6		2.0
11	27.9	23.0	21.6		-	8.4		2.6
12	29.0	21.4	-		-	8.5		2.3
13	28.6	22.2	20.5		-	10.3		2.1
14	29.2	21.9	20.2		-	9.8		2.3
15	28.0	21.1	17.9		-	8.9		2.2
16	29.2	20.5	18.6		-	10.5		2.6
17	28.5	21.2	19.2		-	10.6		2.4
18	28.8	20.7	17.9		-	10.4		2.7
19	28.7	21.6	19.7		-	9.8		1.8
20	29.1	22.3	19.9		-	9.7		2.2
21	29.0	22.8	20.4		-	5.6		2.8
22	28.1	24.0	21.9		-	10.4		3.9
23	28.0	24.0	21.9		Trace	9.5		4.1
24	28.6	24.0	22.3		0.2	10.3		3.4
25	29.0	23.6	22.1		Trace	9.8		2.8
26	28.9	21.1	19.2		Trace	10.4		3.9
27	29.3	24.6	22.1		-	9.7		3.8
28	29.7	23.1	19.8		-	8.4		3.5
29	29.0	21.5	19.6		-	1.4		2.2
30	29.6	22.3	20.4		2.7	9.9		1.8
31	30.0	23.3	21.1		1.7	7.2		1.9
Sum	-	-	-		45.5	220.0		78.5
Mean	28.4	22.5	20.6		-	7.1		2.5

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METEOROLOGICAL OBSERVATIONS.

9 a.m. August 1940

Day of Month.	CLOUD. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Cb	-	-	8	8	2500		cprbcprc	c/pr	K	E	3	1012.6	27.2	25.1	83	29.9			
2	Cu	-	Ci Tr	1	1	2000		bc b	b	M	E	1	1012.0	27.8	24.8	77	28.5			
3	Cu	-	Ci	4	8	4000		bc lc	c	M	CALM	0	1013.0	27.3	24.2	76	27.3			
4	Sc	-	-	7	7	3500		b bc	bc	M	ExS	5	1012.3	27.0	23.8	76	26.5			
5	Sc	Ac	-	2	8	3000		bc c	c	M	SSW	1	1013.1	26.8	23.2	72	25.2			
6	Cu	-	Ci	2	5	3000		cbcbbc	bc	M	E	3	1012.8	27.7	24.3	74	27.3			
7	Sc	Ac Tr	Ci	3	4	3000		bbcbbc	bc	M	CALM	0	1011.7	27.0	24.1	77	27.3			
8	Sc	-	Ci	4	5	3000		cbcbbc	bc	M	ESE	4	1012.1	27.1	23.6	73	26.0			
9	Sc	Ac	Ci	7	9	3000		bccpbc	c/pr.	K	E	4	1011.5	26.0	25.0	92	30.5			
10	Sc	Ac	Ci	5	8	3000		bclcrbc	c	M	E	3	1011.9	27.0	25.0	84	29.7			
11	Cu	-	Ci	4	5	3500		cpqPRbc	bc	M	ESE	2	1011.6	27.6	25.8	86	31.5			
12	Cu	-	Ci Tr	1	1	2000		cprrbcb	b	M	CALM	0	1012.0	26.7	25.0	86	30.0			
13	Cu	-	-	2	2	3000		b bc b	b	M	NExN	1	1012.2	26.8	24.5	82	28.5			
14	Sc	Ns Tr	-	9	9+	3500		bcprc	c	M	S	1	1012.7	25.7	24.1	87	28.4			
15	Sc	Ac Tr	-	8	8	3500		cbcbbcc	cj/pr	K	ESE	3	1012.6	26.5	24.3	82	28.3			
16	Cu	Ac	Ci	3	6	3500		cbcbbc	bc	M	ExN	2	1012.7	26.7	24.2	80	27.9			
17	Sc	-	-	9	9	3000		bcbbcc	c/pr.	M	CALM	0	1012.4	26.1	23.3	78	26.0			
18	Cu	-	Ci	2	7	3000		bc	bc	M	ExS	3	1011.2	28.1	24.6	73	27.7			
19	Cu	Ac	Ci	1	7	3000		cpr.cbc	bc	M	ESE	1	1010.6	27.2	24.5	79	28.3			
20	Cu	Ac	Ci	1	7	3000		clbccbc	bc	M	WSW	1	1011.4	27.0	24.0	77	27.1			
21	Sc	Ac	-	2	7	3000		c bc	bc	M	WNW	1	1010.7	26.4	23.0	73	25.1			
22	Sc	Ac	-	7	9	2500		c bc c	cjpr	M	ESE	2	1010.2	26.0	22.6	73	24.4			
23	Sc	-	Ci	Tr	8	3000		c bc c	c	K	E	4	1010.9	26.5	22.6	70	24.0			
24	Sc	Ac	Ci	4	9+	3000		cbcbbcc	c	M	NW	1	1013.2	26.1	23.0	76	25.2			
25	Cu	-	Ci Tr	2	2	3500		cbcb	b	M	ExS	4	1012.6	28.2	24.8	74	28.3			
26	Sc	Ns	Ci	5	9	2000		cpr.	cpr.	K	ExS	6	1012.2	26.0	24.7	90	29.7			
27	Sc	Ns	Ci	4	9	3500		cptlorq	cr.r.	M	SxE	1	1012.3	25.4	24.0	89	28.4			
28	Cu	Ac	Cc	3	5	4000		cpr bc	bc	M	CALM	0	1012.4	26.0	24.1	85	28.1			
29	Sc	-	Ci Tr	1	1	3000		bc b	b	M	E	3	1012.4	26.5	21.9	65	22.3			
30	Sc	Ac	Ci	3	8	4000		bc c	c	M	ESE	1	1012.1	26.5	22.1	66	22.8			
31	Cu Tr	Ac	Ci	Tr	8	5000		cbcbbcw	cw	M	ExS	4	1011.8	27.1	23.1	70	24.7			
Means	-	-	-	3.7	6.4	3000		-	-	-	-	2.1	1012.0	26.8	24.0	78	27.3			

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METEOROLOGICAL OBSERVATIONS.

3 p.m. August 1940

Day of Month.	CLOUD. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	At Time.	Visibility.	Wind. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Cu	-	Ci Tr	3	3	3000		c bc	bc	K	E	3	1010.3	29.2	25.8	75	30.1			
2	Cu	-	Ci Tr	4	4	2500		b bc	bc	M	ENE	2	1010.2	28.4	25.3	77	29.5			
3	Cb	Ac Tr	Ci Tr	5	5	3000		bc	bcjpr	K	E	5	1010.7	28.7	25.4	75	29.5			
4	Sc	Ac	Cc	3	5	3000		bc	bc	K	ESE	4	1010.2	28.4	23.0	61	23.5			
5	Sc	Ac	-	8	9	3000		c	c	M	E	5	1011.3	28.0	24.0	70	26.3			
6	Cu	Ac Tr	Ci Tr	2	2	3000		bc b	b	M	E	6	1010.4	28.6	25.7	78	30.4			
7	Sc	Ac	-	6	8	3000		c	cjpr	M	E	6	1008.6	28.0	25.0	77	28.9			
8	Cu	Ac	Cc	2	6	3000		bc	bc	M	E	5	1007.7	29.0	24.0	64	25.5			
9	Sc	Ac Tr	Ci	3	4	3000		c bc	bc	M	E	6	1008.3	28.0	24.6	74	27.9			
10	Cb	Ns	Ci Tr	6	9	3000		cbccpr$_o$	cpr$_o$	K	ExS	5	1009.6	27.6	25.6	84	30.9			
11	Cu	Ac	Ci	4	6	2500		bccpr$_o$c	bc	K	ENE	3	1009.0	28.8	26.0	79	31.1			
12	Cu	Ac	-	1	2	3500		b	b	M	N	1	1009.6	28.4	25.1	75	28.9			
13	Fr St	Ns	-	7	9	2000		bc cjr	cjr	K	SSW	1	1009.2	28.3	25.3	77	29.5			
14	Cu	Ns Tr	Cs	5	9	3000		c bc c	cjpr	M	ExN	4	1009.5	28.5	24.9	73	28.3			
15	Cu	Ac	Cs	3	9	3000		c	c	M	E	5	1010.0	28.5	25.2	75	29.1			
16	Cu	Ac Tr	Ci	2	4	3000		bc	bc	M	E	4	1009.7	29.0	26.0	78	30.8			
17	Cu	Ac	-	5	6	3000		bc	bcjpr	M	ExS	3	1008.9	29.2	24.9	69	27.6			
18	Cu	-	Ci	1	8	3500		bc c	c	K	E	5	1008.7	28.4	25.0	75	28.5			
19	Cu	Ac	Ci	4	8	3000		bc c	cjpr	M	E	6	1008.1	28.1	25.2	78	29.3			
20	-	Ns	-	-	10	3000		bccporr	orr	G	N	2	1010.0	24.5	23.7	93	28.4			
21	Sc	Ac	-	7	9	3000		bc c	cjpr	M	E	3	1007.8	28.0	23.2	65	24.3			
22	Sc	Ac	-	7	9+	2500		c	cjpr	K	E	5	1007.3	26.0	22.1	70	23.2			
23	Sc	-	Ci	1	9	3500		c	c	M	E	4	1008.5	27.4	22.9	66	24.0			
24	Sc	As	Cs	1	10	3000		c	c	K	ExS	5	1010.1	28.4	24.3	69	26.8			
25	Cb	Ac	Ci	2	9	3000		b bc c	cjpr	K	E	6	1009.4	27.7	24.7	77	28.4			
26	Sc	Ac	Cc Tr	7	9	4000		cpr	cjr	K	ExS	4	1009.4	27.4	25.1	82	29.7			
27	Fr St	Ac	Cc	5	8	2000		c	cjr	K	E	6	1009.6	26.9	25.0	85	29.9			
28	Sc	Ac	-	2	3	5000		bc	bc	M	E	4	1008.9	29.5	24.1	62	25.2			
29	Sc	-	Ci	3	4	4000		b bc	bc	M	E	6	1009.6	27.6	22.8	65	23.6			
30	Sc	Ac	Ci Tr	6	8	5000		bc c	c	K	E	5	1009.1	27.3	23.1	69	24.5			
31	Cu	Ac	Cs	2	8	3500		c	c	M	E	4	1009.8	28.9	25.0	71	28.1			
Means	-	-	-	3.8	6.8	3000		-	-	-	-	4.3	1009.0	28.1	24.6	74	27.8			

METEOROLOGICAL OBSERVATIONS.

August 1940

Day of Month.	Thermometers.				Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
	Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)				
1	29.8	24.8	23.2		Trace	10.5		2.1
2	29.4	23.6	21.9		-	10.4		2.2
3	29.3	23.0	21.8		-	9.9		2.8
4	29.2	23.4	21.6		-	10.0		2.9
5	29.4	23.0	20.6		2.9	5.0		2.1
6	29.2	23.6	-		-	11.0		2.3
7	29.5	23.0	21.5		-	8.3		2.3
8	30.1	22.0	20.0		0.8	8.3		3.0
9	28.2	24.0	23.1		15.4	8.7		2.1
10	29.3	24.5	23.8		10.5	9.2		1.7
11	29.4	24.4	23.6		22.5	8.2		1.3
12	29.0	23.8	22.8		-	10.7		1.9
13	29.5	23.1	21.8		0.1	7.7		1.7
14	29.4	23.6	22.2		Trace	4.3		2.2
15	29.4	23.6	22.2		-	9.4		2.1
16	29.2	22.9	21.3		Trace	10.6		2.0
17	30.7	22.8	20.8		-	8.1		2.6
18	29.2	23.5	21.8		0.3	10.1		2.4
19	29.7	23.5	22.0		-	8.2		2.2
20	28.5	23.5	22.1		10.2	2.5		1.2
21	28.8	23.8	22.9		-	6.7		2.8
22	27.9	23.8	21.1		-	5.3		3.0
23	28.6	21.6	19.9		-	10.7		3.1
24	28.9	21.5	19.9		-	4.7		2.6
25	29.0	22.4	20.8		1.1	8.7		2.3
26	28.9	24.7	23.2		17.6	4.1		1.4
27	29.9	23.9	23.1		3.6	4.0		1.6
28	30.1	23.7	22.7		-	9.5		3.0
29	28.7	21.4	18.9		-	11.1		3.3
30	28.6	21.4	19.4		-	7.0		2.9
31	29.3	21.8	19.5		0.3	10.0		2.6
Sum	-	-	-		85.3	252.9		71.7
Mean	29.2	23.2	21.7			8.2		2.31

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

9 a.m. September 1940

Day of Month.	CLOUD. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	WEATHER. Since previous Observation.	At Time.	Visibility.	WIND. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	TEMPERATURE AND HUMIDITY. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	UPPER CLOUD. Type observed.	Direction whence coming.	Speed; Height Ratio.
1	Sc	-	Ci	8	9	3500		cbcbbcc	cpr	M	ESE	3	1012.7	25.1	22.8	81	25.6			
2	Sc	-	-	5	5	3000		cpr c	bcjr	K	ESE	4	1013.3	26.9	23.8	76	26.7			
3	Cu	Ac	Ci	2	4	3000		bc	bc	M	ESE	2	1013.6	27.6	22.6	63	23.1			
4	Sc	-	Ci	4	7	3000		bc	bc	M	CALM	0	1012.9	26.3	23.3	77	25.9			
5	Cu	Ac	Ci	1	7	3000		bc	bc	M	ExS	3	1012.1	28.0	23.2	65	24.3			
6	Sc	As	-	8	10	3500		cpr	cpr$_o$	K	ESE	4	1012.1	25.4	24.3	91	29.2			
7	Sc	Ns	-	6	10	3000		cRRotlr	cr$_o$r$_o$	K	E	5	1012.7	26.7	24.6	83	28.9			
8	Sc	-	Cs	6	9	4000		c	c	K	E	4	1011.2	27.0	24.0	77	27.1			
9	Cu	Ns	Cc	7	9	3000		cpr c	cpr	K	ExS	1	1012.2	27.7	25.9	86	31.6			
10	Cu	Ac	-	2	3	3500		clbcb	bc	M	E	1	1013.5	28.0	25.4	80	30.0			
11	Cu	-	Ci	3	4	4000		bcw	bcw	M	E	2	1013.2	28.5	25.7	79	30.4			
12	Cu	Ac	Ci	3	5	4000		bcw	bcw	M	WNW	1	1012.7	27.2	24.0	75	26.9			
13	Cu	Ac	Cs	1	8	4000		bcw	cw	M	ExS	3	1012.5	27.2	24.0	75	26.9			
14	Sc	Ac Tr	-	3	3	4500		cpr bc	bc	M	ExS	3	1012.6	28.7	25.1	72	28.4			
15	Sc	Ac	-	4	9+	3000		bccpr$_o$c	c	K	ESE	3	1013.0	27.0	23.9	76	26.8			
16	Sc	-	Ci	5	6	3000		cpr$_o$bc	bc	K	ExS	4	1012.8	27.9	24.6	75	28.0			
17	Cu	Ac	Cs	2	9+	3000		cbc c	c	K	ESE	2	1012.6	28.4	24.1	69	26.3			
18	Cu	-	Cs	1	9+	3500		bc c	c	M	ExS	5	1012.6	28.4	23.1	62	23.6			
19	Cu	-	Ci	3	4	3000		c bc	bc	M	E	5	1012.7	28.3	23.7	66	25.2			
20	Sc	As	-	7	9+	3000		c	c/cpr$_o$	M	ESE	4	1013.9	26.2	21.6	65	21.9			
21	Cu	Ac	-	1	9+	3000		c	c	M	CALM	0	1012.4	26.4	22.4	69	23.6			
22	Sc	-	-	9	9	3500		c	cpr$_o$	M	ESE	4	1012.3	26.2	23.3	77	26.0			
23	Sc	Ns	-	8	9+	2000		cbcpr$_o$c	cjr	K	ESE	3	1013.1	25.4	22.9	80	25.6			
24	Cu	Ac	Cs	3	9	3500		c	c	M	ExS	4	1012.1	27.1	23.2	70	24.9			
25	Sc	Ac	-	9	10	1500		c	cjpr	K	E	6	1012.3	27.0	23.9	76	26.8			
26	Sc	Ac	-	6	9	4500		c	c	K	E	6	1011.6	26.8	24.2	80	27.7			
27	Sc	Ac	-	6	9	3000		crr	c	K	E	5	1011.6	27.2	24.8	81	29.1			
28	Cu Sc	Ac	-	2	9+	3000		crr	c	K	ExS	4	1011.8	27.9	25.3	80	29.9			
29	Cu	Ac	Ci	2	2	3500		bc b	bc	M	E	3	1011.2	28.5	24.4	69	26.9			
30	Cu Sc	Ac	-	2	8	3500		crr	c	K	E	5	1012.7	27.7	24.4	75	27.6			
31																				
Means	-	-	-	4.3	7.4	3500		-	-	-	-	3.3	1012.5	27.2	23.9	75	26.8			

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METEOROLOGICAL OBSERVATIONS.

3 p.m. September 1940

Day of Month.	CLOUD. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	WEATHER. Since previous Observation.	At Time.	Visibility.	WIND. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	TEMPERATURE AND HUMIDITY. Dry Bulb (°F).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	UPPER CLOUD. Type observed.	Direction whence coming.	Speed: Height Ratio.
1	Cu	-	Cs	3	8	4000		cpr.c	c	K	E	5	1010.0	28.6	24.6	70	27.3			
2	Cu	-	Ci	3	5	3000		bc	bc	K	E	6	1010.4	28.4	24.6	72	27.5			
3	Sc	Ns	Ci Tr	8	9	3000		bc	cpr.	K	E	4	1011.6	26.3	24.2	83	28.3			
4	Cu	-	Ci	2	3	3500		bccbc	bc	M	E	6	1010.1	28.7	24.8	71	27.9			
5	Cu	Ac	Cc	1	8	3000		c	c	K	E	5	1009.5	28.2	24.7	73	28.0			
6	Sc	Ac	-	4	9+	3000		cpr.	c	K	ExS	4	1009.3	27.9	25.0	78	29.1			
7	Cu	Ac	Cs	3	9+	4000		cjprc	c	K	E	5	1010.6	28.4	25.0	75	28.5			
8	Sc	Ac	Ci	5	9	2500		cpr.c	cjpr	K	E	4	1008.6	27.9	25.2	79	29.6			
9	Sc	As	Ci	5	9	4500		c	c	M	ESE	1	1010.0	27.9	25.1	79	29.3			
10	Cu	Ac Tr	Ci	4	5	4000		b bc	bc	M	NE	1	1010.6	28.7	25.9	79	30.8			
11	Cu	-	Cs	1	3	4000		bc	bc	M	ENE	2	1010.6	29.1	25.3	72	28.8			
12	Cu	Ac Tr	Cs	3	8	3500		bccjpr	cjpr	M	E	5	1009.3	28.6	25.8	79	30.7			
13	Sc	Ac	Cc	5	9	4500		c	c	K	E	5	1009.0	28.4	24.9	74	28.3			
14	Cb	Ac	Ci	4	6	2000		bc	bcjpr	K	E	3	1010.0	28.3	25.0	75	28.7			
15	Cu	Ac	-	1	4	3000		cbc	bc	K	E	5	1010.8	29.0	25.0	71	28.1			
16	Cu	-	Cs	4	8	3000		c	c	K	E	5	1010.8	29.1	25.1	71	28.3			
17	Cu	-	Ci	5	5	3000		cbc	bc	K	E	6	1010.3	29.2	24.5	66	26.7			
18	Cu	Ac	Cs	1	9+	3000		c	c	M	ExS	5	1010.7	28.4	23.9	67	25.7			
19	Sc Cu	Ac	Cc	2	4	3000		cbc	bc	M	ExS	5	1010.9	29.3	24.1	63	25.5			
20	Sc	Ac	-	3	9	3000		cpr.c	c	M	ExS	4	1011.5	28.4	22.1	56	21.2			
21	Sc	Ns	-	8	9+	1000		cjpr	cpr	K	ExS	4	1010.0	26.4	24.0	81	27.6			
22	Fs	Ac	-	4	8	2000		cjpr	cjpr	K	ExS	4	1009.7	28.0	24.0	70	26.3			
23	Sc	Ac	-	7	9	2000		cjr	c	K	ESE	5	1010.1	27.1	22.8	68	24.0			
24	Sc	Ac	Ci	3	8	2500		c	c	K	ExS	6	1009.9	27.3	24.0	75	26.8			
25	Sc	As Ns	-	7	9+	1500		cir.	cir.	K	ExS	5	1009.4	27.0	23.8	76	26.5			
26	Sc	-	-	10	10	2500		crr	cpr.	K	ENE	4	1009.9	25.4	23.5	84	26.9			
27	Cu	Ac	Cc	4	9	4500		c	c	K	ExS	4	1008.6	28.7	25.3	75	29.2			
28	Cb	Ac As	-	4	9+	3000		cprlt	cp.	K	S	1	1009.4	23.8	23.1	94	27.5			
29	Fc	Ac	-	4	9	3000		cjp	cup.	K	E	5	1009.4	27.4	24.8	80	28.9			
30	Cu	Ac	Ci	3	6	4500		bc	bc	K	E	6	1010.7	27.7	24.1	73	26.8			
31																				
Means	-	-	-	4.0	7.5	3100		-	-	-	-	4.3	1010.1	27.9	24.5	74	27.6			

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METEOROLOGICAL OBSERVATIONS.

September 1940

Day of Month.	Thermometers.				Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
	Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)				
1	29.3	22.8	20.5		0.7	7.4		2.7
2	28.6	24.4	22.4		-	9.4		3.1
3	29.8	21.7	19.5		-	9.3		2.9
4	29.1	22.0	20.1		-	10.3		3.2
5	29.2	21.8	17.5		Trace	7.9		2.8
6	29.0	24.8	21.7		59.4	1.2		1.0
7	28.8	23.3	20.7		1.1	0.8		2.8
8	29.3	24.7	22.3		4.3	4.9		1.0
9	28.8	24.8	21.6		17.3	1.9		0.6
10	29.8	23.8	20.7		-	8.3		1.8
11	29.8	23.6	20.4		-	10.9		2.2
12	29.5	23.1	19.4		-	10.8		2.1
13	30.0	23.1	19.3		0.5	6.2		2.5
14	29.8	24.2	21.4		0.3	9.2		2.9
15	30.1	24.1	21.4		0.2	8.1		3.4
16	29.7	25.0	21.3		-	10.0		2.7
17	30.1	22.1	18.8		-	10.6		3.4
18	29.1	22.6	18.6		-	2.8		3.8
19	29.8	25.6	21.7		Trace	5.9		4.2
20	29.2	24.8	22.0		-	0.9		3.7
21	29.4	23.4	20.5		0.2	1.6		2.8
22	29.8	23.2	21.0		Trace	6.7		2.9
23	28.8	22.8	20.9		-	1.9		3.5
24	28.9	23.4	21.3		-	5.3		3.7
25	27.3	25.4	23.8		-	0.1		2.7
26	27.8	25.2	23.4		3.8	0.1		1.4
27	30.4	23.3	21.6		3.1	3.3		2.8
28	29.4	23.9	22.4		6.7	2.5		1.0
29	29.5	22.9	21.3		-	7.7		2.8
30	29.2	25.1	23.1		-	8.5		3.3
31								
Sum	-	-	-		97.6	174.5		79.7
Mean	29.3	23.7	21.0		-	5.8		2.66

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METEOROLOGICAL OBSERVATIONS. 9 a.m. October 1940

Day of Month.	CLOUD. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	At Time.	Visibility.	Wind. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars)	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed ; Height Ratio.
1	Cu	-	-	2	2	3500		bc b	b	K	E	4	1012.7	27.6	22.8	65	23.6			
2	Cu	-	Ci	5	9	3000		bc c	c	K	E	6	1010.5	27.0	22.7	68	23.9			
3	Sc	Ac	-	5	10	1500		c	c	M	ExS	3	1010.8	26.9	22.7	68	23.9			
4	Sc	As	Ci	7	9+	3500		c	c	M	SE	1	1009.7	27.7	24.9	79	28.9			
5	Cu	Ac	Cc Cs	2	5	5000		cpr.cbc	bc	M	CALM	0	1010.8	28.8	25.3	74	29.1			
6	Cu	-	Cs	2	9	4000		cbcbbcc	c	M	ENE	1	1012.0	28.6	25.3	75	29.2			
7	Cu Sc	Ac	Cs	2	8	5000		cbc c	c	M	ENE	3	1012.0	29.6	25.5	70	28.9			
8	Sc	As	Cs	4	9+	2500		cRRpr.c	c	K	ExS	5	1012.2	27.3	24.9	81	29.2			
9	Sc	Ac	Ci Cs	3	9+	4000		cpr.c	c	M	ExS	2	1011.5	27.8	25.4	81	29.2			
10	Cu	As	Ci	1	1	4500		cbc b	b	M	ExN	1	1013.7	27.9	25.2	79	29.6			
11	Cu	-	-	2	2	4500		bc b	b	M	ENE	1	1015.0	28.4	25.3	77	29.5			
12	Cb Sc	Ac	-	9	9	2000		bbccpr.c	cjpr	K	ExN	1	1013.7	27.7	25.1	80	29.5			
13	Sc	-	-	9	9+	3000		cbc c	c	M	ExN	4	1013.1	25.7	23.7	84	27.5			
14	Cu	Ac	Cs Cc	1	8	3000		bcbbcc	c	M	ExS	3	1012.7	27.1	23.2	70	24.9			
15	Sc	Ac	Cs	6	9+	3500		ccprc	c	M	E	5	1014.0	27.1	24.9	83	29.3			
16	Cb	Ac Ns	-	5	9+	3000		cprcrrc	c	K	ExS	6	1013.4	26.9	24.4	80	28.3			
17	Cu	Ac	-	3	9	4000		cpr.bcc	c	K	ExS	3	1012.7	28.3	25.0	75	28.7			
18	Cu Sc	Ac	-	4	9+	3500		corrc	c	M	ExS	3	1013.7	27.6	24.6	77	28.1			
19	Cu	-	Cs Cc	1	2	5000		cbccbcb	b	M	NE	1	1014.1	27.7	24.1	73	26.8			
20	Cu	-	Ci	1	1	3000		crrbcb	b	M	CALM	0	1015.3	27.7	24.7	77	28.4			
21	Sc	Ac	Ci	5	9	3500		cbbcc	c	M	ExS	1	1013.1	28.0	24.9	77	28.7			
22	Sc	Ac	-	7	9+	2500		cbccprc	c	M	ESE	4	1011.3	27.1	24.5	80	28.4			
23	Cu Sc	Ac	Ci	5	9	3000		ctlbcpc	c	M	E	4	1011.3	27.9	25.4	81	30.1			
24	Cu	Ac	Cs	3	9+	5500		crtlrrc	c	M	E	2	1012.6	27.5	25.0	79	29.2			
25	Cu Sc	Ac	Ci	2	9	3000		cpr.c	c	K	ExS	6	1012.8	27.9	25.1	79	29.3			
26	Sc	Ac	Cc	6	8	2500		bccprlc	c	M	E	3	1011.0	28.6	26.0	80	31.2			
27	Cb	Ac	Ci	4	7	3000		crr.bc	bc	M	E	2	1010.9	28.7	25.7	76	29.7			
28	Fs	-	-	10	10	1500		cpcbpbp	cpr.	H	SE	2	1012.2	24.1	23.5	95	28.3			
29	Cb	Ac	Ci	3	5	2000		c bc	bc	M	ExS	3	1011.2	28.2	25.8	82	30.9			
30	Cu	Ac	-	4	4	3000		prcbbc	bc	M	ExN	4	1009.9	28.1	25.4	79	30.0			
31	Cu	-	Ci	4	4	3500		pcrrbcb	bc	M	ENE	1	1009.6	28.0	25.0	77	28.8			
Means	-	-	-	4.1	7.1	3700		-	-	-	-	2.7	1012.2	27.7	24.7	77	28.4			

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METEOROLOGICAL OBSERVATIONS.

3 p.m. October 1940

Day of Month.	Cloud. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	At Time.	Visibility.	Wind. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (° C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Cu	As	-	3	3	3500		b bc	bc	K	ExS	6	1010.4	28.2	23.5	66	24.8			
2	Cu	-	Ci	2	9	4500		c	c	K	E	4	1008.3	28.5	23.2	62	23.9			
3	Sc	Ac	Ci	3	9+	3000		cpr c	c	K	ExS	5	1008.6	29.1	25.2	71	28.5			
4	Sc	Ac	Cs	5	9	3000		cpr$_o$c	c	M	ExS	2	1006.8	29.4	26.6	79	32.1			
5	Cu Cb	Ac	Ci	2	9+	3000		bc c	c	M	NxE	1	1008.8	28.7	25.9	79	30.8			
6	Cb	-	Ci	2	8	2500		c	c	M	NNE	2	1009.9	29.1	26.0	77	30.8			
7	Sc	Ac	Cs	6	10	2500		c	c	K	E	4	1010.5	28.5	25.9	80	30.9			
8	Sc	Ac	Cc	5	9+	3000		c	c	K	ExS	4	1009.7	27.9	25.1	79	29.3			
9	Sc	-	Cs	3	9	4500		c	c	M	ExN	1	1010.0	28.9	25.8	77	30.4			
10	Cu Sc	-	Ci	4	6	3000		b bc	bc	K	NE	1	1011.4	28.3	25.8	80	30.8			
11	Cu	Ac	Cs	6	6	3500		bbccpr$_o$	bc	M	E	2	1011.5	29.8	26.5	76	31.6			
12	Sc	Ac	-	7	8	2000		cprcbc	cp/qr	K	SxW	3	1010.6	27.9	23.9	70	26.1			
13	Sc	Ac	-	3	7	2500		c	bc	M	ExS	4	1010.1	28.7	24.0	66	25.7			
14	Sc	Ac	-	3	9+	3500		cbc c	c	K	ExS	6	1011.0	27.9	23.9	70	25.7			
15	Cb Cu	Ac	Cs	2	8	3000		c	c	M	E	6	1010.8	28.2	25.0	76	28.8			
16	Sc	Ac	Cc	3	9+	4000		ccprc	c	M	ExS	3	1010.5	28.3	24.6	72	27.6			
17	Sc Fc	Ac	-	5	9+	3500		c bcc	c	M	ExS	4	1010.7	28.7	24.7	70	27.6			
18	Cb Sc	Ac	-	5	8	3000		c	cjpr	K	ExS	4	1011.5	28.0	25.2	79	29.5			
19	Fc	Ac	-	9	9+	1000		cpc	ctljp	K	ExN	1	1012.6	27.7	25.6	84	30.8			
20	Cu	-	-	8	8	3000		bcc	c	M	E	4	1011.6	29.0	26.3	80	31.7			
21	Cb	Ac	Ci	4	9	3000		cbccjpr	cjpr	K	E	4	1009.9	28.7	25.6	77	30.0			
22	Sc	Ac	Ci	6	9+	3000		c	c	K	ExS	5	1009.2	28.0	24.9	77	28.7			
23	Sc	Ac	Ci	7	9+	2000		cbccprc	c	K	E	3	1009.7	27.1	25.1	84	29.9			
24	Sc	Ac	Ci	5	8	4500		bccjpr	c	M	ExS	3	1010.7	28.1	25.0	77	28.8			
25	Cu	Ac	Ci	1	3	5500		cbc	bc	K	ExN	5	1009.7	28.7	25.4	75	29.5			
26	Cb	Ac	Ci	7	9+	3000		cpr c	cjpr	K	E	4	1008.6	28.0	26.0	85	31.6			
27	Cb	Ac	Ci	4	9+	3000		bccprc	c	K	E	4	1009.3	28.7	26.6	84	32.8			
28	Sc	As Ac	-	3	9+	2500		crrcpr	cr$_o$	M	SSE	1	1010.2	25.9	24.1	85	28.3			
29	Cu	As	Ci	3	9+	2000		bcprcjp	cjpr	K	CALM	0	1008.9	26.7	24.5	83	28.7			
30	Fc Fs	-	-	9	9+	1000		bcpr$_o$	pr$_o$	M	NE	2	1008.3	26.0	25.0	92	30.5			
31	Cu	Ac	Ci	6	8	3000		bc c	bccjpr	M	NNE	1	1007.5	29.0	25.4	74	29.2			
Means	-	-	-	4.5	8.2	3000		-	-	-	-	3.2	1009.9	28.3	25.2	77	29.2			

METEOROLOGICAL OBSERVATIONS.

October 1940

Day of Month.	Thermometers. Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)	Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter (mm.)
1	28.8	21.8	19.9		-	11.2		3.8
2	29.3	20.7	18.9		-	9.9		3.3
3	29.3	23.2	24.5		Trace	4.8		2.2
4	30.7	22.9	20.8		Trace	6.6		1.7
5	30.6	22.8	22.8		-	10.7		1.8
6	29.8	22.4	22.4		-	11.0		2.3
7	29.9	23.8	22.3		21.5	5.9		1.8
8	29.8	24.1	23.4		.05	6.0		2.0
9	29.8	24.9	23.6		-	8.1		1.8
10	29.8	24.5	23.2		-	10.3		2.1
11	30.3	24.3	23.0		Trace	8.7		2.1
12	29.2	24.0	26.9		6.1	5.4		2.1
13	29.5	23.1	21.5		-	5.1		2.6
14	28.9	22.7	21.3		6.7	6.3		3.1
15	29.7	23.5	23.3		8.2	4.6		2.2
16	29.2	24.3	23.4		0.1	3.3		2.3
17	30.1	24.9	23.5		3.5	3.5		2.2
18	29.2	23.3	22.5		-	3.4		1.9
19	30.1	23.4	22.2		1.9	7.3		2.2
20	30.9	22.6	21.2		-	9.7		2.4
21	29.6	23.6	22.1		1.4	8.0		2.0
22	28.6	23.6	-		4.5	2.2		2.5
23	29.9	25.1	22.7		31.9	5.2		0.4
24	29.9	23.0	22.4		0.3	5.6		2.2
25	29.4	24.8	22.4		1.8	7.3		2.6
26	30.0	23.3	22.5		31.7	6.8		1.4
27	30.7	23.1	22.1		17.1	7.9		1.8
28	28.7	23.4	22.4		9.1	0.0		1.4
29	29.1	23.9	23.1		0.3	3.7		1.6
30	30.1	24.2	23.2		24.4	6.7		1.4
31	29.1	23.0	22.2		2.3	6.9		1.8
Sum	-	-	-		172.9	202.1		65.0
Mean	29.7	23.5	22.6		-	6.5		2.1

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METEOROLOGICAL OBSERVATIONS.

9 a.m. November 1940

Day of Month.	Cloud. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	At Time.	Visibility.	Wind. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure	Upper Cloud. Type of...	Direction whence coming.	Speed: Height Ratio.
1	Cu Sc	As	-	7	10	1000		cjpuc	c	M	CALM	0	1009.3	27.2	25.1	83	29.9			
2	Sc	-	-	10	10	1000		cpr$_o$	cpr$_o$	K	CALM	0	1008.9	25.0	24.2	93	29.3			
3	Cb Cu	Ac	Ci Cs	3	9	3000		prtlcbc	cjpr	M	E	1	1009.8	29.0	25.8	76	30.3			
4	Sc	Ac	Cs Ci	6	8	2000		c	c	M	NE	2	1011.9	28.2	25.0	76	28.8			
5	Cu Sc	Ac	Ci	5	7	3500		bccpr	cpr	M	ExN	2	1012.7	28.8	25.4	75	29.3			
6	Cu	Ac	Cs	2	3	3500		bcbbcpr	bc	K	ESE	3	1012.5	28.7	25.2	74	28.9			
7	Cu	-	Ci	1	1	3000		bcb	b	L	ExS	3	1011.6	29.5	25.6	71	29.3			
8	Cu Sc	Ac	Ci	1	9+	3500		bcpclpc	c	L	ExS	4	1011.7	28.3	26.0	82	31.5			
9	Cu Sc	Ac	Ci	1	4	3000		cRtlr$_o$c	bc	M	ExS	2	1012.9	29.2	25.5	73	29.3			
10	Cu Cb	Ac	Cs	2	9+	3500		bc c	c	M	E	3	1010.5	29.1	25.7	75	29.9			
11	Cu Cb	Ac	Cs	3	9+	2500		cp$_o$tljc	c	M	CALM	0	1010.6	27.2	24.1	76	27.2			
12	Cu	Ac	Ci	3	6	3000		cbc	c	M	NNW	1	1010.1	27.6	24.1	74	26.9			
13	Sc Fs	Ac	Ci	8	9	2000		tcpbcr$_o$	c	M	CALM	0	1010.8	25.1	23.6	87	27.6			
14	Cu	Ac	Cs	1	4	2500		clc	bc	M	NE	1	1010.8	27.3	23.1	69	24.5			
15	Cu	As	Ci	1	2	3500		cb	b	M	ExS	4	1011.7	28.1	23.2	65	24.1			
16	Cu	Ac	-	2	7	3000		c	bc	M	ExS	4	1010.9	27.6	22.8	65	23.6			
17	Cu Sc	Ac	-	2	3	3000		b bc	bc	M	ESE	4	1011.4	28.6	24.6	70	27.3			
18	Cu	Ac	Ci	1	1	3500		bc	b	K	ExS	5	1012.2	29.2	25.6	74	29.6			
19	Cu Sc	-	-	3	3	3000		b	bc	L	E	4	1011.4	29.1	25.0	70	28.0			
20	Cu Sc	-	-	1	1	3500		b bc b	b	M	ExN	3	1010.2	28.6	23.7	65	25.1			
21	Cu	Ac	-	7	10	2500		bclcpr$_o$	c	K	ExN	3	1010.8	28.7	25.6	77	30.0			
22	Cu Cb	Ac	Ci	3	6	3000		cbc	bc	M	ExN	4	1010.9	28.6	25.1	74	28.7			
23	Cu Sc	-	Ci Cs	1	9+	2500		ctlqRr$_o$	c	K	ExS	3	1010.9	29.2	25.9	76	30.4			
24	Cu Sc	Ns	Ci Cs	2	8	3000		bcbbcqr$_o$	c	K	ESE	3	1009.9	27.6	24.9	80	28.9			
25	Cu	Ac As	Cs	1	9+	3000		bc c	c	M	CALM	0	1009.1	28.0	24.5	74	27.9			
26	Cu Fs	Ac	Ci	2	8	2500		ctlcr$_o$c	cjpr	K	ExS	4	1007.4	27.6	25.0	80	29.2			
27	Cu Sc	Ac	Ci	2	6	3000		cbbcb	bc	M	NNE	2	1007.5	27.7	25.0	79	29.2			
28	Cu	-	Ci	1	10	2500		or$_o$cjrc	c	L	NE	1	1009.1	27.1	22.2	64	22.5			
29	Cu Sc	-	Ci Cs	2	4	3500		cbc c	bc	L	CALM	0	1009.8	27.8	22.7	64	23.6			
30	Cu	Ac	Ci	1	9	3000		cbcbbc	c	K	ExS	4	1008.2	27.9	23.7	69	25.6			
31																				
Means	-	-	-	2.8	6.5	2800		-	-	-	-	2.3	1010.5	28.1	24.6	74	27.9			

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METEOROLOGICAL OBSERVATIONS.

3 p.m. November 1940

Day of Month.	CLOUD. Form. Low.	Medium.	High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	WEATHER. Since previous Observation.	At Time.	Visibility.	WIND. Direction.	Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	TEMPERATURE AND HUMIDITY. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	UPPER CLOUD. Type observed.	Direction whence coming.	Speed: Height Ratio.
1	Cu	-	-	9	9+	1000		cpr$_o$c	cpr$_o$	K	NW	3	1006.5	27.7	25.0	79	29.2			
2	Sc	-	Ci	9	9+	-		cjpr	cjrt	K	ExS	3	1007.1	27.0	25.3	86	30.5			
3	Sc	-	-	10	10	1000		cqrc	cqr	K	NE	4	1008.6	26.1	25.0	91	30.5			
4	Cu	Ac	Cs	1	7	3000		c	c	M	ENE	2	1010.4	29.5	25.1	68	28.0			
5	Cu Cb	-	Ci Cs	1	2	3000		bc	b	M	ExS	4	1010.3	29.9	26.2	73	30.7			
6	Cu Sc	Ac	Cs	4	7	2500		cprc	c	K	ESE	4	1010.3	29.1	26.1	78	31.1			
7	Cu	-	Ci	2	5	3500		bc	bc	K	ExS	5	1009.9	30.1	26.4	73	31.1			
8	Cu Sc	Ns	-	2	10	3000		ctl/cqp	cprt	K	SSE	1	1010.7	24.9	23.2	86	26.8			
9	Cb	Ac	Ci	6	9+	3000		cjpt/ct	cjp	K	ESE	3	1010.2	29.1	25.5	73	29.3			
10	Cb Sc	Ac As	-	3	10	3000		cbccir$_o$	c	K	ExS	3	1008.6	29.0	25.8	76	30.3			
11	Cu Cb	Ac	Cs	2	8	3500		cjpcprc	c	M	NNE	2	1007.9	27.8	24.9	78	28.8			
12	Cb	Ac	Ci	5	9+	2000		bccpr$_o$c	c	K	CALM	0	1008.0	27.0	24.1	77	27.3			
13	Cb	Ac As	-	7	10	2500		cjr	cjpr	K	SSE	3	1008.7	26.5	23.7	78	26.8			
14	Sc	Ac As	-	4	9	3500		bcc	c	L	E	4	1008.7	28.2	24.4	71	27.2			
15	Cu	Ac As	Ci	1	8	3000		b	c	M	ExS	6	1009.3	28.0	23.3	66	24.5			
16	Sc	-	-	1	1	3500		bc b	b	M	ExS	5	1009.4	28.5	23.8	66	25.2			
17	Sc	Ac	-	9	9+	5000		bc c	c	K	E	6	1009.8	28.6	25.1	74	28.7			
18	Cu	-	-	1	1	3000		bc	b	K	E	6	1008.3	29.7	26.4	76	31.3			
19	Cu	Ac	Cs	2	2	3500		bc	b	K	E	6	1008.5	29.1	25.1	71	28.0			
20	Cu	-	Ci	1	1	3500		b	b	M	E	4	1007.7	29.9	24.9	65	27.1			
21	Sc	As Ns	-	1	10	6000		cqRrrc	c	M	ExN	3	1007.1	26.6	24.3	82	28.3			
22	Cb	Ac	Ci	5	7	2500		bc	bc	M	ExN	5	1008.3	29.3	26.2	77	31.2			
23	Cu	-	Cs	2	10	4000		c	c	K	E	5	1008.5	29.9	25.9	71	29.9			
24	Cb Sc	-	Cs	3	9	3000		c	cjpr	K	E	6	1007.1	29.4	25.8	74	30.0			
25	Cu	Ac	Ci	1	9+	3500		c	c	M	ExS	4	1006.5	30.0	26.1	72	30.3			
26	Cu	Ac	Ci	3	6	1500		cpjprRc	bc	K	ExS	2	1006.0	28.4	25.2	76	29.2			
27	Cb	Ac	-	9	9+	2500		bcpr$_o$	cpr$_o$	M	ExN	2	1005.4	27.6	25.0	80	29.2			
28	Cu Sc	Ac	Ci Cs	4	6	2500		ccpr$_o$	bc	K	SSE	3	1007.7	28.9	23.1	60	23.2			
29	Cu Sc	As	-	2	9	3000		bc c	c	K	ESE	3	1007.4	27.7	22.5	62	22.8			
30	Fc Fs	As Ac	-	1	9+	3000		cjpccz	cz	K	ExS	5	1005.9	29.6	25.3	69	28.4			
31																				
Means	-	-	-	3.7	7.3	2900		-	-	-	-	3.7	1008.3	28.4	25.0	74	28.5			

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METEOROLOGICAL OBSERVATIONS.

November 1940

Day of Month.	Thermometers.				Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
	Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°)				
1	28.2	25.1	23.8		9.7	3.7		1.4
2	29.1	23.8	22.8		1.6	0.5		1.0
3	29.8	24.3	23.3		24.6	5.9		1.2
4	29.9	24.6	23.3		0.6	7.2		2.6
5	30.1	24.9	23.4		2.4	9.8		2.1
6	30.8	23.4	22.3		1.7	9.1		2.6
7	30.2	25.0	22.4		0.5	10.7		2.5
8	30.8	24.5	22.4		9.2	1.4		0.8
9	30.8	23.3	22.0		-	5.7		2.8
10	29.8	24.4	22.7		Trace	4.2		2.2
11	28.9	24.1	23.0		1.8	5.4		1.8
12	29.1	23.4	22.1		8.8	6.2		1.7
13	27.8	23.7	22.2		-	2.4		2.5
14	28.9	24.9	21.4		-	5.9		3.8
15	28.9	23.8	20.2		-	8.3		4.2
16	29.0	21.2	19.6		-	10.2		3.7
17	29.9	21.6	20.0		-	8.9		3.4
18	30.0	23.9	22.1		-	11.6		3.0
19	30.2	22.5	-		-	11.7		4.2
20	30.1	21.4	18.1		Trace	12.2		3.5
21	29.1	25.5	22.6		2.7	1.6		1.4
22	30.8	22.7	20.5		6.3	10.9		2.6
23	30.3	24.1	22.0		0.2	11.8		3.8
24	30.1	23.4	20.6		-	10.3		3.0
25	30.2	23.8	24.4		0.6	10.6		2.6
26	28.9	24.5	23.0		7.5	7.8		1.5
27	29.0	23.7	22.1		12.6	7.1		2.5
28	29.4	24.5	21.8		Trace	9.1		3.9
29	29.5	22.2	20.0		-	5.7		3.4
30	30.2	21.6	20.5		-	6.7		3.2
31								
Sum	-	-	-		90.8	222.6		78.9
Mean	29.7	23.7	21.9		-	7.4		2.63

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS. 9 a.m. December 1940

Day of Month.	CLOUD. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed : Height Ratio.
1	Sc	Ac	Cs	8	9+	4500		c	c	M	ExS	4	1008.0	27.8	24.6	76	28.0			
2	Cu	Ac	Ci	1	8	4000		c	c	K	ExS	4	1008.1	29.2	25.3	71	28.8			
3	Sc	Ac	-	6	9+	4000		crrpr$_o$	cpr$_o$	K	E	4	1009.0	28.0	25.2	79	29.5			
4	Sc	Ac	Ci	3	7	2500		oirrpbc	bc	M	ExN	3	1007.7	28.5	25.4	77	29.6			
5	Sc	Ac	Ci	6	9+	2000		jpcr$_o$pc	c	K	ExS	5	1008.5	27.9	25.5	82	30.4			
6	Sc	As Ac	-	7	9+	2000		cprbcpc	c	K	ExS	5	1008.0	27.9	25.7	83	30.9			
7	Fc Fs	Ac	-	8	9+	2500		cjrcpr$_o$	cpr$_o$	M	E	2	1006.0	27.1	25.1	84	29.9			
8	Cb	Ac	Ci	4	8	3000		c	cjpr	M	ESE	4	1002.4	28.6	25.8	79	30.7			
9	Sc Fs	Ns	-	2	10	1500		cprorr	cr$_o$r$_o$	K	WxS	2	999.4	25.2	24.6	95	30.1			
10	Sc	As	-	4	10	2500		cr$_o$tRrc	c	M	SE	2	997.9	27.1	25.1	84	29.9			
11	Cu	-	Ci	3	6	2000		cpr$_o$cbc	bc	M	E	1	1002.8	28.6	25.9	80	30.9			
12	Cu	Ac	Ci	3	7	4000		jpir$_o$bc	bc	M	NE	1	1004.8	28.5	25.8	80	30.7			
13	Sc	Ac	Ci	4	9+	2500		c	c	M	N	2	1005.4	27.8	25.7	84	30.9			
14	Sc	Ac	-	1	9+	2500		cir$_o$r$_o$c	c	M	SSW	1	1006.1	27.8	25.8	84	31.3			
15	Cu	Ac	Ci	1	8	4000		coRRc	c	K	ExN	3	1007.2	27.8	25.0	78	29.1			
16	Fs Fc	Ns	-	6	10	2500		bccjpr$_o$	cr$_o$r$_o$	K	E	5	1009.4	26.2	24.9	90	30.1			
17	Cu	Ac	Cs	1	6	4500		cbc	bc	M	ExS	1	1010.1	28.2	24.4	71	27.2			
18	Cu	Ac	Ci	3	8	3000		cbcc	c	M	ExN	3	1009.8	29.3	26.3	78	31.5			
19	Cu	Ac	Cc	2	5	3000		cpbccbc	bc	M	ESE	1	1009.1	28.9	25.7	76	30.1			
20	Sc	As	Ci	4	9+	3000		bcrbcpc	c	M	SW	1	1009.2	27.5	24.8	80	28.8			
21	Cu	-	Ci	2	8	4000		c bc c	c	M	SSW	1	1008.7	28.7	25.6	77	30.0			
22	Cu	-	Cs	1	9	3000		b bc c	c	M	WSW	3	1008.1	28.6	25.0	73	28.4			
23	Cu	As	Ci	1	8	3000		cb bc c	c	M	W	4	1008.2	28.0	24.5	73	27.6			
24	Cu	-	Cs	1	9+	4500		cbcbbcc	c	M	NE	1	1008.8	27.2	23.9	74	26.7			
25	Cu	-	Ci	1	9	4000		c bc c	c	M	E	1	1009.1	27.9	24.1	71	26.7			
26	Sc Cu	As	Ci	Tr	9+	3000		cbcbbcc	c	M	S	1	1007.1	26.7	23.7	77	26.5			
27	Cu Sc	Ac	Ci	4	8	2500		cpr$_o$rrc	cj/pr	M	ESE	3	1005.9	27.8	25.1	79	29.3			
28	Cu	As	Ci Cs	3	9+	3500		cucprc	c	K	WxS	1	1007.2	27.7	24.8	78	28.7			
29	Cu	-	Ci	1	9+	3000		cbcbbcc	c	M	NNW	1	1007.7	27.1	24.1	77	27.3			
30	Sc	Ac	Ci	5	9+	2500		cpr$_o$jpc	c	K	E	3	1006.9	28.5	24.1	68	26.1			
31	Cu Sc	Ac	Ci Cs	2	10	4000		cjpprocc	c	M	ExN	1	1007.0	27.7	24.2	74	27.1			
Means	-	-	-	3.2	8.5	3000		-	-	-	-	2.4	1006.9	27.9	25.0	78	29.1			

1,000/7/32—3911] APIA OBSERVATORY

METEOROLOGICAL OBSERVATIONS.

3.0 p.m. December 1940

Day of Month.	CLOUD. Form. Low.	Form. Medium.	Form. High.	Amount of Low.	Total Amount.	Height of Base.	How Height was obtained.	Weather. Since previous Observation.	Weather. At Time.	Visibility.	Wind. Direction.	Wind. Force (Beaufort Scale).	Barometer reduced to M.S.L. (Millibars).	Temperature and Humidity. Dry Bulb (°C).	Wet Bulb (°C).	Relative Humidity (%).	Vapour Pressure (Millibars).	Upper Cloud. Type observed.	Direction whence coming.	Speed: Height Ratio.
1	Cu Sc	Ac As	-	3	9+	2000		czuczjp	czjp	K	E	6	1006.4	28.6	25.2	75	28.9			
2	Cu	As	Ci	3	9+	4000		c	c	K	E	7	1006.1	29.9	26.2	73	30.7			
3	Fs	As	-	5	10	1500		coqRrr	oir$_o$	J	CALM	0	1008.0	24.2	23.7	96	28.7			
4	Sc	As	Cs	4	9+	1500		bccjpr	cjpr	K	E	4	1005.7	28.2	25.3	78	29.6			
5	Cu Sc	As	-	2	10	1500		cr$_o$r$_o$c	c	K	ExS	4	1006.6	28.2	25.9	82	31.2			
6	Cu	Ac	Ci	5	9	3000		cbcc	c	K	E	5	1005.0	30.0	26.0	71	30.0			
7	Sc	Ac	Ci	2	9+	3000		cpr$_o$c	c	K	ESE	4	1003.4	29.4	24.9	67	27.5			
8	Fb	-	-	10	10	2000		opr	pr$_o$	H	SE	3	1000.3	25.3	24.5	93	29.9			
9	Fs	As	-	7	10	1000		crr$_o$ir$_o$	c	K	NxE	1	997.8	26.8	24.9	85	29.6			
10	Cu	-	Ci	4	9+	3000		cjpr c	c	M	NNW	2	997.1	28.4	25.4	77	29.7			
11	Sc	Ac	Cs	6	9+	2500		bccjpr	cjpr	K	NE	2	1001.1	28.9	26.6	83	32.5			
12	Sc	As	Cs Ci	5	10	1500		bcjcroc	c	K	SE	2	1003.8	28.0	26.2	86	32.3			
13	Fs Sc	As	-	7	10	1000		cpr$_o$cpr	cpr$_o$r$_o$	K	SSE	1	1004.3	26.2	25.4	93	31.5			
14	Fc Fs	Ac Ns	-	3	9	500		cjr	cjr	M	SE	2	1004.8	27.4	25.6	86	31.1			
15	Fb Cb	Ac	Ci	4	7	2000		cbc	bcjpr	M	ExS	4	1006.3	29.7	27.2	81	34.1			
16	Fs	As	-	5	9+	500		cr$_o$RRrc	c	M	SE	1	1007.7	26.4	24.3	83	28.9			
17	Sc	Ac	Cs	6	8	3000		bc c	c	M	NE	1	1008.0	28.8	25.4	75	29.3			
18	Fs Fc	Ns	-	6	10	2000		ccpr$_o$r$_o$	cprr$_o$	K	SE	1	1008.2	27.1	25.3	86	30.5			
19	Cb	Ac	Cs Ci	4	7	3000		bcc bc	bc	K	NNE	1	1006.8	29.4	25.9	74	30.3			
20	Cu Sc	As	Ci	5	10	2500		ccproc	c	M	NW	2	1007.0	28.7	26.7	84	32.8			
21	Cu Cb	Ac	Ci Cs	2	9+	2500		c cjp	cjp	M	NW	4	1006.4	29.2	26.0	76	30.7			
22	Cu	-	Ci	1	9+	3000		bc c	c	M	WNW	3	1006.3	28.4	24.9	74	28.3			
23	Cu	-	Ci Cs	1	9+	2500		c	c	M	SW	2	1004.9	30.3	24.7	61	26.3			
24	Cu	Ac	Ci Cs	1	9+	4000		c	c	M	NW	2	1006.6	27.9	24.1	71	26.7			
25	Cb	Ac	Ci	2	9+	2500		cczjp	czjp	L	ExN	3	1007.7	29.0	25.3	73	28.9			
26	Sc	Ac As	Ci Cs	5	9+	2500		ccjp	cjp	M	NNW	3	1004.7	28.5	24.1	68	26.1			
27	Cb	Ac As	Ci	5	9+	2000		cpr$_o$jpcu	cujp	K	E	5	1004.1	28.0	25.7	82	30.8			
28	Sc	-	Ci	2	7	3000		cpr$_o$c	c	K	SSE	3	1003.4	30.8	24.2	56	24.8			
29	Sc	-	Ci	9	9+	3000		c	cpr$_o$	K	N	2	1005.3	29.0	24.9	70	27.9			
30	Cu	Ac	Ci	3	10	3000		c	c	L	E	3	1005.6	29.3	24.7	67	27.1			
31	Cu	-	Ci	3	10	3000		cu	cu	M	S	4	1004.7	29.5	23.6	59	24.0			
Means	-	-	-	4.2	9.1	2300		-	-	-	-	2.8	1005.0	28.4	25.3	77	29.4			

METEOROLOGICAL OBSERVATIONS.

December 1940

Day of Month.	Thermometers.				Rainfall (mm.)	Sunshine (hrs.)	Heat Integrator.	Evaporimeter. (mm.)
	Maximum (°C)	Minimum (°C)	Grass Minimum (°C)	Black Bulb in vacuo (°C)				
1	29.9	24.7	23.4		-	3.9		3.3
2	30.4	26.2	24.3		9.0	8.1		2.4
3	29.2	23.6	24.8		16.1	0.0		1.3
4	30.2	23.9	22.8		3.8	5.6		2.2
5	28.8	24.9	23.8		3.1	1.2		1.6
6	30.2	24.9	23.5		6.9	7.1		1.8
7	30.6	24.9	23.8		0.4	5.3		2.6
8	29.7	25.1	24.4		22.5	4.0		1.4
9	27.6	24.8	24.2		33.2	0.0		0.2
10	29.5	24.2	23.6		Trace	5.9		1.6
11	29.4	24.9	23.7		2.3	7.6		1.4
12	29.2	23.8	22.3		0.4	5.7		1.4
13	29.9	25.2	24.2		2.9	4.1		1.0
14	28.6	24.8	23.8		44.3	0.2		1.0
15	30.3	24.3	23.4		0.6	7.6		1.9
16	28.5	24.6	23.7		36.2	0.1		1.0
17	29.6	22.5	21.2		-	10.2		2.1
18	30.2	24.8	23.6		0.3	6.6		1.6
19	29.8	24.0	22.9		11.0	9.3		1.7
20	29.5	25.7	-		1.2	-		2.3
21	29.5	23.9	22.5		-	9.2		2.2
22	29.3	24.2	22.2		-	6.4		3.4
23	31.2	23.7	20.9		-	11.4		3.7
24	28.8	23.1	20.7		-	8.9		2.6
25	30.0	23.6	21.0		-	5.7		2.1
26	29.2	23.0	21.2		1.6	4.9		2.2
27	30.2	24.4	22.8		1.2	4.7		2.2
28	31.4	24.3	23.1		-	9.4		2.9
29	30.4	22.4	20.0		1.3	7.3		2.3
30	30.4	24.3	22.8		Trace	9.5		2.8
31	31.0	23.7	21.8		Nil	7.8		3.6
Sum	-	-	-		198.3	177.7		63.8
Mean	29.8	24.3	22.1		-	5.9		2.1

Meteorological Elements: Extreme Values, Normals and Variations, 1940

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Pressure													
Normal (mb.)	1007.6	1008.3	1009.1	1009.8	1010.9	1011.5	1011.7	1012.1	1012.0	1011.2	1009.3	1008.1	1010.1
Variation, 1940 ..	+ 0.4	-0 .4	- 0.7	- 0.1	- 0.8	- 0.9	+ 0.3	- 1.3	- 0.7	0.0	+ 0.3	- 2.0	- 0.5
Absolute Maximum ..	1011.4	1012.5	1013.2	1014.2	1014.3	1015.0	1016.3	1012.3	1013.9	1015.3	1013.9	1011.4	1016.3
Absolute Minimum ..	1003.3	1003.6	1003.3	1005.1	1006.4	1007.0	1006.1	1009.7	1008.1	1006.7	1005.4	997.0	997.0
Temperature													
Normal (°C)	26.27	26.26	26.31	26.18	25.97	25:59	25.29	25.59	25.79	26.07	26.08	26.32	25.98
Variation, 1940 ..	+0.84	+0.96	+0.83	+0.82	+0.92	+0.83	-0.16	+0.24	+0.45	+0.18	+0.39	+0.38	+0.55
Absolute Maximum ..	32.2	31.8	32.2	31.9	31.2	30.5	30.0	30.7	30.4	30.9	30.8	31.4	32:2
Absolute Minimum ..	22.5	22.7	22.6	22.9	21.6	21.0	20.4	21.4	21.7	20.7	21.2	22.4	20.4
Greatest daily range	8.4	8.1	8.3	7.9	8.4	8.1	8.7	8.1	8.1	8.6	8.7	8.0	8.7
Mean Maximum ..	30.3	30.5	30.5	30.2	30.3	29.4	28.4	29.2	29.3	29.7	29.7	29.8	29.77
Mean Minimum ..	24.3	24.3	24.3	24.6	23.9	24.0	22.5	23.2	23.7	23.5	23.7	24.3	23.86
Rainfall													
Normal (m.m.)	455	385	358	255	161	130	82	89	133	169	267	370	2854
Variation, 1940 ..	-371	-57	+12	-48	-32	+54	-37	-4	-35	+4	-176	-172	-862
Sunshine													
Normal (hours)	155	156	182	194	209	208	229	234	228	221	181	173	2370
Variation, 1940 ..	+78	+59	+52	+6	+39	-21	-9	+19	-53	-19	+42	+5	198

Pressure: Means of Hourly Values, 1940

From readings in millibars at exact hours (1000 mb. + tabular values).

Hour	1	2	3	4	5	6	7	8	9	10	11	noon	13	14	15	16	17	18	19	20	21	22	23	24	Means
Month																									
January	8.50	8.03	7.72	7.47	7.63	8.15	8.61	8.85	8.84	8.84	8.72	8.32	7.95	7.42	6.94	6.65	6.70	7.06	7.70	8.08	8.42	8.74	8.87	8.77	8.04
February	8.56	8.14	7.67	7.40	7.35	7.56	7.98	8.51	8.83	8.87	8.73	8.26	7.77	7.20	6.73	6.47	6.45	6.80	7.49	8.08	8.45	8.79	8.90	8.85	7.91
March	9.24	8.78	8.29	7.97	7.94	8.09	8.45	9.16	9.50	9.65	9.47	8.91	8.23	7.59	7.18	6.93	6.96	7.22	7.85	8.44	8.91	9.30	9.44	9.36	8.45
April	9.97	9.58	9.22	9.08	9.00	9.30	9.79	10.43	10.90	11.27	11.00	10.26	9.60	8.92	8.38	8.17	8.31	8.56	9.07	9.66	10.23	10.40	10.44	10.33	9.66
May	10.42	10.15	9.82	9.65	9.61	9.82	10.29	10.86	11.29	11.59	11.34	10.66	9.93	9.22	8.67	8.53	8.69	9.07	9.59	10.18	10.60	10.79	10.75	10.63	10.09
June	11.09	10.81	10.43	10.10	10.09	10.22	10.63	11.25	11.79	11.97	11.76	11.16	10.39	9.68	9.20	9.14	9.29	9.66	10.13	10.78	11.20	11.39	11.34	11.22	10.61
July	12.40	12.12	11.72	11.48	11.46	11.62	11.95	12.51	13.07	13.44	13.22	12.67	12.08	11.33	10.81	10.64	10.78	11.04	11.53	12.01	12.40	12.62	12.60	12.53	12.00
August	11.32	10.93	10.53	10.23	10.19	10.42	10.98	11.55	12.06	12.37	12.13	11.38	10.68	9.91	9.34	9.18	9.33	9.69	10.31	10.95	11.38	11.57	11.64	11.56	10.82
September	11.55	11.14	10.74	10.54	10.60	10.84	11.47	12.18	12.53	12.69	12.45	11.81	11.15	10.53	10.06	9.84	9.93	10.22	10.92	11.48	11.85	12.04	12.09	11.93	11.27
October	11.60	11.05	10.64	10.60	10.75	11.08	11.55	11.93	12.25	12.33	11.99	11.40	10.69	10.19	9.91	9.78	9.90	10.30	10.85	11.48	12.01	12.23	12.19	11.92	11.19
November	9.71	9.24	8.91	8.95	9.16	9.64	10.09	10.38	10.48	10.54	10.30	9.86	9.28	8.82	8.29	8.09	8.28	8.67	9.19	9.86	10.24	10.46	10.51	10.26	9.55
December	6.56	6.02	5.64	5.52	5.60	6.04	6.44	6.72	6.89	6.94	6.73	6.33	5.74	5.41	5.00	4.70	4.82	5.21	5.74	6.40	6.77	7.15	7.22	6.94	6.11
Year	10.08	9.67	9.28	9.08	9.11	9.40	9.85	10.36	10.70	10.87	10.65	10.09	9.46	8.85	8.38	8.18	8.29	8.63	9.20	9.78	10.21	10.46	10.50	10.36	9.64
Wet Season 1939-40	8.83	8.40	8.00	7.80	7.87	8.23	8.72	9.10	9.25	9.29	9.12	8.65	8.22	7.68	7.22	6.96	6.98	7.31	7.97	8.42	8.81	9.12	9.25	9.14	8.35
Dry Season 1940	11.31	11.00	10.63	10.37	10.34	10.52	10.96	11.54	12.05	12.34	12.11	11.47	10.77	10.03	9.51	9.37	9.52	9.86	10.39	10.98	11.39	11.59	11.58	11.48	10.88

Pressure: Diurnal Changes, 1940

The departures in millibars from the mean of the day are adjusted for non-cyclic change.

Hour	Mean	1.	2	3	4	5	6	7	8	9	10	11	noon	13	14	15	16	17	18	19	20	21	22	23	24
Month																									
January	8.04	+0.41	-0.06	-0.36	-0.61	-0.44	+0.08	+0.65	+0.79	+0.79	+0.79	+0.67	+0.28	-0.08	-0.61	-1.09	-1.37	-1.32	-0.95	-0.31	+0.08	+0.42	+0.75	+0.88	+0.78
February	7.91	+0.69	+0.27	-0.21	-0.48	-0.53	-0.33	+0.09	+0.61	+0.93	+0.97	+0.82	+0.35	-0.14	-0.72	-1.19	-1.45	-1.48	-1.13	-0.45	+0.14	+0.51	+0.84	+0.95	+0.89
March	8.45	+0.73	+0.28	-0.21	-0.52	-0.55	-0.39	-0.03	+0.69	+1.03	+1.19	+1.01	+0.46	-0.21	-0.85	-1.25	-1.50	-1.46	-1.20	-0.56	+0.03	+0.51	+0.90	+1.05	+0.98
April	9.66	+0.37	-0.02	-0.39	-0.53	-0.62	-0.33	+0.16	+0.79	+1.26	+1.62	+1.55	+0.60	-0.07	-0.75	-1.30	-1.51	-1.38	-1.13	-0.63	-0.05	+0.52	+0.88	+0.72	+0.60
May	10.09	+0.34	+0.07	-0.26	-0.45	-0.47	-0.26	+0.20	+0.77	+1.20	+1.50	+1.25	+0.57	-0.16	-0.87	-1.42	-1.56	-1.40	-1.03	-0.51	+0.08	+0.50	+0.69	+0.65	+0.53
June	10.61	+0.48	+0.20	-0.18	-0.51	-0.52	-0.39	+0.02	+0.64	+1.18	+1.36	+1.15	+0.55	-0.22	-0.93	-1.41	-1.47	-1.32	-0.95	-0.48	+0.17	+0.59	+0.78	+0.73	+0.61
July	12.00	+0.41	+0.13	-0.27	-0.51	-0.53	-0.37	-0.05	+0.51	+1.07	+1.44	+1.22	+0.67	+0.08	-0.67	-1.19	-1.36	-1.22	-0.97	-0.48	0.00	+0.39	+0.61	+0.59	+0.52
August	10.82	+0.50	+0.11	-0.29	-0.59	-0.63	-0.40	+0.16	+0.73	+1.24	+1.55	+1.31	+0.56	-0.14	-0.91	-1.48	-1.64	-1.49	-1.13	-0.51	+0.13	+0.56	+0.75	+0.82	+0.73
September	11.27	+0.29	-0.12	-0.52	-0.72	-0.66	-0.42	+0.20	+0.91	+1.26	+1.42	+1.18	+0.54	-0.12	-0.74	-1.21	-1.43	-1.34	-1.06	-0.36	+0.20	+0.57	+0.76	+0.81	+0.65
October	11.19	+0.35	-0.19	-0.60	-0.63	-0.48	-0.14	+0.33	+0.72	+1.04	+1.13	+0.79	+0.21	-0.49	-0.99	-1.26	-1.39	-1.26	-0.86	-0.30	+0.33	+0.86	+1.09	+1.06	+0.80
November	9.55	+0.15	-0.31	-0.64	-0.60	-0.39	+0.09	+0.54	+0.83	+0.93	+0.99	+0.75	+0.31	-0.27	-0.73	-1.26	-1.46	-1.27	-0.88	-0.36	+0.31	+0.69	+0.91	+0.97	+0.72
December	6.11	+0.42	-0.12	-0.50	-0.61	-0.53	-0.09	+0.32	+0.60	+0.77	+0.82	+0.62	+0.22	-0.37	-0.69	-1.10	-1.40	-1.28	-0.88	-0.35	+0.31	+0.69	+1.07	+1.14	+0.86
Year	9.64	+0.43	+0.02	-0.37	-0.56	-0.53	-0.25	+0.21	+0.72	+1.06	+1.23	+1.01	+0.44	-0.18	-0.79	-1.26	-1.46	-1.35	-1.01	-0.44	+0.14	+0.57	+0.82	+0.86	+0.72
Wet Season 1939-40	8.35	+0.48	+0.05	-0.35	-0.55	-0.47	-0.12	+0.37	+0.75	+0.90	+0.95	+0.77	+0.30	-0.13	-0.67	-1.13	-1.39	-1.37	-1.04	-0.38	+0.08	+0.46	+0.77	+0.91	+0.79
Dry Season 1940	10.88	+0.43	+0.13	-0.25	-0.51	-0.54	-0.36	+0.08	+0.66	+1.17	+1.46	+1.23	+0.59	-0.11	-0.85	-1.37	-1.51	-1.36	-1.02	-0.49	+0.10	+0.51	+0.71	+0.70	+0.60

Temperature: Means of Hourly Values, 1940

From readings in degrees centigrade at exact hours

Hour	1	2	3	4	5	6	7	8	9	10	11	noon	13	14	15	16	17	18	19	20	21	22	23	24	Mean
Month																									
January	25.33	25.15	25.03	24.97	24.92	24.85	25.33	26.79	28.35	29.04	29.06	29.12	29.27	29.41	29.35	29.05	28.71	28.12	27.68	27.11	26.53	26.05	25.79	25.56	27.11
February	25.26	25.22	25.14	25.05	25.05	25.13	25.20	26.57	28.40	29.28	29.48	29.68	29.43	29.31	29.24	29.13	28.76	28.34	27.93	27.21	26.63	26.24	25.90	25.58	27.22
March	25.24	25.16	25.08	25.06	25.04	25.04	25.15	26.06	27.91	28.79	29.38	29.65	29.62	29.67	29.39	29.18	28.68	28.23	27.78	26.97	26.55	26.17	25.88	25.65	27.14
April	25.27	25.29	25.21	25.14	25.14	25.19	25.32	26.08	27.58	28.64	28.97	29.11	29.19	29.15	29.02	28.87	28.54	28.10	27.67	26.92	26.46	26.07	25.68	25.45	27.00
May	25.14	25.03	25.00	24.95	24.83	24.85	24.89	25.69	27.58	28.92	29.28	29.44	29.45	29.50	29.40	28.95	28.29	27.74	27.24	26.55	26.12	25.79	25.53	25.30	26.89
June	24.97	24.84	24.78	24.74	24.79	24.88	24.98	25.31	26.84	28.06	28.47	28.55	28.59	28.60	28.35	27.99	27.51	27.09	26.70	26.15	25.79	25.58	25.39	25.20	26.42
July	23.30	23.24	23.20	23.26	23.28	23.31	23.34	23.81	25.59	26.95	27.45	27.60	27.63	27.67	27.47	27.11	26.69	26.03	25.48	24.85	24.41	24.08	23.84	23.58	25.13
August	24.05	23.93	23.93	23.95	23.89	23.93	24.12	24.90	26.73	27.85	28.20	28.36	28.35	28.25	28.03	27.55	27.09	26.48	26.15	25.58	25.23	24.73	24.49	24.27	25.83
September	25.01	24.85	24.57	24.56	24.51	24.47	24.81	25.85	27.13	28.01	28.22	28.19	28.29	28.23	27.84	27.41	27.06	26.62	26.37	25.96	25.72	25.53	25.33	25.21	26.24
October	24.62	24.45	24.37	24.36	24.35	24.43	25.00	26.37	27.60	28.05	28.35	28.46	28.43	28.33	28.18	27.64	27.27	26.76	26.47	25.97	25.55	25.26	25.00	24.85	26.25
November	24.74	24.54	24.48	24.40	24.40	24.47	25.35	26.84	28.00	28.42	28.53	28.49	28.55	28.53	28.41	28.05	27.68	27.22	26.78	26.22	25.74	25.35	25.14	24.95	26.47
December	25.23	25.15	25.09	25.06	25.04	25.09	25.75	26.76	27.81	28.41	28.42	28.51	28.48	28.41	28.27	27.93	27.51	27.16	26.93	26.53	26.22	25.92	25.70	25.46	26.70
Year	24.85	24.74	24.66	24.62	24.60	24.64	24.94	25.92	27.46	28.37	28.65	28.76	28.77	28.75	28.58	28.24	27.82	27.32	26.93	26.33	25.91	25.56	25.31	25.09	26.53
Wet Season 1939-40	23.05	24.93	24.81	24.76	24.71	24.71	25.27	26.74	28.06	28.77	28.83	28.94	28.96	28.97	28.77	28.59	28.25	27.77	27.33	26.70	26.21	25.81	25.54	25.31	26.65
Dry Season 1940	24.36	24.26	24.23	24.22	24.20	24.24	24.33	24.93	26.69	27.95	28.35	28.49	28.51	28.51	28.31	27.90	27.40	26.84	26.39	25.78	25.39	25.05	24.82	24.59	26.07

Temperature: Diurnal Changes, 1940

The departures in degrees centigrade from the mean of the day are adjusted for non-cyclic change.

Hour	Mean	1	2	3	4	5	6	7	8	9	10	11	noon	13	14	15	16	17	18	19	20	21	22	23	24
Month																									
January	27.11	-1.77	-1.96	-2.08	-2.14	-2.19	-2.26	-1.78	-0.32	+1.24	+1.93	+1.95	+2.01	+2.16	+2.30	+2.24	+1.94	+1.60	+1.01	+0.57	0.0	-0.58	-1.06	-1.33	-1.56
February	27.22	-1.96	-2.00	-2.08	-2.17	-2.17	-2.09	-2.02	-0.65	+1.18	+2.06	+2.26	+2.46	+2.21	+2.09	+2.02	+1.91	+1.54	+1.12	+0.71	-0.01	-0.59	-0.98	-1.32	-1.64
March	27.14	-1.88	-1.96	-2.04	-2.06	-2.09	-2.09	-1.98	-1.07	+0.78	+1.65	+2.24	+2.51	+2.48	+2.53	+2.24	+2.03	+1.53	+1.08	+0.63	-0.19	-0.61	-0.99	-1.28	-1.52
April	27.00	-1.75	-1.73	-1.80	-1.87	-1.87	-1.82	-1.69	-0.93	+0.57	+1.64	+1.97	+2.11	+2.19	+2.15	+2.03	+1.88	+1.55	+1.11	+0.68	-0.07	-0.53	-0.91	-1.30	-1.53
May	26.89	-1.77	-1.88	-1.90	-1.95	-2.07	-2.05	-2.01	-1.21	+0.68	+2.03	+2.39	+2.55	+2.56	+2.61	+2.52	+2.07	+1.41	+0.86	+0.36	-0.33	-0.76	-1.08	-1.34	-1.57
June	26.42	-1.46	-1.59	-1.65	-1.69	-1.64	-1.55	-1.44	-1.11	+0.42	+1.64	+2.05	+2.13	+2.17	+2.18	+1.93	+1.57	+1.09	+0.68	+0.29	-0.26	-0.62	-0.83	-1.02	-1.21
July	25.13	-1.81	-1.87	-1.91	-1.85	-1.83	-1.81	-1.78	-1.31	+0.47	+1.82	+2.32	+2.47	+2.50	+2.54	+2.33	+1.97	+1.55	+0.89	+0.33	-0.30	-0.74	-1.07	-1.31	-1.58
August	25.83	-1.79	-1.91	-1.91	-1.89	-1.95	-1.91	-1.71	-0.93	+0.90	+2.02	+2.37	+2.53	+2.52	+2.42	+2.20	+1.72	+1.26	+0.66	+0.33	-0.24	-0.59	-1.09	-1.33	-1.55
September	26.24	-1.24	-1.40	-1.68	-1.69	-1.74	-1.78	-1.44	-0.40	+0.89	+1.77	+1.98	+1.95	+2.05	+1.99	+1.60	+1.18	+0.83	+0.39	+0.14	-0.27	-0.51	-0.70	-0.90	-1.02
October	26.25	-1.61	-1.78	-1.86	-1.87	-1.89	-1.81	-1.24	+0.13	+1.36	+1.80	+2.10	+2.21	+2.18	+2.08	+1.92	+1.38	+1.01	+0.50	+0.21	-0.30	-0.72	-1.01	-1.27	-1.45
November	26.47	-1.74	-1.94	-2.00	-2.08	-2.08	-2.01	-1.13	+0.36	+1.53	+1.95	+2.06	+2.02	+2.08	+2.06	+1.94	+1.59	+1.22	+0.76	+0.32	-0.24	-0.72	-1.11	-1.32	-1.51
December	26.70	-1.48	-1.56	-1.62	-1.65	-1.67	-1.62	-0.95	+0.06	+1.11	+1.71	+1.72	+1.81	+1.78	+1.71	+1.57	+1.25	+0.81	+0.47	+0.24	-0.16	-0.47	-0.77	-0.99	-1.23
Year	26.53	-1.69	-1.80	-1.88	-1.91	-1.93	-1.90	-1.60	-0.61	+0.93	+1.84	+2.12	+2.23	+2.24	+2.22	+2.04	+1.71	+1.28	+0.79	+0.41	-0.20	-0.62	-0.97	-1.23	-1.45
Wet Season 1939-40	26.83	-1.77	-1.90	-2.01	-2.07	-2.11	-2.12	-1.56	-0.09	+1.23	+1.94	+2.01	+2.11	+2.13	+2.14	+1.94	+1.76	+1.43	+0.95	+0.51	-0.13	-0.62	-1.01	-1.29	-1.52
Dry Season 1940	26.07	-1.71	-1.81	-1.84	-1.85	-1.87	-1.83	-1.74	-1.14	+0.62	+1.88	+2.28	+2.42	+2.44	+2.44	+2.24	+1.83	+1.33	+0.77	+0.33	-0.28	-0.68	-1.02	-1.28	-1.48

Fourier Coefficients: Barometric Pressure and Temperature, 1940

Values of P_n and A_n in the series $\sum P_n \sin(15nt+A_n)$, t being Zone Time (11h 00m slow on Greenwich) expressed in hours from midnight.

Period	P_1	A_1	P_2	A_2	P_3	A_3	P_4	A_4
			Barometric Pressure					
	mb	°	mb	°	mb	°	mb	°
Wet Season 1939-40	0.48	21	0.93	143	0.05	93	0.06	349
Dry Season 1940	0.49	9	1.04	141	0.19	338	0.05	253
Y E A R 1940	0.46	17	1.02	144	0.08	355	0.03	287
			Temperature					
	°C	°	°C	°	°C	°	°C	°
Wet Season 1939-40	2.25	239	0.45	105	0.33	7	0.17	240
Dry Season 1940	2.26	238	0.60	74	0.28	319	0.24	186
Y E A R 1940	2.18	239	0.51	87	0.26	342	0.17	207

Relative Humidity, 1940

Percentages at exact even hours

Hour	2	4	6	8	10	noon	14	16	18	20	22	24	Mean
Month													
January	88	88	88	79	73	74	73	74	78	82	85	86	81
February	88	87	88	81	74	75	77	77	79	84	86	87	82
March	87	87	87	83	76	75	75	77	80	87	87	88	82
April	88	89	89	85	78	78	78	79	81	87	88	89	84
May	88	89	88	84	74	74	75	77	81	85	87	87	82
June	87	87	86	85	78	78	79	79	82	84	85	86	83
July	84	84	84	81	70	69	71	73	75	80	82	83	78
August	87	88	88	83	74	74	75	77	79	83	86	87	82
September	85	86	87	80	76	76	75	78	80	81	82	83	81
October	88	89	88	81	77	77	77	79	81	85	86	87	84
November	86	86	86	79	75	76	76	77	79	81	83	85	81
December	88	88	87	84	78	78	79	80	82	85	87	86	83
Y e a r	87	87	87	81	75	75	76	77	80	84	85	86	82
Wet Season 1939-40	87	87	87	79	74	75	75	75	78	83	85	86	81
Dry Season 1940	87	87	87	84	74	74	75	77	78	83	85	86	81

Rainfall at Apia Observatory - 1940

Month	Number of Days on which stated Amounts of Precipitation were recorded (Amount of rain in millimetres)					Total Rain Days	Total Rain-Fall	Greatest Amount in 24 hours			Greatest Amount in one hour		
	0.2 - 0.9	1.0 - 9.9	10.0 - 24.9	25.0 - 99.9	100 and over								
							mm.	mm.	Date		mm.	Date	Time
January	3	10	3	0	0	16	84.2	16.8	23rd.		12.9	23rd.	18-19
February	5	3	2	7	0	17	328.4	53.4	23rd.		24.2	23rd.	19-20
March	1	11	3	5	0	20	369.8	77.6	29th.		41.2	3rd.	23-24
April	3	11	3	2	0	19	206.7	54.2	6th.	(+)	30.7	7th.	2-3
May	1	3	4	1	0	9	128.8	44.2	26th.	(‡)	-		
June	1	3	4	3	0	11	184.1	47.3	28th.		19.7	28th.	10-11
July	1	3	0	1	0	5	45.5	39.7	6th.		12.8	6th.	11-12
August	3	3	5	0	0	11	85.3	22.5	11th.	(‡)	-		
September	5	5	1	1	0	12	97.6	59.4	6th.		18.9	7th.	4-5
October	2	10	3	2	0	17	172.9	31.9	23rd.		16.8	23rd.	21-22
November	4	10	2	0	0	16	90.8	24.6	3rd.		17.4	3rd.	13-14
December	4	10	3	3	0	20	198.3	44.3	14th.		31.3	14th.	5-6
Y e a r	33	82	33	25	0	173	1992.4	77.6	29th. Mar.		41.2	3rd Mar.	23-24

Note:-

Rainfall is measuredat 9.0 a.m. and entered to the previous day. Greatest amounts for 1 hour are entered to the date on which the fall actually occurred.

(+) Approximate only

(‡) Recording rain gauge failed during heavy rain.

Rainfall in Samoa, 1940

(Expressed in inches)

Station	Elevation (feet)	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year	Authority
Upolu															
Alafua	185	4.78	19.18	14.16	8.49	3.68	8.40	1.75	4.54	6.81	12.36	7.51	10.39	102.05	Mr. M.R. Mecham
Aleisa	910	9.59	17.73	13.30	10.15	2.43	8.16	1.28	5.34	4.92	14.50	8.80	13.05	109.25	N.Z. Reparation Estates
Casala	700	6.69	14.26	10.13	8.51	4.37	3.46	1.03	2.99	4.22	12.85	5.96	12.59	87.06	Mr. P.L.M. Morgan
Lotofaga	40	17.38	9.77	10.93	21.77	7.21	16.64	5.05	29.74	13.82	42.96	17.14	22.10	214.51	Rev. Father Beauchemin
Magia	215	6.36	12.07	10.94	8.29	4.29	5.50	0.88	6.28	3.09	11.65	6.04	17.82	93.21	Mr. G. Miedecke
Mulifanua	14	4.34	10.86	8.59	6.02	2.41	6.21	0.95	5.53	3.26	9.38	5.75	17.05	80.35	N.Z. Reparation Estates
Mulinu'u	5	3.32	12.93	14.56	8.14	5.07	7.25	1.79	3.34	3.83	6.80	3.57	7.81	78.41	The Observatory
Mulivai	6	12.76	2.66	1.40	28.30	4.94	19.42	3.50	21.07	11.00	6.50	2.65	19.20	133.40	Rev. Father Gaucher
Piula	65	8.42	13.86	12.96	12.25	2.15	10.65	1.51	6.74	4.81	14.87	9.16	13.41	110.79	Rev. N.G. Pardey
Tafa'igata	550	7.82	15.94	12.96	8.00	3.69	7.43	1.52	2.90	4.28	10.08	4.76	12.97	92.35	N.Z. Reparation Estates
Tuana'imato	105	4.24	11.55	12.39	6.93	3.05	6.90	1.26	4.06	5.21	9.72	6.87	10.65	82.83	" " " "
Vailele	25	2.60	7.04	9.75	6.74	2.32	5.14	2.49	2.02	5.50	13.05	3.92	7.59	68.16	" " " "
Vailima		6.76	17.06	13.03	9.46	4.46	6.68	2.28	5.76	7.79	9.38	7.47	14.34	104.47	Government House, Vailima
Vaipapa	720	7.18	12.59	12.90	10.67	8.95	5.61	1.07	5.76	7.62	13.73	13.36	18.10	117.54	N.Z. Reparation Estates
Vaipoto	400	6.21	19.80	21.00	9.66	4.18	8.83	1.54	4.00	5.64	13.04	5.26	14.86	114.02	Mr. A.R. Coboroft
Vaitele	20	4.06	12.89	13.93	8.00	4.26	8.26	1.79	3.00	3.80	7.82	2.55	7.54	77.90	N.Z. Reparation Estates
Savai'i															
Fagamalo	8	4.82	18.46	12.12	9.08	7.30	7.91	0.82	5.76	6.75	6.49	5.01	11.06	95.58	The Wireless Operator
Falealupo	8	4.70	7.64	5.83	8.31	3.35	8.28		1.11	6.58	1.89	4.83	9.96		Rev. Father Merten
Tuasivi	25	10.15	9.49	11.04	11.07	3.90	10.60	1.12	10.05	7.17	11.85	8.64	16.50	111.58	The Resident Commissioner
Vaipouli	210	6.17	19.52	11.21	5.94	8.03	6.43	1.14	5.59	5.86	9.93	5.36	17.07	102.25	Superintendent of Schools
Tutuila (American Samoa)															
Pago Pago		13.25	13.97	13.89	27.36	4.39	14.90	3.15	16.15	5.43	17.16	10.45	33.13	173.23	U.S. Naval Station

Notes:-

(1) The rim of the gauge is generally at a height of one or two feet above the ground.
(2) Most of the gauges in use are of the Meteorological Office (London) pattern with a deep funnel five inches in diameter. A tapered glass measure reading in inches is used.
(3) Some of the sites are not strictly conventional owing to the profuse growth of vegetation i.e. surrounding objects may be nearer the gauge than twice their own height.
(4) The readings of the rain gauges at many of the stations given in this table are made in the morning and entered ("thrown back") to the previous day while at other stations the readings are entered to the same day.

Duration of Bright Sunshine, 1940

Aggregate duration of bright sunshine occurring between the exact hours of apparent solar time and the percentage of possible duration of sunshine for the month

Hour of day	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Totals	%
M o n t h																
January	1.1	18.0	23.9	25.5	23.7	22.8	20.7	22.2	20.1	18.3	14.4	12.6	8.5	0.9	232.7	58
February	0.6	14.3	20.5	23.2	24.1	22.5	20.1	16.5	16.0	16.5	15.7	15.6	9.4	0.3	215.3	59
March	0.0	10.2	19.3	22.6	24.0	26.6	26.1	23.4	21.0	20.6	19.7	15.5	5.3	0.0	234.3	62
April	0.0	6.0	15.9	18.4	20.8	22.7	21.3	21.9	18.6	17.7	16.7	14.0	6.4	0.0	200.4	57
May	0.0	6.5	18.7	23.5	27.9	28.9	28.1	25.9	24.2	23.0	19.3	17.0	5.3	0.0	248.3	70
June	0.0	4.2	15.5	19.3	21.9	20.7	21.5	20.5	19.2	15.7	14.4	10.8	3.1	0.0	186.8	55
July	0.0	4.8	18.6	22.4	23.8	23.6	24.2	21.9	20.5	19.4	18.7	17.8	4.3	0.0	220.0	62
August	0.0	9.4	24.4	26.6	28.6	26.9	27.1	24.8	22.3	19.9	19.9	17.5	5.5	0.0	252.9	70
September	0.0	5.7	15.9	17.4	18.1	19.0	17.6	18.2	16.2	15.6	13.9	11.9	5.0	0.0	174.5	48
October	0.0	10.3	19.6	21.0	20.3	22.2	22.0	22.6	18.9	15.6	12.5	12.1	5.0	0.0	202.1	53
November	0.6	13.9	20.6	23.5	22.3	23.8	18.9	20.7	19.5	17.3	14.2	14.2	12.3	0.8	222.6	58
December	1.1	11.5	17.4	21.2	19.5	19.4	20.7	18.2	17.5	12.6	8.7	5.8	3.5	0.6	177.7+	44
Totals	3.4	114.8	230.3	264.6	275.0	279.1	268.3	256.8	234.0	212.2	188.1	164.8	73.6	2.6	2567.6	58

+ The record for December 20th. was lost and hence the December values are for 30 days only. It is known from eye observations that the duration of bright sunshine on December 20th., did not exceed three hours.

Analysis of Sunshine, 1940

Clear days - more than 7 hours bright sunshine

Cloudy days - less than 3 hours bright sunshine

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Clear	16	18	22	15	19	16	20	22	14	12	17	13	204
Partly Cloudy	13	7	5	10	11	7	5	8	6	17	9	12	110
Cloudy	2	4	4	5	1	7	6	1	10	2	4	6	52

Wind, 1940

Means of Hourly Values of Wind Speed in Miles per Hour

Hour	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
Month																									
January	2.0	2.4	1.9	2.2	2.0	2.1	1.8	2.3	4.3	6.3	7.8	8.4	9.2	9.0	9.2	8.9	8.4	7.9	7.0	5.0	2.9	2.3	2.6	2.2	4.9
February	2.9	2.9	3.4	3.0	3.1	3.5	3.9	3.4	4.4	7.2	8.1	9.4	9.7	9.5	9.1	8.5	8.6	7.6	7.0	6.2	3.4	2.8	2.6	3.0	5.6
March	3.3	3.3	3.2	3.0	3.2	3.2	2.8	3.7	4.4	6.0	6.5	7.6	8.1	7.6	8.0	7.7	7.9	6.9	5.2	2.6	2.0	2.1	2.3	3.0	4.7
April	2.5	3.3	3.0	3.0	3.1	3.3	3.0	3.1	3.3	4.1	5.5	6.6	7.4	7.3	7.6	6.9	6.2	5.7	5.1	3.9	3.1	2.8	2.6	2.1	4.3
May	4.8	4.3	4.0	5.1	3.8	3.9	3.4	4.0	5.3	7.8	9.4	10.6	11.3	11.2	10.8	10.3	9.9	8.7	5.7	3.6	2.8	3.7	4.3	4.5	6.4
June	4.9	5.0	4.1	4.1	4.4	4.4	6.0	5.6	6.0	10.2	13.0	15.1	15.2	15.6	14.8	14.0	12.8	11.6	9.2	5.9	5.6	4.9	5.5	4.8	8.4
July	4.1	4.6	4.0	4.0	4.2	4.6	4.7	4.8	6.0	8.4	10.5	11.8	12.3	12.5	12.7	11.9	10.9	10.6	8.2	5.3	4.7	4.7	4.9	4.9	7.3
August	4.2	3.7	3.0	3.6	2.8	3.2	3.4	4.1	5.6	8.0	11.1	13.5	14.5	15.1	15.5	14.8	13.8	12.5	9.3	6.3	5.2	4.9	4.4	3.6	7.7
September	6.9	5.8	5.4	4.1	5.0	5.2	5.0	7.2	10.2	12.6	15.0	16.4	15.7	16.0	16.5	15.0	14.2	13.2	11.6	8.8	7.8	7.5	7.6	7.5	10.0
October	5.6	5.3	5.8	2.7	3.1	3.0	2.9	4.0	6.7	9.5	10.5	11.8	11.8	11.7	11.2	11.7	10.3	7.9	5.9	5.6	4.7	5.5	2.9	2.7	6.5
November	4.6	5.2	4.1	3.6	3.3	4.2	4.2	4.8	8.3	10.7	14.0	15.4	13.7	13.9	13.2	12.8	12.2	10.7	10.5	7.0	7.0	4.4	4.3	4.0	8.2
December	4.0	4.2	4.3	3.7	4.6	5.1	4.8	5.1	6.2	8.3	8.5	9.1	10.1	10.1	9.2	8.7	8.3	7.3	6.2	5.5	5.0	4.3	3.9	3.5	6.3
Year 1940	4.0	4.0	3.7	3.5	3.6	3.8	3.8	4.3	5.9	8.3	10.0	11.3	11.6	11.6	11.5	10.9	10.3	9.2	7.6	5.5	4.5	4.0	4.0	3.8	6.7
Wet Season 1939-40	2.6	2.7	2.7	2.7	2.6	2.8	2.7	2.9	4.3	6.6	7.8	8.5	9.1	9.1	8.5	8.0	7.7	6.9	6.0	4.4	3.0	2.6	2.7	2.8	5.0
Dry Season 1940	4.5	4.4	3.8	4.2	3.8	4.0	4.4	4.6	5.7	8.6	11.0	12.7	13.3	13.6	13.5	12.8	11.8	10.9	8.1	5.3	4.6	4.5	4.8	4.5	7.5

Percentage Frequencies of Winds, 1940

(This table is based on observations every three hours commencing at midnight)

Month	Calm	N	NE	E	SE	S	SW	W	NW	Variable	Number of observations
January	1	2	5	31	12	35	8	2	1	3	246
February	0	1	8	26	21	26	14	1	1	2	229
March	0	2	7	23	22	25	13	3	2	3	239
April	3	2	3	22	10	36	17	2	5	0+	239
May	1	3	2	32	22	28	9	1	1	1	238
June	0+	1	2	37	32	22	6	0	0	0	230
July	1	2	1	30	27	27	8	2	2	0	243
August	2	1	4	40	20	21	7	2	1	2	248
September	1	0	1	49	29	16	2	0+	0	2	240
October	3	2	4	30	31	20	10	0	0+	0+	248
November	2	1	3	29	32	20	10	1	2	0	240
December	2	4	6	28	19	19	13	2	6	1	248
Y e a r	1	2	4	31	23	25	10	1	2	1	2888

Note:

0+ means that there were some observations but less than 0.5%

Monthly Wind Speed and Direction, 1940

Speed in miles per hour

Month		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Mean speed for month		4.9	5.6	4.7	4.3	6.4	8.4	7.3	7.7	10.0	6.5	8.2	6.3	6.7
Greatest speed in Gust		36	33	44	32	40	41	35	33	34	38	39	42	44
Direction of Gust		E	E	ESE	NW	E & NE	ESE	ESE	E	ENE	NE	ESE	E	ESE
Greatest speed for one hourly period		22	21	23	20	23	25	26	26	26	26	26	31	31
Prevailing direction of wind	9 a.m.	E	E	ESE	CALM	ESE	ESE	ESE	E	ESE	E	E	E	E&ESE
	3 p.m.	E	E	E	E	E	E	E	E	E	E	E	E	E
Most frequent direction of Wind (Eight points only)		S	S & E	S	S	E	E	E	E	E	SE	SE	E	E

Thunder and Lightning, 1940

Month	Number of Days with		Total
	Lightning only	Lightning and Thunder	
January	7	10	17
February	4	5	9
March	9	10	19
April	8	4	12
May	6	5	11
June	2	4	6
July	2	0	2
August	5	1	6
September	4	3	7
October	4	3	7
November	6	7	13
December	0	1	1
Year	57	53	110

Pilot Balloon Ascents 1940

The method of observing the balloon with a single theodolite was used during 1940 assuming a constant rate of ascent calculated from the formula.

$$V = qL^{\frac{1}{2}}/(L+W)^{\frac{1}{2}}$$

where
V = rate of ascent in feet per minute
q = 275
L = free lift in grams
W = weight of balloon in grams

The rate of ascent (V) used normally was 500 feet per minute but occasionally 400 feet per minute was adopted. Flights in which the balloons had the latter upward velocity (400 ft/m.) have been marked thus:(+) Further there were a few occasions on which toy balloons were used and these were given varying rates of ascent depending on the size of the balloon. Such flights have been marked thus:(‡)

The surface winds are taken from the anemometer, the vane of which is at a height of 80 feet above the ground.

The measurements are expressed in the form recommended in Resolutions LIV and LVII of the Commission for Synoptic Weather Information at Salzburg, September 1937. (O.M.I. Publication No. 37, pages 53 and 57). Values have also been given at the additional heights recommended in Resolution XXXIX of the Meteorological Conference for the Southwest Pacific, 1937 (O.M.I. Publication No. 42, page 37).

Details of the form are as follows:

YYGG $HHddv_5$ $HHddv_5$ ----- ----- $C_L C_M HHM$

where
YY = Greenwich day of month; GG hour of Greenwich time

HH = (a) For heights up to and including 9000 metres (90 hectametres) HH is the height in <u>hectametres</u> of the centre of a layer about 300 metres thick.
(b) For heights above 9000 metres HH is the height in <u>kilometres</u> of a layer about 600 metres thick.

<u>Note</u> In the original computations the heights are ex-

pressed in feet and hence a certain approximation is made when converting to metres. The order of this approximation may be seen from the table of "Selected Heights" below, which gives the actual heights and the published heights. In cases where the published heights do not occur in the table of selected heights, it may be assumed that the order of approximation is the same as that shown in the table.

dd = direction of wind using 36 points; thus 270° is expressed as 27.

v_5 = average wind velocity in the layer expressed in code (see below)

$C_L C_M$ = usual information about clouds

M = reason for the ending of the observation (see below)

Table of Selected Heights.

Published Height Hectametres = Metres	Actual Height Rate of ascent 400 ft./min.	Rate of ascent 500 ft./min.
	metres.	metres.
02 200	244	152
05 500	488	457
10 1000	975	914
20 2000	1951	1981
30 3000	3048	3048
40 4000	4023	3962
50 5000	4999	5029
60 6000	5974	5944
70 7000	6949	7010
80 8000	8047	7925
90 9000	9022	9144
Kilometres. Metres.	Metres.	Metres.
10 10000	9997	10058
11 11000	10973	10973
12 12000	11948	11887
13 13000	13045	13106
14 14000	14021	14021
15 15000	14996	14935
16 16000	15971	15850
17 17000	16947	17069
18 18000	18044	17983

Code for V_5 in miles per hour

dd = 01 -36		dd = 51 - 86	
v_5	m.p.h.	v_5	m.p.h.
0	0- 1	0	30-32

v_5	m.p.h.	v_5	m.p.h.
1	2- 4	1	33-35
2	5- 7	2	36-38
3	8-10	3	39-41
4	11-14	4	42-45
5	15-17	5	46-48
6	18-20	6	49-51
7	21-23	7	52-54
8	24-26	8	55-57
9	27-29	9	58-60

i.e. if the wind is equal to or greater than 30 miles per hour then 50 is added to dd and the code on the right above is used for v_5.

Code for M in last group

0 = observation abandoned
1 = obscured by passing clouds
2 = balloon burst
3 = lost in haze
4 = lost near the sun
5 = entered cloud layer
6 = lost accidentally
7 = obscured by rain
8 = confused with star
9 = for use when none of the above apply.

January

	0319	00094	02104	05082	10133	20055	45301	
(+)	0620	00104	02114	05113	10093	16073	20043	30032
		29345						
	0819	00170	02113	05083	10052	20084	30094	40064
		29465						
	1219	00000	05062	10062	20112	27183	30193	40192
		50154	60174	70192	80184	90155	10156	11179
		14029						
	1519	00000	11164	15184	50175			
	1719	00000	02101	05121	11243	20234	30214	40224
		50222	60292	10619				
	1819	00000	02121	05101	11251	20302	30172	40202
		47122	58012	10610				
	1919	00112	02104	05104	08092	10000	20252	30192
		32153	40133	47062	50033	60043	10610	
	2002	00094	02095	05084	10051	12241	20xxx	27162
		30142	40123	52071	60022	40670		
	2021	00104	02105	05104	10113	12072	17362	20342
		24302	30162	10326				
	2219	00090	02092	05062	10361	12291	20293	52235
	2320	00000	02081	06043	10344	50115		
(+)	2420	00112	02109	06301	10311	13351	17092	20051
		23011	31051	37252	40253	20490		
(+)	2520	00141	02081	05081	10251	13272	52165	

January (contd.)

(+)	2619	00000	02281	05312	10312	30114		
(+)	2720	00000 20479	02042	05051	10180	20132	30122	40112
(+)	2920	00000	02092	05052	10053	15022	20360	12245
(+)	3020	00131 30272	02081 40242	05051 45262	10112 23460	15181	20161	22202
(+)	3120	00230 40232	02291 20460	06131	10124	20142	30121	37251

February

(+)	0120	00000 40172	02231 20460	05240	10xxx	20101	30031	37192
(+)	0520	00100	02091	05091	10124	20123	20233	
(+)	0820	00181 50329	02342	05291	10081	13312	20302	30253
(+)	0919	00000	02031	05062	10021	17281	10209	
(+)	1019	00030	02xxx	05xxx	10191	20270	30282	10369
(+)	1219	00000 32342	02094 10349	05104	10122	20122	22082	29022
(+)	1319	00220	02102	05115	10105	20094	20269	
(+)	1419	00044	02049	05058	10552	92141		
(+)	1519	00043	02042	62045				
(+)	1619	00131	02094	05074	10066	20067	39249	
(+)	1720	00095	02096	05096	20091			
(+)	1919	00131	02106	05097	10591	25129		
	2020	00104	02107	05107	10097	23141		
(+)	2120	00000	02104	05085	10076	20093	20229	
(+)	2219	00151 20399	02103	05094	10084	20061	30091	38052
(+)	2320	00113	02115	05104	10084	20092	27092	13295
(+)	2419	00114	02105	05085	10075	20065	99229	
(+)	2619	00000	02104	05095	10075	20084	83229	
(+)	2719	00190	02231	05132	10124	20114	27084	23309
	2819	00102 59154	02104 10610	05116	10115	20124	30133	40152
(+)	2919	00181 40114	02331 10439	05352	10111	20361	24082	30112

March

(+)	0219	00111	02104	05094	10064	13054	13159	
	0420	00240 46037	02262 14485	05222	10232	20202	30124	40034
(+)	0519	00000 10339	02091	05202	10222	17152	20152	30082
(+)	0619	00000	02061	05151	10154	20134	29136	20309
	0702	00052 20234	02042	05291	08172	11142	15102	21062

March (contd.)

(+)0719	00000	01122	05092	10121	18131	20161	24142
	20279						
0819	00000	02092	05082	10072	21122	30110	34081
	40093	50074	60064	20629			
0919	00000	02101	05071	10061	20112	30113	40123
	50113	56153	60163	30649			
1119	00000	02112	05113	10121	12092	20092	24122
	30113	38073	50063	61121	70116	80116	20889
1219	00000	02103	06094	10094	17113	20114	30115
	40114	50095	59084	30610			
1319	00133	02115	05096	62065			
1419	00160	02113	05095	10095	20124	30105	40123
	46163	50152	60182	67233	70232	10785	
1519	00180	02123	05114	10123	20171	30134	37091
	40101	50111	56143	60135	20666		
1620	00081	02082	05085	10104	20365	30353	40361
	42292	50262	56232	60332	64041	70182	80253
	85234	90275	99276	10109			
1819	00230	01262	05331	10302	20322	30342	40322
	62455						
1919	00000	02292	05293	10304	20353	30337	40286
	51445						
2019	00000	02112	06232	10264	18276	13204	
2120	00000	02061	05013	08014	64085		
2619	00114	02115	05119	10118	14108	30159	
2719	00114	02115	05108	10096	20104	23085	30075
	10329						
2820	00122	02115	05108	10096	20086	99265	
2919	00112	02104	05085	20085			
3019	00131	02112	05055	10055	15046	93205	

April

0220	00191	02180	05013	07346	62085		
0319	00000	02121	06231	10252	15262	20264	24272
	29312	40352	23445				
0419	00190	02131	05091	10131	20122	23092	27261
	30231	35321	40252	70475			
0519	00252	02234	05216	10233	18274	29262	17385
0619	00160	02124	05117	10115	20202	24262	30312
	40323	33496					
0920	00272	02284	05314	10305	17308	62185	
1019	00000	02131	05321	10313	20342	10301	
1120	00221	02181	05032	10035	20055	30231	
1219	00200	02241	05061	10050	17050	8x185	
1319	00201	03332	11361	20352	32323	40323	50362
	60343	30610					
1519	00130	03052	06112	10152	18203	40205	
1620	00100	02081	05101	52065			

April (contd.)

1719	00170	02124	05116	10092	15242	21192	29272
	40232	50074	60095	10610			
1819	00201	02131	05132	10141	14031	20302	30032
	40091	49075	60067	10610			
1919	00181	02142	05124	10094	20084	30122	40102
	50093	55053	60054	20610			
2019	00000	02112	05125	10114	20092	30082	40113
	43053	50042	59032	70011	82172	90145	10167
	11169	12174	13214	14215	15186	30169	
2219	00000	02112	05103	10082	20052	27242	
2319	00171	02122	05083	10064	14044	20152	
2419	00131	02113	05094	10074	20054	30034	40013
	50334	60335	70336	80326	94267	10277	20135
2619	00094	02084	05072	08102	12082	20083	29255
2719	00201	02114	05126	11084	20095	30085	40074
	39445						
2919	00160	02132	05133	10202	20180	30301	37342
	40363	50353	58282	70296	80306	90254	10254
	11254	12254	20129				
3019	00200	02102	05115	10094	15054	20074	32221
	40302	44481					

May

(+)0119	00200	02114	05115	10104	15063	34172	
(+)0219	00191	02104	05115	10104	16094	24182	
(+)0319	00114	02107	06098	09089	10105		
(+)0419	00132	02126	05108	10099	20065	30063	39355
(+)0619	00191	02331	05362	10301	12331	20333	30344
	40345	10439					
(+)0719	00201	02114	06084	10064	18025	22025	50235
(+)0819	00161	02103	05103	10092	12072	10152	
(+)0919	00171	02124	05105	11124	10132		
(+)1019	00211	02252	06132	10114	17142	20123	22094
	29133	10419					
(+)1120	00000	02231	05202	10183	16272	20254	10242
(+)1419	00200	02173	05182	10171	12321	20252	30277
	10372						
(+)1519	00131	02135	05125	10129	20122	24222	10252
(+)1619	00152	02116	05107	10109	16055	20313	43211
(+)1719	00121	02105	05116	10105	16053	20054	50211
(+)1819	00181	02116	05108	10115	16092	10189	
(+)2020	00131	02104	05095	10075	12056	20084	10309
2119	00000	02091	05092	10124	20135	27167	30123
	35102	40113	47045	50054	55094	60093	62054
	70112	10799					
(+)2219	00211	02061	05114	09116	94105		
(+)2319	00105	02095	05097	99065			
(+)2419	00201	02092	05083	10332	20302	28212	30193
	13381						
(+)2519	00201	02152	05124	10123	20102	40222	

May (contd.)

(+)2723 00142 02135 05114 09064 20075 28088 92295
(+)2823 00095 02099 05096 10087 13115
(+)2923 00104 02106 05097 10077 20122
(+)3023 00084 02095 05085 10112 20122
3123 00092 02083 05093 10102 15072 20063 30124
35053 40044 49022 53142 60103 70143 80175
90214 10234 11283 12257 13277 33146

June

0123 00096 02097 05114 10133 15104 20103 23074
30084 40121 43282 20440
0223 00094 02095 05113 10112 20123 30071 10310
0423 00084 02095 05104 10124 20072 30361 40032
47331 50342 55024 60035 70024 80033 20850
0523 00104 02105 05095 10095 20085 30065 38033
20500
0623 00104 02105 05095 10084 20074 26022 26271
0723 00105 02115 05124 10112 49155
0823 00095 02106 05117 10118 20116 30137 40151
10460
1023 00093 02095 05085 10084 18084 99205
1123 00072 02073 05112 10193 20023 40291
1223 00104 02115 05114 10123 40155
1323 00096 02108 05124 10133 15093 20092 29191
38331 49032 46521
1423 00117 02118 05137 10136 15085 56186
1523 00104 02115 05126 10105 20113 29275
1823 00096 02119 05117 10601 15087 29209
1923 00096 01105 04109 10042
2023 00106 02117 05108 10109 20085 29072 20323
2123 00107 02109 05118 10118 20134 25256
2223 00116 02118 05128 10591 16099 40171
2423 00105 02107 05097 10087 20075 24113 30202
10311
2523 00094 02105 05104 10083 15065 5x175
2623 00105 02114 06191 10142 9x125
2723 00095 02115 05125 10104 13145

July

0123 00331 02332 05201 10142 40134
0223 00162 02162 05164 10164 14213 53175
0323 00094 02104 05123 10152 13141
0423 00113 02114 05123 10221 18294 50205
0523 00072 02092 05231 10151 14063 71155
0823 00131 02132 05153 10152 53125
0923 00361 02011 04121 62045
1023 00113 02123 05171 10152 15201 52175
1123 00116 02117 05119 10117 15092 20151 23302
30241 40342 73411
1223 00095 02095 05123 43105

July (Contd.)

1323	00095	02097	05115	10124	20135	30183	40183
	44202	10470					
1410	00200	02xxx	05xxx	10114	15132	20112	40239
1509	00180	02142	05171	11123	10188		
1523	00341	02361	05131	10152	12182	20182	30203
	35213	40233	49312	10506			
1609	00171	02122	07103	14142	18231	10208	
1623	00105	02104	05133	10172	21211	32251	41313
	46335	10499					
1709	00191	02124	05117	10105	20161	29202	10359
(+)1723	00096	02098	05105	40075			
1809	00191	02134	05115	10084	14124	20113	27172
	10299						
1823	00094	02095	05105	10123	18072	21132	30182
	40251	44031	50064	61105	70123	80074	90032
	10345	11276	12266	13307	14244	40151	
1909	00180	02114	06094	11043	15143	18284	40239
1923	00091	02082	05062	10352	15322	20263	26192
	10296						
2009	00181	02112	06253	10253	15273	20244	40239
2023	00011	02012	05030	10162	20183	32353	40323
	10490						
2109	00000	02180	05221	08341	11182	15142	20112
	30162	40162	10439				
(+)2223	00115	02117	05612	10613	10115		
2323	00107	02601	05600	10109	15116	20291	30181
	40272	50312	60312	10701			
2423	00096	02096	05096	10085	18185	30250	40352
	50323	61214	70111	80243	90275	10274	11265
	12239	13353	14282	15251	10169		
2523	00095	02097	05096	10105	18136	30125	40116
	52133	61124	10679				
2623	00096	02097	05107	10124	17104	10186	
2723	00108	02118	05118	10109	40105		
(+)2923	00094	02104	05142	10092	12012	20023	51215
3009	00171	02104	06116	10084	15133	20133	40249
(+)3023	00104	02107	05098	10074	19055	44202	
3109	00162	02103	05093	08053	30128		
(+)3123	00123	02084	05074	10072	15044	20024	30024
	40015	45334	20469				

August

0109	00114	02104	05095	08085	4x099		
(+)0123	00114	02084	05065	10054	17045	20036	20205
0209	00111	02103	06074	10073	17052	40181	
(+)0223	00071	02062	05091	09151	18351	30035	10379
0309	00191	02180	05131	10112	18032	23033	30248
(+)0323	00105	02105	05122	09145	20133	23212	
0410	00121	02071	05091	10134	15113	5x181	
(+)0523	00105	02114	05133	10163	13164	50155	
(+)0623	00096	02105	05124	10115	16114	10179	

August (contd.)

(+)0723	00095	02109	05602	10129	13145	53155	
(+)0823	00094	02104	06153	10154	18054	30041	38025
	40024	50031	59322	13742			
(+)0923	00108	02109	05109	07105	63095		
(+)1023	00104	02105	05085	10084	13075	10152	
1223	00050	02032	05333	10325	20345	30322	38274
	50305	60306	70288	73279	13799		
1309	00201	02102	05111	08262	15274	20262	23254
	30252	43409					
(+)1323	00341	02011	05051	10232	16242	20175	
(+)1409	00000	01121	05071	09131	20101	40269	
(+)1423	00094	02103	05092	10143	16073	20064	32162
	70341						
(+)1509	00113	01103	04114	08125	4x095		
(+)1523	00096	02096	05115	10114	15115	20169	
(+)1609	00201	02115	05106	10095	15084	20102	22161
	26033	1x309					
(+)1623	00094	02095	05094	10092	12132	20084	24114
	26279						
(+)1709	00180	02114	05125	10125	15113	20124	27122
	20299						
(+)1723	00xx0	02121	05123	10114	15122	18062	32101
	40121	43044	48332	50332	57231	60181	26621
(+)1809	00161	02124	06162	10135	15073	20074	23211
(+)1909	00122	05095	09075	13044	54155		
(+)1923	00095	02104	05142	10133	15093	18033	23215
2009	00230	02292	05122	10104	16032	20033	22312
	32355	34359					
2522	00096	02107	05116	10106	20074	22077	10242
2623	00107	02118	05613	52067			
2723	00094	02115	05127	10128	15094	20092	27232
2823	00093	02113	05152	10133	15115	20142	29051
	24235						
2922	00095	02095	05113	10153	12173	40145	
3009	00201	02132	05123	11143	17344	20313	27324
	40299						
3023	00095	02095	05104	10151	11191	40125	
3123	00095	02107	05096	10104	20252	30253	20460

September

0423	00096	02096	05105	10113	24179		
0523	00098	02097	05104	10121	20023	24296	
0623	00117	02600	05098	10088	12017	27159	
1022	00092	02074	05073	10082	20113	32091	20340
(+)1222	00105	02096	05094	10121	20102	26054	20292
(+)1400	00095	02106	05113	10132	15180	23161	
(+)1411	00141	02114	05105	60065			
(+)1419	00000	02114	05105	10096	15074	20062	80219
(‡)1600	00095	02097	05096	10095	23129		
(+)1700	00095	02097	05099	10600	10119		
(‡)1710	00131	02116	05107	10097	14096	10159	

September (contd.)

(+)	1719	00161	02124	05116	10128	17118	23189	
(+)	1722	00096	02115	05116	10610	15127	24159	
(+)	1823	00106	02108	05108	12079			
(+)	1923	00115	05137	08145	8x089			
	2023	00114	02124	05134	10134	20102	30343	40334
		27425						
	2123	00094	02104	05113	10162	84205		
	2210	00131	02114	05133	10135	20242	24274	27256
		47299						
	2222	00095	02097	05106	10134	20212	26252	10272
	2310	00092	02114	05116	10107	20180	23301	50265
	2323	00107	02108	05127	10117	84185		
	2409	00103	02127	05129	10119	18052	54209	
	2423	00108	02109	05117	10104	14087	47155	
	2509	00097	02610	05109	08107	57095		
	2523	00124	02106	05108	52065			
	2609	00114	02115	05105	10095	13078	21034	40299
	2623	00105	02136	05159	11085	20054	54295	
	2709	00131	02124	05105	11035	20025	52215	
	2723	00104	02095	05085	44085			
	2823	00102	02093	05054	06064	14034	20016	30365
		44385						
	2910	00000	02132	05114	10101	15271	20291	44219
	2922	00107	02097	05095	10103	15241	20263	30275
		20310						
	3009	00104	02115	05107	10099	20132	24193	30215
		38246	40416					
	3022	00108	02109	05107	17115	20135	40249	

October

	0109	00132	02xxx	05xxx	10108	20112	5x241	
	0123	00108	02108	05108	10116	20164	30189	40227
		47275	50266	60162	62149	70233	80148	90149
		00096	20009					
	0209	00161	02134	05116	10107	15164	20196	30185
		40339						
	0223	00106	02095	05095	10097	17095	10185	
	0309	00111	02125	05116	10054	15066	20034	30361
		1x309						
	0401	00106	02097	05096	10094	12073	20153	
	0409	00111	02116	05118	10098	15104	20074	30052
		02310						
	0423	00091	02092	06132	12094	21082	26025	32365
		40335						
(+)	0509	00000	02042	05353	10356	15347	20016	1x265
	0522	00011	02362	03354	05344	07334	11325	15337
		10172						
	0610	00161	02xxx	05xxx	10xxx	15344	20333	26312
		10279						
(+)	0622	00072	02042	05021	10351	20342	30332	20320
	0709	00201	02112	05092	12341	20312	27272	20299

October (contd.)

(+)0723	00095	01086	05104	10102	13092	21121	30221
	33021	40062	11435				
0809	00191	02134	05127	10116	20092	30313	37353
	42385						
(+)0823	00106	02107	05109	10095	40129		
0909	00113	02104	05074	6x061			
(‡)0923	00071	01072	06362	10354	13345	17365	40215
1009	00191	02101	05032	10323	20334	30324	37344
	10389						
1023	00071	01062	05012	10341	20314	30315	20349
1109	00111	02141	05070	10090	15281	20176	
(+)1123	00072	01064	05064	10064	20112		
1209	00190	01180	05022	10131	14152	20151	10279
1309	00161	02132	05142	10144	20173	26131	30141
	40329						
(+)1322	00115	02116	05144	65062			
1409	00162	02124	05135	10134	15032	20322	24312
	30333	10389					
(‡)1423	00108	02108	06132	10142	11191	29129	
1509	00201	02181	05122	10094	14052	18044	23044
	52249						
(+)1523	00096	01089	05105	07109	96095		
1610	00132	02115	05117	10105	20063	29064	43329
(+)1623	00095	01108	05099	10581	12079	87132	
1709	00111	02115	05096	10087	17055	53189	
1723	00095	01099	05097	10107	15105	23169	
1809	00112	02116	05105	10042	12363	20013	30353
	53349						
1823	00096	01097	05124	10112	15171	17162	
1909	00121	02115	05105	10092	17171	29182	53309
(+)1923	00093	01094	05103	10112	20112	10222	
2010	00191	02121	05112	10122	20152	30062	13349
(+)2023	00094	02096	05102	10192	13153	30162	
(+)2123	00094	01097	06053	10042	13022	76152	
(+)2223	00096	01097	05123	07142	41092		
2309	00104	02106	05097	10098	18057	41205	
2322	00114	02095	05096	10054	20034	26023	30005
	34354	23351					
2422	00094	02095	05094	09102	14112	20102	27012
	32024	40344	43355	26441			
2509	00000	02123	05113	10124	20122	30072	50309
2522	00107	02118	05610	10108	14592	16175	
2609	00112	02125	05126	10119	20116	30083	40339
2622	00107	02108	05118	10109	20106	30109	37106
	34439						
2709	00112	02104	03096	62055			
2723	00114	02107	05096	08094	33092		
2809	00121	02115	05095	10094	20093	26083	40271
2902	00161	02124	05105	10065	62155		
2909	00132	02117	05097	10085	20103	27072	30091
	35041	40261	44252	4x469			
2923	00104	02095	05105	10083	15062	20082	30012
	28322	44012	13461				

October (contd.)

3009	00181	02251	05124	10124	21183	40239	
3022	00103	02094	05094	10094	20075	29112	34342
	41273	50245	55274	20584			
3121	00091	02031	05341	10324	20314	29092	40214
	50051	55001	60112	66121	72132	76131	20799

November

0109	00201	02272	05324	10315	20304	30305	41276
	40439						
0122	00364	02334	05314	09316	92115		
0222	00113	02093	05104	11131	15161	82205	
0309	00201	02221	05133	10145	18115	40201	
0322	00091	02072	05044	10043	14053	39151	
0409	00181	02112	05064	10054	15055	40175	
0422	00051	02053	05052	10022	20046	30032	40053
	50015	60367	20665				
0509	00131	02123	05073	10044	20053	30084	13329
0522	00201	02133	05094	10115	20135	26125	24275
0609	00201	02124	05116	10106	15085	20072	27065
	10299						
0622	00114	02105	05107	10095	21084	27084	80292
0709	00161	02114	05105	10085	20044	20215	
0723	00095	02096	05108	10104	15075	20074	30067
	36359						
0809	00122	02104	05086	11057	21044	25269	
0823	00104	02105	05096	10076	20066	30044	40043
	37455						
0910	00161	02112	05xxx	08093	14053	20054	24055
	61275						
0922	00094	02095	05094	10094	20102	30102	38052
	43032	49343	52013	35531			
1010	00191	02122	05164	10166	20155	43235	
1022	00105	02095	05096	10096	20084	30084	35113
	97385						
1109	00170	02180	05052	10043	12034	62141	
1122	00051	02061	05291	10302	20314	30315	35306
	34375						
1209	00191	02121	05231	10061	20244	30275	24300
1223	00314	02314	05304	10294	20314	30315	36325
1309	00131	02112	05152	10182	20295	30294	26319
1323	00351	02332	05291	10041	20324	30244	27315
1409	00181	02161	10xxx	83125			
1423	00118	02097	06072	10151	57125		
1509	00101	02122	05155	10173	83175		
1523	00108	02096	05132	10182	20293	30293	54304
1609	00161	02124	05107	10094	20332	40269	
1622	00105	02104	05152	10340	20273	27364	30314
	40302	46192	50132	58052	64211	80662	
1710	00292	02202	05142	10074	07129		
1722	00107	02098	05107	10105	20036	30024	34333
	40304	20472					

November (contd.)

1809	00132	02116	05118	10096	12078	10149	
1822	00097	02106	05106	10085	20093	26073	20299
1909	00114	02105	05117	10117	20082	24174	30164
	10339						
1922	00097	02096	05114	10113	17173	20153	20212
2009	00181	02133	05125	10143	20184	24052	30114
	38074	44084	47065	50066	53093	10569	
2022	00094	02084	05095	10112	12163	20061	24015
	30035	40054	47075	20502			
2109	00161	02114	05075	10076	4x145		
2122	00328	02339	05325	10333	62125		
2209	00131	02114	05105	10112	20063	30014	40344
	43355	50335	55336	46599			
2222	00104	02105	05096	10095	20094	27122	14295
2322	00097	02107	05117	10116	17085	20105	10219
2409	00112	02115	05107	10097	20096	30106	20349
2423	00097	02105	05105	10095	20074	29045	20309
2509	00131	02114	05107	10107	17142	20132	30143
	40329						
2523	00097	02086	05103	10113	20082	30052	38241
	27405						
2609	00201	01182	04104	10122	15171	20332	3x265
2622	00096	02075	05074	96065			
2709	00201	02091	05092	10000	20211	30282	37212
	40389						
2723	00353	02353	05251	10023	20234	30265	40276
	20419						
2809	00163	02xxx	05xxx	11155	15242	20245	29262
	40305						
2823	00105	02106	05123	10163	14163	85155	
2909	00000	02000	05xxx	10142	14261	17282	10189
2923	00105	02106	05126	10154	53125		
3009	00162	02124	05115	10133	14252	20274	23324
	50249						
3023	00106	02107	05107	10104	15073	20301	27215

December

0110	00114	02115	05118	10105	20072	23052	41245
0122	00105	02106	05128	10116	14117	17155	
0209	00115	02116	05119	10109	20593	41235	
0223	00096	02097	05107	10096	20075	46215	
0309	00124	02117	05106	87065			
0323	00102	02103	05093	10054	14012	17023	57185
0409	00102	02115	05096	10083	20351	30353	62369
0423	00104	02105	05106	10105	14096	18102	20205
0509	00112	02114	05097	10098	20114	62239	
0517	00117	02600	05601	10108	15115	67181	
0601	00103	02114	05115	10095	20075	30093	51359
0609	00123	02114	05124	10151	20173	47245	
0623	00107	02109	05119	10600	44129		
0709	00104	02104	05125	10127	20116	57265	
0723	00113	02115	05127	10620	15116	20118	86235

December (contd.)

0810	00121	02145	05136	10127	41121		
0822	00115	02117	05117	10119	17107	37185	
0923	00261	02302	05302	10143	14122	20081	82212
1008	00132	02112	05093	10092	12354	15032	43175
1020	00121	02133	05145	10094	20142	24262	47265
1023	00051	02331	05251	10121	15184	20202	30264
	40246	47274	50256	60760	46625		
1109	00191	01181	02071	0x035			
1123	00051	02042	05061	10301	20272	20205	
1209	00201	02262	05282	10302	14293	53155	
1223	00021	02022	05092	10211	12213	80155	
1309	00180	02091	05131	10051	12250	5x145	
1323	00094	02094	05082	10071	12161	20201	23283
	80245						
1423	00103	02122	05182	10162	12172	17152	51185
1509	00181	02151	05112	10201	20282	30263	41293
	47505						
1522	00093	02094	05084	10074	20060	23241	30293
	23505						
1609	00131	02114	05114	10114	20302	26315	20279
1709	00181	02132	05050	10262	20255	30274	38266
	44409						
1723	00031	02052	05051	10281	14252	14154	
1809	00181	02122	05091	07270	10272	20233	46269
1823	00093	02093	05093	10172	10111		
1909	00121	02093	05073	07052	10131	40111	
1923	00071	02062	05362	10331	20304	30316	23342
2009	00181	02xxx	05352	10335	17304	52185	
2023	00301	02322	05335	10336	14338	20337	27309
	30319	86325					
2109	00241	02304	05304	10316	20307	30316	40409
2123	00353	02334	05343	10345	20082	26171	24271
2210	00170	02102	05031	10333	20294	30297	40287
	50266	40649					
2222	00313	02314	05264	10265	17141		
2310	00232	02244	05235	10236	15253	20273	00359
2323	00274	02274	05263	10256	20276	30254	38232
	10409						
2409	00200	02214	05234	10265	20295	30255	40213
	46361	00369					
2423	00303	02313	05000	10211	20245	20279	
2509	00191	02xxx	05263	10302	20276	40279	
2522	00081	02082	05061	10252	36144		
2609	00132	02133	05124	10123	20152	40265	
2622	00320	02291	05192	10123	20104	30074	40093
	27465						
2709	00000	02102	05115	10127	20127	30094	40113
	40428						
2722	00094	02107	05600	10109	17109	96185	
2809	00123	02xxx	05xxx	10129	18139	87185	
2823	00094	02093	05102	10172	20111	27252	86275
2910	00191	02152	05122	10124	20042	30243	40255
	50235	40539					

December (contd.)

2922	00231	02203	05162	10152	20311	36245	
3009	00180	02122	05123	10144	40125		
3023	00104	02114	05134	10144	15141	34175	
3109	00121	02122	05101	10122	15182	20321	23262
	4x241						
3123	00332	02312	05322	20064			

CLIMATOLOGICAL SUMMARY, 1940

Mean Values and Frequencies of Meteorological Elements

Station - Atafu Lat. 8° 32'S. Long. 172° 31'W. Altitude: 6 feet above sea level (barometer cistern) Hour of observation 8.0 a.m. Local Time (Time standard: +11h i.e. slow on Greenwich)

Month	Barometer (millibars)	Temperature °F								Rainfall (inches)	Wind - Number of observations of:-										Cloud - Number of observations of:			Number of daily reports available
		Dry Bulb	Wet Bulb	Mean Maximum	Absolute Max.	Date	Mean Minimum	Absolute Minimum	Date		Forces 8 or more	Forces 4 - 7	Forces 1 - 3	Calm	N	NE	E	SE	S	SW	W	NW	Variable	Clear Sky 0-2	Partly clouded 3 - 7	Overcast 8-10	
January	1008.9	82.8	79.0	89.9	93.6	12th,	79.0	72.2	18th.	8.06	0	3	28	0	2½	4½	12	3½	1½	0	1	6	0	2	14	15	31
February	1008.6	81.9	78.0	88.2	93.9	3rd.	78.2	74.5	21st.	28.64	0	2	27	0	5½	6½	9½	0	0	0	3	4½	0	0	10	19	29
March	1009.2	81.6	77.9	88.5	91.8	14th.	78.0	75.7	21st.	17.52	0	2	29	0	2	9	9	3	2	0	4	2	0	0	10	21	31
April	1010.1	83.8	79.1	91.0	93.2	15th.	79.9	78.2	4-23.	5.52	0	0	30	0	½	6½	17	4	2	0	0	0	0	3	17	10	30
May	1009.6	83.8	79.1	90.9	92.8	6th.	79.9	77.4	24th.	8.08	0	4	27	0	1	3	19½	4½	½	1½	1	0	0	2	16	13	31
June	1009.8	82.7	78.6	88.7	91.8	2nd.	78.7	75.7	30th.	7.91	0	1	29	0	2	3½	16½	5½	2	0	0	½	0	0	13	17	30
July	1010.8	81.6	77.6	86.6	90.3	11-17.	77.2	73.9	29th.	15.40	0	9	22	0	2	6½	15½	5	0	0	½	1½	0	1	13	17	31
August	1010.2	82.6	78.0	86.7	90.4	14-16.	78.4	74.2	18th.	7.35	0	11	20	0	1½	4½	17½	6½	0	1	0	0	0	0	19	12	31
September	1010.5	82.3	77.5	86.7	91.7	12-28.	78.1	74.2	2nd.	11.32	0	4	25	1	0	3½	20½	3	1½	½	0	0	0	2	18	10	30
October	1010.1	83.1	77.9	87.7	93.2	1st.	78.6	75.7	22nd.	10.33	0	6	25	0	2	7½	15½	4	1½	0	0	½	0	2	16	13	31
November	1009.2	82.8	77.8	88.9	93.9	2nd.	78.4	75.0	28th.	11.21	0	1	28	1	3½	2½	14½	4	2½	½	½	1	0	0	16	14	30
December	1007.3	82.3	78.2	87.5	91.8	19th.	78.0	75.2	22nd.	17.68	0	13	18	0	5½	4½	1	0	2½	3½	8½	5½	0	0	5	26	31
YEAR										149.02																	

Source of data:

Monthly meteorological reports supplied by the native radio operator, Simi. Readings of pressure are obtained from a Kew pattern mercury barometer (M.O. 874) and temperatures are read from mercury thermometers. The readings of the barometer are corrected for index error, temperature, gravity and elevation above mean sea level.

Note: The frequencies of wind have been condensed to eight principal points by crediting one half of the frequencies of intermediate points to each of the neighbouring principal points; e.g. a frequency of 5 observations of wind from N.N.E. is expressed as N 2½ and NE 2½.

CLIMATOLOGICAL SUMMARY, 1940

Mean Values and Frequencies of Meteorological Elements

Station - Nukualofa Latitude 21° 08'S Longtitude 175° 12'W Hour of observation: 8.20 a.m. Local Time from Jan. to Oct. 7.50 a.m. " " " Nov. to Dec. (Time standard: -12h 19m i.e. in advance of Greenwich).

Month	Barometer (millibars)	Temperature °F: Dry Bulb	Wet Bulb	Mean Maximum	Absolute Max.	Date	Mean Minimum	Absolute Min.	Date	Rainfall (inches)	Wind - Number of observations of: Forces 8 or more	Forces 4 - 7	Forces 1 - 3	Calm	N	NE	E	SE	S	SW	W	NW	Variable	Cloud - Number of observations of:- Clear sky 0-2	Partly clouded 3 - 7	Overcast 8-10	Number of daily reports available
January	1012.3	77.6	72.2	81.8	87.5	31st.	69.8	63.0	17th.	0.45	0	4	27	0	3	2	10	12½	3½	0	0	0	0	2	17	12	31
February	1012.0	81.3	76.0	86.0	87.8	6th.	75.0	67.4	14th.	0.45	0	8	21	0	0	1½	14	11	2½	0	0	0	0	6	9	14	29
March	1012.0	79.9	76.2	84.4	87.0	2nd.	75.0	66.0	23rd.	5.97	0	4	27	0	1	½	14	12	2½	1	0	0	0	5	14	12	31
April	1012.8	73.8	69.0	79.5	82.5	12th.	68.6	62.2	22nd.	7.09	0	3	25	1	0	1	5½	7	10	2½	1	1	1	4	8	18	30
May	1013.9	72.6	69.5	78.1	82.6	7th.	67.7	60.0	15th.	9.73	0	3	18	10	0	4	2	6	6½	1½	1	0	0	3	8	21	31
June	1017.1	70.4	66.3	75.2	79.0	6th.	67.2	62.5	28th.	3.58	0	8	22	0	0	0	10	13½	6	½	0	0	0	2	5	23	30
July	1016.6	68.4	64.2	73.9	77.8	21st.	63.2	51.7	5th.	1.04	0	4	24	3	1	1½	8	6½	6½	3	1	½	0	4	12	15	31
August	1016.5	67.9	63.8	73.4	76.1	28th.	61.8	53.4	19th.	5.60	0	4	25	2	0	1	4½	11½	7	3½	1½	0	0	7	8	16	31
September	1016.9	70.8	66.8	74.9	78.8	29th.	66.2	59.5	16th.	4.25	0	5	25	0	1½	2	6	14	6½	0	0	0	0	3	7	20	30
October	1016.3	73.0	68.2	76.6	80.2	6th.	67.8	63.0	11,12 & 23rd.	4.27	0	9	22	0	1	3	15½	4½	5	2	0	0	0	2	14	15	31
November	1013.9	74.7	68.4	72.8	82.3	26th.	66.6	56.5	3rd.	2.67	0	2	26	2	0	7	4½	8	6½	2	0	0	0	6	12	12	30
December	1012.3	75.3	70.8	79.7	82.4	17th.	70.5	67.0	1st.	1.97	0	16	15	0	0	0	10½	20½	0	0	0	0	0	1	14	16	31

Source of data:

Monthly meteorological records supplied by the Telegraph and Telephone Department, Nukualofa, Tonga. Readings of pressure are obtained from a Kew pattern mercury barometer (Hicks, London). The readings of the barometer are corrected for index error, temperature, gravity and elevation above mean sea level. Temperatures are measured by means of mercurial thermometers.

CLIMATOLOGICAL SUMMARY, 1940

Mean Values and Frequencies of Meteorological Elements

Station - Norfolk Island Latitude 29° 00'S Longtitude 167° 55'E
Altitude 300 feet approximately above sea level.

Hour of observation, 10.30 a.m. Local Time.
Time standard -11h.30m. i.e. in advance of Greenwich.

Month	Pressure (millibars)	Temperature °F: Dry Bulb	Wet Bulb	Dew Point	Rainfall (inches)	Forces 8 or more	Wind - Number of observations of: Forces 4 - 7	Forces 1 - 3	Calm	N	NE	E	SE	S	SW	W	NW	Variable	Cloud - Number of observations of:- Clear Sky 0-2	Partly clouded 3 - 7	Overcast 8-10	Number of daily reports available.
January	1013.5	72.3	67.8	65	11.33	0	5	25	1	5	5½	6	4½	3½	2	1	2½	0	1	6	24	31
February	1014.3	72.7	69.0	68	2.02	0	8	17	4	2	5	7	2½	5½	1	2	0	0	2	3	24	29
March	1018.2	71.6	67.1	65	3.15	0	6	23	2	½	3½	8	10	4½	1	½	1	0	2	9	20	31
April	1019.4	68.8	62.2	58	1.49	0	2	25	3	2	½	7	6	7	2	1	1½	0	4	12	14	30
May	1016.7	65.0	59.5	55	2.33	0	3	25	3	1½	1½	4	2½	3½	10	3½	1½	0	2	9	20	31
June	1012.3	62.7	57.4	53	2.27	0	4	23	3	½	5½	6½	4	7	2½	1	0	0	1	11	18	30
July	1012.0	61.4	56.2	52	3.16	0	3	22	6	1½	3½	3	3½	6	5	2½	0	0	2	10	19	31
August	1021.4	61.8	56.1	52	1.81	0	1	28	2	1	4	3½	6	5½	5	3	1	0	3	10	18	31
September	1021.4	63.0	57.3	53	3.89	0	4	26	0	1½	3½	5½	4½	7	4	2	2	0	2	12	16	30
October	1020.6	66.0	59.7	55	0.76	0	1	29	1	4	3½	3	4½	8½	3	2	1½	0	3	9	19	31
November	1015.8	68.4	61.3	56	1.18	0	7	23	0	2½	6½	4	2	½	7	5½	2	0	1	10	19	30
December	1019.7	71.7	65.0	61	1.48	0	2	29	0	2½	8	11½	5	2	1	½	½	0	2	15	14	31
				YEAR	34.87																	

Source of data:

Written reports made by the Meteorologist attached to the Department of the Interior, Commonwealth of Australia, who is stationed on Norfolk Island. Pressure readings are made with a mercurial barometer, M.O. 1253, and temperatures are read from mercurial thermometers.

Atmospheric Electricity, 1940

The observations of potential gradient at the Land Station with the Benndorf electrometer were continued under the guidance of the Carnegie Institute of Washington who provide a grant-in-aid for this purpose. The scale value of the instrument was determined four times a week and lay in the region of 70 volts per centimetre. Frequent leak tests of the insulation of the instrument were carried out and in general the standard of insulation was such that the logarithmic rate of leak was 0.025 or less.

In May collector No. 53 at the Land Station was replaced by No. 52 which had been repointed and standardized by the Department of Terrestrial Magnetism, Washington who also reconditioned collectors Nos. 23 and F 33 which are used on the stretched wire in absolute determinations. An additional collector for absolute observations, No. F 8, was also forwarded.

During the year three absolute determinations of the reduction factor of the Land Station were carried out on the sandflats to the South of the Observatory, using the stretched wire and incorporating the leak-free, potentiometric method due to Gish and Sherman. The mean values of the reduction factor obtained in these experiments were as follows:-

17th May	0.99
31st July	1.01
1st August	1.02

These justify the continued use of unity as the reduction factor.

The electrical classification of days is as follows:

Character 0:- Days during which no negative potential gradient is recorded.

Character 1:- Days during which negative potential gradient is recorded for one or more short periods amounting to less than three hours in the aggregate.

Character 2:- Days during which the period of negative potential gradient recorded amounts in the aggregate to three hours or more.

The days is unclassified (Character X) if, after interpolating where interpolation is justified, there is still no record over a period or periods amounting in the aggregate to three hours or more, provided that the day is not of character 2 as above. During 1940 the number of days of character 0 recorded was 130, this being even larger than the unusually high number recorded last year.

Potential Gradient 1940. at Apia Observatory, Samoa

(Based on days free from negative gradient).

Tabular values are the average values expressed in volts per metre, using reduction factor 1.00 for successive periods of one hour. Time Standard, Meridian 165° West of Greenwich. The seasonal means are derived from the following grouping of months:- Wet - November 1939 to February 1940 inclusive; Dry - May to August inclusive.

Month	Hour	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	No. of Days																									
January	+8	92	90	92	105	94	94	125	207	221	132	106	97	87	88	86	80	81	91	98	145	159	120	98	97	112
February	6	91	95	99	98	96	99	145	275	276	149	123	109	101	99	93	90	93	96	110	170	157	132	105	102	125
March	4	108	107	109	93	92	109	128	202	287	171	123	107	97	95	91	87	87	93	113	177	167	136	109	93	124
April	5	82	84	81	75	74	84	100	181	236	172	114	109	99	96	90	94	96	89	136	194	166	136	109	104	117
May	18	84	87	85	84	86	93	126	219	248	168	125	117	114	107	101	98	99	100	142	198	181	130	116	99	125
June	‡12	93	98	98	87	93	103	129	196	237	217	152	145	114	109	109	102	98	105	132	166	166	120	113	91	128
July	27	93	92	89	86	91	98	125	209	273	210	154	125	113	112	107	99	103	112	150	205	186	161	124	102	134
August	17	98	107	100	98	129	136	164	245	287	186	141	120	110	102	96	95	96	99	121	160	183	137	125	101	135
September	8	91	90	91	94	101	103	126	196	194	143	122	118	108	94	98	95	86	99	111	142	114	93	88	85	112
October	7	104	114	92	77	104	111	218	285	228	143	117	107	107	102	98	98	92	91	105	189	151	113	93	90	126
November	10	101	96	99	95	103	114	184	247	177	149	137	126	116	115	118	113	114	114	137	168	163	146	115	105	131
December	8	120	113	102	106	115	110	162	294	251	167	126	113	109	104	98	85	90	106	129	197	228	197	151	124	141
Year	130	96	98	95	91	98	105	144	230	243	167	128	116	106	102	99	95	95	100	124	176	168	135	111	99	126
Wet Season 1939-40	34	89	87	92	93	91	98	163	251	225	132	110	97	90	86	84	84	85	90	106	144	145	119	91	91	114
Dry Season 1940	74	92	96	93	89	100	107	135	217	261	195	143	127	113	107	103	99	99	104	136	182	179	137	119	96	130

+ Eight (8) days of character '0' occurred in January, but only seven (7) days were used in computing means.

‡ Twelve (12) days of character '0' occurred in June, but only eleven (11) days were used in computing means.

Atmospheric Electricity
Monthly Values 1940

Month	Electric Character of Day 0	1	2	Number of Days not classified	Mean Potential Gradient for Days of Character 0	Number of hours of negative potential recorded
January	+8	11	4	8	112	83
February ..	6	7	8	8	125	111
March	4	17	3	7	124	104
April	5	11	3	11	117	80
May	18	8	1	4	125	37
June	#12	11	2	5	128	83
July	27	3	1	0	134	12
August	17	9	2	3	135	40
September ..	8	14	1	7	112	57
October	7	17	3	4	126	79
November ..	10	17	2	1	131	68
December ..	8	22	1	0	141	83
Y e a r	130	147	31	58	126	817

\+ Only seven (7) days were used when computing means.

\# Only eleven (11) days were used when computing means.