IRISH METEOROLOGICAL SERVICE

FINAL REPORT
CONTRACT No. 296 - 77 - ES EIR
BETWEEN
EEC AND IRISH METEOROLOGICAL SERVICE

PROJECT - F SOLAR RADIATION DATA
INTRODUCTION OF THRESHOLDS

VOLUME I

[1983]

EC SOLAR ENERGY R & D PROGRAMME

PROJECT F - SOLAR RADIATION DATA

INTRODUCTION OF THRESHOLDS

Contribution to Action 3.3

Contract number : 296 - 77 - ES EIR

Duration : 1 Year from 1st Jan. 1978 to 31st Dec. 1978

Total budget : £15,972 CEC Contribution : £7,986

Head of Project : S. McWilliams

Contracting Institution : Irish Meteorological Service

Address : 44 Upper O'Connell St., Dublin

FINAL REPORT

SUMMARY

EEC Contract No. 296 - 77 - ES EIR

The research programme consists of three parts:

Part I Statistical analysis of hourly sums of Global radiation for seven stations and Diffuse radiation for two of these stations.

Part II Analysis of a 2-year series of Global data for a south-facing vertical surface at Valentia.

Part III Using cumulative frequency curves for Valentia determine the expected energy output of flat plate solar collectors tilted at 45° to the horizontal.

This volume deals with Part I

Part I Statistical analysis of hourly sums of solar radiation and daily totals of duration of bright sunshine at a selection of Irish and U.K. stations

The selected stations and reference periods are:

Valentia	(1966 - '75)	Irish
Kilkenny	(1969 - '75)	
Birr	(1971 - '75)	
Lerwick	(1966 - '75)	U.K.
Kew	(1966 - '75)	
Aberporth	(1966 - '75)	
Jersey	(1968 - '75)	

The analysis consisted of producing cumulative frequency distribution data for:

(a) Global solar radiation at all seven stations on a monthly basis for each hour

(b) Diffuse sky radiation for Valentia and Lerwick on a monthly basis for each hour

(c) Daily totals of bright sunshine on a monthly basis

(d) Daily percentage of possible sunshine (maximum possible being taken as the astronomical length of day - sunrise - sunset).

All the cumulative frequency distribution data indicated above are given in Tables 1.1.1 - 4.7 which are included in the report. Other statistical data, of interest to users, which are included in the tables are:

Mean : Standard Deviation : Median : 4 Quintiles ; minima and maxima :

Graphs are given which show the cumulative frequency of threshold irradiance for each month for all seven stations.

Part I

Statistical analysis of hourly sums of Global radiation for seven stations and Diffuse radiation for two of these stations.

Part I. Statistical analysis of hourly sums of solar radiation and daily totals of duration of bright sunshine at a selection of Irish and U.K. stations

The selected stations and reference periods are:

Valentia	(1966 - 75)	Irish
Kilkenny	(1969 - 75)	
Birr	(1971 - 75)	
Lerwick	(1966 - 75)	U.K.
Kew	(1966 - 75)	
Aberporth	(1966 - 75)	
Jersey	(1968 - 75)	

The positions of these stations are shown on the map of Fig. 1.

The analysis consisted of producing cumulative frequency distribution data for:

(a) Global solar radiation at all seven stations on a monthly basis for each hour

(b) Diffuse sky radiation for Valentia and Lerwick on a monthly basis for each hour

(c) Daily totals of bright sunshine on a monthly basis

(d) Daily percentage of possible sunshine (maximum possible being taken as the astronomical length of day - sunrise-sunset).

The range intervals adopted for the frequency distributions are:

Global Radiation:

0 - 8; 9 - 17; 18 - 26; etc. in steps of 9 J/cm^2 up to 89 J/cm^2, then 90 - 107; 108 - 125; etc. in steps of 18 J/cm^2.

The steps of 9 and 18 J/cm^2 were chosen for the convenience of those users who may prefer Wh/m^2 in which case the intervals 9 and 18 J/cm^2 may conveniently be replaced by 25 and 50 Wh/m^2 respectively.

Diffuse Radiation:

Intervals of 9 J/cm^2 (25 Wh/m^2) throughout.

Duration of Bright Sunshine:

Daily totals in hours and tenths, 0 - 0.1; 0.2 - 0.3; 0.4 - 0.5; 0.6 - 0.7; 0.8 - 0.9; 1.0 - 1.4; and continuing with intervals of 0.5 hrs.

Percentage of possible sunshine:

Actual daily total expressed as a percentage of length of sunshine day (sunrise - sunset). Intervals 5% throughout.

All the cumulative frequency distribution data indicated above are given in Tables 1.1.1 - 4.7 which are included in this report. Other statistical data, of interest to users, which are included in the tables are:

Mean; Standard Deviation; Median; 4 Quintiles; minima and maxima;

In this context Quintile 1 indicates that 20% of the observed values are equal to or greater than the figure indicated and similarly Quintile 4 indicates that 80% of the observed values are equal to or greater than the given figure. The median divides the observed values into two equal groups so that 50% of the observed values are equal to or greater than the figure shown.

In Tables 1.1.1 - 2.6.12 the column on the right hand side headed "Total" gives the number of hours (in thousands of an hour) on the average day when radiation equals or exceeds the relevant level.

The hourly values of radiation in Wh/m^2 may be taken as the mean hourly irradiance in W/m^2.

From these data the graphs of Fig. 2 - 10 have been drawn showing the cumulative frequency of threshold irradiance for each month for all seven stations.

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.1

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JANUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	3	6	-	-	-	-	-	-	-	-	3
108 (0300)	-	-	-	-	-	-	-	-	35	32	6	-	-	-	-	-	-	-	9
090 (0250)	-	-	-	-	-	-	3	26	94	126	32	-	-	-	-	-	-	-	73
081 (0225)	-	-	-	-	-	-	3	48	142	200	87	-	-	-	-	-	-	-	281
072 (0200)	-	-	-	-	-	-	3	94	190	232	129	13	-	-	-	-	-	-	480
063 (0175)	-	-	-	-	-	-	19	155	271	316	223	42	-	-	-	-	-	-	661
054 (0150)	-	-	-	-	-	-	45	223	371	390	300	94	-	-	-	-	-	-	1026
045 (0125)	-	-	-	-	-	-	77	342	468	465	397	145	-	-	-	-	-	-	1423
036 (0100)	-	-	-	-	-	3	174	455	555	561	516	232	3	-	-	-	-	-	1894
027 (0075)	-	-	-	-	-	10	300	597	671	668	623	410	13	-	-	-	-	-	2499
018 (0050)	-	-	-	-	-	48	535	735	800	790	735	597	97	-	-	-	-	-	3292
009 (0025)	-	-	-	-	-	271	842	926	926	926	913	806	348	-	-	-	-	-	4337
001 (0003)	-	-	-	-	139	958	1000	1000	1000	1000	1000	994	958	197	-	-	-	-	5958
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	8246
MEAN	0	0	0	0	0	8	22	37	46	47	40	25	9	0	0	0	0	0	18000
S.D.	0	0	0	0	1	5	14	23	29	31	26	17	7	1	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.6	6.3	19.3	33.1	41.7	41.7	37.2	22.7	7.0	.6	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.9	11.9	34.1	57.0	70.9	81.0	65.2	39.3	14.3	1.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.7	7.5	23.2	40.4	51.3	52.8	44.8	27.5	8.3	.7	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.5	5.2	16.1	26.8	32.5	32.7	28.9	17.9	5.7	.5	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.2	2.8	10.2	14.9	18.0	17.3	14.7	9.3	3.1	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	2	4	4	4	4	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	8	42	90	101	146	134	114	80	39	8	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	2	8	13	15	15	13	8	2	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	4	10	14	16	16	14	10	4	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	5	12	16	19	19	16	12	5	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.2

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

FEBRUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4
180 (0500)	-	-	-	-	-	-	-	4	39	35	-	-	-	-	-	-	-	-	78
162 (0450)	-	-	-	-	-	-	-	25	78	85	32	-	-	-	-	-	-	-	220
144 (0400)	-	-	-	-	-	-	-	60	128	167	92	4	-	-	-	-	-	-	451
126 (0350)	-	-	-	-	-	-	11	145	220	234	184	46	-	-	-	-	-	-	840
108 (0300)	-	-	-	-	-	-	60	230	340	362	277	106	-	-	-	-	-	-	1375
090 (0250)	-	-	-	-	-	4	113	326	433	447	365	188	7	-	-	-	-	-	1883
081 (0225)	-	-	-	-	-	11	181	394	507	507	418	230	28	-	-	-	-	-	2276
072 (0200)	-	-	-	-	-	18	241	447	560	539	475	326	57	-	-	-	-	-	2663
063 (0175)	-	-	-	-	-	78	340	574	635	631	578	408	121	-	-	-	-	-	3365
054 (0150)	-	-	-	-	-	106	433	638	674	691	660	511	174	-	-	-	-	-	3887
045 (0125)	-	-	-	-	-	174	525	699	745	762	730	628	230	-	-	-	-	-	4493
036 (0100)	-	-	-	-	-	248	606	777	826	837	791	695	333	4	-	-	-	-	5117
027 (0075)	-	-	-	-	4	411	745	855	897	915	883	784	475	32	-	-	-	-	6001
018 (0050)	-	-	-	-	28	638	876	926	940	957	954	894	684	106	-	-	-	-	7003
009 (0025)	-	-	-	-	216	844	979	986	986	986	993	986	876	333	-	-	-	-	8185
001 (0003)	-	-	-	46	929	1000	1000	1000	1000	1000	1000	1000	1000	957	149	-	-	-	10081
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	6	27	51	73	85	87	78	58	31	8	0	0	0	0	
S.D.	0	0	0	0	5	18	30	42	47	49	43	33	21	7	1	0	0	0	
MEDIAN	.0	.0	.0	.5	5.8	23.5	47.4	68.2	81.9	82.1	69.8	55.0	25.9	6.9	.6	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.8	9.8	41.8	78.2	114.4	129.9	135.1	122.9	87.4	49.8	14.3	.9	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.6	6.9	27.6	57.2	80.0	96.4	100.0	84.1	63.9	31.8	8.1	.7	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.4	4.7	19.5	36.7	59.3	67.2	66.0	60.6	47.2	21.6	5.6	.5	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.2	2.4	10.9	23.2	33.3	38.9	40.4	35.1	25.7	12.6	3.0	.2	.0	.0	.0	
MIN VALUE	0	0	0	0	0	4	4	7	8	4	8	2	4	0	0	0	0	0	
MAX VALUE	0	0	0	4	29	96	138	180	201	197	176	147	93	38	4	0	0	0	
ALTITUDE 05	0	0	0	0	0	8	14	19	22	22	19	14	8	0	0	0	0	0	
OF 15	0	0	0	0	3	11	17	22	25	25	22	17	11	3	0	0	0	0	
SUN 25	0	0	0	0	6	14	21	26	28	28	26	21	14	6	0	0	0	0	
AZIMUTH 05	0	0	0	0	-63	-50	-37	-23	-8	8	23	37	50	63	0	0	0	0	
OF 15	0	0	0	0	-64	-52	-38	-24	-8	8	24	38	52	64	0	0	0	0	
SUN 25	0	0	0	0	-66	-54	-40	-25	-8	8	25	40	54	66	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.3

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MARCH

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	3	10	10	3	-	-	-	-	-	-	-	26
234 (0650)	-	-	-	-	-	-	-	10	32	35	10	-	-	-	-	-	-	-	87
216 (0600)	-	-	-	-	-	-	3	45	61	90	35	3	-	-	-	-	-	-	237
198 (0550)	-	-	-	-	-	-	13	74	132	161	81	10	-	-	-	-	-	-	471
180 (0500)	-	-	-	-	-	-	23	126	223	239	152	32	-	-	-	-	-	-	795
162 (0450)	-	-	-	-	-	-	52	197	306	313	242	81	-	-	-	-	-	-	1191
144 (0400)	-	-	-	-	-	3	119	281	371	381	319	158	6	-	-	-	-	-	1638
126 (0350)	-	-	-	-	-	10	197	377	435	445	413	248	39	-	-	-	-	-	2164
108 (0300)	-	-	-	-	-	55	287	461	500	542	494	348	113	-	-	-	-	-	2800
090 (0250)	-	-	-	-	-	135	381	555	613	613	581	448	187	-	-	-	-	-	3513
081 (0225)	-	-	-	-	3	229	497	619	716	710	655	532	319	35	-	-	-	-	4315
072 (0200)	-	-	-	-	19	303	568	677	752	758	700	558	377	61	-	-	-	-	4773
063 (0175)	-	-	-	-	35	345	623	719	784	787	745	632	426	103	-	-	-	-	5199
054 (0150)	-	-	-	-	71	429	684	794	835	819	816	687	523	158	-	-	-	-	5816
045 (0125)	-	-	-	-	132	510	732	829	858	865	858	771	597	223	-	-	-	-	6375
036 (0100)	-	-	-	-	213	629	790	868	903	913	887	832	648	303	-	-	-	-	6986
027 (0075)	-	-	-	23	497	826	932	965	974	984	974	932	839	529	58	-	-	-	7723
018 (0050)	-	-	-	68	677	903	974	990	994	1000	997	977	923	677	145	-	-	-	8533
009 (0025)	-	-	-	248	897	977	997	1000	1000	1000	1000	997	990	903	355	-	-	-	9325
001 (0003)	-	-	132	948	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	968	129	-	-	10364
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12177
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	7	30	62	94	120	134	137	126	100	69	35	9	0	0	0	
S.D.	0	0	1	6	19	35	51	62	66	68	62	53	39	24	8	1	0	0	
MEDIAN	.0	.0	.6	6.1	26.9	55.1	89.6	118.5	126.0	133.8	124.8	96.9	65.1	29.2	7.1	.6	.0	.0	
1ST QUINTILE	.0	.0	.9	11.4	46.4	95.6	143.4	179.4	202.5	207.0	188.4	153.6	106.2	57.2	15.6	.9	.0	.0	
2ND QUINTILE	.0	.0	.7	7.3	32.9	66.1	105.1	139.1	153.8	156.7	146.5	116.6	76.8	36.8	8.4	.7	.0	.0	
3RD QUINTILE	.0	.0	.5	5.0	21.9	47.2	75.8	95.3	110.1	111.3	103.4	75.9	53.5	22.7	5.8	.5	.0	.0	
4TH QUINTILE	.0	.0	.2	2.7	13.0	29.4	43.7	61.5	69.2	68.3	65.0	49.7	31.0	13.1	3.2	.2	.0	.0	
MIN VALUE	0	0	0	0	1	3	8	12	17	21	13	4	4	4	0	0	0	0	
MAX VALUE	0	0	4	34	92	163	239	277	285	281	281	239	176	105	42	4	0	0	
ALTITUDE OF SUN 05	0	0	0	0	8	17	23	29	31	31	29	23	17	8	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	3	12	20	27	32	35	35	32	27	20	12	3	0	0	0	
ALTITUDE OF SUN 25	0	0	0	6	15	23	31	36	39	39	36	31	23	15	6	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-68	-55	-41	-26	-9	9	26	41	55	68	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	-83	-70	-57	-43	-27	-9	9	27	43	57	70	83	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-85	-73	-60	-45	-28	-10	10	28	45	60	73	85	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS APRIL

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	6
324 (0900)	-	-	-	-	-	-	-	-	7	7	-	-	-	-	-	-	-	-	14
306 (0850)	-	-	-	-	-	-	-	10	30	43	13	-	-	-	-	-	-	-	96
288 (0800)	-	-	-	-	-	-	-	30	77	100	47	7	-	-	-	-	-	-	261
270 (0750)	-	-	-	-	-	-	7	73	147	170	120	13	-	-	-	-	-	-	530
252 (0700)	-	-	-	-	-	3	13	150	247	267	210	50	3	-	-	-	-	-	943
234 (0650)	-	-	-	-	-	7	43	240	323	330	283	133	10	-	-	-	-	-	1369
216 (0600)	-	-	-	-	-	10	120	310	383	377	330	233	27	-	-	-	-	-	1790
198 (0550)	-	-	-	-	-	20	247	383	443	430	383	333	83	-	-	-	-	-	2322
180 (0500)	-	-	-	-	-	70	303	467	507	497	470	400	177	7	-	-	-	-	2898
162 (0450)	-	-	-	-	-	157	390	497	560	547	517	463	310	20	-	-	-	-	3461
144 (0400)	-	-	-	-	3	257	427	553	613	613	573	530	370	67	-	-	-	-	4006
126 (0350)	-	-	-	-	67	357	523	640	673	697	627	590	460	153	-	-	-	-	4787
108 (0300)	-	-	-	-	167	413	593	687	730	723	683	627	527	283	3	-	-	-	5436
090 (0250)	-	-	-	3	283	510	680	747	783	780	747	703	610	393	33	-	-	-	6272
081 (0225)	-	-	-	10	317	570	723	790	813	820	807	720	630	450	70	-	-	-	6720
072 (0200)	-	-	-	40	387	633	773	827	847	847	827	757	663	497	107	-	-	-	7205
063 (0175)	-	-	-	113	477	710	830	853	870	893	857	800	727	547	187	-	-	-	7864
054 (0150)	-	-	-	163	550	757	870	900	907	923	900	850	777	620	250	-	-	-	8467
045 (0125)	-	-	-	257	640	837	920	943	940	940	943	893	817	683	367	-	-	-	9180
036 (0100)	-	-	-	347	733	880	950	980	977	973	973	940	880	763	480	-	-	-	9876
027 (0075)	-	-	20	497	803	923	967	990	993	993	987	973	917	850	613	50	-	-	10576
018 (0050)	-	-	80	680	903	970	987	993	1000	1000	997	990	967	920	760	163	-	-	11417
009 (0025)	-	-	210	870	967	997	1000	1000	1000	1000	1000	1000	993	977	880	363	-	-	12257
001 (0003)	-	53	890	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	937	133	-	14010
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	7	31	64	99	134	161	175	177	165	146	114	75	38	10	0	0	
S.D.	0	0	7	21	37	53	66	78	84	85	82	75	62	44	24	8	1	0	
MEDIAN	.0	.5	5.6	26.9	60.2	91.9	130.3	161.0	182.0	178.9	168.5	152.1	115.3	71.5	34.6	7.1	.6	.0	
1ST QUINTILE	.0	.8	9.7	50.5	102.9	154.3	204.7	242.0	260.5	264.4	254.0	221.9	176.9	119.5	61.1	16.3	.9	.0	
2ND QUINTILE	.0	.6	6.8	32.8	70.7	112.2	157.1	194.4	210.9	208.2	194.5	180.0	138.0	88.9	42.4	8.5	.7	.0	
3RD QUINTILE	.0	.4	4.4	21.9	49.0	76.7	106.6	134.3	148.4	147.5	135.0	121.1	92.2	56.5	27.9	5.7	.5	.0	
4TH QUINTILE	.0	.2	2.1	12.3	27.4	49.2	67.7	78.6	84.9	85.5	82.1	63.0	48.8	32.2	15.0	2.9	.2	.0	
MIN VALUE	0	0	0	0	8	8	17	16	24	21	16	11	8	3	1	0	0	0	
MAX VALUE	0	4	32	101	151	255	272	310	344	352	314	289	260	184	113	34	4	0	
ALTITUDE OF SUN 05	0	0	0	9	18	27	34	40	43	43	40	34	27	18	9	0	0	0	
ALTITUDE OF SUN 15	0	0	3	12	21	30	38	44	47	47	44	38	30	21	12	3	0	0	
ALTITUDE OF SUN 25	0	0	6	15	24	33	41	47	50	50	47	41	33	24	15	6	0	0	
AZIMUTH OF SUN 05	0	0	0	-88	-75	-62	-47	-30	-10	10	30	47	62	75	88	0	0	0	
AZIMUTH OF SUN 15	0	0	-102	-90	-78	-65	-49	-32	-11	11	32	49	65	78	90	102	0	0	
AZIMUTH OF SUN 25	0	0	-104	-92	-80	-67	-52	-33	-12	12	33	52	67	80	92	104	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.5 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS MAY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	6
342 (0950)	-	-	-	-	-	-	-	6	29	39	10	-	-	-	-	-	-	-	84
324 (0900)	-	-	-	-	-	-	-	23	116	165	55	6	-	-	-	-	-	-	365
306 (0850)	-	-	-	-	-	-	-	126	206	248	190	23	-	-	-	-	-	-	793
288 (0800)	-	-	-	-	-	-	16	174	265	284	245	65	3	-	-	-	-	-	1052
270 (0750)	-	-	-	-	-	-	103	229	323	339	323	210	10	-	-	-	-	-	1537
252 (0700)	-	-	-	-	-	-	174	271	374	410	387	290	26	-	-	-	-	-	1932
234 (0650)	-	-	-	-	-	48	239	361	435	458	448	355	145	-	-	-	-	-	2489
216 (0600)	-	-	-	-	-	135	303	439	465	490	484	397	242	-	-	-	-	-	2955
198 (0550)	-	-	-	-	-	200	348	477	510	548	519	439	352	10	-	-	-	-	3403
180 (0500)	-	-	-	-	23	258	429	526	565	594	574	506	416	94	-	-	-	-	3985
162 (0450)	-	-	-	-	90	313	490	590	619	645	619	532	481	223	-	-	-	-	4602
144 (0400)	-	-	-	-	177	384	574	661	674	694	652	603	529	329	3	-	-	-	5280
126 (0350)	-	-	-	3	268	487	639	726	758	758	729	668	561	416	35	-	-	-	6048
108 (0300)	-	-	-	58	352	581	710	771	810	810	771	726	629	500	203	-	-	-	6921
090 (0250)	-	-	-	177	461	668	771	855	861	874	839	790	697	565	323	-	-	-	7881
081 (0225)	-	-	-	252	523	706	794	865	887	900	874	819	729	597	403	-	-	-	8349
072 (0200)	-	-	-	303	590	765	835	894	916	916	903	845	784	642	442	-	-	-	8835
063 (0175)	-	-	16	400	668	800	871	923	932	939	923	894	829	684	497	35	-	-	9411
054 (0150)	-	-	65	474	706	852	903	942	945	952	945	926	861	735	571	116	-	-	9993
045 (0125)	-	-	110	552	781	871	926	955	971	971	965	945	903	806	648	232	-	-	10636
036 (0100)	-	-	206	674	842	916	958	968	981	984	987	961	932	865	726	368	-	-	11368
027 (0075)	-	-	339	765	900	955	987	997	994	997	994	984	965	919	800	484	-	-	12080
018 (0050)	-	6	539	858	961	987	994	1000	1000	1000	1000	994	984	971	894	648	-	-	12836
009 (0025)	-	126	806	971	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	984	865	171	-	13920
001 (0003)	3	855	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	990	890	10	15748
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	5	23	55	89	127	161	189	204	211	200	177	146	105	66	29	6	0	
S.D.	0	4	15	31	48	65	78	86	94	95	93	86	74	56	38	18	4	0	
MEDIAN	.5	4.9	19.8	51.0	84.3	123.5	159.9	189.6	202.0	212.9	207.8	181.6	154.9	108.0	62.6	26.1	5.3	.5	
1ST QUINTILE	.8	8.2	36.6	87.2	139.5	198.0	244.8	279.5	307.2	316.4	302.7	271.2	223.8	165.2	108.3	47.5	8.7	.8	
2ND QUINTILE	.6	6.0	24.3	63.0	100.1	141.2	186.4	225.0	244.3	254.5	248.2	214.7	184.5	129.3	81.3	33.5	6.5	.6	
3RD QUINTILE	.4	3.8	15.9	41.5	70.8	104.1	136.8	159.5	168.3	177.9	169.6	144.8	115.7	80.4	50.6	20.6	4.2	.4	
4TH QUINTILE	.2	1.6	9.2	23.6	42.2	63.0	79.7	101.8	111.5	111.5	100.3	86.9	68.8	45.8	27.0	11.7	2.0	.2	
MIN VALUE	0	0	2	5	9	13	17	23	23	25	21	17	11	2	2	0	0	0	
MAX VALUE	4	25	67	130	193	247	293	356	364	368	352	339	289	209	146	71	17	4	
ALTITUDE OF SUN 05	0	0	8	17	26	35	43	50	54	54	50	43	35	26	17	8	0	0	
ALTITUDE OF SUN 15	0	2	10	19	28	37	46	52	56	56	52	46	37	28	19	10	2	0	
ALTITUDE OF SUN 25	0	3	12	21	30	39	47	54	58	58	54	47	39	30	21	12	3	0	
AZIMUTH OF SUN 05	0	0	-106	-94	-82	-69	-54	-35	-12	12	35	54	69	82	94	106	0	0	
AZIMUTH OF SUN 15	0	-119	-107	-96	-84	-71	-56	-36	-13	13	36	56	71	84	96	107	119	0	
AZIMUTH OF SUN 25	0	-120	-109	-98	-86	-73	-57	-38	-13	13	38	57	73	86	98	109	120	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JUNE

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	3	13	-	-	-	-	-	-	-	-	16
342 (0950)	-	-	-	-	-	-	-	7	23	40	7	-	-	-	-	-	-	-	77
324 (0900)	-	-	-	-	-	-	-	20	97	117	47	-	-	-	-	-	-	-	281
306 (0850)	-	-	-	-	-	-	10	120	227	257	200	27	-	-	-	-	-	-	841
288 (0800)	-	-	-	-	-	3	33	217	273	310	297	90	-	-	-	-	-	-	1223
270 (0750)	-	-	-	-	-	7	127	280	333	353	343	230	17	-	-	-	-	-	1690
252 (0700)	-	-	-	-	-	13	210	323	350	393	390	323	47	-	-	-	-	-	2049
234 (0650)	-	-	-	-	-	73	253	367	403	433	437	387	193	3	-	-	-	-	2549
216 (0600)	-	-	-	-	-	170	300	410	457	467	487	450	317	10	-	-	-	-	3068
198 (0550)	-	-	-	-	7	210	343	460	507	530	540	503	377	30	-	-	-	-	3507
180 (0500)	-	-	-	-	50	277	403	523	587	603	593	533	420	207	-	-	-	-	4196
162 (0450)	-	-	-	-	133	330	457	590	630	647	653	590	463	327	3	-	-	-	4823
144 (0400)	-	-	-	-	223	383	530	640	687	713	697	653	523	393	23	-	-	-	5465
126 (0350)	-	-	-	13	313	470	627	707	740	743	733	717	613	453	143	-	-	-	6272
108 (0300)	-	-	-	123	390	553	733	773	803	780	777	767	683	543	297	-	-	-	7222
090 (0250)	-	-	-	240	497	670	797	850	840	847	813	807	743	593	407	-	-	-	8104
081 (0225)	-	-	10	307	550	740	823	873	863	863	853	837	770	647	470	10	-	-	8616
072 (0200)	-	-	17	340	643	790	860	903	897	887	890	870	797	707	517	60	-	-	9178
063 (0175)	-	-	97	470	723	830	880	913	907	897	903	907	833	740	590	170	-	-	9860
054 (0150)	-	-	183	513	770	870	920	940	927	927	933	933	873	793	663	273	-	-	10518
045 (0125)	-	-	250	613	820	920	950	960	960	953	957	957	907	847	697	373	-	-	11164
036 (0100)	-	-	360	733	867	943	967	973	983	970	980	967	937	890	760	497	-	-	11827
027 (0075)	-	13	480	840	927	970	990	993	990	993	990	977	967	937	853	603	7	-	12530
018 (0050)	-	107	703	927	980	997	1000	1000	993	997	993	987	990	973	920	757	160	-	13484
009 (0025)	-	450	913	980	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	990	940	557	-	14830
001 (0003)	170	983	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	993	287	16433
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	10	31	61	96	130	162	190	202	207	202	185	152	115	76	37	11	1	
S.D.	1	6	19	33	50	66	78	89	95	99	95	85	75	59	41	21	6	1	
MEDIAN	.6	8.2	26.2	56.7	89.5	119.5	151.4	186.6	200.5	206.6	211.6	199.0	150.9	116.6	75.3	35.7	10.3	.7	
1ST QUINTILE	1.0	15.6	51.7	96.2	148.6	202.5	254.2	291.2	309.7	313.3	306.0	273.9	233.0	180.7	119.3	60.4	17.1	3.4	
2ND QUINTILE	.7	10.3	33.0	67.8	106.3	140.5	180.9	220.2	235.0	248.9	248.2	230.3	188.4	141.9	91.1	43.0	12.6	.8	
3RD QUINTILE	.5	6.7	22.2	46.2	76.2	100.8	131.0	158.4	174.6	180.7	177.9	159.1	128.6	88.8	61.8	27.3	8.2	.6	
4TH QUINTILE	.2	3.7	13.8	30.4	48.6	69.8	89.0	101.7	108.9	102.6	96.5	93.2	71.3	52.8	32.1	15.9	4.5	.3	
MIN VALUE	0	0	2	5	12	11	18	21	15	13	13	13	13	10	8	2	0	0	
MAX VALUE	4	32	85	129	205	296	306	344	360	369	344	318	285	251	170	88	35	4	
ALTITUDE OF SUN 05	0	5	13	22	31	40	49	56	60	60	56	49	40	31	22	13	5	0	
ALTITUDE OF SUN 15	0	5	14	23	32	41	50	57	61	61	57	50	41	32	23	14	5	0	
ALTITUDE OF SUN 25	0	6	14	23	32	41	50	57	61	61	57	50	41	32	23	14	6	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-87	-74	-59	-39	-14	14	39	59	74	87	99	110	121	0	
AZIMUTH OF SUN 15	0	-122	-110	-99	-88	-75	-59	-40	-14	14	40	59	75	88	99	110	122	0	
AZIMUTH OF SUN 25	0	-122	-111	-99	-88	-75	-60	-40	-14	14	40	60	75	88	99	111	122	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.7

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JULY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
360 (1000)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
342 (0950)	-	-	-	-	-	-	-	6	23	16	-	-	-	-	-	-	-	-	45
324 (0900)	-	-	-	-	-	-	-	16	61	81	26	-	-	-	-	-	-	-	184
306 (0850)	-	-	-	-	-	-	3	55	135	206	116	16	-	-	-	-	-	-	531
288 (0800)	-	-	-	-	-	-	19	158	206	258	223	61	-	-	-	-	-	-	925
270 (0750)	-	-	-	-	-	-	71	197	255	303	297	158	3	-	-	-	-	-	1284
252 (0700)	-	-	-	-	-	3	148	245	284	345	323	268	19	-	-	-	-	-	1635
234 (0650)	-	-	-	-	-	16	190	277	342	387	394	329	90	-	-	-	-	-	2025
216 (0600)	-	-	-	-	-	90	252	313	381	423	423	377	213	3	-	-	-	-	2475
198 (0550)	-	-	-	-	3	139	290	368	452	471	471	413	274	16	-	-	-	-	2897
180 (0500)	-	-	-	-	19	210	332	458	513	535	532	461	348	103	-	-	-	-	3511
162 (0450)	-	-	-	-	97	239	400	529	594	587	587	529	423	223	-	-	-	-	4208
144 (0400)	-	-	-	-	145	323	490	606	658	648	655	594	481	290	3	-	-	-	4893
126 (0350)	-	-	-	13	203	413	571	677	729	697	710	661	568	381	58	-	-	-	5681
108 (0300)	-	-	-	106	277	503	658	768	777	748	748	690	613	439	206	-	-	-	6533
090 (0250)	-	-	-	174	410	600	732	803	826	800	784	739	697	542	306	-	-	-	7413
081 (0225)	-	-	-	203	474	652	765	826	852	835	829	784	726	594	365	3	-	-	7908
072 (0200)	-	-	6	232	539	700	810	858	865	861	848	823	768	648	426	16	-	-	8400
063 (0175)	-	-	45	303	619	771	852	890	881	887	874	861	813	716	503	55	-	-	9070
054 (0150)	-	-	110	400	671	839	903	919	906	910	903	887	839	745	581	174	-	-	9787
045 (0125)	-	-	155	526	742	874	935	942	952	923	919	916	887	790	665	284	-	-	10510
036 (0100)	-	-	239	623	839	916	958	965	958	968	948	929	916	848	729	397	-	-	11233
027 (0075)	-	3	377	726	913	955	971	981	987	990	984	965	958	916	803	548	3	-	12080
018 (0050)	-	45	555	855	968	990	990	997	1000	1000	997	994	990	958	897	703	45	-	12984
009 (0025)	-	245	823	965	990	1000	1000	1000	1000	1000	1000	997	1000	997	981	881	316	-	14195
001 (0003)	39	926	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	942	65	15969
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	6	25	52	83	116	149	174	188	193	188	170	139	102	66	32	7	0	
S.D.	0	5	17	32	46	62	76	86	92	98	94	87	71	56	38	19	5	0	
MEDIAN	.5	6.0	20.8	46.9	77.4	108.6	141.8	169.4	183.8	189.8	189.4	169.7	140.1	97.3	63.4	29.9	6.6	.5	
1ST QUINTILE	.8	11.0	40.2	81.9	126.9	182.5	231.1	268.9	289.5	306.9	291.9	263.1	217.9	165.5	108.7	51.9	12.9	.9	
2ND QUINTILE	.6	7.2	25.8	54.0	91.4	128.6	162.0	191.6	211.2	227.5	230.3	204.5	167.5	120.1	75.8	35.8	7.9	.6	
3RD QUINTILE	.4	4.8	16.5	38.1	65.1	90.0	120.0	145.4	160.3	158.2	158.6	142.4	113.2	80.0	52.0	24.0	5.4	.4	
4TH QUINTILE	.2	2.5	9.8	21.8	39.6	59.2	74.0	91.5	99.6	90.0	86.8	77.3	65.6	43.4	27.4	13.1	2.8	.2	
MIN VALUE	0	0	1	4	7	13	15	16	18	18	15	8	13	8	4	0	0	0	
MAX VALUE	4	29	80	131	198	264	306	356	385	352	338	319	280	225	151	85	28	4	
ALTITUDE OF SUN 05	0	5	13	22	32	41	49	56	60	60	56	49	41	32	22	13	5	0	
ALTITUDE OF SUN 15	0	4	13	22	31	40	48	55	59	59	55	48	40	31	22	13	4	0	
ALTITUDE OF SUN 25	0	3	11	20	29	38	47	54	57	57	54	47	38	29	20	11	3	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-88	-75	-59	-39	-14	14	39	59	75	88	99	110	121	0	
AZIMUTH OF SUN 15	0	-121	-109	-98	-87	-74	-58	-39	-14	14	39	58	74	87	98	109	121	0	
AZIMUTH OF SUN 25	0	-120	-108	-97	-85	-72	-57	-37	-13	13	37	57	72	85	97	108	120	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.8 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS AUGUST

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	3	6	3	-	-	-	-	-	-	-	12
324 (0900)	-	-	-	-	-	-	-	3	23	13	3	-	-	-	-	-	-	-	42
306 (0850)	-	-	-	-	-	-	-	3	58	61	16	-	-	-	-	-	-	-	138
288 (0800)	-	-	-	-	-	-	-	32	126	142	48	-	-	-	-	-	-	-	348
270 (0750)	-	-	-	-	-	-	10	94	174	213	132	23	-	-	-	-	-	-	646
252 (0700)	-	-	-	-	-	-	32	161	232	294	213	77	-	-	-	-	-	-	1009
234 (0650)	-	-	-	-	-	-	113	216	290	326	310	174	13	-	-	-	-	-	1442
216 (0600)	-	-	-	-	-	16	168	268	342	377	355	248	48	-	-	-	-	-	1822
198 (0550)	-	-	-	-	-	55	235	326	406	429	416	313	135	-	-	-	-	-	2315
180 (0500)	-	-	-	-	-	135	306	413	458	487	465	400	245	-	-	-	-	-	2909
162 (0450)	-	-	-	-	10	203	342	506	542	539	516	448	310	42	-	-	-	-	3458
144 (0400)	-	-	-	-	39	258	419	574	590	629	590	510	403	119	-	-	-	-	4131
126 (0350)	-	-	-	-	129	335	513	639	661	681	671	581	468	261	-	-	-	-	4939
108 (0300)	-	-	-	-	229	448	635	690	723	742	703	655	526	345	6	-	-	-	5702
090 (0250)	-	-	-	23	313	568	716	768	777	797	777	732	587	445	65	-	-	-	6568
081 (0225)	-	-	-	71	361	619	748	806	816	842	813	774	632	494	148	-	-	-	7124
072 (0200)	-	-	-	110	429	665	800	839	855	865	855	813	687	532	223	-	-	-	7673
063 (0175)	-	-	-	210	519	748	842	865	890	903	890	855	752	610	310	-	-	-	8394
054 (0150)	-	-	-	300	613	810	861	906	929	926	923	884	797	668	377	3	-	-	8997
045 (0125)	-	-	6	374	703	871	903	939	961	968	955	919	874	719	474	23	-	-	9689
036 (0100)	-	-	29	477	803	894	948	971	981	984	974	955	926	800	574	61	-	-	10377
027 (0075)	-	-	81	597	881	948	987	987	994	990	987	977	955	881	700	152	-	-	11117
018 (0050)	-	-	242	797	935	990	1000	1000	1000	1000	1000	997	987	945	790	313	-	-	11996
009 (0025)	-	-	526	945	997	1000	1000	1000	1000	1000	1000	1000	1000	987	935	568	6	-	12964
001 (0003)	-	361	987	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	977	432	-	14757
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	1	12	39	71	105	136	160	173	180	170	149	119	83	46	15	1	0	
S.D.	0	2	10	24	39	54	67	77	86	86	81	73	63	46	28	11	2	0	
MEDIAN	.0	.8	9.8	34.3	64.9	100.2	128.5	163.2	171.0	175.5	167.6	146.9	116.1	79.6	42.7	11.4	.9	.0	
1ST QUINTILE	.0	4.6	20.3	63.9	113.2	162.8	207.4	239.2	261.9	273.3	254.9	227.7	187.4	133.7	74.8	24.3	5.4	.0	
2ND QUINTILE	.0	.9	13.0	42.7	75.8	115.6	148.4	182.7	199.7	208.0	202.7	180.0	144.6	98.1	51.9	14.9	1.6	.0	
3RD QUINTILE	.0	.6	7.7	26.9	55.2	84.4	113.2	136.8	141.5	149.8	141.8	121.4	87.4	64.2	34.1	8.4	.7	.0	
4TH QUINTILE	.0	.3	4.2	17.8	36.3	55.5	72.0	82.4	84.7	89.4	84.3	75.0	53.6	36.0	17.4	4.5	.4	.0	
MIN VALUE	0	0	0	3	8	17	18	21	20	20	21	17	10	4	3	0	0	0	
MAX VALUE	0	8	46	102	167	230	280	331	352	347	347	281	243	176	125	56	16	0	
ALTITUDE OF SUN 05	0	1	9	18	27	36	45	51	55	55	51	45	36	27	18	9	1	0	
ALTITUDE OF SUN 15	0	0	7	16	25	34	42	48	52	52	48	42	34	25	16	7	0	0	
ALTITUDE OF SUN 25	0	0	4	13	23	31	39	45	49	49	45	39	31	23	13	4	0	0	
AZIMUTH OF SUN 05	0	-118	-107	-95	-83	-70	-55	-36	-13	13	36	55	70	83	95	107	118	0	
AZIMUTH OF SUN 15	0	0	-105	-93	-81	-68	-53	-34	-12	12	34	53	68	81	93	105	0	0	
AZIMUTH OF SUN 25	0	0	-103	-91	-79	-66	-50	-32	-11	11	32	50	66	79	91	103	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.9 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS SEPTEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	3
306 (0850)	-	-	-	-	-	-	-	3	7	-	-	-	-	-	-	-	-	-	10
288 (0800)	-	-	-	-	-	-	-	3	7	3	3	-	-	-	-	-	-	-	16
270 (0750)	-	-	-	-	-	-	-	7	13	17	7	-	-	-	-	-	-	-	44
252 (0700)	-	-	-	-	-	-	-	17	60	57	23	3	-	-	-	-	-	-	160
234 (0650)	-	-	-	-	-	-	-	60	103	120	80	17	-	-	-	-	-	-	380
216 (0600)	-	-	-	-	-	-	17	103	180	210	143	40	-	-	-	-	-	-	693
198 (0550)	-	-	-	-	-	-	53	177	233	293	230	93	-	-	-	-	-	-	1079
180 (0500)	-	-	-	-	-	3	120	267	280	367	320	157	10	-	-	-	-	-	1524
162 (0450)	-	-	-	-	-	20	200	330	387	427	380	250	67	-	-	-	-	-	2061
144 (0400)	-	-	-	-	-	87	293	433	460	473	437	330	127	-	-	-	-	-	2640
126 (0350)	-	-	-	-	-	167	360	527	563	567	520	440	250	-	-	-	-	-	3394
108 (0300)	-	-	-	-	10	250	467	603	643	700	623	507	343	33	-	-	-	-	4179
090 (0250)	-	-	-	-	43	360	587	667	740	770	713	607	427	113	-	-	-	-	5027
081 (0225)	-	-	-	-	100	423	633	727	780	797	747	650	480	163	-	-	-	-	5500
072 (0200)	-	-	-	-	147	487	677	760	830	820	787	720	520	240	-	-	-	-	5988
063 (0175)	-	-	-	-	220	593	737	797	863	863	820	783	617	327	-	-	-	-	6620
054 (0150)	-	-	-	-	323	680	803	843	897	880	860	817	707	433	20	-	-	-	7263
045 (0125)	-	-	-	23	423	757	853	900	933	910	900	860	777	540	40	-	-	-	7916
036 (0100)	-	-	-	70	547	820	910	940	940	957	920	897	827	640	97	-	-	-	8565
027 (0075)	-	-	-	113	710	877	953	970	980	983	963	937	880	733	203	-	-	-	9302
018 (0050)	-	-	-	277	840	953	980	990	997	997	993	973	940	853	380	-	-	-	10173
009 (0025)	-	-	-	650	943	993	1000	1000	997	997	1000	997	997	933	643	7	-	-	11157
001 (0003)	-	-	440	990	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	987	470	17	-	12904
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	1	14	43	78	107	130	141	146	136	114	84	50	17	2	0	0	
S.D.	0	0	2	11	25	42	55	65	68	69	68	59	47	29	13	2	0	0	
MEDIAN	.0	.0	.9	12.6	39.4	70.9	103.1	131.2	137.0	138.8	130.3	109.9	76.5	48.4	13.9	.9	.5	.0	
1ST QUINTILE	.0	.0	5.4	22.2	65.5	118.8	162.0	193.4	209.2	218.0	204.2	171.7	133.3	76.7	27.3	5.7	.8	.0	
2ND QUINTILE	.0	.0	1.7	15.0	47.1	84.3	119.3	149.8	158.8	170.1	155.7	132.5	95.8	56.8	17.3	2.2	.6	.0	
3RD QUINTILE	.0	.0	.7	10.2	33.1	62.3	87.5	108.7	117.7	121.5	112.0	91.3	64.6	39.6	10.5	.8	.4	.0	
4TH QUINTILE	.0	.0	.4	5.5	20.8	38.9	54.4	62.4	77.4	79.8	68.5	58.5	40.9	22.0	5.3	.4	.2	.0	
MIN VALUE	0	0	0	0	3	4	13	13	8	4	13	8	8	2	0	0	0	0	
MAX VALUE	0	0	8	50	121	180	222	331	323	297	289	256	187	122	59	13	1	0	
ALTITUDE OF SUN 05	0	0	1	10	20	28	36	42	45	45	42	36	28	20	10	1	0	0	
ALTITUDE OF SUN 15	0	0	0	7	16	25	32	38	41	41	38	32	25	16	7	0	0	0	
ALTITUDE OF SUN 25	0	0	0	4	13	22	29	34	37	37	34	29	22	13	4	0	0	0	
AZIMUTH OF SUN 05	0	0	-100	-89	-76	-63	-48	-31	-11	11	31	48	63	76	89	100	0	0	
AZIMUTH OF SUN 15	0	0	0	-86	-74	-61	-46	-29	-10	10	29	46	61	74	86	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-84	-72	-59	-44	-28	-9	9	28	44	59	72	84	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.10

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

OCTOBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	6	6	-	-	-	-	-	-	-	-	12
180 (0500)	-	-	-	-	-	-	-	3	19	29	16	-	-	-	-	-	-	-	67
162 (0450)	-	-	-	-	-	-	-	16	71	55	48	-	-	-	-	-	-	-	190
144 (0400)	-	-	-	-	-	-	6	39	113	110	100	3	-	-	-	-	-	-	371
126 (0350)	-	-	-	-	-	-	16	81	210	194	155	19	-	-	-	-	-	-	675
108 (0300)	-	-	-	-	-	-	55	197	300	300	274	84	-	-	-	-	-	-	1210
090 (0250)	-	-	-	-	-	6	132	271	368	377	348	171	16	-	-	-	-	-	1689
081 (0225)	-	-	-	-	-	35	216	371	442	461	442	284	52	-	-	-	-	-	2303
072 (0200)	-	-	-	-	-	55	290	432	497	526	477	335	90	-	-	-	-	-	2702
063 (0175)	-	-	-	-	3	90	377	506	532	577	513	387	119	-	-	-	-	-	3101
054 (0150)	-	-	-	-	3	161	439	577	639	626	568	445	210	-	-	-	-	-	3668
045 (0125)	-	-	-	-	6	223	526	658	697	697	648	526	290	6	-	-	-	-	4274
036 (0100)	-	-	-	-	26	319	629	723	745	758	703	616	384	32	-	-	-	-	4915
027 (0075)	-	-	-	-	103	439	716	765	823	819	790	710	497	77	-	-	-	-	5662
018 (0050)	-	-	-	-	235	565	790	839	890	897	877	797	610	152	-	-	-	-	6520
009 (0025)	-	-	-	6	529	745	865	939	965	968	939	881	752	287	-	-	-	-	7576
001 (0003)	-	-	-	419	974	887	971	997	997	990	994	981	906	565	6	-	-	-	8829
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	977	406	16	-	-	10792
																			18000
MEAN	0	0	0	1	12	36	61	78	90	91	86	64	40	14	1	0	0	0	
S.D.	0	0	0	2	10	24	36	45	53	53	52	38	26	12	2	0	0	0	
MEDIAN	.0	.0	.0	.9	9.9	31.6	56.7	72.7	80.2	84.6	75.3	56.9	35.8	11.1	.8	.5	.0	.0	
1ST QUINTILE	.0	.0	.0	5.2	20.4	57.3	93.4	125.3	145.9	143.0	137.2	103.4	64.0	23.8	5.1	.8	.0	.0	
2ND QUINTILE	.0	.0	.0	1.4	12.9	38.9	68.7	85.7	100.2	103.1	98.0	70.0	43.7	14.3	1.1	.6	.0	.0	
3RD QUINTILE	.0	.0	.0	.7	7.7	25.3	47.5	60.4	66.3	67.8	59.4	46.6	27.8	8.3	.7	.4	.0	.0	
4TH QUINTILE	.0	.0	.0	.3	4.1	14.5	25.8	31.7	38.7	38.8	35.0	26.7	15.2	4.4	.3	.2	.0	.0	
MIN VALUE	0	0	0	0	0	1	4	8	8	8	8	7	3	0	0	0	0	0	
MAX VALUE	0	0	0	13	63	117	167	209	230	222	201	167	117	60	13	1	0	0	
ALTITUDE OF SUN 05	0	0	0	1	10	18	25	31	33	33	31	25	18	10	1	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	7	15	22	27	30	30	27	22	15	7	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	4	12	19	24	26	26	24	19	12	4	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	-81	-69	-57	-42	-26	-9	9	26	42	57	69	81	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-67	-55	-41	-25	-9	9	25	41	55	67	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-65	-53	-39	-24	-8	8	24	39	53	65	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.11 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS NOVEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
144 (0400)	-	-	-	-	-	-	-	-	17	7	-	-	-	-	-	-	-	-	24
126 (0350)	-	-	-	-	-	-	-	10	33	37	17	-	-	-	-	-	-	-	97
108 (0300)	-	-	-	-	-	-	-	27	67	83	33	-	-	-	-	-	-	-	210
090 (0250)	-	-	-	-	-	-	7	90	190	190	107	10	-	-	-	-	-	-	594
081 (0225)	-	-	-	-	-	-	17	140	263	247	167	23	-	-	-	-	-	-	857
072 (0200)	-	-	-	-	-	-	33	210	323	320	237	70	-	-	-	-	-	-	1193
063 (0175)	-	-	-	-	-	-	77	283	420	400	303	117	3	-	-	-	-	-	1603
054 (0150)	-	-	-	-	-	-	143	353	487	500	390	183	10	-	-	-	-	-	2066
045 (0125)	-	-	-	-	-	-	243	493	613	597	500	287	13	-	-	-	-	-	2746
036 (0100)	-	-	-	-	-	20	360	590	683	673	593	400	47	-	-	-	-	-	3366
027 (0075)	-	-	-	-	-	73	513	707	763	777	743	513	113	-	-	-	-	-	4202
018 (0050)	-	-	-	-	-	193	683	830	850	880	833	677	277	-	-	-	-	-	5223
009 (0025)	-	-	-	-	7	567	877	953	960	973	930	887	607	7	-	-	-	-	6768
001 (0003)	-	-	-	-	473	983	1000	1000	1000	1000	1000	1000	973	527	-	-	-	-	8956
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	1	12	31	47	57	57	49	33	14	2	0	0	0	0	
S.D.	0	0	0	0	2	9	20	29	34	33	30	22	11	2	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.9	10.6	27.8	44.4	53.1	54.0	45.0	28.0	11.9	1.4	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	5.7	17.8	48.9	73.3	88.8	88.4	76.8	52.5	22.2	6.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	2.3	13.0	33.6	51.0	64.9	63.0	53.2	36.0	14.6	3.0	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.8	8.4	22.4	35.2	45.9	44.6	35.6	22.2	9.2	.8	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.4	4.5	12.6	20.2	23.2	25.0	21.3	12.7	4.8	.4	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	2	4	4	5	4	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	13	42	96	134	163	151	134	105	66	13	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	1	9	15	20	22	22	20	15	9	1	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	6	13	17	20	20	17	13	6	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	4	11	15	17	17	15	11	4	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-51	-38	-23	-8	8	23	38	51	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.1.12

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
090 (0250)	-	-	-	-	-	-	-	-	13	10	-	-	-	-	-	-	-	-	23
081 (0225)	-	-	-	-	-	-	-	3	52	77	-	-	-	-	-	-	-	-	132
072 (0200)	-	-	-	-	-	-	-	16	126	132	32	-	-	-	-	-	-	-	306
063 (0175)	-	-	-	-	-	-	-	90	197	213	90	-	-	-	-	-	-	-	590
054 (0150)	-	-	-	-	-	-	-	165	232	274	168	6	-	-	-	-	-	-	845
045 (0125)	-	-	-	-	-	-	10	245	358	397	271	26	-	-	-	-	-	-	1307
036 (0100)	-	-	-	-	-	-	45	365	471	477	397	113	-	-	-	-	-	-	1868
027 (0075)	-	-	-	-	-	-	190	552	623	635	529	219	-	-	-	-	-	-	2748
018 (0050)	-	-	-	-	-	-	384	713	787	781	684	448	-	-	-	-	-	-	3797
009 (0025)	-	-	-	-	-	35.	755	919	942	948	894	748	100	-	-	-	-	-	5341
001 (0003)	-	-	-	-	-	919	997	1000	1000	1000	1000	997	910	13	-	-	-	-	7836
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	4	17	32	39	40	32	18	5	0	0	0	0	0	
S.D.	0	0	0	0	0	3	10	19	23	24	20	12	3	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.0	4.8	15.2	29.5	34.3	34.7	29.0	16.4	5.0	.5	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.0	7.5	26.5	50.1	62.2	64.4	51.2	28.6	8.0	.8	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.0	5.7	17.6	34.3	41.7	44.7	35.8	19.9	6.0	.6	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.0	3.9	12.8	24.3	28.4	29.0	22.9	13.4	4.1	.4	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.0	2.1	7.5	14.2	17.2	17.0	13.0	7.3	2.1	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	3	4	4	2	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	0	13	48	86	109	96	80	60	17	1	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	3	9	13	16	16	13	9	3	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	2	8	12	15	15	12	8	2	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	2	8	12	14	14	12	8	2	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.1

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JANUARY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	6
108 (0300)	-	-	-	-	-	-	-	6	52	52	6	-	-	-	-	-	-	-	116
090 (0250)	-	-	-	-	-	-	6	52	116	116	26	-	-	-	-	-	-	-	316
081 (0225)	-	-	-	-	-	-	6	110	155	142	65	-	-	-	-	-	-	-	478
072 (0200)	-	-	-	-	-	-	13	168	245	232	116	-	-	-	-	-	-	-	774
063 (0175)	-	-	-	-	-	-	52	226	316	290	168	13	-	-	-	-	-	-	1065
054 (0150)	-	-	-	-	-	-	123	258	394	361	265	39	-	-	-	-	-	-	1440
045 (0125)	-	-	-	-	-	6	168	361	471	471	361	110	-	-	-	-	-	-	1948
036 (0100)	-	-	-	-	-	6	232	510	606	574	439	258	-	-	-	-	-	-	2625
027 (0075)	-	-	-	-	-	39	387	665	735	697	639	374	26	-	-	-	-	-	3562
018 (0050)	-	-	-	-	-	148	574	819	858	897	794	529	71	-	-	-	-	-	4690
009 (0025)	-	-	-	-	-	335	826	961	994	994	974	865	432	-	-	-	-	-	6381
001 (0003)	-	-	-	-	239	974	1000	1000	1000	1000	1000	1000	981	239	-	-	-	-	8433
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	9	26	41	49	48	39	24	8	0	0	0	0	0	
S.D.	0	0	0	0	0	8	19	25	29	29	24	15	6	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.7	6.9	21.6	36.6	43.1	42.5	33.3	19.7	8.0	.7	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	2.3	15.5	40.5	67.0	76.5	75.2	60.0	39.5	14.8	2.3	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.8	8.2	26.4	42.6	53.3	50.8	40.5	25.5	9.8	.8	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.5	5.7	17.1	30.8	36.4	34.1	28.8	16.1	6.6	.5	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.3	3.2	9.9	19.1	22.2	22.4	17.7	10.7	3.6	.3	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	4	6	7	7	6	4	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	3	52	95	117	120	132	115	69	29	2	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	2	8	12	14	14	12	8	2	0	0	0	0	0	
15	0	0	0	0	0	3	9	13	15	15	13	9	3	0	0	0	0	0	
25	0	0	0	0	0	5	11	15	17	17	15	11	5	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
15	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	
25	0	0	0	0	0	-49	-36	-22	-7	7	22	36	49	0	0	0	0	0	

BIRR 53.08N 7.88W ALTITJDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.2

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

FEBRUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	7
144 (0400)	-	-	-	-	-	-	-	43	71	92	21	-	-	-	-	-	-	-	70
126 (0350)	-	-	-	-	-	-	7	85	149	156	92	-	-	-	-	-	-	-	227
108 (0300)	-	-	-	-	-	-	50	206	305	312	184	78	-	-	-	-	-	-	489
090 (0250)	-	-	-	-	-	-	170	326	376	440	312	128	-	-	-	-	-	-	1135
081 (0225)	-	-	-	-	-	-	206	390	482	496	362	163	7	-	-	-	-	-	1752
072 (0200)	-	-	-	-	-	21	270	489	574	546	440	227	14	-	-	-	-	-	2106
063 (0175)	-	-	-	-	-	71	319	553	667	603	525	355	78	-	-	-	-	-	2581
054 (0150)	-	-	-	-	-	113	397	603	702	695	610	475	135	-	-	-	-	-	3171
045 (0125)	-	-	-	-	-	156	482	695	816	773	674	582	234	-	-	-	-	-	3730
036 (0100)	-	-	-	-	7	270	546	794	879	837	780	667	369	-	-	-	-	-	4412
027 (0075)	-	-	-	-	43	404	681	872	922	922	858	780	532	21	-	-	-	-	5149
018 (0050)	-	-	-	-	92	610	858	957	979	993	979	936	723	106	-	-	-	-	6035
009 (0025)	-	-	-	-	319	894	986	1000	1000	1000	1000	993	901	348	-	-	-	-	7233
001 (0003)	-	-	-	85	929	1000	1000	1000	1000	1000	1000	1000	1000	965	85	-	-	-	8441
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	10064
																			18000
MEAN	0	0	0	0	7	27	50	71	83	82	69	54	31	8	0	0	0	0	
S.D.	0	0	0	0	7	18	32	37	40	41	37	29	18	7	0	0	0	0	
MEDIAN	.0	.0	.0	.5	6.6	22.8	42.5	70.5	79.2	80.3	65.6	51.9	28.8	7.0	.5	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.9	13.7	41.5	82.5	108.9	120.1	120.9	105.8	75.8	48.1	14.5	.9	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.7	7.9	27.3	53.7	80.1	88.0	95.6	76.6	59.6	34.3	8.3	.7	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.4	5.3	18.4	32.4	54.5	69.5	63.5	55.1	43.1	23.8	5.7	.4	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.2	2.7	12.0	20.9	35.3	46.3	41.2	33.7	25.8	14.1	3.1	.2	.0	.0	.0	
MIN VALUE	0	0	0	0	0	3	7	13	11	17	10	8	4	0	0	0	0	0	
MAX VALUE	0	0	0	3	41	77	127	162	186	163	154	125	83	34	2	0	0	0	
ALTITUDE 05	0	0	0	0	0	7	14	18	20	20	18	14	7	0	0	0	0	0	
OF 15	0	0	0	0	3	10	17	21	24	24	21	17	10	3	0	0	0	0	
SUN 25	0	0	0	0	5	13	20	25	27	27	25	20	13	5	0	0	0	0	
AZIMUTH 05	0	0	0	0	0	-50	-37	-23	-9	8	23	37	50	0	0	0	0	0	
OF 15	0	0	0	0	-64	-52	-38	-24	-9	8	24	38	52	64	0	0	0	0	
SUN 25	0	0	0	0	-66	-54	-40	-25	-8	8	25	40	54	66	0	0	0	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.3

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MARCH

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	6	6	13	-	-	-	-	-	-	-	-	25
216 (0600)	-	-	-	-	-	-	-	19	58	58	26	-	-	-	-	-	-	-	161
198 (0550)	-	-	-	-	-	-	6	90	123	123	65	-	-	-	-	-	-	-	407
180 (0500)	-	-	-	-	-	-	32	181	232	219	116	19	-	-	-	-	-	-	799
162 (0450)	-	-	-	-	-	13	110	290	316	323	200	65	-	-	-	-	-	-	1317
144 (0400)	-	-	-	-	-	19	206	413	394	394	284	148	6	-	-	-	-	-	1864
126 (0350)	-	-	-	-	-	84	348	490	471	458	394	258	45	-	-	-	-	-	2548
108 (0300)	-	-	-	-	6	181	413	503	516	529	477	316	135	-	-	-	-	-	3076
090 (0250)	-	-	-	-	49	374	490	594	645	652	587	432	213	6	-	-	-	-	4038
081 (0225)	-	-	-	-	65	445	542	632	703	697	658	497	277	26	-	-	-	-	4542
072 (0200)	-	-	-	-	123	477	574	684	729	768	697	587	335	45	-	-	-	-	5019
063 (0175)	-	-	-	-	155	548	671	755	787	813	768	632	413	110	-	-	-	-	5652
054 (0150)	-	-	-	-	194	594	755	819	858	858	813	710	484	174	-	-	-	-	6259
045 (0125)	-	-	-	6	342	665	813	884	884	877	890	826	587	271	-	-	-	-	7045
036 (0100)	-	-	-	32	445	755	890	923	929	923	948	877	723	368	13	-	-	-	7826
027 (0075)	-	-	-	65	568	858	935	968	968	968	974	929	832	529	32	-	-	-	8626
018 (0050)	-	-	-	181	755	961	987	987	1000	994	1000	987	935	703	110	-	-	-	9600
009 (0025)	-	-	-	406	955	994	1000	1000	1000	1000	1000	1000	1000	942	381	-	-	-	10678
001 (0003)	-	-	181	968	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	961	161	-	-	12271
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	10	37	71	96	117	122	122	109	88	60	33	9	0	0	0	
S.D.	0	0	0	9	24	38	49	60	61	60	53	45	34	20	8	0	0	0	
MEDIAN	.0	.0	.6	7.7	32.0	69.1	88.3	112.2	114.4	115.4	104.2	80.7	52.6	28.6	7.4	.6	.0	.0	
1ST QUINTILE	.0	.0	1.0	17.2	53.6	106.2	145.1	176.9	185.3	183.6	162.0	135.5	93.0	51.6	15.0	1.0	.0	.0	
2ND QUINTILE	.0	.0	.7	9.2	39.9	86.7	111.6	145.9	142.6	142.3	124.7	95.0	64.5	34.2	8.7	.7	.0	.0	
3RD QUINTILE	.0	.0	.5	6.2	25.5	53.2	69.6	88.6	96.3	97.6	88.4	69.4	44.1	23.3	6.0	.5	.0	.0	
4TH QUINTILE	.0	.0	.2	3.4	16.0	32.1	47.0	56.7	61.4	65.6	56.6	47.0	29.6	14.3	3.2	.2	.0	.0	
MIN VALUE	0	0	0	0	3	6	12	10	18	17	19	16	10	5	0	0	0	0	
MAX VALUE	0	0	3	46	113	163	212	240	251	240	233	186	148	92	39	3	0	0	
ALTITUDE 05	0	0	0	0	8	16	23	28	30	30	28	23	16	8	0	0	0	0	
OF 15	0	0	0	2	11	19	26	31	34	34	31	26	19	11	2	0	0	0	
SUN 25	0	0	0	6	14	23	30	35	38	38	35	30	23	14	6	0	0	0	
AZIMUTH 05	0	0	0	0	-68	-55	-41	-25	-9	9	25	41	55	68	0	0	0	0	
OF 15	0	0	0	-83	-70	-57	-43	-27	-9	9	27	43	57	70	83	0	0	0	
SUN 25	0	0	0	-85	-73	-59	-45	-28	-10	10	28	45	59	73	85	0	0	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.4

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

APRIL

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	7	33	33	-	-	-	-	-	-	-	-	73
270 (0750)	-	-	-	-	-	-	-	40	107	87	20	-	-	-	-	-	-	-	254
252 (0700)	-	-	-	-	-	-	7	140	180	167	93	-	-	-	-	-	-	-	587
234 (0650)	-	-	-	-	-	-	53	220	247	227	173	27	-	-	-	-	-	-	947
216 (0600)	-	-	-	-	-	-	153	313	333	287	213	107	-	-	-	-	-	-	1406
198 (0550)	-	-	-	-	-	27	267	380	373	360	293	227	7	-	-	-	-	-	1934
180 (0500)	-	-	-	-	-	80	373	440	433	427	427	307	93	-	-	-	-	-	2580
162 (0450)	-	-	-	-	7	180	440	520	493	500	507	420	160	-	-	-	-	-	3227
144 (0400)	-	-	-	-	33	307	513	553	593	580	553	453	267	13	-	-	-	-	3865
126 (0350)	-	-	-	-	113	380	593	633	660	640	633	547	347	67	-	-	-	-	4613
108 (0300)	-	-	-	-	253	520	647	693	727	727	660	607	500	207	-	-	-	-	5541
090 (0250)	-	-	-	7	353	620	733	767	800	787	787	720	587	333	-	-	-	-	6494
081 (0225)	-	-	-	60	413	660	780	793	840	820	820	747	660	407	33	-	-	-	7033
072 (0200)	-	-	-	107	493	707	807	820	887	887	840	780	700	480	107	-	-	-	7615
063 (0175)	-	-	-	153	580	787	840	893	933	953	913	840	740	547	173	-	-	-	8352
054 (0150)	-	-	-	253	660	827	900	953	960	973	933	887	780	613	247	-	-	-	8986
045 (0125)	-	-	-	353	773	907	940	973	973	980	973	933	840	720	353	-	-	-	9718
036 (0100)	-	-	-	453	847	933	960	993	987	980	987	953	927	780	500	-	-	-	10300
027 (0075)	-	-	53	627	900	960	980	993	987	987	987	980	967	860	600	73	-	-	10954
018 (0050)	-	-	153	820	947	987	1000	1000	987	993	993	993	987	953	773	193	-	-	11779
009 (0025)	-	-	467	927	993	1000	1000	1000	1000	1000	1000	1000	1000	993	940	440	-	-	12760
001 (0003)	-	187	980	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	973	233	-	14373
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	10	38	75	109	142	161	168	165	155	135	104	71	38	10	0	0	
S.D.	0	0	8	22	38	50	65	74	75	73	68	62	50	37	22	8	0	0	
MEDIAN	.0	.6	8.5	33.6	71.3	110.6	147.2	166.5	160.7	162.0	163.6	135.0	108.0	69.3	36.0	8.1	.7	.0	
1ST QUINTILE	.0	1.0	16.7	58.8	114.8	159.2	208.6	238.5	246.6	242.1	221.9	202.1	155.3	108.9	59.7	17.7	2.1	.0	
2ND QUINTILE	.0	.7	10.9	40.8	83.0	123.4	172.7	192.0	189.9	187.3	183.6	165.2	119.8	81.9	42.1	10.5	.8	.0	
3RD QUINTILE	.0	.5	6.9	28.4	60.8	93.6	123.7	133.4	142.1	138.0	133.4	110.1	88.4	55.8	27.0	6.6	.5	.0	
4TH QUINTILE	.0	.2	3.8	18.9	41.7	60.1	74.3	78.7	90.0	86.5	86.5	69.0	51.0	33.8	16.5	3.6	.3	.0	
MIN VALUE	0	0	0	5	7	13	18	20	15	14	17	15	15	8	5	0	0	0	
MAX VALUE	0	3	34	91	164	208	252	291	299	299	276	238	204	161	87	34	2	0	
ALTITUDE OF SUN 05	0	0	0	9	18	26	34	39	42	42	39	34	26	18	9	0	0	0	
ALTITUDE OF SUN 15	0	0	3	12	21	29	37	43	46	46	43	37	29	21	12	3	0	0	
ALTITUDE OF SUN 25	0	0	6	15	24	32	40	46	49	49	46	40	32	24	15	6	0	0	
AZIMUTH OF SUN 05	0	0	-99	-87	-75	-62	-47	-29	-10	10	29	47	62	75	87	99	0	0	
AZIMUTH OF SUN 15	0	0	-102	-90	-77	-64	-49	-31	-11	11	31	49	64	77	90	102	0	0	
AZIMUTH OF SUN 25	0	0	-104	-92	-80	-66	-51	-32	-11	11	32	51	66	80	92	104	0	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.5

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MAY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	6	-	19	-	-	-	-	-	-	-	-	25
288 (0800)	-	-	-	-	-	-	-	19	65	71	26	-	-	-	-	-	-	-	181
270 (0750)	-	-	-	-	-	6	-	84	116	142	71	6	-	-	-	-	-	-	425
252 (0700)	-	-	-	-	-	6	32	174	149	181	129	39	6	-	-	-	-	-	715
234 (0650)	-	-	-	-	-	6	123	232	194	245	239	84	6	-	-	-	-	-	1129
216 (0600)	-	-	-	-	-	13	187	271	277	303	290	135	19	-	-	-	-	-	1495
198 (0550)	-	-	-	-	-	97	226	348	368	361	335	219	77	-	-	-	-	-	2031
180 (0500)	-	-	-	-	-	226	290	406	394	406	413	297	174	6	-	-	-	-	2612
162 (0450)	-	-	-	-	39	290	381	465	484	477	484	394	277	13	-	-	-	-	3304
144 (0400)	-	-	-	-	161	368	439	510	510	574	542	484	335	84	-	-	-	-	4007
126 (0350)	-	-	-	26	342	503	594	645	697	729	697	645	471	303	19	-	-	-	4847
108 (0300)	-	-	-	168	452	626	639	755	781	774	761	735	568	413	103	-	-	-	5671
090 (0250)	-	-	-	277	535	690	774	826	852	839	826	832	658	523	290	-	-	-	6775
081 (0225)	-	-	-	387	652	742	826	852	890	897	852	858	748	561	335	6	-	-	7922
072 (0200)	-	-	6	445	690	768	871	871	916	929	884	884	774	606	394	13	-	-	8606
063 (0175)	-	-	39	490	723	794	884	897	942	948	910	890	819	671	465	58	-	-	9051
054 (0150)	-	-	97	555	761	839	929	929	955	955	935	923	839	755	529	187	-	-	9530
045 (0125)	-	-	194	639	819	923	961	968	968	968	974	935	890	832	645	258	-	-	10188
036 (0100)	-	-	290	710	871	942	968	974	974	981	987	981	929	871	755	361	-	-	10974
027 (0075)	-	-	523	800	929	948	981	987	994	987	1000	994	981	935	832	516	-	-	11594
018 (0050)	-	32	652	935	974	994	994	1000	994	1000	1000	1000	994	974	916	755	45	-	12407
009 (0025)	-	316	916	987	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	994	923	342	-	13259
001 (0003)	39	929	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	961	39	14478
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	15968
MEAN	0	6	29	64	100	131	152	173	176	182	174	156	126	95	62	32	7	0	18000
S.D.	0	5	17	36	50	64	72	81	80	81	78	66	62	48	33	18	5	0	
MEDIAN	.5	6.6	27.9	61.6	97.6	126.8	149.8	166.0	168.9	175.7	175.0	159.0	120.6	93.8	58.1	27.9	7.0	.5	
1ST QUINTILE	.8	12.7	44.4	102.7	155.6	201.6	228.0	261.9	250.7	264.7	258.4	220.1	193.5	145.8	98.7	52.4	13.3	.8	
2ND QUINTILE	.6	7.9	31.8	79.0	116.5	153.9	174.1	199.9	196.8	200.4	201.0	178.8	142.6	110.1	71.2	33.7	8.3	.6	
3RD QUINTILE	.4	5.3	21.6	49.2	85.0	111.8	123.6	144.0	140.2	156.0	143.0	138.7	101.6	73.2	48.5	23.8	5.7	.4	
4TH QUINTILE	.2	2.7	13.0	27.0	47.9	61.8	85.5	96.6	103.2	100.8	97.2	95.9	66.8	48.7	30.7	15.6	3.1	.2	
MIN VALUE	0	0	1	4	11	16	15	19	17	19	32	21	11	12	6	1	0	0	
MAX VALUE	1	21	73	129	190	289	286	333	322	341	312	291	271	200	136	83	23	1	
ALTITUDE OF SUN 05	0	0	8	17	26	35	43	49	52	52	49	43	35	26	17	8	0	0	
ALTITUDE OF SUN 15	0	2	10	19	28	37	45	51	55	55	51	45	37	28	19	10	2	0	
ALTITUDE OF SUN 25	0	4	12	21	30	39	47	53	57	57	53	47	39	30	21	12	4	0	
AZIMUTH OF SUN 05	0	0	-106	-94	-82	-68	-53	-34	-12	12	34	53	68	82	94	106	0	0	
AZIMUTH OF SUN 15	0	-119	-107	-96	-84	-70	-55	-36	-13	13	36	55	70	84	96	107	119	0	
AZIMUTH OF SUN 25	0	-120	-109	-97	-85	-72	-56	-37	-13	13	37	56	72	85	97	109	120	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.6

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JUNE

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	13	-	7	-	-	-	-	-	-	-	20
324 (0900)	-	-	-	-	-	-	-	7	27	13	7	-	-	-	-	-	-	-	54
306 (0850)	-	-	-	-	-	-	-	13	113	120	20	-	-	-	-	-	-	-	266
288 (0800)	-	-	-	-	-	-	13	140	180	167	120	13	-	-	-	-	-	-	633
270 (0750)	-	-	-	-	-	-	53	187	207	227	167	67	-	-	-	-	-	-	908
252 (0700)	-	-	-	-	-	-	133	253	287	247	233	160	-	-	-	-	-	-	1313
234 (0650)	-	-	-	-	-	40	173	313	373	300	333	213	47	-	-	-	-	-	1792
216 (0600)	-	-	-	-	-	133	227	380	413	373	393	260	147	-	-	-	-	-	2326
198 (0550)	-	-	-	7	7	173	280	427	473	473	460	313	200	-	-	-	-	-	2813
180 (0500)	-	-	-	7	93	287	367	467	533	520	533	427	320	87	-	-	-	-	3641
162 (0450)	-	-	-	7	220	393	447	527	580	640	640	507	420	167	-	-	-	-	4508
144 (0400)	-	-	-	13	293	400	527	633	667	707	713	633	467	273	-	-	-	-	5326
126 (0350)	-	-	-	107	360	500	667	740	727	787	787	733	553	393	113	-	-	-	6467
108 (0300)	-	-	-	227	507	593	753	833	807	833	827	787	667	487	267	-	-	-	7588
090 (0250)	-	-	7	327	587	713	820	900	873	880	887	853	787	620	353	7	-	-	8614
081 (0225)	-	-	7	340	627	767	873	927	920	907	900	887	840	693	427	60	-	-	9175
072 (0200)	-	-	87	427	693	847	933	967	953	933	927	920	880	767	507	153	-	-	9994
063 (0175)	-	-	167	513	787	927	967	973	973	940	953	927	913	840	607	240	-	-	10727
054 (0150)	-	-	307	640	840	947	973	973	987	960	973	987	940	887	693	313	-	-	11420
045 (0125)	-	-	413	753	900	967	980	987	987	1000	987	993	960	913	787	413	-	-	12040
036 (0100)	-	7	547	833	927	980	993	993	993	1000	1000	1000	980	953	860	533	7	-	12606
027 (0075)	-	73	693	940	980	1000	993	993	993	1000	1000	1000	993	987	920	720	167	-	13452
018 (0050)	-	300	853	967	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	980	833	347	-	14280
009 (0025)	-	760	980	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	987	767	-	15494
001 (0003)	680	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	707	17387
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	1	14	40	73	108	134	159	184	192	192	189	167	142	110	77	42	16	1	
S.D.	1	7	20	37	50	59	66	76	82	79	74	66	59	46	36	23	9	1	
MEDIAN	3.1	14.1	39.2	64.4	108.9	126.0	150.1	170.1	189.9	187.7	188.1	163.6	137.1	106.2	72.8	38.5	14.7	3.3	
1ST QUINTILE	6.6	22.0	60.9	112.1	164.8	193.7	225.0	266.5	274.7	278.1	261.0	238.4	198.0	156.4	115.8	67.1	25.4	6.7	
2ND QUINTILE	4.3	16.0	46.1	74.8	121.1	144.0	172.6	208.3	221.9	211.1	214.1	184.3	165.6	124.7	84.3	46.2	16.9	4.5	
3RD QUINTILE	1.9	12.1	32.7	56.8	87.1	107.0	134.6	149.6	157.9	168.0	168.7	148.7	118.6	92.7	63.6	32.8	12.6	2.2	
4TH QUINTILE	.6	7.7	21.0	39.7	60.8	77.3	95.4	114.4	109.6	120.9	120.2	104.5	87.8	67.9	43.4	20.6	7.9	.7	
MIN VALUE	0	1	5	10	22	29	24	25	26	45	38	41	26	23	9	8	1	0	
MAX VALUE	4	41	105	210	211	249	297	338	348	339	352	289	246	197	136	105	37	3	
ALTITUDE OF SUN 05	0	5	13	22	31	40	48	55	59	59	55	48	40	31	22	13	5	0	
ALTITUDE OF SUN 15	0	6	14	23	32	41	49	56	60	60	56	49	41	32	23	14	6	0	
ALTITUDE OF SUN 25	0	6	14	23	32	41	49	56	60	60	56	49	41	32	23	14	6	0	
AZIMUTH OF SUN 05	0	-121	-110	-98	-86	-73	-58	-38	-14	14	38	58	73	86	98	110	121	0	
AZIMUTH OF SUN 15	0	-121	-110	-99	-87	-74	-58	-39	-14	14	39	58	74	87	99	110	121	0	
AZIMUTH OF SUN 25	0	-122	-110	-99	-87	-74	-58	-39	-14	14	39	58	74	87	99	110	122	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.7

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JULY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	13	13	-	-	-	-	-	-	-	-	26
306 (0850)	-	-	-	-	-	-	-	19	39	45	26	-	-	-	-	-	-	-	129
288 (0800)	-	-	-	-	-	-	-	84	110	77	77	13	-	-	-	-	-	-	361
270 (0750)	-	-	-	-	-	-	32	135	187	148	116	58	-	-	-	-	-	-	676
252 (0700)	-	-	-	-	-	-	116	200	252	226	155	110	-	-	-	-	-	-	1059
234 (0650)	-	-	-	-	-	19	219	239	277	252	206	161	32	-	-	-	-	-	1405
216 (0600)	-	-	-	-	-	90	239	316	335	335	271	200	110	-	-	-	-	-	1896
198 (0550)	-	-	-	-	-	206	290	329	394	374	310	245	148	-	-	-	-	-	2296
180 (0500)	-	-	-	-	58	252	335	413	452	426	400	290	219	45	-	-	-	-	2890
162 (0450)	-	-	-	-	148	303	413	503	516	471	477	361	310	181	6	-	-	-	3689
144 (0400)	-	-	-	-	265	394	490	574	555	600	574	484	361	206	6	-	-	-	4509
126 (0350)	-	-	-	71	323	445	594	658	665	658	639	555	439	342	71	-	-	-	5460
108 (0300)	-	-	-	168	400	561	665	729	723	748	729	606	529	387	200	-	-	-	6445
090 (0250)	-	-	-	284	477	613	781	813	794	800	819	703	626	484	329	-	-	-	7523
081 (0225)	-	-	-	323	535	677	819	852	839	845	871	761	671	548	361	6	-	-	8108
072 (0200)	-	-	26	361	594	742	852	903	897	865	916	819	729	600	406	52	-	-	8762
063 (0175)	-	-	110	406	645	806	903	935	916	910	942	852	787	703	471	103	-	-	9489
054 (0150)	-	-	181	523	735	865	948	935	961	935	955	910	819	794	542	181	-	-	10284
045 (0125)	-	-	277	613	845	916	955	948	961	974	974	968	884	832	619	239	-	-	11005
036 (0100)	-	-	355	716	890	961	981	968	974	974	974	994	942	871	768	387	-	-	11755
027 (0075)	-	13	529	852	948	981	994	987	987	994	994	994	968	916	852	606	19	-	12634
018 (0050)	-	148	729	948	994	994	1000	1000	1000	1000	1000	1000	994	955	942	774	161	-	13639
009 (0025)	-	510	955	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	994	929	542	-	14930
001 (0003)	297	994	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	987	239	16517
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	10	32	64	96	125	152	167	173	170	164	144	121	96	67	33	10	0	
S.D.	0	6	19	36	51	63	71	78	83	81	74	72	63	51	38	19	7	0	
MEDIAN	.7	9.2	28.5	55.8	86.4	117.5	142.3	162.6	166.5	158.0	157.7	139.9	113.8	87.8	59.3	31.4	10.0	.7	
1ST QUINTILE	3.6	16.7	52.2	103.0	154.0	198.9	237.3	252.0	266.4	258.0	236.1	216.0	184.8	148.3	108.0	51.1	17.1	2.3	
2ND QUINTILE	.9	11.7	33.7	64.2	108.0	141.9	165.0	182.8	196.1	189.0	180.0	156.3	135.0	105.6	73.2	35.5	12.4	.8	
3RD QUINTILE	.6	7.5	23.8	46.3	70.9	94.5	124.5	138.4	136.6	144.0	136.8	110.1	94.8	72.0	47.2	27.2	8.0	.5	
4TH QUINTILE	.3	4.2	15.2	30.4	48.7	63.8	85.5	92.8	88.8	90.0	93.8	74.9	59.3	52.6	32.6	16.5	4.4	.3	
MIN VALUE	0	0	4	13	16	15	25	24	20	22	24	26	13	11	6	3	0	0	
MAX VALUE	2	33	76	136	191	249	283	313	326	326	322	299	249	191	167	85	30	2	
ALTITUDE OF SUN 05	0	6	14	23	32	40	49	55	59	59	55	49	40	32	23	14	6	0	
ALTITUDE OF SUN 15	0	5	13	22	31	40	48	54	58	58	54	48	40	31	22	13	5	0	
ALTITUDE OF SUN 25	0	3	11	20	29	38	46	53	56	56	53	46	38	29	20	11	3	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-87	-74	-58	-38	-14	14	38	58	74	87	99	110	121	0	
AZIMUTH OF SUN 15	0	-121	-109	-98	-86	-73	-57	-38	-13	13	38	57	73	86	98	109	121	0	
AZIMUTH OF SUN 25	0	-120	-108	-97	-85	-71	-56	-36	-13	13	36	56	71	85	97	108	120	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.8 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS AUGUST

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	6	13	-	-	-	-	-	-	-	-	19
288 (0800)	-	-	-	-	-	-	-	6	26	32	19	-	-	-	-	-	-	-	83
270 (0750)	-	-	-	-	-	-	-	32	84	58	45	6	-	-	-	-	-	-	225
252 (0700)	-	-	-	-	-	-	26	84	116	103	71	26	-	-	-	-	-	-	426
234 (0650)	-	-	-	-	-	-	58	135	161	174	123	65	-	-	-	-	-	-	716
216 (0600)	-	-	-	-	-	6	110	194	219	252	206	103	13	-	-	-	-	-	1103
198 (0550)	-	-	-	-	-	65	161	265	277	323	297	174	52	-	-	-	-	-	1614
180 (0500)	-	-	-	-	-	116	258	323	394	394	394	226	90	-	-	-	-	-	2195
162 (0450)	-	-	-	-	13	187	335	432	471	445	458	323	168	6	-	-	-	-	2838
144 (0400)	-	-	-	-	103	277	413	497	542	561	535	426	226	39	-	-	-	-	3619
126 (0350)	-	-	-	-	155	355	477	619	645	671	594	523	335	135	-	-	-	-	4509
108 (0300)	-	-	-	13	284	477	568	723	723	735	690	606	445	206	6	-	-	-	5476
090 (0250)	-	-	-	77	387	548	697	794	832	806	748	710	568	316	39	-	-	-	6522
081 (0225)	-	-	-	174	413	574	735	826	871	871	768	781	613	381	90	-	-	-	7097
072 (0200)	-	-	-	226	484	665	845	890	923	929	819	806	690	452	161	-	-	-	7890
063 (0175)	-	-	-	271	535	723	877	916	942	955	903	852	748	561	219	-	-	-	8502
054 (0150)	-	-	-	355	632	781	916	935	948	981	948	916	826	665	335	13	-	-	9251
045 (0125)	-	-	19	452	716	840	942	955	974	987	974	948	871	748	458	45	-	-	9979
036 (0100)	-	-	65	535	806	955	961	968	981	987	974	961	910	819	555	77	-	-	10554
027 (0075)	-	-	174	677	923	981	981	994	1000	994	1000	981	961	897	665	187	-	-	11415
018 (0050)	-	-	374	852	981	994	994	1000	1000	1000	1000	994	981	948	819	368	-	-	12305
009 (0025)	-	13	697	981	1000	1000	1000	1000	1000	1000	1000	1000	994	994	981	703	32	-	13395
001 (0003)	6	581	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	497	-	15084
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	2	16	46	78	106	131	150	159	161	152	132	104	73	43	17	2	0	
S.D.	0	2	11	28	42	53	61	66	68	68	69	61	53	38	25	12	2	0	
MEDIAN	.5	2.1	14.5	39.8	69.2	102.2	121.5	143.6	154.6	153.5	152.2	130.3	100.0	68.0	41.1	14.5	1.0	.0	
1ST QUINTILE	.8	6.4	25.8	76.5	119.7	159.4	190.8	214.5	221.9	228.0	217.3	189.0	152.1	109.5	65.9	26.4	6.1	.0	
2ND QUINTILE	.6	3.5	17.3	49.8	85.5	119.4	147.0	167.3	178.6	177.9	178.3	148.5	115.4	78.6	49.2	17.1	2.7	.0	
3RD QUINTILE	.4	1.0	11.7	31.9	57.0	78.4	103.5	128.8	133.9	137.6	124.9	109.3	83.6	59.6	32.3	11.8	.8	.0	
4TH QUINTILE	.2	.5	6.3	20.7	36.6	52.4	75.7	88.3	95.3	91.5	75.4	74.2	57.0	38.4	19.1	6.4	.4	.0	
MIN VALUE	0	0	1	7	10	15	16	26	30	24	28	17	8	7	5	1	0	0	
MAX VALUE	1	9	50	122	169	226	266	288	311	313	301	273	232	168	111	58	13	0	
ALTITUDE OF SUN 05	0	1	9	18	27	36	44	50	54	54	50	44	36	27	18	9	1	0	
ALTITUDE OF SUN 15	0	0	7	16	25	34	41	47	51	51	47	41	34	25	16	7	0	0	
ALTITUDE OF SUN 25	0	0	4	13	22	31	39	44	48	48	44	39	31	22	13	4	0	0	
AZIMUTH OF SUN 05	0	-118	-106	-95	-83	-69	-54	-35	-12	12	35	54	69	83	95	106	118	0	
AZIMUTH OF SUN 15	0	0	-105	-93	-81	-67	-52	-33	-12	12	33	52	67	81	93	105	0	0	
AZIMUTH OF SUN 25	0	0	-103	-91	-79	-65	-50	-32	-11	11	32	50	65	79	91	103	0	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.9 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS SEPTEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	7
270 (0750)	-	-	-	-	-	-	-	-	7	7	7	-	-	-	-	-	-	-	21
252 (0700)	-	-	-	-	-	-	-	7	20	33	7	-	-	-	-	-	-	-	67
234 (0650)	-	-	-	-	-	-	-	27	67	73	40	7	-	-	-	-	-	-	214
216 (0600)	-	-	-	-	-	-	13	73	167	133	87	7	-	-	-	-	-	-	480
198 (0550)	-	-	-	-	-	-	33	153	240	253	200	27	-	-	-	-	-	-	906
180 (0500)	-	-	-	-	-	-	127	313	307	360	300	107	-	-	-	-	-	-	1514
162 (0450)	-	-	-	-	-	53	307	373	400	453	353	233	13	-	-	-	-	-	2185
144 (0400)	-	-	-	-	-	127	453	460	480	520	440	300	67	-	-	-	-	-	2847
126 (0350)	-	-	-	-	-	267	513	567	580	580	507	387	147	-	-	-	-	-	3548
108 (0300)	-	-	-	-	60	427	620	653	620	647	607	493	253	20	-	-	-	-	4400
090 (0250)	-	-	-	-	113	520	660	773	753	707	660	593	353	87	-	-	-	-	5219
081 (0225)	-	-	-	-	213	560	680	793	807	740	720	680	440	107	-	-	-	-	5740
072 (0200)	-	-	-	-	307	593	760	807	833	800	800	740	513	180	-	-	-	-	6333
063 (0175)	-	-	-	-	400	667	793	833	867	827	833	793	620	227	-	-	-	-	6860
054 (0150)	-	-	-	20	480	733	853	880	907	873	873	827	727	347	13	-	-	-	7533
045 (0125)	-	-	-	40	560	807	887	927	920	920	920	880	760	453	47	-	-	-	8121
036 (0100)	-	-	-	100	653	867	933	973	947	940	953	913	840	600	153	-	-	-	8872
027 (0075)	-	-	-	260	793	940	987	980	993	980	973	960	900	767	227	-	-	-	9760
018 (0050)	-	-	-	493	900	980	993	993	1000	993	1000	1000	973	887	380	-	-	-	10592
009 (0025)	-	-	40	807	987	1000	1000	1000	1000	1000	1000	1000	1000	987	767	20	-	-	11608
001 (0003)	-	13	600	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	540	-	-	13153
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	2	19	54	90	121	136	140	142	131	110	78	46	18	2	0	0	
S.D.	0	0	2	12	29	44	54	59	64	68	63	52	39	25	13	2	0	0	
MEDIAN	.0	.5	2.4	17.8	51.8	93.9	129.9	137.3	140.4	149.4	127.9	106.7	73.6	42.1	15.2	1.6	.0	.0	
1ST QUINTILE	.0	.8	6.7	30.4	82.2	134.6	172.7	192.7	207.9	206.0	198.0	166.7	117.0	68.2	30.3	6.2	.0	.0	
2ND QUINTILE	.0	.6	3.9	21.6	63.0	111.0	150.5	156.4	162.0	172.3	152.3	123.8	85.1	49.5	17.5	3.2	.0	.0	
3RD QUINTILE	.0	.4	1.0	14.9	41.1	71.1	111.4	119.1	117.0	120.6	109.3	89.3	64.7	36.0	12.9	.9	.0	.0	
4TH QUINTILE	.0	.2	.5	9.2	26.4	45.9	62.0	76.5	82.2	72.0	72.0	61.1	40.5	24.5	7.9	.4	.0	.0	
MIN VALUE	0	0	0	1	6	14	15	15	20	12	22	22	13	7	1	0	0	0	
MAX VALUE	0	1	12	58	119	177	228	266	280	290	280	235	164	116	56	10	0	0	
ALTITUDE 05	0	0	1	10	19	28	35	41	44	44	41	35	28	19	10	1	0	0	
OF 15	0	0	0	7	16	24	32	37	40	40	37	32	24	16	7	0	0	0	
SUN 25	0	0	0	4	13	21	28	33	36	36	33	28	21	13	4	0	0	0	
AZIMUTH 05	0	0	-100	-88	-76	-63	-48	-30	-10	10	30	48	63	76	88	100	0	0	
OF 15	0	0	0	-86	-74	-60	-46	-29	-10	10	29	46	60	74	86	0	0	0	
SUN 25	0	0	0	-84	-71	-58	-44	-27	-9	9	27	44	58	71	84	0	0	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.10 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS OCTOBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	6
198 (0550)	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	13
180 (0500)	-	-	-	-	-	-	-	-	19	13	-	-	-	-	-	-	-	-	32
162 (0450)	-	-	-	-	-	-	-	19	65	58	26	6	-	-	-	-	-	-	174
144 (0400)	-	-	-	-	-	-	26	116	116	135	77	13	-	-	-	-	-	-	483
126 (0350)	-	-	-	-	-	-	90	200	204	277	161	26	-	-	-	-	-	-	960
108 (0300)	-	-	-	-	-	6	142	361	368	394	258	110	-	-	-	-	-	-	1639
090 (0250)	-	-	-	-	-	58	284	445	497	510	394	284	26	-	-	-	-	-	2498
081 (0225)	-	-	-	-	-	71	335	516	535	568	432	329	52	-	-	-	-	-	2838
072 (0200)	-	-	-	-	-	110	400	574	600	652	516	368	97	-	-	-	-	-	3317
063 (0175)	-	-	-	-	-	174	490	658	710	697	581	432	174	-	-	-	-	-	3916
054 (0150)	-	-	-	-	13	290	581	723	794	755	671	484	265	-	-	-	-	-	4576
045 (0125)	-	-	-	-	32	419	665	813	865	832	781	600	387	19	-	-	-	-	5413
036 (0100)	-	-	-	-	97	555	774	897	948	897	845	716	477	90	-	-	-	-	6296
027 (0075)	-	-	-	-	148	658	884	923	961	948	923	852	619	168	-	-	-	-	7084
018 (0050)	-	-	-	-	323	806	948	987	1000	981	987	935	806	297	-	-	-	-	8070
009 (0025)	-	-	-	26	697	981	1000	1000	1000	1000	1000	1000	974	652	6	-	-	-	9336
001 (0003)	-	-	-	529	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	471	-	-	-	11000
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	1	16	41	67	86	91	93	80	62	39	15	1	0	0	0	
S.D.	0	0	0	2	12	24	36	42	42	44	41	35	22	12	2	0	0	0	
MEDIAN	.0	.0	.0	1.5	13.7	39.6	62.0	83.0	89.3	91.6	73.7	52.8	34.5	12.9	.9	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	6.2	24.3	61.0	100.6	126.0	127.2	135.8	118.8	98.7	60.4	24.8	5.7	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	3.1	16.1	46.3	72.0	99.6	103.5	107.1	88.6	67.5	43.7	15.4	2.2	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.8	11.3	32.1	52.0	69.2	72.0	77.6	61.1	45.0	28.2	10.3	.8	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.4	6.3	18.4	33.9	46.3	53.2	48.7	42.3	30.4	18.3	5.6	.4	.0	.0	.0	
MIN VALUE	0	0	0	0	2	7	12	15	19	14	14	9	7	1	0	0	0	0	
MAX VALUE	0	0	0	10	56	117	151	168	216	191	179	177	99	52	9	0	0	0	
ALTITUDE OF SUN 05	0	0	0	1	10	18	25	30	32	32	30	25	18	10	1	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	7	14	21	26	29	29	26	21	14	7	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	4	11	18	22	25	25	22	18	11	4	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	-81	-69	-56	-42	-26	-9	9	26	42	56	69	81	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-67	-54	-40	-25	-9	9	25	40	54	67	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-65	-52	-39	-24	-9	8	24	39	52	65	0	0	0	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.11 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS NOVEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	13	7	-	-	-	-	-	-	-	-	20
108 (0300)	-	-	-	-	-	-	-	47	120	113	27	-	-	-	-	-	-	-	307
090 (0250)	-	-	-	-	-	-	7	153	233	220	127	-	-	-	-	-	-	-	740
081 (0225)	-	-	-	-	-	-	40	220	293	287	220	7	-	-	-	-	-	-	1067
072 (0200)	-	-	-	-	-	-	80	293	347	353	300	40	-	-	-	-	-	-	1413
063 (0175)	-	-	-	-	-	-	160	367	420	460	333	100	-	-	-	-	-	-	1840
054 (0150)	-	-	-	-	-	-	207	420	533	553	447	200	-	-	-	-	-	-	2360
045 (0125)	-	-	-	-	-	13	307	560	633	620	540	327	7	-	-	-	-	-	3007
036 (0100)	-	-	-	-	-	60	387	620	713	727	647	433	60	-	-	-	-	-	3647
027 (0075)	-	-	-	-	-	160	560	767	800	800	740	580	120	-	-	-	-	-	4527
018 (0050)	-	-	-	-	-	307	740	867	933	913	887	713	280	-	-	-	-	-	5640
009 (0025)	-	-	-	-	7	653	927	980	987	1000	980	947	667	7	-	-	-	-	7155
001 (0003)	-	-	-	-	547	1000	1000	1000	1000	1000	1000	1000	987	493	-	-	-	-	9027
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	1	15	35	53	60	60	52	34	14	1	0	0	0	0	
S.D.	0	0	0	0	2	11	22	30	33	32	29	20	10	2	0	0	0	0	
MEDIAN	.0	.0	.0	.0	1.7	13.0	30.1	48.9	56.6	59.1	48.9	31.9	12.9	1.0	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	6.1	24.6	55.3	83.7	95.3	93.4	82.9	54.0	22.5	5.8	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	3.2	15.6	35.3	57.4	65.5	68.0	57.7	38.8	15.2	2.5	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.9	10.4	25.0	39.0	48.0	47.7	40.0	25.6	10.6	.8	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.4	5.6	15.1	24.0	27.0	27.0	23.3	14.7	5.7	.4	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	1	5	5	8	9	4	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	9	46	102	123	134	131	121	88	52	10	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	1	8	14	19	21	21	19	14	8	1	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	6	12	16	18	18	16	12	6	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	4	10	14	16	16	14	10	4	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-51	-37	-23	-8	8	23	37	51	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 1.2.12 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	19	6	-	-	-	-	-	-	-	-	25
081 (0225)	-	-	-	-	-	-	-	-	45	52	-	-	-	-	-	-	-	-	97
072 (0200)	-	-	-	-	-	-	-	26	116	135	32	-	-	-	-	-	-	-	309
063 (0175)	-	-	-	-	-	-	6	123	161	206	90	-	-	-	-	-	-	-	586
054 (0150)	-	-	-	-	-	-	6	194	245	277	168	-	-	-	-	-	-	-	890
045 (0125)	-	-	-	-	-	-	32	226	329	355	258	13	-	-	-	-	-	-	1213
036 (0100)	-	-	-	-	-	-	116	323	497	471	394	110	-	-	-	-	-	-	1911
027 (0075)	-	-	-	-	-	-	239	497	632	600	548	271	-	-	-	-	-	-	2787
018 (0050)	-	-	-	-	-	-	419	748	839	865	774	452	-	-	-	-	-	-	4097
009 (0025)	-	-	-	-	-	84	787	968	987	974	948	839	77	-	-	-	-	-	5664
001 (0003)	-	-	-	-	-	955	1000	1000	1000	1000	1000	1000	968	6	-	-	-	-	7929
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	4	19	32	39	39	33	19	4	0	0	0	0	0	
S.D.	0	0	0	0	0	3	12	19	22	23	18	11	3	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.0	5.2	16.0	26.9	35.8	34.0	29.8	16.9	5.2	.5	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.0	7.9	29.9	52.3	58.8	63.8	50.8	31.0	7.9	.8	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.0	6.1	19.0	32.0	41.2	41.5	35.6	20.6	6.1	.6	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.0	4.3	13.6	23.3	29.1	27.0	24.9	14.6	4.3	.4	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.0	2.4	8.5	15.9	19.7	20.2	16.7	9.9	2.5	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	1	5	7	6	3	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	0	17	65	79	99	104	78	47	13	1	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	2	8	12	14	14	12	8	2	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	1	7	11	13	13	11	7	1	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	1	7	11	13	13	11	7	1	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.1

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JANUARY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	5
108 (0300)	-	-	-	-	-	-	-	5	51	37	9	-	-	-	-	-	-	-	102
090 (0250)	-	-	-	-	-	-	-	41	124	120	37	-	-	-	-	-	-	-	322
081 (0225)	-	-	-	-	-	-	-	92	194	171	65	-	-	-	-	-	-	-	522
072 (0200)	-	-	-	-	-	-	5	147	272	244	129	9	-	-	-	-	-	-	806
063 (0175)	-	-	-	-	-	-	23	244	327	323	221	28	-	-	-	-	-	-	1166
054 (0150)	-	-	-	-	-	-	78	309	429	406	318	74	-	-	-	-	-	-	1614
045 (0125)	-	-	-	-	-	-	171	392	516	516	392	189	-	-	-	-	-	-	2176
036 (0100)	-	-	-	-	-	-	263	484	618	618	479	281	5	-	-	-	-	-	2748
027 (0075)	-	-	-	-	-	23	387	622	719	705	622	410	18	-	-	-	-	-	3506
018 (0050)	-	-	-	-	-	92	558	774	816	820	793	599	129	-	-	-	-	-	4581
009 (0025)	-	-	-	-	-	356	797	922	954	954	931	820	488	-	-	-	-	-	6202
001 (0003)	-	-	-	-	235	945	995	995	1000	1000	1000	1000	963	350	-	-	-	-	8483
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	8	25	41	50	49	40	26	10	1	0	0	0	0	
S.D.	0	0	0	0	1	7	17	26	30	30	25	17	7	1	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.7	6.8	21.1	35.0	46.7	46.3	34.7	22.7	8.8	.8	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	2.2	14.0	42.2	67.1	80.3	77.4	65.1	43.9	16.2	4.4	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.8	8.2	26.3	44.2	56.6	54.7	44.2	27.7	11.2	.9	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.5	5.5	16.4	28.4	37.6	37.6	28.4	18.0	7.1	.6	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.3	2.9	8.9	16.4	19.5	19.6	17.5	9.8	3.7	.3	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	7	7	4	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	5	34	79	109	123	126	110	75	44	6	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	2	8	12	14	14	12	8	2	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	3	9	13	16	16	13	9	3	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	5	11	16	18	18	16	11	5	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-49	-36	-22	-7	7	22	36	49	0	0	0	0	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.2 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS FEBRUARY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	5
180 (0500)	-	-	-	-	-	-	-	-	15	10	-	-	-	-	-	-	-	-	25
162 (0450)	-	-	-	-	-	-	-	5	41	41	5	-	-	-	-	-	-	-	92
144 (0400)	-	-	-	-	-	-	-	56	112	132	36	-	-	-	-	-	-	-	336
126 (0350)	-	-	-	-	-	-	10	173	228	264	142	15	-	-	-	-	-	-	832
108 (0300)	-	-	-	-	-	-	61	294	325	335	254	81	-	-	-	-	-	-	1350
090 (0250)	-	-	-	-	-	-	178	381	431	452	401	183	5	-	-	-	-	-	2031
081 (0225)	-	-	-	-	-	10	259	431	472	513	442	249	20	-	-	-	-	-	2396
072 (0200)	-	-	-	-	-	41	340	482	543	599	513	315	61	-	-	-	-	-	2894
063 (0175)	-	-	-	-	-	102	416	538	619	650	599	416	117	-	-	-	-	-	3457
054 (0150)	-	-	-	-	-	168	472	584	695	721	645	497	173	-	-	-	-	-	3955
045 (0125)	-	-	-	-	-	218	518	650	756	766	716	569	259	-	-	-	-	-	4452
036 (0100)	-	-	-	-	5	340	594	736	822	817	777	680	340	10	-	-	-	-	5121
027 (0075)	-	-	-	-	15	452	711	853	893	878	858	777	508	36	-	-	-	-	5981
018 (0050)	-	-	-	-	76	609	883	934	964	975	944	898	695	142	-	-	-	-	7120
009 (0025)	-	-	-	-	310	893	980	1000	1000	1000	995	990	924	396	-	-	-	-	8488
001 (0003)	-	-	-	91	919	1000	1000	1000	1000	1000	1000	1000	1000	975	193	-	-	-	10178
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	7	30	54	75	84	86	76	57	32	10	0	0	0	0	
S.D.	0	0	0	0	7	20	33	43	46	45	40	32	21	8	1	0	0	0	
MEDIAN	.0	.0	.0	.6	6.5	24.2	48.5	69.1	77.5	82.9	73.6	53.6	27.4	7.6	.6	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.9	13.2	48.2	87.6	122.0	130.3	134.7	116.7	87.7	51.2	15.9	1.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.7	7.8	31.2	64.9	86.6	95.3	98.0	90.1	64.4	32.8	8.9	.7	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.4	5.2	18.5	35.5	51.8	65.3	71.8	62.8	42.5	22.6	6.2	.5	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.2	2.6	11.9	22.3	31.1	39.0	39.0	33.4	25.3	13.9	3.4	.2	.0	.0	.0	
MIN VALUE	0	0	0	0	0	2	7	10	11	9	8	4	3	0	0	0	0	0	
MAX VALUE	0	0	0	5	38	85	138	168	203	184	168	142	97	38	4	0	0	0	
ALTITUDE 05	0	0	0	0	0	8	14	18	21	21	18	14	8	0	0	0	0	0	
OF 15	0	0	0	0	3	10	17	22	24	24	22	17	10	3	0	0	0	0	
SUN 25	0	0	0	0	6	14	20	25	28	28	25	20	14	6	0	0	0	0	
AZIMUTH 05	0	0	0	0	0	-50	-37	-23	-8	8	23	37	50	0	0	0	0	0	
OF 15	0	0	0	0	-64	-52	-38	-24	-8	8	24	38	52	64	0	0	0	0	
SUN 25	0	0	0	0	-66	-54	-40	-25	-8	8	25	40	54	66	0	0	0	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.3

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MARCH

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	5	-	5	-	-	-	-	-	-	-	10
234 (0650)	-	-	-	-	-	-	-	-	32	37	14	-	-	-	-	-	-	-	83
216 (0600)	-	-	-	-	-	-	-	28	101	134	46	-	-	-	-	-	-	-	309
198 (0550)	-	-	-	-	-	-	9	83	180	207	120	5	-	-	-	-	-	-	604
180 (0500)	-	-	-	-	-	-	69	180	290	290	230	32	-	-	-	-	-	-	1091
162 (0450)	-	-	-	-	-	5	134	272	346	350	327	143	-	-	-	-	-	-	1577
144 (0400)	-	-	-	-	-	23	226	369	419	433	396	244	5	-	-	-	-	-	2115
126 (0350)	-	-	-	-	-	101	355	447	488	525	475	341	69	-	-	-	-	-	2801
108 (0300)	-	-	-	-	-	166	456	553	576	585	567	433	161	-	-	-	-	-	3497
090 (0250)	-	-	-	-	32	323	535	645	659	687	654	512	304	18	-	-	-	-	4369
081 (0225)	-	-	-	-	55	401	585	700	700	737	687	571	364	46	-	-	-	-	4846
072 (0200)	-	-	-	-	88	461	659	751	737	765	728	650	442	97	-	-	-	-	5378
063 (0175)	-	-	-	-	152	548	714	783	783	793	788	724	530	143	-	-	-	-	5958
054 (0150)	-	-	-	-	203	604	779	811	848	839	834	783	604	221	-	-	-	-	6526
045 (0125)	-	-	-	-	295	668	816	876	880	889	880	829	691	295	5	-	-	-	7124
036 (0100)	-	-	-	23	433	737	862	945	945	931	931	889	779	465	23	-	-	-	7963
027 (0075)	-	-	-	51	553	820	922	982	982	963	968	917	839	622	83	-	-	-	8702
018 (0050)	-	-	-	143	737	899	972	991	991	986	982	977	945	783	175	-	-	-	9581
009 (0025)	-	-	-	323	908	977	991	995	1000	1000	1000	1000	995	935	447	-	-	-	10571
001 (0003)	-	-	161	926	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	982	272	-	-	12341
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	9	36	69	99	118	128	130	122	99	68	37	11	1	0	0	
S.D.	0	0	1	9	24	39	51	56	64	65	60	50	36	22	9	1	0	0	
MEDIAN	.0	.0	.6	6.7	31.0	68.0	98.0	117.0	123.5	130.9	121.1	92.7	66.1	34.0	8.2	.7	.0	.0	
1ST QUINTILE	.0	.0	1.0	15.2	54.5	104.1	149.1	176.1	194.7	199.7	184.9	151.8	103.1	56.4	17.2	3.1	.0	.0	
2ND QUINTILE	.0	.0	.7	8.0	38.2	81.1	118.0	136.8	148.7	151.2	143.1	114.5	76.8	39.4	10.6	.8	.0	.0	
3RD QUINTILE	.0	.0	.5	5.3	24.7	54.6	79.2	98.8	102.8	105.4	101.2	77.7	54.5	28.3	6.7	.5	.0	.0	
4TH QUINTILE	.0	.0	.2	2.7	14.7	29.2	48.9	57.5	60.6	61.6	60.7	50.7	32.9	17.0	3.7	.3	.0	.0	
MIN VALUE	0	0	0	0	1	3	5	8	13	12	14	13	8	2	0	0	0	0	
MAX VALUE	0	0	4	43	105	167	214	227	264	244	259	213	159	101	46	4	0	0	
ALTITUDE OF SUN 05	0	0	0	0	8	16	23	28	31	31	28	23	16	8	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	3	11	20	26	32	34	34	32	26	20	11	3	0	0	0	
ALTITUDE OF SUN 25	0	0	0	6	15	23	30	35	38	38	35	30	23	15	6	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-68	-55	-41	-26	-9	9	26	41	55	68	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	-83	-70	-57	-43	-27	-9	9	27	43	57	70	83	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-85	-73	-59	-45	-28	-10	10	28	45	59	73	85	0	0	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS APRIL

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	5
306 (0850)	-	-	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-	20
288 (0800)	-	-	-	-	-	-	-	5	51	36	5	-	-	-	-	-	-	-	97
270 (0750)	-	-	-	-	-	-	-	41	122	127	36	-	-	-	-	-	-	-	326
252 (0700)	-	-	-	-	-	-	15	107	198	223	122	10	-	-	-	-	-	-	675
234 (0650)	-	-	-	-	-	-	76	218	299	274	218	41	5	-	-	-	-	-	1131
216 (0600)	-	-	-	-	-	-	168	310	360	350	294	128	20	-	-	-	-	-	1630
198 (0550)	-	-	-	-	-	36	294	401	431	431	386	204	51	-	-	-	-	-	2234
180 (0500)	-	-	-	-	-	107	396	492	503	513	457	291	97	-	-	-	-	-	2856
162 (0450)	-	-	-	-	5	259	472	563	594	604	513	357	168	10	-	-	-	-	3545
144 (0400)	-	-	-	-	51	406	558	695	670	640	589	418	235	36	-	-	-	-	4298
126 (0350)	-	-	-	-	178	487	660	746	741	726	660	505	347	122	-	-	-	-	5172
108 (0300)	-	-	-	10	320	624	761	792	817	787	716	628	454	245	-	-	-	-	6154
090 (0250)	-	-	-	41	467	721	822	853	888	873	797	730	556	378	20	-	-	-	7146
081 (0225)	-	-	-	71	533	766	853	883	909	904	832	796	628	434	66	-	-	-	7675
072 (0200)	-	-	-	96	614	797	868	893	929	929	853	821	684	490	128	-	-	-	8102
063 (0175)	-	-	-	193	665	863	919	929	939	944	914	888	770	582	173	-	-	-	8779
054 (0150)	-	-	-	294	756	888	934	954	944	964	944	908	827	689	301	-	-	-	9403
045 (0125)	-	-	-	406	812	914	954	954	959	975	964	934	888	750	383	-	-	-	9893
036 (0100)	-	-	-	569	888	939	970	964	980	990	995	980	944	832	556	15	-	-	10622
027 (0075)	-	-	76	701	909	964	980	975	980	995	1000	1000	980	923	679	102	-	-	11264
018 (0050)	-	-	168	873	954	990	990	995	1000	1000	1000	1000	990	980	852	260	-	-	12052
009 (0025)	-	-	452	959	995	1000	1000	1000	1000	1000	1000	1000	1000	1000	954	485	-	-	12845
001 (0003)	-	213	954	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	990	281	-	14438
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	10	42	85	121	153	171	180	179	163	136	106	76	41	12	1	0	
S.D.	0	1	8	23	39	50	62	68	73	73	72	61	51	37	22	9	1	0	
MEDIAN	.0	.6	8.2	39.8	85.5	124.3	156.1	178.0	180.8	182.9	166.2	127.0	99.9	71.0	38.9	8.8	.7	.0	
1ST QUINTILE	.0	1.5	17.0	62.4	123.2	169.0	211.4	236.9	251.6	256.3	237.4	198.9	153.4	114.6	61.1	21.4	3.3	.0	
2ND QUINTILE	.0	.8	10.6	45.5	98.2	144.7	179.1	198.2	205.9	204.9	194.5	149.3	117.1	86.5	44.1	12.4	.8	.0	
3RD QUINTILE	.0	.5	6.6	33.9	73.6	111.2	136.6	157.0	160.6	162.8	141.2	112.1	84.5	61.5	32.8	7.2	.6	.0	
4TH QUINTILE	.0	.3	3.5	21.8	46.9	71.6	96.5	105.6	112.0	105.3	89.2	79.6	58.3	39.5	20.7	4.0	.3	.0	
MIN VALUE	0	0	0	1	8	10	14	12	19	24	29	29	12	12	5	0	0	0	
MAX VALUE	0	4	35	113	164	214	264	299	320	329	305	265	234	170	101	40	6	0	
ALTITUDE OF SUN 05	0	0	0	9	18	27	34	40	43	43	40	34	27	18	9	0	0	0	
ALTITUDE OF SUN 15	0	0	3	12	21	30	37	43	46	46	43	37	30	21	12	3	0	0	
ALTITUDE OF SUN 25	0	0	6	15	24	32	40	46	50	50	46	40	32	24	15	6	0	0	
AZIMUTH OF SUN 05	0	0	0	-88	-75	-62	-47	-30	-10	10	30	47	62	75	88	0	0	0	
AZIMUTH OF SUN 15	0	0	-102	-90	-78	-64	-49	-31	-11	11	31	49	64	78	90	102	0	0	
AZIMUTH OF SUN 25	0	0	-104	-92	-80	-66	-51	-33	-11	11	33	51	66	80	92	104	0	0	

KILKENNY 52.67N 7.27W ALTITJDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.5

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MAY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	5
360 (1000)	-	-	-	-	-	-	-	5	-	5	-	-	-	-	-	-	-	-	10
342 (0950)	-	-	-	-	-	-	-	5	5	9	-	-	-	-	-	-	-	-	19
324 (0900)	-	-	-	-	-	-	-	18	28	37	9	5	-	-	-	-	-	-	97
306 (0850)	-	-	-	-	-	-	-	55	97	101	32	9	-	-	-	-	-	-	294
288 (0800)	-	-	-	-	-	-	37	138	147	166	92	18	5	-	-	-	-	-	603
270 (0750)	-	-	-	-	-	-	101	207	240	198	134	69	5	-	-	-	-	-	954
252 (0700)	-	-	-	-	-	5	143	258	286	272	212	152	14	-	-	-	-	-	1342
234 (0650)	-	-	-	-	-	46	217	309	346	332	281	198	60	-	-	-	-	-	1789
216 (0600)	-	-	-	-	-	124	263	378	401	378	346	244	111	-	-	-	-	-	2245
198 (0550)	-	-	-	-	5	226	350	447	461	442	406	309	194	5	-	-	-	-	2845
180 (0500)	-	-	-	-	88	300	419	502	539	502	475	369	300	51	-	-	-	-	3545
162 (0450)	-	-	-	-	189	373	484	562	576	562	512	438	392	138	-	-	-	-	4226
144 (0400)	-	-	-	-	276	447	548	618	645	636	581	512	461	249	-	-	-	-	4973
126 (0350)	-	-	-	41	346	507	618	710	696	696	668	604	502	364	55	-	-	-	5807
108 (0300)	-	-	-	189	419	590	687	760	765	756	747	691	590	461	171	-	-	-	6826
090 (0250)	-	-	-	281	539	677	770	806	816	797	811	783	714	571	276	-	-	-	7841
081 (0225)	-	-	-	346	608	724	816	843	839	829	843	820	751	636	346	5	-	-	8406
072 (0200)	-	-	14	410	650	770	834	862	857	866	871	839	797	682	461	28	-	-	8941
063 (0175)	-	-	55	479	696	816	862	885	903	899	889	857	825	756	544	97	-	-	9563
054 (0150)	-	-	152	539	737	843	912	908	922	926	917	880	876	806	599	189	-	-	10206
045 (0125)	-	-	240	618	825	894	940	931	935	949	931	899	889	853	696	290	-	-	10890
036 (0100)	-	-	355	691	880	926	959	959	963	963	959	954	908	876	747	415	-	-	11555
027 (0075)	-	-	470	793	912	968	986	972	982	982	977	972	954	908	834	604	9	-	12323
018 (0050)	-	18	710	899	977	991	991	986	991	995	995	991	972	959	926	797	92	-	13290
009 (0025)	-	226	871	995	995	991	991	991	991	995	995	995	991	991	972	908	429	-	14327
001 (0003)	55	899	1000	1000	995	991	991	991	991	995	995	995	991	995	995	1000	954	134	15967
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	6	30	63	100	132	158	180	185	182	171	153	132	102	67	34	9	0	
S.D.	0	5	18	36	54	67	77	87	90	89	82	77	66	50	36	19	6	0	
MEDIAN	.5	5.7	25.9	59.9	95.9	128.1	157.5	180.7	189.0	180.6	167.8	146.9	126.9	101.6	67.8	32.0	7.9	.6	
1ST QUINTILE	.8	10.1	49.1	105.8	159.7	202.6	238.1	271.8	277.7	269.5	254.8	233.2	197.0	151.9	103.0	53.0	15.1	.9	
2ND QUINTILE	.6	6.9	32.5	73.4	112.7	155.4	185.0	210.3	216.3	209.8	199.8	171.9	159.9	119.3	76.8	37.1	9.8	.7	
3RD QUINTILE	.4	4.6	22.1	47.1	82.0	109.9	130.6	149.8	155.7	152.8	140.1	126.8	106.5	86.0	53.9	27.2	6.4	.5	
4TH QUINTILE	.2	2.2	13.0	26.4	47.6	66.1	84.1	92.3	95.6	89.2	93.1	85.9	71.0	55.1	30.5	17.8	3.3	.2	
MIN VALUE	0	0	1	8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
MAX VALUE	4	23	78	139	199	258	302	382	353	360	332	331	293	210	138	84	30	4	
ALTITUDE 05	0	0	8	17	26	35	43	49	53	53	49	43	35	26	17	8	0	0	
OF 15	0	2	10	19	28	37	45	52	55	55	52	45	37	28	19	10	2	0	
SUN 25	0	4	12	21	30	39	47	54	58	58	54	47	39	30	21	12	4	0	
AZIMUTH 05	0	0	-106	-94	-82	-69	-53	-34	-12	12	34	53	69	82	94	106	0	0	
OF 15	0	-119	-107	-96	-84	-71	-55	-36	-13	13	36	55	71	84	96	107	119	0	
SUN 25	0	-120	-109	-97	-85	-72	-57	-37	-13	13	37	57	72	85	97	109	120	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JUNE

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	5
342 (0950)	-	-	-	-	-	-	-	10	10	19	14	-	-	-	-	-	-	-	53
324 (0900)	-	-	-	-	-	-	-	38	62	67	29	-	-	-	-	-	-	-	196
306 (0850)	-	-	-	-	-	-	5	114	148	148	110	5	-	-	-	-	-	-	530
288 (0800)	-	-	-	-	-	-	52	171	214	210	167	57	-	-	-	-	-	-	871
270 (0750)	-	-	-	-	-	10	133	248	276	276	238	133	5	-	-	-	-	-	1319
252 (0700)	-	-	-	-	-	19	224	295	343	362	314	190	24	-	-	-	-	-	1771
234 (0650)	-	-	-	-	-	148	305	371	419	457	395	252	129	-	-	-	-	-	2476
216 (0600)	-	-	-	-	-	257	371	438	500	538	467	348	205	-	-	-	-	-	3124
198 (0550)	-	-	-	-	29	324	433	495	552	581	529	443	276	38	-	-	-	-	3700
180 (0500)	-	-	-	-	176	405	510	548	629	624	581	524	371	162	-	-	-	-	4530
162 (0450)	-	-	-	-	314	505	581	652	695	676	667	595	443	243	5	-	-	-	5376
144 (0400)	-	-	-	24	424	571	676	757	790	743	729	662	514	314	38	-	-	-	6242
126 (0350)	-	-	-	138	495	638	743	810	819	805	786	776	643	424	195	-	-	-	7272
108 (0300)	-	-	-	286	567	700	838	862	852	843	829	829	700	533	310	-	-	-	8149
090 (0250)	-	-	10	395	662	805	900	924	900	886	871	857	771	638	448	14	-	-	9081
081 (0225)	-	-	38	462	724	843	910	933	919	914	895	886	810	695	519	90	-	-	9638
072 (0200)	-	-	124	529	767	852	938	962	948	933	919	900	848	748	586	181	-	-	10235
063 (0175)	-	-	262	605	848	919	957	986	976	948	938	929	890	810	686	329	-	-	11083
054 (0150)	-	-	310	714	895	948	967	990	981	957	948	957	919	848	743	410	-	-	11587
045 (0125)	-	-	414	805	914	957	981	995	986	971	962	967	952	881	800	505	-	-	12090
036 (0100)	-	-	614	876	957	981	995	1000	986	986	986	976	929	852	638	24	-	-	12786
027 (0075)	-	33	719	924	990	990	1000	1000	1000	1000	995	995	990	967	905	795	152	-	13455
018 (0050)	-	295	876	995	995	1000	1000	1000	1000	1000	995	1000	995	995	967	910	495	-	14518
009 (0025)	-	690	986	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	995	967	852	-	15490
001 (0003)	538	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	995	800	17333
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	1	14	43	80	122	156	182	201	209	209	199	180	150	114	83	48	18	2	
S.D.	1	7	21	37	52	65	71	78	81	85	83	72	65	53	39	23	8	1	
MEDIAN	1.6	13.3	41.1	75.9	124.8	162.9	182.3	196.3	216.0	224.4	206.4	185.3	147.5	113.4	83.4	45.5	17.9	4.0	
1ST QUINTILE	6.0	21.3	67.0	118.5	176.9	225.4	256.7	281.2	291.8	290.9	279.6	249.1	217.2	171.6	125.2	70.8	25.7	7.0	
2ND QUINTILE	3.1	15.6	46.2	89.3	147.9	181.1	207.6	226.2	238.5	244.8	232.8	206.1	172.8	129.9	96.3	55.1	20.5	5.0	
3RD QUINTILE	.9	11.1	36.6	63.6	101.7	136.2	158.4	171.0	186.8	190.0	176.0	160.7	132.0	96.5	70.7	38.6	15.4	3.0	
4TH QUINTILE	.4	6.2	22.4	45.5	68.3	90.9	115.2	129.4	137.8	127.5	120.1	117.8	83.3	64.5	45.0	26.6	10.3	1.0	
MIN VALUE	0	1	8	12	15	22	32	44	33	29	17	25	17	13	8	4	0	0	
MAX VALUE	4	35	91	151	210	276	306	353	364	359	356	306	272	215	163	94	42	7	
ALTITUDE OF SUN 05	0	5	13	22	31	40	48	55	59	59	55	48	40	31	22	13	5	0	
ALTITUDE OF SUN 15	0	6	14	23	32	41	49	56	60	60	56	49	41	32	23	14	6	0	
ALTITUDE OF SUN 25	0	6	14	23	32	41	49	56	60	60	56	49	41	32	23	14	6	0	
AZIMUTH OF SUN 05	0	-121	-110	-98	-87	-74	-58	-38	-14	14	38	58	74	87	98	110	121	0	
AZIMUTH OF SUN 15	0	-121	-110	-99	-87	-74	-59	-39	-14	14	39	59	74	87	99	110	121	0	
AZIMUTH OF SUN 25	0	-122	-110	-99	-87	-74	-59	-39	-14	14	39	59	74	87	99	110	122	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.7 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JULY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	14	5	-	-	-	-	-	-	-	19
324 (0900)	-	-	-	-	-	-	-	-	41	46	18	-	-	-	-	-	-	-	105
306 (0850)	-	-	-	-	-	-	-	41	83	101	51	5	-	-	-	-	-	-	281
288 (0800)	-	-	-	-	-	5	9	106	143	152	101	9	-	-	-	-	-	-	525
270 (0750)	-	-	-	-	-	5	92	166	189	226	171	74	5	-	-	-	-	-	928
252 (0700)	-	-	-	-	-	14	171	240	240	276	194	120	14	-	-	-	-	-	1269
234 (0650)	-	-	-	-	-	69	235	341	336	332	253	171	55	-	-	-	-	-	1792
216 (0600)	-	-	-	-	-	166	313	401	429	415	341	240	138	-	-	-	-	-	2443
198 (0550)	-	-	-	-	23	226	373	475	512	484	396	318	207	18	-	-	-	-	3032
180 (0500)	-	-	-	-	101	295	419	553	581	567	442	382	276	97	-	-	-	-	3713
162 (0450)	-	-	-	-	212	341	493	613	641	608	548	479	346	175	-	-	-	-	4456
144 (0400)	-	-	-	5	290	396	544	673	696	691	641	581	429	272	5	-	-	-	5223
126 (0350)	-	-	-	92	355	512	599	724	783	756	719	664	516	355	120	-	-	-	6195
108 (0300)	-	-	-	194	415	627	696	806	843	839	811	751	599	438	217	-	-	-	7236
090 (0250)	-	-	-	263	539	742	806	862	880	880	862	802	719	576	332	-	-	-	8263
081 (0225)	-	-	5	313	590	783	829	894	903	889	871	829	770	613	387	37	-	-	8713
072 (0200)	-	-	51	369	659	829	871	908	922	917	889	876	802	659	465	97	-	-	9314
063 (0175)	-	-	106	470	714	862	894	945	949	935	922	912	834	737	562	180	-	-	10022
054 (0150)	-	-	189	548	783	876	945	954	972	968	940	945	889	793	618	272	-	-	10692
045 (0125)	-	-	240	668	862	912	968	963	982	982	968	959	926	834	700	382	-	-	11346
036 (0100)	-	-	350	816	908	963	986	986	991	991	986	986	949	917	802	525	-	-	12156
027 (0075)	-	18	548	899	968	995	1000	1000	1000	1000	995	991	991	963	862	668	51	-	12949
018 (0050)	-	69	811	968	982	1000	1000	1000	1000	1000	1000	995	995	995	959	806	230	-	13810
009 (0025)	-	410	959	991	995	1000	1000	1000	1000	1000	1000	1000	1000	1000	991	949	627	-	14922
001 (0003)	249	977	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	982	382	16590
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	9	33	67	103	136	162	186	193	193	177	160	134	104	71	39	12	1	
S.D.	1	6	19	35	53	64	75	78	78	82	78	70	64	52	37	22	7	1	
MEDIAN	.7	7.7	29.2	59.5	95.7	127.9	159.5	192.2	200.6	194.5	170.2	158.3	129.3	99.9	68.8	37.6	11.9	.8	
1ST QUINTILE	2.6	14.5	52.1	106.4	163.9	205.8	243.8	261.7	266.1	276.3	250.2	226.4	199.8	157.4	111.2	61.0	19.5	4.8	
2ND QUINTILE	.8	9.3	33.7	69.2	112.5	143.4	187.4	216.3	221.6	219.3	196.4	176.7	150.3	116.2	79.5	43.9	14.1	1.0	
3RD QUINTILE	.5	6.3	25.2	50.1	79.7	112.2	125.8	165.9	174.3	165.5	151.9	139.9	107.9	84.2	56.9	31.3	9.6	.6	
4TH QUINTILE	.3	3.5	18.4	37.0	52.1	77.7	91.0	109.3	120.9	116.5	110.2	90.7	72.6	52.5	36.2	18.4	5.1	.3	
MIN VALUE	0	0	2	6	5	19	29	31	31	31	21	16	16	10	7	3	0	0	
MAX VALUE	3	32	84	145	210	292	297	318	340	353	345	306	272	214	145	87	34	4	
ALTITUDE OF SUN 05	0	6	14	23	32	41	49	56	60	60	56	49	41	32	23	14	6	0	
ALTITUDE OF SUN 15	0	5	13	22	31	40	48	55	59	59	55	48	40	31	22	13	5	0	
ALTITUDE OF SUN 25	0	3	11	20	29	38	46	53	57	57	53	46	38	29	20	11	3	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-87	-74	-58	-39	-14	14	39	58	74	87	99	110	121	0	
AZIMUTH OF SUN 15	0	-121	-109	-98	-86	-73	-57	-38	-13	13	38	57	73	86	98	109	121	0	
AZIMUTH OF SUN 25	0	-120	-108	-97	-85	-72	-56	-37	-13	13	37	56	72	85	97	108	120	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.8

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

AUGUST

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	5
324 (0900)	-	-	-	-	-	-	-	-	9	-	5	-	-	-	-	-	-	-	14
306 (0850)	-	-	-	-	-	-	-	-	14	18	9	-	-	-	-	-	-	-	41
288 (0800)	-	-	-	-	-	-	-	9	41	41	23	-	-	-	-	-	-	-	114
270 (0750)	-	-	-	-	-	-	5	41	78	111	55	9	-	-	-	-	-	-	299
252 (0700)	-	-	-	-	-	-	18	101	143	180	138	23	-	-	-	-	-	-	603
234 (0650)	-	-	-	-	-	-	101	157	217	249	184	88	-	-	-	-	-	-	996
216 (0600)	-	-	-	-	-	14	171	258	290	318	263	147	9	-	-	-	-	-	1470
198 (0550)	-	-	-	-	-	74	230	309	355	364	382	230	46	5	-	-	-	-	1995
180 (0500)	-	-	-	-	-	198	318	401	429	433	447	318	152	5	-	-	-	-	2701
162 (0450)	-	-	-	-	28	263	369	488	530	493	516	392	240	9	-	-	-	-	3328
144 (0400)	-	-	-	-	92	350	433	581	613	585	594	479	332	60	-	-	-	-	4119
126 (0350)	-	-	-	-	212	447	558	687	705	673	654	558	442	147	-	-	-	-	5083
108 (0300)	-	-	-	9	267	525	682	747	774	774	705	645	558	323	32	-	-	-	6041
090 (0250)	-	-	-	74	382	618	770	825	848	843	774	728	636	419	88	-	-	-	7005
081 (0225)	-	-	-	152	442	664	797	839	876	871	825	779	664	488	124	-	-	-	7521
072 (0200)	-	-	-	207	502	737	829	885	908	880	862	806	682	562	189	-	-	-	8049
063 (0175)	-	-	-	253	590	783	912	908	940	926	880	871	742	659	323	-	-	-	8787
054 (0150)	-	-	14	332	654	848	945	926	949	935	912	885	797	714	396	14	-	-	9321
045 (0125)	-	-	37	406	742	931	954	977	963	954	931	926	839	779	493	32	-	-	9964
036 (0100)	-	-	88	516	829	949	977	982	972	986	977	959	903	843	641	74	-	-	10696
027 (0075)	-	-	166	700	931	977	995	995	986	986	995	986	959	899	770	189	-	-	11534
018 (0050)	-	-	341	853	968	995	1000	1000	995	995	995	995	991	963	885	438	-	-	12414
009 (0025)	-	9	622	968	991	1000	1000	1000	1000	1000	1000	1000	1000	995	972	788	41	-	13386
001 (0003)	-	470	982	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	659	-	15111
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	1	16	45	79	117	142	160	169	168	161	140	113	81	49	18	2	0	
S.D.	0	2	12	27	42	56	63	67	71	75	74	66	56	40	27	11	3	0	
MEDIAN	.0	.9	12.9	37.3	72.3	113.8	134.4	159.7	167.3	160.6	166.2	139.2	117.0	79.5	44.6	16.4	3.1	.0	
1ST QUINTILE	.0	5.7	25.3	73.1	127.8	179.4	207.2	226.3	238.1	246.8	230.4	204.5	170.2	120.6	71.3	26.6	6.9	.0	
2ND QUINTILE	.0	2.2	16.1	45.7	87.3	134.7	153.3	180.2	187.1	188.6	193.0	160.3	132.9	93.6	53.6	19.4	4.4	.0	
3RD QUINTILE	.0	.8	9.7	31.9	61.6	93.5	119.9	140.8	146.8	140.9	142.2	117.3	98.3	68.5	38.5	13.8	1.8	.0	
4TH QUINTILE	.0	.4	5.0	21.1	39.0	60.6	80.2	95.8	101.7	101.2	85.4	74.0	53.4	42.0	24.7	8.5	.6	.0	
MIN VALUE	0	0	0	5	8	13	26	21	16	11	10	17	10	6	4	1	0	0	
MAX VALUE	0	10	58	118	171	226	272	293	344	318	335	281	226	210	122	57	13	0	
ALTITUDE OF SUN 05	0	1	9	18	27	36	44	51	54	54	51	44	36	27	18	9	1	0	
ALTITUDE OF SUN 15	0	0	7	16	25	34	42	48	51	51	48	42	34	25	16	7	0	0	
ALTITUDE OF SUN 25	0	0	4	13	22	31	39	45	48	48	45	39	31	22	13	4	0	0	
AZIMUTH OF SUN 05	0	-118	-106	-95	-83	-70	-54	-35	-12	12	35	54	70	83	95	106	118	0	
AZIMUTH OF SUN 15	0	0	-105	-93	-81	-68	-52	-34	-12	12	34	52	68	81	93	105	0	0	
AZIMUTH OF SUN 25	0	0	-103	-91	-79	-65	-50	-32	-11	11	32	50	65	79	91	103	0	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.9

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

SEPTEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	5
270 (0750)	-	-	-	-	-	-	-	-	14	24	-	-	-	-	-	-	-	-	38
252 (0700)	-	-	-	-	-	-	-	5	43	48	10	-	-	-	-	-	-	-	106
234 (0650)	-	-	-	-	-	-	-	57	100	86	38	-	-	-	-	-	-	-	281
216 (0600)	-	-	-	-	-	-	10	114	162	138	86	5	-	-	-	-	-	-	515
198 (0550)	-	-	-	-	-	-	81	224	262	229	143	24	-	-	-	-	-	-	963
180 (0500)	-	-	-	-	-	5	152	314	371	319	248	95	-	-	-	-	-	-	1504
162 (0450)	-	-	-	-	-	29	271	371	452	429	343	210	24	-	-	-	-	-	2129
144 (0400)	-	-	-	-	-	100	376	467	543	486	457	314	95	-	-	-	-	-	2838
126 (0350)	-	-	-	-	5	214	462	571	638	586	538	395	224	-	-	-	-	-	3633
108 (0300)	-	-	-	-	19	362	557	686	714	671	624	514	357	14	-	-	-	-	4518
090 (0250)	-	-	-	-	76	505	662	733	795	752	733	619	486	124	-	-	-	-	5485
081 (0225)	-	-	-	-	124	543	710	781	810	805	752	681	529	176	-	-	-	-	5911
072 (0200)	-	-	-	-	186	605	757	814	857	824	786	724	581	257	-	-	-	-	6391
063 (0175)	-	-	-	-	319	667	833	871	910	857	810	767	648	319	14	-	-	-	7015
054 (0150)	-	-	-	14	429	757	867	900	924	890	833	824	738	424	33	-	-	-	7633
045 (0125)	-	-	-	57	552	829	905	929	943	919	857	852	790	538	90	-	-	-	8261
036 (0100)	-	-	-	90	705	890	948	967	967	952	929	890	848	657	181	-	-	-	9024
027 (0075)	-	-	-	171	805	919	971	981	981	971	967	933	881	757	267	-	-	-	9604
018 (0050)	-	-	-	362	895	976	995	990	990	995	990	976	957	871	486	5	-	-	10488
009 (0025)	-	-	33	714	976	995	995	1000	1000	1000	1000	1000	990	962	743	76	-	-	11484
001 (0003)	-	-	490	990	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	986	581	5	-	13052
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	2	17	50	88	119	139	150	142	130	109	86	51	20	3	0	0	
S.D.	0	0	3	13	25	41	54	62	64	66	63	53	43	28	15	3	0	0	
MEDIAN	.0	.0	1.0	14.5	48.8	90.6	118.8	138.3	152.5	141.5	134.4	110.1	87.1	48.0	17.5	2.3	.5	.0	
1ST QUINTILE	.0	.0	6.1	25.6	71.1	128.2	172.7	201.9	209.2	203.7	188.2	163.6	129.3	78.3	34.0	7.0	.8	.0	
2ND QUINTILE	.0	.0	2.6	17.0	56.4	103.2	139.0	156.6	173.6	166.7	153.0	125.2	102.0	56.1	21.5	3.9	.6	.0	
3RD QUINTILE	.0	.0	.8	11.9	42.2	72.7	100.6	121.5	133.2	123.0	113.0	93.3	69.4	40.3	14.0	1.0	.4	.0	
4TH QUINTILE	.0	.0	.4	6.5	27.5	48.6	66.9	75.8	87.0	81.8	66.8	57.8	43.4	23.6	7.1	.5	.2	.0	
MIN VALUE	0	0	0	0	4	8	8	12	13	13	16	13	8	4	0	0	0	0	
MAX VALUE	0	0	13	60	128	180	218	256	302	281	266	228	173	113	71	22	4	0	
ALTITUDE OF SUN 05	0	0	1	10	19	28	35	41	44	44	41	35	28	19	10	1	0	0	
ALTITUDE OF SUN 15	0	0	0	7	16	25	32	37	40	40	37	32	25	16	7	0	0	0	
ALTITUDE OF SUN 25	0	0	0	4	13	21	28	34	37	37	34	28	21	13	4	0	0	0	
AZIMUTH OF SUN 05	0	0	-100	-88	-76	-63	-48	-30	-10	10	30	48	63	76	88	100	0	0	
AZIMUTH OF SUN 15	0	0	0	-86	-74	-61	-46	-29	-10	10	29	46	61	74	86	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-84	-72	-58	-44	-27	-9	9	27	44	58	72	84	0	0	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.10

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

OCTOBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	5
180 (0500)	-	-	-	-	-	-	-	18	51	65	18	-	-	-	-	-	-	-	14
162 (0450)	-	-	-	-	-	-	-	65	115	134	37	-	-	-	-	-	-	-	152
144 (0400)	-	-	-	-	-	-	18	134	203	198	83	41	-	-	-	-	-	-	351
126 (0350)	-	-	-	-	-	5	88	258	341	313	203	88	-	-	-	-	-	-	677
108 (0300)	-	-	-	-	-	9	217	373	456	396	309	143	-	-	-	-	-	-	1296
090 (0250)	-	-	-	-	-	60	300	442	567	502	438	244	46	-	-	-	-	-	1903
081 (0225)	-	-	-	-	-	120	327	493	636	581	512	318	60	-	-	-	-	-	2599
072 (0200)	-	-	-	-	-	161	392	571	659	641	571	382	111	-	-	-	-	-	3047
063 (0175)	-	-	-	-	-	244	470	654	719	710	664	465	189	5	-	-	-	-	3488
054 (0150)	-	-	-	-	5	300	544	724	779	765	687	558	300	9	-	-	-	-	4120
045 (0125)	-	-	-	-	23	387	659	760	839	820	742	650	424	46	-	-	-	-	4671
036 (0100)	-	-	-	-	78	461	756	848	899	880	829	756	558	88	-	-	-	-	5350
027 (0075)	-	-	-	-	161	641	857	922	949	935	922	848	682	198	-	-	-	-	6153
018 (0050)	-	-	-	-	336	811	926	972	982	982	963	917	853	346	-	-	-	-	7115
009 (0025)	-	-	-	23	631	931	991	991	1000	1000	1000	995	977	751	46	-	-	-	8088
001 (0003)	-	-	-	484	982	1000	1000	1000	1000	1000	1000	1000	1000	995	631	-	-	-	9336
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	11092
MEAN	0	0	0	1	15	41	67	88	100	96	84	65	42	17	2	0	0	0	18000
S.D.	0	0	0	2	12	27	38	46	48	50	43	37	23	12	3	0	0	0	
MEDIAN	.0	.0	.0	1.0	13.0	34.1	59.4	80.2	100.9	90.3	82.5	59.6	39.9	14.6	2.8	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	5.9	25.0	67.8	110.4	134.4	144.6	143.7	126.5	97.8	62.1	26.9	6.9	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	2.5	16.0	43.4	71.1	101.0	116.8	107.3	95.3	70.0	46.7	16.8	4.2	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.8	9.9	29.1	49.6	68.9	85.7	78.2	69.2	49.9	33.0	12.4	1.4	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.4	5.1	18.6	32.1	40.9	50.9	48.3	39.0	31.7	20.8	7.4	.5	.0	.0	.0	
MIN VALUE	0	0	0	0	0	3	2	7	16	14	11	6	3	0	0	0	0	0	
MAX VALUE	0	0	0	11	61	126	153	190	197	216	194	160	105	65	13	0	0	0	
ALTITUDE 05	0	0	0	1	10	18	25	30	33	33	30	25	18	10	1	0	0	0	
OF 15	0	0	0	0	7	15	21	26	29	29	26	21	15	7	0	0	0	0	
SUN 25	0	0	0	0	4	12	18	23	25	25	23	18	12	4	0	0	0	0	
AZIMUTH 05	0	0	0	-81	-69	-56	-42	-26	-9	9	26	42	56	69	81	0	0	0	
OF 15	0	0	0	0	-67	-54	-40	-25	-9	9	25	40	54	67	0	0	0	0	
SUN 25	0	0	0	0	-65	-53	-39	-24	-8	8	24	39	53	65	0	0	0	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.11 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS NOVEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	5
144 (0400)	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	10
126 (0350)	-	-	-	-	-	-	-	10	19	48	-	-	-	-	-	-	-	-	77
108 (0300)	-	-	-	-	-	-	-	24	138	124	33	-	-	-	-	-	-	-	319
090 (0250)	-	-	-	-	-	-	-	138	295	262	148	10	-	-	-	-	-	-	853
081 (0225)	-	-	-	-	-	-	33	219	376	343	205	19	-	-	-	-	-	-	1195
072 (0200)	-	-	-	-	-	-	81	310	433	414	271	52	-	-	-	-	-	-	1561
063 (0175)	-	-	-	-	-	-	143	400	481	495	400	124	5	-	-	-	-	-	2048
054 (0150)	-	-	-	-	-	-	233	471	567	576	467	205	10	-	-	-	-	-	2529
045 (0125)	-	-	-	-	-	5	357	571	648	643	562	333	19	-	-	-	-	-	3138
036 (0100)	-	-	-	-	-	52	452	652	738	719	633	448	67	-	-	-	-	-	3761
027 (0075)	-	-	-	-	-	148	600	757	819	819	743	548	143	-	-	-	-	-	4577
018 (0050)	-	-	-	-	-	338	752	890	914	919	857	733	338	5	-	-	-	-	5746
009 (0025)	-	-	-	-	10	686	919	976	990	1000	986	952	729	33	-	-	-	-	7281
001 (0003)	-	-	-	-	600	1000	1000	1000	1000	1000	1000	1000	990	729	-	-	-	-	9319
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	2	15	36	54	65	64	53	35	16	2	0	0	0	0	
S.D.	0	0	0	0	2	10	22	30	35	35	30	21	11	3	0	0	0	0	
MEDIAN	.0	.0	.0	.0	2.4	13.8	33.1	51.4	61.0	62.4	50.9	31.3	14.3	3.6	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	6.4	24.5	57.3	83.1	100.9	98.1	81.8	54.6	24.4	7.1	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	3.7	16.4	40.9	63.0	77.2	73.8	63.0	39.8	16.6	4.8	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	1.0	11.2	27.0	41.8	50.3	50.8	40.2	24.5	12.0	2.5	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.5	6.1	15.4	24.1	29.1	28.7	22.5	15.2	6.8	.7	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	1	1	3	8	9	6	2	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	14	50	88	134	139	168	125	92	71	18	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	1	8	15	19	22	22	19	15	8	1	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	6	12	17	19	19	17	12	6	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	4	10	14	17	17	14	10	4	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-51	-37	-23	-8	8	23	37	51	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 1.3.12

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	5	9	14	-	-	-	-	-	-	-	-	28
072 (0200)	-	-	-	-	-	-	-	5	60	55	-	-	-	-	-	-	-	-	120
063 (0175)	-	-	-	-	-	-	-	23	161	152	14	-	-	-	-	-	-	-	350
054 (0150)	-	-	-	-	-	-	-	92	267	230	138	-	-	-	-	-	-	-	727
045 (0125)	-	-	-	-	-	-	5	226	346	309	240	-	-	-	-	-	-	-	1126
036 (0100)	-	-	-	-	-	-	14	323	415	396	313	9	-	-	-	-	-	-	1470
027 (0075)	-	-	-	-	-	-	60	433	530	558	406	115	-	-	-	-	-	-	2102
018 (0050)	-	-	-	-	-	-	244	585	728	682	548	263	-	-	-	-	-	-	3050
009 (0025)	-	-	-	-	-	-	461	806	866	871	779	558	-	-	-	-	-	-	4341
001 (0003)	-	-	-	-	-	78	825	945	968	977	968	848	212	-	-	-	-	-	5821
000	-	-	-	-	28	963	1000	1000	1000	1000	1000	1000	954	60	-	-	-	-	8005
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	5	19	35	43	43	35	20	6	0	0	0	0	0	
S.D.	0	0	0	0	0	3	10	19	23	23	19	11	4	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.5	5.2	17.0	32.0	38.3	39.2	30.0	19.8	5.9	.5	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.8	7.9	29.2	55.7	68.7	66.5	57.5	30.8	9.5	.9	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.6	6.1	20.5	38.7	47.0	44.8	36.6	22.8	7.0	.6	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.4	4.3	14.6	26.4	32.8	33.0	25.0	16.7	4.8	.4	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.2	2.5	9.6	18.2	22.3	21.4	17.0	10.5	2.7	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	1	3	5	7	6	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	1	16	61	90	106	104	76	50	16	4	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	2	8	13	15	15	13	8	2	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	2	7	12	14	14	12	7	2	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	1	7	11	14	14	11	7	1	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.1

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JANUARY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	4
126 (0350)	-	-	-	-	-	-	-	4	40	16	4	-	-	-	-	-	-	-	12
108 (0300)	-	-	-	-	-	-	-	28	130	85	16	-	-	-	-	-	-	-	64
090 (0250)	-	-	-	-	-	-	12	97	211	190	113	4	-	-	-	-	-	-	259
081 (0225)	-	-	-	-	-	-	24	170	263	251	182	16	-	-	-	-	-	-	627
072 (0200)	-	-	-	-	-	-	40	243	304	316	235	28	-	-	-	-	-	-	906
063 (0175)	-	-	-	-	-	-	85	312	356	381	308	81	-	-	-	-	-	-	1166
054 (0150)	-	-	-	-	-	-	138	368	433	453	360	174	-	-	-	-	-	-	1523
045 (0125)	-	-	-	-	-	16	223	453	510	538	421	259	12	-	-	-	-	-	1926
036 (0100)	-	-	-	-	-	32	304	534	595	607	530	360	36	-	-	-	-	-	2432
027 (0075)	-	-	-	-	-	101	449	672	704	709	656	453	85	-	-	-	-	-	2998
018 (0050)	-	-	-	-	-	202	611	818	846	854	785	611	202	-	-	-	-	-	3829
009 (0025)	-	-	-	-	12	587	899	972	984	984	968	899	587	4	-	-	-	-	4929
001 (0003)	-	-	-	-	231	879	996	1000	1000	1000	1000	1000	935	190	-	-	-	-	6896
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	8231
																			18000
MEAN	0	0	0	0	1	12	29	47	55	55	46	30	12	1	0	0	0	0	
S.D.	0	0	0	0	2	10	21	30	37	34	30	21	10	1	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.7	11.0	24.2	39.8	46.2	49.0	38.5	24.3	11.0	.6	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	2.1	18.2	47.4	77.3	92.4	88.5	77.9	51.2	18.2	1.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.8	13.4	30.0	50.6	57.9	60.6	48.1	32.1	13.4	.7	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.5	8.6	18.6	31.7	35.6	36.9	31.0	18.6	8.7	.5	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.3	3.2	12.1	19.1	20.9	21.4	17.3	12.1	4.1	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	3	6	3	3	3	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	12	49	98	127	171	141	141	90	49	9	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	4	11	15	18	18	15	11	4	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	6	12	17	19	19	17	12	6	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	7	14	19	21	21	19	14	7	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-22	-7	7	22	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.2 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS FEBRUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	4	9	9	-	-	-	-	-	-	-	-	22
180 (0500)	-	-	-	-	-	-	-	18	75	62	13	-	-	-	-	-	-	-	168
162 (0450)	-	-	-	-	-	-	-	62	142	159	80	-	-	-	-	-	-	-	443
144 (0400)	-	-	-	-	-	-	4	146	243	252	155	13	-	-	-	-	-	-	813
126 (0350)	-	-	-	-	-	-	62	217	323	336	270	71	-	-	-	-	-	-	1279
108 (0300)	-	-	-	-	-	-	137	336	403	420	341	177	-	-	-	-	-	-	1814
090 (0250)	-	-	-	-	-	13	226	416	513	513	456	292	27	-	-	-	-	-	2456
081 (0225)	-	-	-	-	-	58	265	465	562	553	518	354	84	-	-	-	-	-	2859
072 (0200)	-	-	-	-	-	93	336	496	606	593	540	425	133	-	-	-	-	-	3222
063 (0175)	-	-	-	-	-	146	407	549	668	673	606	473	181	-	-	-	-	-	3703
054 (0150)	-	-	-	-	-	199	456	642	708	704	659	535	270	-	-	-	-	-	4173
045 (0125)	-	-	-	-	-	265	562	717	748	757	721	611	381	-	-	-	-	-	4762
036 (0100)	-	-	-	-	13	381	650	774	810	814	752	704	478	27	-	-	-	-	5403
027 (0075)	-	-	-	-	66	522	779	854	867	885	845	761	588	97	-	-	-	-	6264
018 (0050)	-	-	-	-	155	664	872	942	951	947	925	863	730	150	-	-	-	-	7199
009 (0025)	-	-	-	-	482	898	978	991	1000	996	991	973	898	553	9	-	-	-	8769
001 (0003)	-	-	-	84	867	982	1000	1000	1000	1000	1000	1000	1000	898	124	-	-	-	9955
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	10	33	59	82	95	95	85	64	38	11	0	0	0	0	
S.D.	0	0	0	1	9	23	37	49	55	55	50	39	25	10	1	0	0	0	
MEDIAN	.0	.0	.0	.5	8.6	28.4	50.3	71.3	92.1	92.5	83.6	59.1	34.2	10.2	.6	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.9	16.8	53.9	95.3	130.3	151.7	154.1	137.0	104.4	61.1	16.9	.9	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.7	11.3	34.8	63.9	93.6	108.7	112.3	98.8	75.2	43.2	12.4	.7	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.4	6.5	22.1	41.1	58.1	73.2	71.2	63.8	46.3	26.2	7.9	.5	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.2	2.4	12.8	25.0	33.1	37.5	38.2	31.4	23.6	14.3	3.3	.2	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	6	6	9	6	3	3	3	0	0	0	0	0	
MAX VALUE	0	0	0	6	38	107	159	200	210	202	194	153	101	43	12	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	2	10	17	22	24	24	22	17	10	2	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	4	13	20	25	27	27	25	20	13	4	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	7	16	23	28	31	31	28	23	16	7	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-51	-38	-23	-8	8	23	38	51	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-65	-52	-39	-24	-8	8	24	39	52	65	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-67	-54	-41	-25	-9	9	25	41	54	67	0	0	0	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.3 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS MARCH

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	8
270 (0750)	-	-	-	-	-	-	-	-	12	24	-	-	-	-	-	-	-	-	36
252 (0700)	-	-	-	-	-	-	-	16	60	81	16	-	-	-	-	-	-	-	173
234 (0650)	-	-	-	-	-	-	-	77	145	157	81	-	-	-	-	-	-	-	460
216 (0600)	-	-	-	-	-	-	8	145	266	274	165	24	-	-	-	-	-	-	882
198 (0550)	-	-	-	-	-	-	48	226	367	379	286	69	-	-	-	-	-	-	1375
180 (0500)	-	-	-	-	-	-	133	339	435	431	407	169	-	-	-	-	-	-	1914
162 (0450)	-	-	-	-	-	12	206	383	456	464	452	302	16	-	-	-	-	-	2291
144 (0400)	-	-	-	-	-	73	339	435	536	520	516	440	77	-	-	-	-	-	2936
126 (0350)	-	-	-	-	-	137	399	500	569	573	556	484	161	-	-	-	-	-	3379
108 (0300)	-	-	-	-	-	242	452	585	625	641	609	560	315	-	-	-	-	-	4029
090 (0250)	-	-	-	-	56	359	528	673	673	718	685	633	480	32	-	-	-	-	4837
081 (0225)	-	-	-	-	93	403	573	694	750	750	746	685	532	69	-	-	-	-	5295
072 (0200)	-	-	-	-	141	456	633	722	774	778	782	718	569	129	-	-	-	-	5702
063 (0175)	-	-	-	-	198	528	698	758	794	802	819	766	605	214	-	-	-	-	6182
054 (0150)	-	-	-	-	250	573	742	794	823	839	851	794	665	302	-	-	-	-	6833
045 (0125)	-	-	-	4	335	621	798	867	875	883	871	831	718	399	-	-	-	-	7202
036 (0100)	-	-	-	28	407	718	839	899	919	927	915	863	794	516	12	-	-	-	7837
027 (0075)	-	-	-	73	504	786	879	940	952	964	952	927	863	629	52	-	-	-	8521
018 (0050)	-	-	-	161	641	855	935	968	972	976	972	948	899	746	165	-	-	-	9238
009 (0025)	-	-	-	407	859	956	996	996	1000	996	1000	988	968	899	492	-	-	-	10557
001 (0003)	-	-	44	794	988	1000	1000	1000	1000	1000	1000	1000	1000	988	847	48	-	-	11709
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	9	36	70	103	131	146	149	140	117	80	40	10	0	0	0	
S.D.	0	0	1	10	28	45	59	72	78	78	71	60	44	25	9	1	0	0	
MEDIAN	.0	.0	.5	7.1	27.4	66.5	96.6	126.0	152.1	150.4	148.5	122.2	86.5	37.2	8.8	.5	.0	.0	
1ST QUINTILE	.0	.0	.8	16.6	62.7	115.2	163.5	203.8	225.8	227.4	210.8	175.8	121.4	64.5	17.0	.8	.0	.0	
2ND QUINTILE	.0	.0	.6	9.3	36.9	81.6	125.7	156.1	189.3	190.7	181.0	149.2	98.7	44.9	11.5	.6	.0	.0	
3RD QUINTILE	.0	.0	.4	5.0	20.7	48.9	77.0	104.9	116.0	118.9	111.1	98.1	64.3	29.3	6.6	.4	.0	.0	
4TH QUINTILE	.0	.0	.2	1.0	11.4	25.2	44.6	53.3	61.1	63.8	67.6	52.5	35.2	14.8	2.1	.2	.0	.0	
MIN VALUE	0	0	0	0	0	2	6	5	9	4	9	5	3	0	0	0	0	0	
MAX VALUE	0	0	6	46	107	173	221	268	297	294	258	221	176	104	41	6	0	0	
ALTITUDE OF SUN 05	0	0	0	0	9	18	25	31	34	34	31	25	18	9	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	3	13	21	29	35	38	38	35	29	21	13	3	0	0	0	
ALTITUDE OF SUN 25	0	0	0	6	16	25	32	38	42	42	38	32	25	16	6	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-69	-56	-42	-26	-9	9	26	42	56	69	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	-83	-71	-58	-44	-28	-10	10	28	44	58	71	83	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-85	-74	-61	-46	-29	-10	10	29	46	61	74	85	0	0	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS APRIL

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4
306 (0850)	-	-	-	-	-	-	-	8	25	38	-	-	-	-	-	-	-	-	71
288 (0800)	-	-	-	-	-	-	-	25	142	142	46	-	-	-	-	-	-	-	355
270 (0750)	-	-	-	-	-	-	-	125	304	329	188	-	-	-	-	-	-	-	946
252 (0700)	-	-	-	-	-	-	25	238	367	417	354	42	-	-	-	-	-	-	1443
234 (0650)	-	-	-	-	-	-	113	313	433	446	438	167	-	-	-	-	-	-	1910
216 (0600)	-	-	-	-	-	-	229	396	488	508	500	350	4	-	-	-	-	-	2475
198 (0550)	-	-	-	-	-	50	313	454	525	567	550	438	71	-	-	-	-	-	2968
180 (0500)	-	-	-	-	-	142	396	513	592	608	588	513	175	-	-	-	-	-	3527
162 (0450)	-	-	-	-	-	263	467	571	617	654	633	567	379	4	-	-	-	-	4155
144 (0400)	-	-	-	-	38	367	538	650	667	704	675	608	458	50	-	-	-	-	4755
126 (0350)	-	-	-	-	117	438	592	696	704	742	733	671	546	133	-	-	-	-	5372
108 (0300)	-	-	-	-	246	517	683	738	758	817	754	725	596	329	-	-	-	-	6163
090 (0250)	-	-	-	8	338	583	733	808	808	858	817	775	667	463	4	-	-	-	6862
081 (0225)	-	-	-	33	408	658	767	829	838	883	854	800	708	529	33	-	-	-	7340
072 (0200)	-	-	-	71	429	717	796	854	875	896	883	825	758	567	83	-	-	-	7754
063 (0175)	-	-	-	113	500	742	813	892	904	917	904	863	788	604	163	-	-	-	8203
054 (0150)	-	-	-	200	558	775	850	925	942	954	933	888	842	671	250	-	-	-	8788
045 (0125)	-	-	-	283	621	833	888	942	967	967	954	913	854	704	400	-	-	-	9326
036 (0100)	-	-	-	396	708	879	929	963	971	975	971	950	904	796	517	-	-	-	9959
027 (0075)	-	-	21	533	846	942	975	988	983	983	992	975	954	875	625	21	-	-	10713
018 (0050)	-	-	88	654	929	979	996	1000	996	996	996	996	983	929	742	108	-	-	11392
009 (0025)	-	-	358	917	992	1000	1000	1000	1000	1000	1000	1000	1000	996	933	429	-	-	12625
001 (0003)	-	13	775	996	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	858	21	-	13663
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	7	33	69	111	146	175	192	200	190	162	123	79	38	8	0	0	
S.D.	0	0	7	22	41	57	72	80	88	85	83	73	58	41	22	7	0	0	
MEDIAN	.0	.5	6.3	29.2	63.0	111.9	153.6	184.0	210.2	218.3	216.0	183.1	135.4	85.0	37.3	7.7	.5	.0	
1ST QUINTILE	.0	.8	14.3	54.0	114.4	171.4	220.5	258.1	281.6	282.4	268.7	230.8	177.8	119.8	59.2	15.4	.8	.0	
2ND QUINTILE	.0	.6	8.2	35.7	82.0	135.6	179.0	214.8	243.0	255.5	242.1	205.8	157.2	98.5	45.0	9.8	.6	.0	
3RD QUINTILE	.0	.4	4.4	22.0	48.0	88.0	124.4	155.4	174.2	183.5	175.2	147.5	107.0	64.0	29.1	5.8	.4	.0	
4TH QUINTILE	.0	.2	.9	13.0	30.0	50.1	69.9	92.1	92.9	112.1	94.9	81.0	61.0	35.5	15.3	2.1	.2	.0	
MIN VALUE	0	0	0	0	6	14	12	23	17	12	17	12	9	6	3	0	0	0	
MAX VALUE	0	3	35	93	161	210	267	317	323	340	302	267	228	164	90	35	6	0	
ALTITUDE OF SUN 05	0	0	0	9	19	28	36	43	46	46	43	36	28	19	9	0	0	0	
ALTITUDE OF SUN 15	0	0	2	12	22	31	39	46	50	50	46	39	31	22	12	2	0	0	
ALTITUDE OF SUN 25	0	0	5	15	24	34	42	49	53	53	49	42	34	24	15	5	0	0	
AZIMUTH OF SUN 05	0	0	0	-88	-76	-64	-49	-31	-11	11	31	49	64	76	88	0	0	0	
AZIMUTH OF SUN 15	0	0	-102	-91	-79	-66	-51	-33	-12	12	33	51	66	79	91	102	0	0	
AZIMUTH OF SUN 25	0	0	-104	-93	-81	-69	-53	-35	-12	12	35	53	69	81	93	104	0	0	

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TABLE 1.4.5 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS MAY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	4	4	4	-	-	-	-	-	-	-	-	12
324 (0900)	-	-	-	-	-	-	-	8	44	36	4	-	-	-	-	-	-	-	92
306 (0850)	-	-	-	-	-	-	4	56	258	230	69	4	-	-	-	-	-	-	621
288 (0800)	-	-	-	-	-	-	20	278	367	367	298	12	-	-	-	-	-	-	1342
270 (0750)	-	-	-	-	-	-	97	363	444	444	472	125	-	-	-	-	-	-	1945
252 (0700)	-	-	-	-	-	-	278	391	516	468	512	323	-	-	-	-	-	-	2488
234 (0650)	-	-	-	-	-	28	331	460	548	528	560	452	16	-	-	-	-	-	2923
216 (0600)	-	-	-	-	-	185	415	528	585	560	585	524	234	-	-	-	-	-	3616
198 (0550)	-	-	-	-	-	319	464	597	621	621	601	569	427	-	-	-	-	-	4219
180 (0500)	-	-	-	-	8	407	536	641	677	673	645	601	520	28	-	-	-	-	4736
162 (0450)	-	-	-	-	133	464	585	669	706	706	681	637	548	153	-	-	-	-	5282
144 (0400)	-	-	-	-	298	532	649	722	734	738	722	685	593	395	-	-	-	-	6068
126 (0350)	-	-	-	-	371	577	726	754	782	766	750	714	629	488	20	-	-	-	6577
108 (0300)	-	-	-	73	452	649	774	790	802	798	798	746	690	552	77	-	-	-	7201
090 (0250)	-	-	-	226	528	730	815	851	863	863	815	798	734	637	323	-	-	-	8183
081 (0225)	-	-	-	331	577	790	847	875	879	903	859	823	754	685	464	-	-	-	8787
072 (0200)	-	-	-	375	661	819	871	891	911	915	883	839	782	718	540	-	-	-	9205
063 (0175)	-	-	4	452	722	855	903	907	919	927	899	859	819	742	593	4	-	-	9605
054 (0150)	-	-	36	516	750	879	931	927	923	940	927	907	859	778	613	36	-	-	10022
045 (0125)	-	-	105	581	815	923	964	956	948	944	964	931	895	827	685	153	-	-	10691
036 (0100)	-	-	185	669	891	952	980	976	960	968	964	956	919	855	758	331	-	-	11364
027 (0075)	-	-	371	782	927	984	996	984	984	988	984	992	968	911	831	484	-	-	12186
018 (0050)	-	-	552	883	964	1000	1000	996	1000	1000	996	996	992	948	883	681	-	-	12891
009 (0025)	-	121	859	980	1000	1000	1000	1000	1000	1000	1000	996	996	1000	988	867	190	-	13997
001 (0003)	-	629	988	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	996	694	4	15311
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	3	23	58	99	144	179	205	220	218	211	186	152	109	67	27	4	0	
S.D.	0	3	15	32	50	66	78	90	96	94	94	84	72	53	34	15	4	0	
MEDIAN	.0	3.0	20.6	56.3	96.6	152.5	189.0	223.4	256.0	242.4	257.4	222.0	183.9	122.6	76.7	26.3	4.1	.5	
1ST QUINTILE	.0	7.8	35.3	93.1	154.7	214.0	259.8	294.3	310.9	308.8	295.7	263.2	218.8	158.5	99.0	42.6	8.8	.8	
2ND QUINTILE	.0	4.6	25.6	69.1	119.6	181.4	219.2	249.7	280.3	280.3	277.4	241.3	200.5	143.0	85.1	31.9	5.7	.6	
3RD QUINTILE	.0	1.5	16.6	43.1	78.5	120.3	157.8	196.8	208.5	204.2	199.1	180.6	140.5	97.8	59.9	21.7	2.5	.4	
4TH QUINTILE	.0	.5	10.7	25.4	47.1	77.9	96.6	105.0	109.8	107.4	105.9	89.3	67.6	50.0	30.8	12.2	.7	.2	
MIN VALUE	0	0	0	3	9	20	23	12	20	20	14	3	3	9	3	0	0	0	
MAX VALUE	0	14	64	124	194	244	315	343	348	348	325	314	249	190	131	64	17	3	
ALTITUDE OF SUN 05	0	0	7	17	27	36	45	52	56	56	52	45	36	27	17	7	0	0	
ALTITUDE OF SUN 15	0	0	9	19	29	38	47	55	59	59	55	47	38	29	19	9	0	0	
ALTITUDE OF SUN 25	0	2	11	20	30	40	49	56	61	61	56	49	40	30	20	11	2	0	
AZIMUTH OF SUN 05	0	0	-106	-95	-84	-71	-56	-37	-13	13	37	56	71	84	95	106	0	0	
AZIMUTH OF SUN 15	0	-119	-108	-97	-86	-73	-58	-39	-14	14	39	58	73	86	97	108	119	0	
AZIMUTH OF SUN 25	0	-120	-109	-99	-87	-75	-60	-40	-15	15	40	60	75	87	99	109	120	0	

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TABLE 1.4.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JUNE

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4
360 (1000)	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4
342 (0950)	-	-	-	-	-	-	-	-	17	26	-	-	-	-	-	-	-	-	43
324 (0900)	-	-	-	-	-	-	-	13	137	120	21	-	-	-	-	-	-	-	291
306 (0850)	-	-	-	-	-	-	9	172	399	391	150	4	-	-	-	-	-	-	1125
288 (0800)	-	-	-	-	-	-	52	369	485	502	429	30	-	-	-	-	-	-	1867
270 (0750)	-	-	-	-	-	-	249	451	532	588	515	288	-	-	-	-	-	-	2623
252 (0700)	-	-	-	-	-	9	399	498	575	635	575	498	4	-	-	-	-	-	3193
234 (0650)	-	-	-	-	-	86	472	541	614	652	614	549	73	-	-	-	-	-	3601
216 (0600)	-	-	-	-	-	279	511	575	648	670	644	597	399	-	-	-	-	-	4323
198 (0550)	-	-	-	-	-	373	558	622	704	691	682	652	554	-	-	-	-	-	4836
180 (0500)	-	-	-	-	77	472	588	652	721	708	712	682	609	116	-	-	-	-	5337
162 (0450)	-	-	-	-	270	532	644	691	730	738	747	717	661	421	-	-	-	-	6151
144 (0400)	-	-	-	-	425	601	678	738	760	773	781	773	725	558	4	-	-	-	6816
126 (0350)	-	-	-	26	515	648	738	790	807	824	837	798	742	622	17	-	-	-	7364
108 (0300)	-	-	-	232	575	700	785	820	845	867	867	828	781	665	296	-	-	-	8261
090 (0250)	-	-	-	369	644	760	824	854	880	914	897	867	828	725	541	-	-	-	9103
081 (0225)	-	-	9	442	682	803	867	893	910	940	906	888	837	768	575	-	-	-	9520
072 (0200)	-	-	9	506	721	828	901	914	918	944	914	906	850	794	609	4	-	-	9818
063 (0175)	-	-	86	567	755	863	931	931	948	948	944	936	867	820	670	86	-	-	10352
054 (0150)	-	-	236	644	798	901	940	953	953	957	957	944	884	837	725	270	-	-	10999
045 (0125)	-	-	373	695	837	927	957	966	974	974	970	953	914	880	781	481	-	-	11682
036 (0100)	-	-	476	760	897	966	970	974	979	983	970	966	940	906	837	562	-	-	12186
027 (0075)	-	-	601	815	936	987	983	987	987	991	991	987	961	940	901	712	-	-	12779
018 (0050)	-	34	760	906	974	996	996	996	991	1000	1000	996	996	974	944	828	34	-	13425
009 (0025)	-	575	923	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	991	953	631	-	15073
001 (0003)	4	880	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	991	927	9	15811
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	9	35	71	115	155	194	218	238	243	231	208	171	128	80	39	9	0	
S.D.	0	5	20	37	54	69	83	92	96	94	88	79	69	54	36	18	5	0	
MEDIAN	.5	10.2	34.3	72.8	129.0	171.6	221.1	251.2	282.3	288.3	273.1	251.3	204.3	151.6	93.0	42.9	11.0	.5	
1ST QUINTILE	.8	15.2	56.2	110.8	168.5	223.4	274.5	303.4	319.7	318.7	302.8	276.1	227.0	175.0	114.2	57.4	15.5	.8	
2ND QUINTILE	.6	11.9	42.6	86.2	146.9	193.1	251.8	281.2	305.8	304.5	289.9	260.4	215.9	163.2	100.4	48.5	12.5	.6	
3RD QUINTILE	.4	8.3	27.1	59.1	101.5	144.3	176.1	206.4	240.5	265.4	240.5	215.0	182.9	132.2	74.4	33.7	9.5	.4	
4TH QUINTILE	.2	3.1	15.8	29.5	53.5	81.6	101.1	120.0	128.7	134.5	137.9	124.8	100.7	69.9	41.9	20.2	4.4	.2	
MIN VALUE	0	0	3	9	9	17	14	14	14	20	26	14	12	9	6	0	0	0	
MAX VALUE	3	23	87	136	196	268	320	341	354	380	334	317	258	192	145	73	23	5	
ALTITUDE OF SUN 05	0	3	12	22	31	41	50	58	63	63	58	50	41	31	22	12	3	0	
ALTITUDE OF SUN 15	0	4	13	22	32	42	51	59	63	63	59	51	42	32	22	13	4	0	
ALTITUDE OF SUN 25	0	4	13	22	32	42	51	59	64	64	59	51	42	32	22	13	4	0	
AZIMUTH OF SUN 05	0	-121	-110	-100	-89	-76	-62	-42	-15	15	42	62	76	89	100	110	121	0	
AZIMUTH OF SUN 15	0	-122	-111	-100	-90	-77	-62	-42	-16	16	42	62	77	90	100	111	122	0	
AZIMUTH OF SUN 25	0	-122	-111	-101	-90	-77	-63	-43	-16	16	43	63	77	90	101	111	122	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.7

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JULY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	8
324 (0900)	-	-	-	-	-	-	-	-	40	48	4	-	-	-	-	-	-	-	92
306 (0850)	-	-	-	-	-	-	-	48	226	254	52	4	-	-	-	-	-	-	584
288 (0800)	-	-	-	-	-	-	8	266	423	431	286	12	-	-	-	-	-	-	1426
270 (0750)	-	-	-	-	-	-	85	379	484	500	452	129	-	-	-	-	-	-	2029
252 (0700)	-	-	-	-	-	4	278	464	516	540	516	371	4	-	-	-	-	-	2693
234 (0650)	-	-	-	-	-	16	391	480	540	552	560	504	48	-	-	-	-	-	3091
216 (0600)	-	-	-	-	-	161	452	520	573	609	585	556	274	-	-	-	-	-	3730
198 (0550)	-	-	-	-	-	286	512	544	609	641	637	597	492	-	-	-	-	-	4318
180 (0500)	-	-	-	-	12	367	540	601	661	694	685	645	601	40	-	-	-	-	4846
162 (0450)	-	-	-	-	121	460	581	661	710	714	730	681	653	262	-	-	-	-	5573
144 (0400)	-	-	-	-	298	516	661	710	766	746	754	746	698	516	-	-	-	-	6411
126 (0350)	-	-	-	12	379	593	706	762	806	790	782	786	754	605	4	-	-	-	6979
108 (0300)	-	-	-	85	460	645	738	810	843	839	851	835	778	665	157	-	-	-	7706
090 (0250)	-	-	-	302	577	726	802	875	879	867	891	867	823	742	423	-	-	-	8774
081 (0225)	-	-	-	367	641	770	855	899	911	887	903	887	859	786	560	-	-	-	9325
072 (0200)	-	-	-	440	677	794	871	931	919	903	915	923	871	806	625	-	-	-	9675
063 (0175)	-	-	20	524	722	831	911	948	931	935	927	931	895	847	702	20	-	-	10144
054 (0150)	-	-	65	569	754	867	944	968	944	952	944	948	919	879	730	105	-	-	10588
045 (0125)	-	-	206	649	790	923	956	980	960	972	964	964	944	923	778	274	-	-	11283
036 (0100)	-	-	379	742	855	944	972	988	976	972	980	972	960	948	815	476	-	-	11979
027 (0075)	-	-	536	806	915	972	988	992	1000	992	980	980	980	956	887	657	-	-	12641
018 (0050)	-	-	669	891	980	992	1000	1000	1000	1000	1000	996	984	976	931	806	16	-	13241
009 (0025)	-	327	887	984	996	996	1000	1000	1000	1000	1000	1000	1000	1000	992	948	351	-	14481
001 (0003)	-	823	988	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	988	867	4	15670
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	6	29	63	101	141	180	207	224	226	218	199	168	125	76	34	6	0	
S.D.	0	4	17	34	50	66	79	86	92	94	86	76	64	48	32	16	4	0	
MEDIAN	.0	6.2	29.1	65.6	101.8	149.1	201.6	225.0	261.0	270.0	256.5	234.5	196.7	145.1	84.9	34.8	6.7	.5	
1ST QUINTILE	.0	12.5	45.4	98.5	154.0	210.4	259.3	293.4	308.5	310.7	294.6	264.7	221.9	167.0	105.1	48.9	13.1	.8	
2ND QUINTILE	.0	7.8	34.8	76.9	121.3	173.6	231.3	265.6	290.1	291.2	275.6	248.1	205.6	152.2	91.6	39.4	8.2	.6	
3RD QUINTILE	.0	4.6	22.7	50.5	86.8	123.6	157.7	180.3	202.5	218.8	210.8	196.9	180.2	127.0	75.5	29.8	5.1	.4	
4TH QUINTILE	.0	1.4	12.6	27.8	43.6	70.5	90.6	111.8	128.7	122.3	121.3	120.9	99.2	74.7	39.6	18.4	2.0	.2	
MIN VALUE	0	0	0	3	6	6	20	20	32	23	23	17	12	9	6	0	0	0	
MAX VALUE	0	17	67	132	193	268	293	316	357	346	331	314	265	196	128	69	20	3	
ALTITUDE OF SUN 05	0	4	13	22	32	41	51	58	63	63	58	51	41	32	22	13	4	0	
ALTITUDE OF SUN 15	0	3	12	21	31	41	50	57	62	62	57	50	41	31	21	12	3	0	
ALTITUDE OF SUN 25	0	1	10	20	30	39	48	56	60	60	56	48	39	30	20	10	1	0	
AZIMUTH OF SUN 05	0	-122	-111	-100	-89	-77	-62	-42	-15	15	42	62	77	89	100	111	122	0	
AZIMUTH OF SUN 15	0	-121	-110	-99	-88	-76	-61	-41	-15	15	41	61	76	88	99	110	121	0	
AZIMUTH OF SUN 25	0	-120	-109	-98	-87	-74	-59	-40	-14	14	40	59	74	87	98	109	120	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.8 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS AUGUST

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4
324 (0900)	-	-	-	-	-	-	-	-	12	8	-	-	-	-	-	-	-	-	20
306 (0850)	-	-	-	-	-	-	-	4	28	20	-	-	-	-	-	-	-	-	52
288 (0800)	-	-	-	-	-	-	-	32	157	145	28	-	-	-	-	-	-	-	362
270 (0750)	-	-	-	-	-	-	4	153	282	294	169	-	-	-	-	-	-	-	902
252 (0700)	-	-	-	-	-	-	56	274	399	419	315	32	-	-	-	-	-	-	1495
234 (0650)	-	-	-	-	-	-	165	375	469	472	435	181	-	-	-	-	-	-	2096
216 (0600)	-	-	-	-	-	8	262	456	500	524	488	355	-	-	-	-	-	-	2593
198 (0550)	-	-	-	-	-	73	351	512	532	560	552	452	85	-	-	-	-	-	3117
180 (0500)	-	-	-	-	-	177	431	548	585	605	609	520	242	-	-	-	-	-	3717
162 (0450)	-	-	-	-	4	310	496	601	657	633	665	565	415	-	-	-	-	-	4346
144 (0400)	-	-	-	-	44	399	585	673	730	685	734	625	540	73	-	-	-	-	5088
126 (0350)	-	-	-	-	157	508	629	734	770	746	762	710	605	218	-	-	-	-	5839
108 (0300)	-	-	-	-	302	573	702	794	810	798	810	778	690	427	-	-	-	-	6684
090 (0250)	-	-	-	28	387	637	790	831	855	851	835	802	738	593	44	-	-	-	7391
081 (0225)	-	-	-	77	476	698	827	851	879	879	867	843	786	657	81	-	-	-	7921
072 (0200)	-	-	-	133	552	734	847	879	887	895	887	867	810	710	185	-	-	-	8386
063 (0175)	-	-	-	226	633	802	883	911	895	919	919	883	847	734	290	-	-	-	8942
054 (0150)	-	-	-	315	681	831	895	935	931	940	931	903	879	766	399	-	-	-	9406
045 (0125)	-	-	4	403	742	867	923	952	952	964	952	923	911	810	548	-	-	-	9951
036 (0100)	-	-	20	528	810	911	944	968	972	968	960	944	923	851	657	20	-	-	10476
027 (0075)	-	-	97	645	863	940	976	984	984	984	984	968	948	895	758	81	-	-	11107
018 (0050)	-	-	206	786	952	976	992	992	992	988	996	988	984	935	851	254	-	-	11892
009 (0025)	-	-	653	956	988	1000	1000	1000	1000	1000	1000	1000	996	984	960	694	-	-	13231
001 (0003)	-	185	915	996	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	960	157	-	14213
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	1	12	41	78	119	156	184	198	199	192	165	133	91	47	13	1	0	
S.D.	0	1	10	24	41	58	70	80	85	86	79	70	56	41	24	9	1	0	
MEDIAN	.0	.6	12.1	38.0	78.2	127.3	161.2	201.9	216.0	224.3	212.6	185.3	149.8	100.1	47.9	13.0	.6	.0	
1ST QUINTILE	.0	1.0	18.5	65.5	120.7	176.9	227.5	263.0	281.8	281.4	266.2	232.0	184.8	128.2	70.7	20.8	.9	.0	
2ND QUINTILE	.0	.7	14.1	45.3	88.7	143.8	187.0	228.4	251.7	254.7	239.3	207.6	163.6	110.3	53.9	15.0	.7	.0	
3RD QUINTILE	.0	.5	10.1	30.5	66.7	100.4	137.9	162.3	176.3	182.0	182.8	151.5	127.4	89.0	40.7	10.9	.5	.0	
4TH QUINTILE	.0	.2	4.5	17.3	37.3	63.3	87.6	105.1	112.5	107.3	111.8	91.5	75.8	47.0	22.9	5.8	.2	.0	
MIN VALUE	0	0	0	0	3	9	14	14	17	14	17	12	6	3	3	0	0	0	
MAX VALUE	0	6	46	99	173	224	276	314	346	341	304	265	215	161	98	41	6	0	
ALTITUDE OF SUN 05	0	0	8	18	28	37	46	53	58	58	53	46	37	28	18	8	0	0	
ALTITUDE OF SUN 15	0	0	6	16	26	35	44	51	55	55	51	44	35	26	16	6	0	0	
ALTITUDE OF SUN 25	0	0	4	13	23	32	41	48	51	51	48	41	32	23	13	4	0	0	
AZIMUTH OF SUN 05	0	0	-107	-96	-85	-72	-57	-38	-13	13	38	57	72	85	96	107	0	0	
AZIMUTH OF SUN 15	0	0	-105	-94	-83	-70	-55	-36	-13	13	36	55	70	83	94	105	0	0	
AZIMUTH OF SUN 25	0	0	-103	-92	-80	-67	-52	-34	-12	12	34	52	67	80	92	103	0	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.9 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS SEPTEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	8	17	4	-	-	-	-	-	-	-	29
270 (0750)	-	-	-	-	-	-	-	-	42	46	13	-	-	-	-	-	-	-	101
252 (0700)	-	-	-	-	-	-	-	29	121	133	29	-	-	-	-	-	-	-	312
234 (0650)	-	-	-	-	-	-	-	104	279	279	117	4	-	-	-	-	-	-	783
216 (0600)	-	-	-	-	-	-	33	233	392	367	267	25	-	-	-	-	-	-	1317
198 (0550)	-	-	-	-	-	-	92	342	446	438	383	117	-	-	-	-	-	-	1818
180 (0500)	-	-	-	-	-	4	229	421	496	488	467	283	8	-	-	-	-	-	2396
162 (0450)	-	-	-	-	-	29	338	483	558	546	517	413	58	-	-	-	-	-	2942
144 (0400)	-	-	-	-	-	113	408	550	617	604	592	496	192	-	-	-	-	-	3572
126 (0350)	-	-	-	-	-	246	467	596	679	646	621	546	350	-	-	-	-	-	4151
108 (0300)	-	-	-	-	8	371	567	667	708	683	683	596	475	29	-	-	-	-	4787
090 (0250)	-	-	-	-	88	458	642	754	779	750	733	650	567	142	-	-	-	-	5563
081 (0225)	-	-	-	-	188	521	708	796	808	796	763	696	621	275	-	-	-	-	6172
072 (0200)	-	-	-	-	254	588	754	838	838	825	788	733	654	342	-	-	-	-	6614
063 (0175)	-	-	-	4	329	667	804	875	867	842	829	796	713	413	-	-	-	-	7139
054 (0150)	-	-	-	13	413	717	833	892	892	871	879	821	763	517	8	-	-	-	7619
045 (0125)	-	-	-	42	533	771	883	917	925	908	904	850	804	588	38	-	-	-	8163
036 (0100)	-	-	-	100	646	833	900	946	946	933	938	896	842	675	125	-	-	-	8780
027 (0075)	-	-	-	238	729	871	925	979	963	958	950	950	883	767	238	-	-	-	9451
018 (0050)	-	-	-	404	821	933	988	996	992	983	983	983	925	842	388	-	-	-	10238
009 (0025)	-	-	17	758	971	1000	1000	1000	1000	1000	1000	1000	996	963	729	21	-	-	11455
001 (0003)	-	-	304	971	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	975	300	-	-	12550
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	1	18	49	86	121	150	167	163	152	127	100	55	18	1	0	0	
S.D.	0	0	2	13	28	45	60	69	78	80	73	63	85	30	13	2	0	0	
MEDIAN	.0	.0	.7	15.6	47.5	84.0	120.1	157.4	178.8	176.3	168.1	142.6	103.1	55.5	15.0	.7	.0	.0	
1ST QUINTILE	.0	.0	3.9	29.5	79.4	132.2	183.8	220.6	243.0	243.7	224.0	189.0	143.1	86.1	30.0	3.9	.0	.0	
2ND QUINTILE	.0	.0	.9	18.2	55.4	102.0	146.1	184.8	213.3	207.6	194.4	163.8	118.8	64.6	17.7	.9	.0	.0	
3RD QUINTILE	.0	.0	.6	13.0	39.7	70.6	100.1	125.0	149.2	145.2	139.0	106.7	84.5	43.8	12.4	.6	.0	.0	
4TH QUINTILE	.0	.0	.3	7.4	20.1	40.8	63.7	80.1	83.5	79.8	69.4	61.6	45.9	23.0	6.7	.3	.0	.0	
MIN VALUE	0	0	0	0	3	12	14	14	14	12	9	12	6	3	0	0	0	0	
MAX VALUE	0	0	14	64	110	193	232	268	294	297	288	236	1192	118	58	14	0	0	
ALTITUDE 05	0	0	1	10	20	29	38	44	48	48	44	38	29	20	10	1	0	0	
OF 15	0	0	0	8	17	26	34	40	44	44	40	34	26	17	8	0	0	0	
SUN 25	0	0	0	5	14	23	31	37	40	40	37	31	23	14	5	0	0	0	
AZIMUTH 05	0	0	-100	-89	-77	-65	-50	-32	-11	11	32	50	65	77	89	100	0	0	
OF 15	0	0	0	-87	-75	-62	-47	-30	-10	10	30	47	62	75	87	0	0	0	
SUN 25	0	0	0	-84	-72	-60	-45	-29	-10	10	29	45	60	72	84	0	0	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.10 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS OCTOBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	8	4	-	-	-	-	-	-	-	-	12
216 (0600)	-	-	-	-	-	-	-	-	44	40	4	-	-	-	-	-	-	-	88
198 (0550)	-	-	-	-	-	-	-	20	101	97	32	-	-	-	-	-	-	-	250
180 (0500)	-	-	-	-	-	-	4	101	198	194	105	4	-	-	-	-	-	-	606
162 (0450)	-	-	-	-	-	-	24	185	306	298	218	24	-	-	-	-	-	-	1055
144 (0400)	-	-	-	-	-	-	97	315	415	407	347	129	-	-	-	-	-	-	1710
126 (0350)	-	-	-	-	-	4	194	403	480	460	440	262	8	-	-	-	-	-	2251
108 (0300)	-	-	-	-	-	48	335	452	524	540	512	403	60	-	-	-	-	-	2874
090 (0250)	-	-	-	-	-	125	419	569	593	609	581	496	157	-	-	-	-	-	3549
081 (0225)	-	-	-	-	-	177	460	633	645	649	637	556	230	-	-	-	-	-	3987
072 (0200)	-	-	-	-	-	262	548	677	673	673	694	613	290	-	-	-	-	-	4430
063 (0175)	-	-	-	-	16	339	609	738	722	738	742	665	395	8	-	-	-	-	4972
054 (0150)	-	-	-	-	32	423	661	754	774	802	782	726	500	28	-	-	-	-	5482
045 (0125)	-	-	-	-	77	504	754	839	851	851	839	770	589	85	-	-	-	-	6159
036 (0100)	-	-	-	-	141	593	831	887	899	887	891	823	673	165	-	-	-	-	6790
027 (0075)	-	-	-	-	242	726	879	919	935	935	923	867	762	266	-	-	-	-	7454
018 (0050)	-	-	-	-	383	831	940	972	976	980	956	931	843	431	-	-	-	-	8243
009 (0025)	-	-	-	93	750	980	1000	1000	1000	1000	996	984	968	774	65	-	-	-	9610
001 (0003)	-	-	-	363	976	1000	1000	1000	1000	1000	1000	1000	1000	968	351	-	-	-	10658
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	2	19	50	82	105	117	116	109	87	54	20	2	0	0	0	
S.D.	0	0	0	3	15	30	44	55	62	61	55	46	31	15	3	0	0	0	
MEDIAN	.0	.0	.0	.8	15.1	45.4	76.9	100.6	117.8	117.0	111.0	89.4	54.0	16.2	.8	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	5.8	30.7	78.6	125.2	159.9	179.7	179.0	164.9	134.4	84.7	32.9	5.2	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.9	17.6	56.5	94.1	126.6	146.5	145.2	133.7	108.4	62.6	19.7	.9	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.6	12.7	35.5	64.3	85.6	88.8	92.3	86.9	74.1	43.8	13.6	.6	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.3	7.2	20.7	39.6	49.1	51.0	54.3	51.2	39.9	22.8	7.9	.3	.0	.0	.0	
MIN VALUE	0	0	0	0	0	3	9	9	12	12	6	6	3	0	0	0	0	0	
MAX VALUE	0	0	0	14	69	127	192	215	236	236	217	196	136	64	14	0	0	0	
ALTITUDE 05	0	0	0	2	11	20	27	33	36	36	33	27	20	11	2	0	0	0	
OF 15	0	0	0	0	8	17	24	29	32	32	29	24	17	8	0	0	0	0	
SUN 25	0	0	0	0	5	14	21	26	29	29	26	21	14	5	0	0	0	0	
AZIMUTH 05	0	0	0	-82	-70	-57	-43	-27	-9	9	27	43	57	70	82	0	0	0	
OF 15	0	0	0	0	-68	-55	-41	-26	-9	9	26	41	55	68	0	0	0	0	
SUN 25	0	0	0	0	-65	-53	-40	-25	-8	8	25	40	53	65	0	0	0	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.11

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

NOVEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4
144 (0400)	-	-	-	-	-	-	-	-	17	8	-	-	-	-	-	-	-	-	25
126 (0350)	-	-	-	-	-	-	4	50	104	117	63	-	-	-	-	-	-	-	120
108 (0300)	-	-	-	-	-	-	13	108	183	183	138	13	-	-	-	-	-	-	338
090 (0250)	-	-	-	-	-	-	71	213	258	283	229	88	-	-	-	-	-	-	638
081 (0225)	-	-	-	-	-	-	104	258	321	325	271	108	-	-	-	-	-	-	1142
072 (0200)	-	-	-	-	-	-	146	308	354	342	317	142	-	-	-	-	-	-	1387
063 (0175)	-	-	-	-	-	4	196	367	429	392	358	208	4	-	-	-	-	-	1609
054 (0150)	-	-	-	-	-	21	271	454	483	458	421	271	33	-	-	-	-	-	1958
045 (0125)	-	-	-	-	-	50	392	542	583	529	500	354	75	-	-	-	-	-	2412
036 (0100)	-	-	-	-	-	108	458	625	683	646	571	417	108	-	-	-	-	-	3025
027 (0075)	-	-	-	-	-	217	583	746	779	763	688	554	200	-	-	-	-	-	3616
018 (0050)	-	-	-	-	4	392	713	854	875	867	846	679	363	4	-	-	-	-	4530
009 (0025)	-	-	-	-	96	738	938	975	988	992	979	921	696	71	-	-	-	-	5597
001 (0003)	-	-	-	-	517	979	1000	1000	1000	1000	1000	1000	963	458	-	-	-	-	7394
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	3	18	39	56	63	62	55	38	17	2	0	0	0	0	
S.D.	0	0	0	0	4	14	27	36	42	43	38	28	14	3	0	0	0	0	
MEDIAN	.0	.0	.0	.0	1.3	15.2	33.0	49.3	52.5	48.7	45.0	30.5	14.3	.9	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	7.0	28.4	62.5	92.2	103.9	104.9	95.7	64.1	27.0	6.3	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	3.2	17.8	43.9	59.6	66.5	61.9	57.0	38.4	17.0	2.2	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.8	12.6	25.8	38.7	43.5	39.5	33.8	23.7	11.6	.7	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.4	6.9	14.5	22.5	25.0	23.8	20.6	13.5	5.9	.4	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	3	6	6	3	3	3	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	19	71	136	149	171	192	153	112	63	20	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	2	11	17	23	25	25	23	17	11	2	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	8	15	20	22	22	20	15	8	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	6	13	18	20	20	18	13	6	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-51	-38	-24	-8	8	24	38	51	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-61	-50	-37	-23	-8	8	23	37	50	61	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-48	-36	-22	-8	8	22	36	48	0	0	0	0	0	

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 1.4.12 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4
108 (0300)	-	-	-	-	-	-	-	-	40	24	4	-	-	-	-	-	-	-	68
090 (0250)	-	-	-	-	-	-	-	20	161	141	16	-	-	-	-	-	-	-	338
081 (0225)	-	-	-	-	-	-	-	129	214	194	105	-	-	-	-	-	-	-	642
072 (0200)	-	-	-	-	-	-	-	194	250	222	165	-	-	-	-	-	-	-	831
063 (0175)	-	-	-	-	-	-	24	242	302	274	202	16	-	-	-	-	-	-	1060
054 (0150)	-	-	-	-	-	-	85	274	335	327	266	81	-	-	-	-	-	-	1368
045 (0125)	-	-	-	-	-	-	190	375	383	387	323	157	-	-	-	-	-	-	1815
036 (0100)	-	-	-	-	-	-	266	415	484	468	411	242	-	-	-	-	-	-	2286
027 (0075)	-	-	-	-	-	8	331	520	629	633	532	371	-	-	-	-	-	-	3024
018 (0050)	-	-	-	-	-	93	496	694	774	782	722	500	69	-	-	-	-	-	4130
009 (0025)	-	-	-	-	-	403	847	944	976	968	960	859	395	-	-	-	-	-	6352
001 (0003)	-	-	-	-	16	863	992	996	996	1000	996	988	895	8	-	-	-	-	7750
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	8	24	38	46	45	37	24	8	0	0	0	0	0	
S.D.	0	0	0	0	0	7	18	27	32	31	25	17	6	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.5	7.3	17.9	28.7	35.0	34.3	29.4	18.0	7.3	.5	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.8	14.9	43.8	70.9	83.4	79.1	63.5	40.4	14.4	.8	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.6	9.1	23.2	39.4	43.5	43.6	37.1	25.0	8.9	.6	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.4	5.6	15.3	22.9	28.8	28.8	23.8	15.5	5.7	.4	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.2	4.1	10.2	14.2	16.8	17.1	15.1	10.5	2.5	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	3	29	69	101	124	130	113	68	25	3	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	5	11	16	18	18	16	11	5	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	4	10	15	17	17	15	10	4	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	4	10	15	17	17	15	10	4	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.1 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JANUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	16	19	-	-	-	-	-	-	-	-	35
090 (0250)	-	-	-	-	-	-	-	23	77	87	23	-	-	-	-	-	-	-	210
081 (0225)	-	-	-	-	-	-	-	42	129	132	52	-	-	-	-	-	-	-	355
072 (0200)	-	-	-	-	-	-	10	100	184	174	94	3	-	-	-	-	-	-	565
063 (0175)	-	-	-	-	-	-	19	161	261	232	148	10	-	-	-	-	-	-	831
054 (0150)	-	-	-	-	-	-	58	245	339	281	210	39	3	-	-	-	-	-	1175
045 (0125)	-	-	-	-	-	-	106	326	403	374	313	87	3	-	-	-	-	-	1612
036 (0100)	-	-	-	-	-	3	219	403	494	481	400	161	3	-	-	-	-	-	2164
027 (0075)	-	-	-	-	-	16	329	529	603	590	523	306	13	-	-	-	-	-	2909
018 (0050)	-	-	-	-	-	113	513	684	781	771	690	516	97	-	-	-	-	-	4165
009 (0025)	-	-	-	-	-	332	800	926	952	945	935	784	381	-	-	-	-	-	6055
001 (0003)	-	-	-	-	355	981	1000	1000	1000	1000	1000	1000	990	413	-	-	-	-	8739
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	1	8	22	35	42	41	34	21	8	1	0	0	0	0	
S.D.	0	0	0	0	1	7	16	24	28	28	23	15	7	1	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.8	6.9	18.6	29.1	35.5	34.4	28.7	18.7	7.4	.9	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	4.5	14.4	37.5	58.8	70.1	68.0	55.5	33.6	14.7	5.1	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.9	8.2	23.5	36.4	45.4	42.8	36.0	23.0	8.8	1.3	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.6	5.7	15.3	22.9	27.2	26.5	22.9	15.2	6.1	.7	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.3	3.2	9.0	13.7	17.0	16.5	14.0	8.4	3.5	.3	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	3	3	4	4	4	2	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	7	37	78	107	122	115	99	76	61	7	0	0	0	0	
ALTITUDE 05	0	0	0	0	0	3	9	13	16	16	13	9	3	0	0	0	0	0	
OF 15	0	0	0	0	0	4	10	15	17	17	15	10	4	0	0	0	0	0	
SUN 25	0	0	0	0	0	6	12	17	19	19	17	12	6	0	0	0	0	0	
AZIMUTH 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
OF 15	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	
SUN 25	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	

KEW 51.47N 0.32W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.2 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS FEBRUARY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	21	11	-	-	-	-	-	-	-	-	32
144 (0400)	-	-	-	-	-	-	-	25	85	64	25	-	-	-	-	-	-	-	199
126 (0350)	-	-	-	-	-	-	7	107	160	142	78	-	-	-	-	-	-	-	494
108 (0300)	-	-	-	-	-	-	61	199	256	256	174	32	-	-	-	-	-	-	978
090 (0250)	-	-	-	-	-	-	154	306	345	356	246	128	-	-	-	-	-	-	1535
081 (0225)	-	-	-	-	-	-	211	374	381	413	302	171	-	-	-	-	-	-	1852
072 (0200)	-	-	-	-	-	36	289	409	441	434	381	228	21	-	-	-	-	-	2239
063 (0175)	-	-	-	-	-	86	332	448	491	488	413	299	64	-	-	-	-	-	2621
054 (0150)	-	-	-	-	-	132	393	498	566	534	477	395	103	-	-	-	-	-	3098
045 (0125)	-	-	-	-	4	214	446	587	598	601	534	491	164	-	-	-	-	-	3639
036 (0100)	-	-	-	-	7	307	539	690	708	708	662	548	281	-	-	-	-	-	4450
027 (0075)	-	-	-	-	18	421	650	765	843	840	751	662	420	18	-	-	-	-	5388
018 (0050)	-	-	-	-	103	596	796	886	932	922	904	815	616	121	-	-	-	-	6691
009 (0025)	-	-	-	4	324	807	946	982	996	989	986	968	858	349	4	-	-	-	8213
001 (0003)	-	-	-	224	957	1000	1000	1000	1000	1000	1000	1000	1000	975	249	-	-	-	10405
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	7	27	49	65	72	71	61	47	27	8	0	0	0	0	
S.D.	0	0	0	1	7	20	33	42	45	44	39	30	18	7	1	0	0	0	
MEDIAN	.0	.0	.0	.6	6.8	22.9	39.8	53.8	61.9	60.7	50.4	43.6	23.3	7.1	.7	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	1.9	14.0	46.5	82.7	107.8	118.5	116.8	101.5	76.4	42.2	14.9	2.6	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.8	8.0	28.7	52.8	74.3	78.2	83.1	66.7	53.5	28.3	8.3	.8	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.5	5.5	17.8	31.1	43.9	44.8	45.1	40.4	31.9	18.7	5.8	.5	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.3	3.0	9.3	17.8	24.4	29.9	29.7	24.1	18.9	11.2	3.2	.3	.0	.0	.0	
MIN VALUE	0	0	0	0	0	2	3	4	3	5	3	4	2	0	0	0	0	0	
MAX VALUE	0	0	0	9	51	80	129	154	173	169	157	124	80	33	12	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	1	8	15	20	22	22	20	15	8	1	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	3	11	18	23	25	25	23	18	11	3	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	6	14	21	26	29	29	26	21	14	6	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-50	-37	-23	-8	8	23	37	50	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-64	-52	-39	-24	-8	8	24	39	52	64	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-66	-54	-40	-25	-8	8	25	40	54	66	0	0	0	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.3 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS MARCH

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	6	16	19	3	-	-	-	-	-	-	-	44
216 (0600)	-	-	-	-	-	-	-	23	77	71	6	-	-	-	-	-	-	-	177
198 (0550)	-	-	-	-	-	-	-	71	129	126	61	-	-	-	-	-	-	-	387
180 (0500)	-	-	-	-	-	-	35	135	187	181	119	10	-	-	-	-	-	-	667
162 (0450)	-	-	-	-	-	-	94	239	287	239	171	65	-	-	-	-	-	-	1095
144 (0400)	-	-	-	-	-	19	171	332	371	335	252	119	13	-	-	-	-	-	1612
126 (0350)	-	-	-	-	-	81	281	419	458	423	329	219	45	-	-	-	-	-	2255
108 (0300)	-	-	-	-	-	168	381	506	539	497	426	319	129	-	-	-	-	-	2965
090 (0250)	-	-	-	-	16	271	468	577	619	574	510	419	232	6	-	-	-	-	3692
081 (0225)	-	-	-	-	48	342	503	613	671	629	558	471	290	19	-	-	-	-	4144
072 (0200)	-	-	-	-	71	374	558	652	703	674	639	516	365	48	-	-	-	-	4600
063 (0175)	-	-	-	-	135	413	619	706	742	732	681	558	423	113	-	-	-	-	5122
054 (0150)	-	-	-	-	194	471	697	758	790	781	732	603	481	161	-	-	-	-	5668
045 (0125)	-	-	-	-	268	552	755	813	829	839	765	671	558	235	6	-	-	-	6291
036 (0100)	-	-	-	6	365	655	823	871	877	874	826	755	632	368	6	-	-	-	7058
027 (0075)	-	-	-	58	468	758	861	913	939	935	903	842	729	484	55	-	-	-	7945
018 (0050)	-	-	-	145	648	871	916	965	977	977	971	942	826	639	148	-	-	-	9025
009 (0025)	-	-	-	355	842	968	994	1000	1000	1000	997	997	971	858	342	6	-	-	10330
001 (0003)	-	-	261	923	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	935	213	-	-	12329
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	8	32	61	88	108	117	113	99	80	58	30	8	0	0	0	
S.D.	0	0	1	8	23	39	51	59	63	63	57	49	38	21	9	1	0	0	
MEDIAN	.0	.0	.7	7.0	25.4	50.8	81.8	109.2	116.7	107.3	92.1	75.2	51.8	26.1	6.9	.6	.0	.0	
1ST QUINTILE	.0	.0	2.9	15.6	53.3	102.4	139.3	168.8	177.7	174.1	155.6	129.4	95.6	49.3	15.6	1.5	.0	.0	
2ND QUINTILE	.0	.0	.8	8.4	32.9	66.0	104.1	129.9	138.0	130.7	112.8	93.4	66.6	33.5	8.2	.8	.0	.0	
3RD QUINTILE	.0	.0	.5	5.5	20.4	40.8	65.8	84.3	94.3	85.7	76.3	54.6	39.9	20.3	5.5	.5	.0	.0	
4TH QUINTILE	.0	.0	.3	2.7	10.9	23.7	39.0	47.1	51.7	51.1	39.8	31.3	20.4	11.4	2.8	.3	.0	.0	
MIN VALUE	0	0	0	0	0	3	7	9	11	11	8	7	5	2	0	0	0	0	
MAX VALUE	0	0	7	39	94	149	191	238	251	248	251	187	153	93	51	15	0	0	
ALTITUDE OF SUN 05	0	0	0	0	9	17	24	29	32	32	29	24	17	9	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	3	12	20	27	33	36	36	33	27	20	12	3	0	0	0	
ALTITUDE OF SUN 25	0	0	0	6	15	23	31	36	40	40	36	31	23	15	6	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-68	-55	-41	-26	-9	9	26	41	55	68	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	-83	-71	-58	-43	-27	-9	9	27	43	58	71	83	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-85	-73	-60	-45	-28	-10	10	28	45	60	73	85	0	0	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS APRIL

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	10	3	-	-	-	-	-	-	-	-	13
270 (0750)	-	-	-	-	-	-	-	3	43	30	-	-	-	-	-	-	-	-	76
252 (0700)	-	-	-	-	-	-	-	33	97	120	37	7	-	-	-	-	-	-	294
234 (0650)	-	-	-	-	-	-	7	117	160	187	123	17	-	-	-	-	-	-	611
216 (0600)	-	-	-	-	-	-	77	170	230	243	183	53	-	-	-	-	-	-	956
198 (0550)	-	-	-	-	-	3	157	243	270	300	263	110	-	-	-	-	-	-	1346
180 (0500)	-	-	-	-	-	40	220	307	337	363	297	217	27	-	-	-	-	-	1808
162 (0450)	-	-	-	-	-	123	313	367	403	427	370	277	83	-	-	-	-	-	2363
144 (0400)	-	-	-	-	7	240	383	437	457	507	407	340	173	3	-	-	-	-	2954
126 (0350)	-	-	-	-	67	333	457	507	543	553	483	447	260	37	3	-	-	-	3690
108 (0300)	-	-	-	-	177	397	517	590	610	603	573	530	360	103	3	-	-	-	4463
090 (0250)	-	-	-	3	293	463	587	660	693	653	657	603	450	253	3	-	-	-	5318
081 (0225)	-	-	-	17	347	520	627	680	710	693	703	647	490	313	10	-	-	-	5757
072 (0200)	-	-	-	57	390	577	673	713	760	740	747	683	567	373	23	-	-	-	6303
063 (0175)	-	-	-	117	450	623	700	763	797	793	800	727	620	440	83	-	-	-	6913
054 (0150)	-	-	-	183	503	670	750	813	847	827	837	783	693	520	163	-	-	-	7589
045 (0125)	-	-	-	263	563	730	793	877	900	870	873	840	743	610	220	-	-	-	8282
036 (0100)	-	-	7	370	650	773	877	923	940	927	913	900	817	713	373	-	-	-	9183
027 (0075)	-	-	27	477	753	833	940	987	987	977	970	943	900	787	523	7	-	-	10111
018 (0050)	-	-	127	647	877	947	987	993	1000	990	997	983	963	880	707	117	-	-	11215
009 (0025)	-	-	310	850	977	993	997	1000	1000	1000	1000	997	993	967	880	327	3	-	12294
001 (0003)	-	220	937	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	947	190	-	14291
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	8	31	62	90	116	132	141	143	132	115	87	60	31	8	0	0	
S.D.	0	1	7	22	39	54	67	72	76	79	72	62	49	35	20	7	1	0	
MEDIAN	.0	.6	6.6	25.8	54.5	84.2	113.1	127.8	135.0	145.6	122.6	114.5	79.8	56.3	28.4	6.8	.6	.0	
1ST QUINTILE	.0	1.7	14.4	52.1	104.4	150.2	185.7	208.6	223.7	229.8	212.2	182.9	138.4	96.4	48.2	14.4	1.0	.0	
2ND QUINTILE	.0	.8	7.9	33.5	70.5	107.2	139.9	153.5	162.8	169.6	147.4	133.9	100.0	68.4	34.4	8.1	.7	.0	
3RD QUINTILE	.0	.5	5.3	20.5	41.2	67.5	87.1	105.4	110.7	109.1	102.2	90.7	66.4	46.0	23.2	5.5	.5	.0	
4TH QUINTILE	.0	.3	2.7	11.2	23.6	32.0	44.3	56.3	62.5	61.1	63.0	51.3	38.1	25.7	13.2	2.9	.2	.0	
MIN VALUE	0	0	0	1	4	6	8	14	20	12	11	8	5	3	0	0	0	0	
MAX VALUE	0	7	44	93	145	206	251	282	294	297	260	257	193	146	128	31	13	0	
ALTITUDE OF SUN 05	0	0	0	9	18	27	35	41	44	44	41	35	27	18	9	0	0	0	
ALTITUDE OF SUN 15	0	0	3	12	21	30	38	44	47	47	44	38	30	21	12	3	0	0	
ALTITUDE OF SUN 25	0	0	5	15	24	33	41	47	51	51	47	41	33	24	15	5	0	0	
AZIMUTH OF SUN 05	0	0	0	-88	-76	-62	-47	-30	-10	10	30	47	62	76	88	0	0	0	
AZIMUTH OF SUN 15	0	0	-102	-90	-78	-65	-50	-32	-11	11	32	50	65	78	90	102	0	0	
AZIMUTH OF SUN 25	0	0	-104	-92	-80	-67	-52	-33	-12	12	33	52	67	80	92	104	0	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.5

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MAY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	13	6	-	-	-	-	-	-	-	-	19
306 (0850)	-	-	-	-	-	-	-	10	39	32	10	-	-	-	-	-	-	-	91
288 (0800)	-	-	-	-	-	-	-	29	84	84	26	3	-	-	-	-	-	-	226
270 (0750)	-	-	-	-	-	-	19	103	158	155	84	13	-	-	-	-	-	-	532
252 (0700)	-	-	-	-	-	-	58	219	210	226	165	42	-	-	-	-	-	-	920
234 (0650)	-	-	-	-	-	3	142	306	290	271	226	100	3	-	-	-	-	-	1341
216 (0600)	-	-	-	-	-	35	261	335	371	339	306	184	26	-	-	-	-	-	1857
198 (0550)	-	-	-	-	-	145	361	406	429	394	377	258	90	-	-	-	-	-	2460
180 (0500)	-	-	-	-	6	297	406	455	497	452	458	326	171	16	-	-	-	-	3084
162 (0450)	-	-	-	-	45	406	458	494	571	510	503	426	242	39	-	-	-	-	3694
144 (0400)	-	-	-	-	181	468	516	577	632	581	561	513	365	123	-	-	-	-	4517
126 (0350)	-	-	-	-	316	526	577	635	681	652	648	603	452	216	10	-	-	-	5316
108 (0300)	-	-	3	39	448	606	635	694	742	706	694	635	539	390	42	-	-	-	6173
090 (0250)	-	-	3	187	545	681	729	742	790	777	752	726	626	494	165	-	-	-	7217
081 (0225)	-	-	6	294	597	726	761	784	826	826	800	752	681	529	258	-	-	-	7840
072 (0200)	-	-	6	365	632	771	787	816	855	858	852	790	713	597	365	-	-	-	8407
063 (0175)	-	-	10	423	671	806	826	861	894	903	881	819	771	635	435	3	-	-	8938
054 (0150)	-	-	45	497	719	848	861	897	913	926	916	868	826	703	503	42	-	-	9564
045 (0125)	-	-	139	597	790	868	894	929	942	942	942	906	874	758	597	119	-	-	10297
036 (0100)	-	-	265	713	861	913	942	958	965	968	968	945	903	832	697	252	-	-	11182
027 (0075)	-	3	461	794	913	958	961	974	971	984	977	971	948	900	777	465	-	-	12057
018 (0050)	-	26	645	900	977	981	981	987	997	1000	994	984	984	952	887	671	13	-	12979
009 (0025)	-	190	865	981	994	1000	1000	1000	1000	1000	997	997	1000	994	965	884	181	-	14048
001 (0003)	110	926	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	942	97	16072
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	5	26	58	94	128	148	165	174	170	162	142	116	87	56	26	5	0	
S.D.	0	5	16	31	47	62	75	83	83	83	78	70	58	45	31	15	4	0	
MEDIAN	.6	5.6	25.1	53.7	98.4	134.1	149.0	160.7	179.3	165.1	163.2	146.7	116.1	88.5	54.4	25.5	5.6	.6	
1ST QUINTILE	.9	8.9	40.6	88.9	141.5	191.5	225.2	254.9	255.5	258.6	241.7	212.1	172.6	129.1	86.6	39.5	8.8	.9	
2ND QUINTILE	.7	6.7	29.8	66.6	114.5	163.0	182.4	199.5	207.0	196.1	192.9	166.7	136.8	106.3	67.5	29.7	6.7	.7	
3RD QUINTILE	.4	4.5	20.2	44.8	80.2	109.4	118.9	136.9	153.4	139.2	135.9	126.6	95.4	71.3	44.7	21.1	4.6	.4	
4TH QUINTILE	.2	2.4	11.7	26.5	43.7	64.5	69.0	76.5	87.5	85.8	81.0	68.9	58.3	39.9	25.1	12.5	2.5	.2	
MIN VALUE	0	0	2	4	7	10	13	9	14	20	5	8	11	7	2	0	0	0	
MAX VALUE	5	33	109	123	182	237	283	323	331	330	320	291	243	197	142	67	22	4	
ALTITUDE OF SUN 05	0	0	8	17	26	35	44	50	54	54	50	44	35	26	17	8	0	0	
ALTITUDE OF SUN 15	0	1	10	19	28	38	46	53	57	57	53	46	38	28	19	10	1	0	
ALTITUDE OF SUN 25	0	3	12	21	30	39	48	55	59	59	55	48	39	30	21	12	3	0	
AZIMUTH OF SUN 05	0	0	-106	-94	-83	-69	-54	-35	-12	12	35	54	69	83	94	106	0	0	
AZIMUTH OF SUN 15	0	-119	-108	-96	-85	-71	-56	-37	-13	13	37	56	71	85	96	108	119	0	
AZIMUTH OF SUN 25	0	-120	-109	-98	-86	-73	-58	-38	-14	14	38	58	73	86	98	109	120	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JUNE

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
324 (0900)	-	-	-	-	-	-	-	-	7	3	-	-	-	-	-	-	-	-	10
306 (0850)	-	-	-	-	-	-	-	7	80	50	13	-	-	-	-	-	-	-	150
288 (0800)	-	-	-	-	-	-	-	127	167	183	113	-	-	-	-	-	-	-	590
270 (0750)	-	-	-	-	-	-	20	227	250	273	213	23	3	-	-	-	-	-	1009
252 (0700)	-	-	-	-	-	10	167	320	317	363	277	160	7	-	-	-	-	-	1621
234 (0650)	-	-	-	-	-	43	280	380	397	400	337	253	23	-	-	-	-	-	2113
216 (0600)	-	-	-	-	-	167	413	450	467	447	407	320	117	-	-	-	-	-	2788
198 (0550)	-	-	-	-	7	297	480	513	527	490	487	363	230	3	-	-	-	-	3397
180 (0500)	-	-	-	-	53	427	520	557	583	563	547	413	293	30	-	-	-	-	3986
162 (0450)	-	-	-	-	220	510	597	590	657	603	597	487	400	167	-	-	-	-	4828
144 (0400)	-	-	-	-	377	563	650	640	700	677	647	580	467	297	7	-	-	-	5605
126 (0350)	-	-	-	27	500	600	690	710	723	733	710	647	543	377	30	-	-	-	6290
108 (0300)	-	-	-	250	570	653	743	783	773	793	787	733	597	473	197	-	-	-	7352
090 (0250)	-	-	3	420	643	747	780	820	837	860	823	790	690	553	333	-	-	-	8299
081 (0225)	-	-	3	497	667	787	823	850	850	873	850	820	740	620	400	7	-	-	8787
072 (0200)	-	-	23	540	707	807	863	877	893	897	877	853	780	693	490	23	-	-	9323
063 (0175)	-	-	133	613	760	850	890	913	927	920	910	870	820	747	557	103	-	-	10013
054 (0150)	-	3	273	667	803	867	940	940	940	930	927	903	887	810	650	273	-	-	10813
045 (0125)	-	3	383	727	837	907	957	970	967	943	950	923	917	860	727	407	-	-	11478
036 (0100)	-	3	533	787	890	950	967	977	977	963	963	947	933	913	797	543	-	-	12143
027 (0075)	-	17	667	860	940	980	987	983	987	983	977	970	953	933	857	690	10	-	12794
018 (0050)	-	143	823	933	987	997	993	993	997	987	990	983	983	960	910	813	200	-	13692
009 (0025)	3	653	940	983	1000	1000	1000	1000	1000	997	993	1000	997	993	977	920	667	-	15123
001 (0003)	597	993	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	983	597	17170
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	1	12	38	74	112	146	173	187	194	193	183	160	134	103	70	38	12	1	
S.D.	1	7	20	36	53	67	75	84	86	87	83	75	65	50	36	19	6	1	
MEDIAN	2.3	11.7	38.0	80.4	126.0	164.2	189.0	201.7	206.1	195.5	194.1	159.5	136.2	101.9	70.7	38.8	12.2	2.3	
1ST QUINTILE	6.3	17.0	58.7	112.0	164.2	211.4	246.7	274.9	280.8	284.6	272.3	244.3	202.8	157.4	107.6	57.9	18.0	6.3	
2ND QUINTILE	3.7	13.5	44.0	92.1	140.6	183.7	217.8	228.9	233.2	234.0	217.8	184.7	162.0	121.7	81.0	45.5	14.1	3.6	
3RD QUINTILE	1.0	9.9	31.5	64.6	100.6	126.0	161.0	158.4	175.9	163.4	160.9	138.6	107.4	83.7	58.8	32.5	10.3	1.0	
4TH QUINTILE	.5	5.5	19.3	34.4	54.6	75.2	85.8	99.7	100.4	106.1	101.5	87.0	67.5	55.4	35.6	19.0	5.6	.5	
MIN VALUE	0	0	3	6	10	17	12	14	14	7	7	11	8	6	3	2	0	0	
MAX VALUE	11	54	101	133	202	263	277	316	342	325	319	284	277	205	157	89	30	7	
ALTITUDE OF SUN 05	0	5	13	22	31	41	49	56	60	60	56	49	41	31	22	13	5	0	
ALTITUDE OF SUN 15	0	5	14	23	32	41	50	57	61	61	57	50	41	32	23	14	5	0	
ALTITUDE OF SUN 25	0	5	14	23	32	41	50	57	61	61	57	50	41	32	23	14	5	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-87	-75	-59	-39	-14	14	39	59	75	87	99	110	121	0	
AZIMUTH OF SUN 15	0	-122	-111	-100	-88	-75	-60	-40	-14	14	40	60	75	88	100	111	122	0	
AZIMUTH OF SUN 25	0	-122	-111	-100	-88	-75	-60	-40	-15	15	40	60	75	88	100	111	122	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.7 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JULY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	6	3	-	-	-	-	-	-	-	-	9
306 (0850)	-	-	-	-	-	-	-	-	23	39	3	-	-	-	-	-	-	-	65
288 (0800)	-	-	-	-	-	-	-	39	113	107	58	-	-	-	-	-	-	-	317
270 (0750)	-	-	-	-	-	-	10	107	194	220	129	13	-	-	-	-	-	-	673
252 (0700)	-	-	-	-	-	3	78	197	265	275	210	78	-	-	-	-	-	-	1106
234 (0650)	-	-	-	-	-	6	172	288	343	330	259	197	3	-	-	-	-	-	1598
216 (0600)	-	-	-	-	-	55	291	359	392	385	311	249	42	-	-	-	-	-	2084
198 (0550)	-	-	-	-	-	172	346	421	437	443	369	311	155	-	-	-	-	-	2654
180 (0500)	-	-	-	-	-	320	427	505	508	489	424	375	245	3	-	-	-	-	3296
162 (0450)	-	-	-	-	78	392	482	547	589	547	482	450	355	52	-	-	-	-	3974
144 (0400)	-	-	-	-	243	450	576	625	644	608	566	515	426	194	-	-	-	-	4847
126 (0350)	-	-	-	-	359	492	625	670	696	696	647	583	494	316	-	-	-	-	5578
108 (0300)	-	-	-	61	427	566	689	748	748	761	696	673	594	410	81	-	-	-	6454
090 (0250)	-	-	-	246	502	657	754	819	812	816	783	754	684	561	242	-	-	-	7630
081 (0225)	-	-	-	343	553	699	796	851	858	851	835	777	732	603	310	-	-	-	8208
072 (0200)	-	-	-	392	602	735	848	883	880	887	880	832	784	668	413	3	-	-	8807
063 (0175)	-	-	26	472	654	812	874	916	922	909	909	858	806	729	484	29	-	-	9400
054 (0150)	-	-	87	544	722	858	903	939	945	942	942	887	842	777	597	100	-	-	10085
045 (0125)	-	-	201	599	790	913	935	961	968	968	968	929	890	835	681	210	-	-	10848
036 (0100)	-	-	356	693	861	942	964	977	984	984	971	948	935	881	774	429	-	-	11699
027 (0075)	-	-	476	812	916	977	987	987	984	990	981	977	971	929	832	597	3	-	12419
018 (0050)	-	19	667	922	984	997	997	994	994	994	990	990	987	965	923	794	55	-	13272
009 (0025)	-	362	919	990	1000	1000	1000	1000	1000	997	1000	997	1000	997	977	916	416	3	14574
001 (0003)	219	977	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	990	248	16431
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	7	29	61	94	128	155	173	181	180	165	150	126	95	62	32	8	0	
S.D.	0	4	17	32	49	63	71	76	83	84	79	72	60	45	31	16	5	1	
MEDIAN	.6	7.2	25.9	59.5	90.5	124.1	158.6	181.1	182.0	176.6	158.1	148.2	124.9	97.3	61.7	32.2	7.8	.7	
1ST QUINTILE	1.7	13.3	45.1	94.5	148.7	194.6	229.8	251.4	268.5	273.2	254.2	233.0	189.0	143.1	94.7	45.8	14.4	2.6	
2ND QUINTILE	.8	8.5	32.7	71.1	115.1	159.5	186.0	204.1	212.8	211.3	187.9	174.0	150.6	109.9	73.1	37.2	9.4	.8	
3RD QUINTILE	.5	5.9	21.2	44.9	72.4	101.3	135.2	149.8	158.4	146.4	136.4	122.6	106.8	81.6	53.7	26.9	6.4	.5	
4TH QUINTILE	.3	3.3	13.3	27.9	43.7	64.4	80.3	94.8	93.4	95.2	87.1	77.2	65.5	50.4	32.0	17.6	3.6	.3	
MIN VALUE	0	0	2	5	10	17	17	11	12	8	10	4	10	4	3	0	0	0	
MAX VALUE	4	21	71	125	178	253	276	300	334	325	312	283	236	185	122	79	29	13	
ALTITUDE OF SUN 05	0	5	13	22	32	41	49	57	61	61	57	49	41	32	22	13	5	0	
ALTITUDE OF SUN 15	0	4	12	21	31	40	49	56	60	60	56	49	40	31	21	12	4	0	
ALTITUDE OF SUN 25	0	2	11	20	29	39	47	54	58	58	54	47	39	29	20	11	2	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-88	-75	-60	-40	-14	14	40	60	75	88	99	110	121	0	
AZIMUTH OF SUN 15	0	-121	-109	-98	-87	-74	-59	-39	-14	14	39	59	74	87	98	109	121	0	
AZIMUTH OF SUN 25	0	-120	-108	-97	-85	-73	-57	-38	-13	13	38	57	73	85	97	108	120	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.8 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS AUGUST

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-	20
270 (0750)	-	-	-	-	-	-	-	3	55	61	13	-	-	-	-	-	-	-	132
252 (0700)	-	-	-	-	-	-	3	71	126	142	71	6	-	-	-	-	-	-	419
234 (0650)	-	-	-	-	-	-	39	158	235	219	142	48	-	-	-	-	-	-	841
216 (0600)	-	-	-	-	-	-	110	242	342	300	258	90	3	-	-	-	-	-	1345
198 (0550)	-	-	-	-	-	29	219	358	410	377	319	165	13	-	-	-	-	-	1890
180 (0500)	-	-	-	-	-	84	332	452	465	442	384	274	74	-	-	-	-	-	2507
162 (0450)	-	-	-	-	3	219	439	513	535	510	465	358	155	-	-	-	-	-	3197
144 (0400)	-	-	-	-	29	332	503	574	600	594	568	448	287	26	-	-	-	-	3961
126 (0350)	-	-	-	-	119	448	581	642	671	661	626	568	400	71	-	-	-	-	4787
108 (0300)	-	-	-	-	258	526	635	700	739	742	719	642	510	171	-	-	-	-	5642
090 (0250)	-	-	-	29	384	632	710	761	794	806	787	726	606	358	19	-	-	-	6612
081 (0225)	-	-	-	61	439	687	742	816	829	845	819	752	661	432	48	-	-	-	7131
072 (0200)	-	-	-	119	506	723	774	842	868	858	842	794	697	523	81	-	-	-	7627
063 (0175)	-	-	-	203	555	761	810	865	894	894	871	839	729	597	190	-	-	-	8208
054 (0150)	-	-	-	323	629	790	839	894	919	923	903	871	781	661	287	-	-	-	8820
045 (0125)	-	-	6	400	739	845	877	923	935	952	932	919	835	726	397	3	-	-	9489
036 (0100)	-	-	52	523	800	887	923	955	971	974	955	939	887	781	581	39	-	-	10267
027 (0075)	-	-	139	619	858	942	945	977	984	984	987	971	945	848	713	126	-	-	11038
018 (0050)	-	-	300	781	939	971	974	997	994	997	997	987	990	948	832	297	-	-	12004
009 (0025)	-	3	571	939	987	994	1000	997	1000	1000	1000	1000	1000	984	958	700	-	-	13133
001 (0003)	-	577	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	990	545	-	15109
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	1	13	40	74	110	136	156	165	163	153	133	106	72	41	14	1	0	
S.D.	0	2	10	24	40	53	66	71	74	73	69	61	51	36	21	10	2	0	
MEDIAN	.0	2.1	11.4	37.7	72.8	114.0	144.8	165.8	171.0	164.6	155.9	136.2	109.6	74.3	40.0	13.5	1.7	.0	
1ST QUINTILE	.0	6.3	23.6	63.3	115.5	164.5	201.1	225.0	239.8	238.4	225.0	192.2	155.9	105.2	62.1	23.1	6.1	.0	
2ND QUINTILE	.0	3.5	14.7	45.0	87.4	133.4	168.6	190.0	200.6	191.6	176.4	153.6	126.0	84.9	44.9	15.7	3.1	.0	
3RD QUINTILE	.0	.9	8.5	28.8	57.5	95.4	119.7	137.1	144.0	142.4	134.1	118.2	91.1	62.6	34.7	11.2	.9	.0	
4TH QUINTILE	.0	.5	4.7	16.9	36.0	52.4	65.5	83.6	88.5	91.7	86.3	70.8	50.8	33.4	20.4	6.2	.4	.0	
MIN VALUE	0	0	0	2	3	8	10	8	9	15	14	11	10	6	2	0	0	0	
MAX VALUE	0	15	47	99	162	210	267	272	289	300	280	268	216	159	94	53	8	0	
ALTITUDE OF SUN 05	0	0	9	18	27	37	45	51	55	55	51	45	37	27	18	9	0	0	
ALTITUDE OF SUN 15	0	0	7	16	25	34	42	49	52	52	49	42	34	25	16	7	0	0	
ALTITUDE OF SUN 25	0	0	4	13	23	32	40	46	49	49	46	40	32	23	13	4	0	0	
AZIMUTH OF SUN 05	0	-118	-107	-95	-84	-70	-55	-36	-13	13	36	55	70	84	95	107	118	0	
AZIMUTH OF SUN 15	0	0	-105	-93	-81	-68	-53	-34	-12	12	34	53	68	81	93	105	0	0	
AZIMUTH OF SUN 25	0	0	-103	-91	-79	-66	-51	-33	-11	11	33	51	66	79	91	103	0	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.9

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

SEPTEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
234 (0650)	-	-	-	-	-	-	-	3	13	7	-	-	-	-	-	-	-	-	23
216 (0600)	-	-	-	-	-	-	-	17	57	53	3	-	-	-	-	-	-	-	130
198 (0550)	-	-	-	-	-	-	3	57	123	140	67	-	-	-	-	-	-	-	390
180 (0500)	-	-	-	-	-	-	37	150	237	230	147	3	-	-	-	-	-	-	804
162 (0450)	-	-	-	-	-	-	97	253	327	313	250	70	-	-	-	-	-	-	1310
144 (0400)	-	-	-	-	-	7	190	360	423	397	347	177	-	-	-	-	-	-	1901
126 (0350)	-	-	-	-	-	67	330	443	537	463	407	280	43	-	-	-	-	-	2570
108 (0300)	-	-	-	-	3	173	430	530	597	553	503	367	150	-	-	-	-	-	3306
090 (0250)	-	-	-	-	13	313	553	623	653	627	600	463	253	20	-	-	-	-	4118
081 (0225)	-	-	-	-	73	437	640	710	703	717	703	590	390	63	-	-	-	-	5026
072 (0200)	-	-	-	-	153	503	697	760	743	773	730	627	450	110	-	-	-	-	5546
063 (0175)	-	-	-	-	220	547	730	787	773	800	767	677	523	183	-	-	-	-	6007
054 (0150)	-	-	-	3	300	610	773	823	807	833	810	737	593	277	3	-	-	-	6569
045 (0125)	-	-	-	13	370	670	823	867	850	850	840	783	643	360	7	-	-	-	7076
036 (0100)	-	-	-	37	477	767	847	880	887	880	863	840	713	450	23	-	-	-	7664
027 (0075)	-	-	-	67	613	850	897	917	923	917	917	903	793	580	73	-	-	-	8450
018 (0050)	-	-	-	197	737	893	943	960	963	953	950	943	880	713	177	3	-	-	9312
009 (0025)	-	-	-	403	847	953	977	990	993	980	973	977	973	843	363	7	-	-	10279
001 (0003)	-	-	7	677	957	997	997	997	997	997	1000	1000	990	963	700	10	-	-	11289
000	-	-	587	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	557	-	-	13138
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	1	17	47	81	111	129	138	136	126	104	76	45	16	2	0	0	
S.D.	0	0	2	12	27	41	53	60	66	67	61	51	40	26	12	3	0	0	
MEDIAN	.0	.0	2.2	14.8	43.5	81.4	115.8	132.2	149.8	136.6	126.6	102.8	74.8	41.5	14.3	1.8	.0	.0	
1ST QUINTILE	.0	.0	6.3	26.9	74.7	122.5	160.7	189.3	203.8	204.0	188.7	158.0	117.3	70.4	25.9	6.2	.0	.0	
2ND QUINTILE	.0	.0	3.6	18.1	51.5	95.4	131.4	153.3	166.3	161.2	146.1	119.8	88.5	50.0	17.0	3.3	.0	.0	
3RD QUINTILE	.0	.0	1.0	11.5	36.9	64.4	98.3	112.5	125.0	114.6	108.0	87.6	61.7	34.6	11.7	.9	.0	.0	
4TH QUINTILE	.0	.0	.5	5.9	21.8	41.4	58.1	68.8	64.9	72.0	65.1	51.3	35.3	21.0	6.3	.5	.0	.0	
MIN VALUE	0	0	0	0	4	6	8	8	6	7	10	9	6	2	0	0	0	0	
MAX VALUE	0	0	9	69	131	168	225	252	256	280	239	199	157	124	66	33	0	0	
ALTITUDE OF SUN 05	0	0	1	10	20	28	36	42	45	45	42	36	28	20	10	1	0	0	
ALTITUDE OF SUN 15	0	0	0	7	17	25	33	38	42	42	38	33	25	17	7	0	0	0	
ALTITUDE OF SUN 25	0	0	0	4	14	22	29	35	38	38	35	29	22	14	4	0	0	0	
AZIMUTH OF SUN 05	0	0	-100	-89	-77	-63	-48	-31	-11	11	31	48	63	77	89	100	0	0	
AZIMUTH OF SUN 15	0	0	0	-86	-74	-61	-46	-29	-10	10	29	46	61	74	86	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-84	-72	-59	-44	-28	-10	10	28	44	59	72	84	0	0	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.10 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS OCTOBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	6
198 (0550)	-	-	-	-	-	-	-	-	10	3	-	-	-	-	-	-	-	-	13
180 (0500)	-	-	-	-	-	-	-	13	32	55	-	-	-	-	-	-	-	-	100
162 (0450)	-	-	-	-	-	-	-	52	100	100	42	-	-	-	-	-	-	-	294
144 (0400)	-	-	-	-	-	-	23	145	203	190	119	13	-	-	-	-	-	-	693
126 (0350)	-	-	-	-	-	-	94	261	323	313	216	61	3	-	-	-	-	-	1271
108 (0300)	-	-	-	-	-	3	184	381	413	381	319	168	10	-	-	-	-	-	1859
090 (0250)	-	-	-	-	-	35	332	471	494	458	413	310	45	-	-	-	-	-	2558
081 (0225)	-	-	-	-	-	74	374	523	548	519	432	361	94	-	-	-	-	-	2925
072 (0200)	-	-	-	-	-	135	426	565	590	568	487	403	135	3	-	-	-	-	3312
063 (0175)	-	-	-	-	3	223	477	623	645	626	590	468	200	3	-	-	-	-	3858
054 (0150)	-	-	-	-	6	290	539	674	694	716	623	548	300	6	-	-	-	-	4396
045 (0125)	-	-	-	-	23	339	597	723	771	784	713	616	416	42	-	-	-	-	5024
036 (0100)	-	-	-	-	58	417	690	806	852	829	790	697	516	103	-	-	-	-	5818
027 (0075)	-	-	-	-	158	594	806	884	913	916	865	803	642	174	-	-	-	-	6755
018 (0050)	-	-	-	-	310	784	926	945	965	981	971	923	787	365	3	-	-	-	7960
009 (0025)	-	-	-	16	652	939	994	997	997	997	1000	997	935	671	13	-	-	-	9208
001 (0003)	-	-	-	610	1000	1000	1000	1000	1000	1000	1000	1000	1000	994	561	-	-	-	11165
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	2	15	39	66	86	93	91	80	65	41	16	2	0	0	0	
S.D.	0	0	0	2	11	25	39	48	51	51	46	38	25	13	2	0	0	0	
MEDIAN	.0	.0	.0	2.5	13.0	34.2	59.7	85.0	89.0	83.8	70.9	59.4	37.4	14.0	1.9	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	6.5	24.5	65.4	106.1	135.5	144.5	142.5	129.0	103.9	63.0	25.8	6.3	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	3.8	15.6	41.0	76.5	104.2	110.6	103.6	92.5	72.6	46.2	17.0	3.4	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	1.1	10.4	26.7	44.7	66.6	70.4	67.0	60.3	47.1	30.0	11.1	.9	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.5	5.6	17.1	27.5	36.7	41.8	41.8	34.8	27.3	17.2	5.8	.5	.0	.0	.0	
MIN VALUE	0	0	0	0	1	5	5	6	7	5	11	5	4	0	0	0	0	0	
MAX VALUE	0	0	0	13	66	108	152	188	231	219	177	147	136	80	23	0	0	0	
ALTITUDE OF SUN 05	0	0	0	1	10	19	26	31	34	34	31	26	19	10	1	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	7	15	22	27	30	30	27	22	15	7	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	4	12	19	24	27	27	24	19	12	4	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	-82	-70	-57	-42	-26	-9	9	26	42	57	70	82	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-67	-55	-41	-25	-9	9	25	41	55	67	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-65	-53	-39	-24	-8	8	24	39	53	65	0	0	0	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.11

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

NOVEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
108 (0300)	-	-	-	-	-	-	-	3	23	13	-	-	-	-	-	-	-	-	39
090 (0250)	-	-	-	-	-	-	-	50	100	80	23	-	-	-	-	-	-	-	253
081 (0225)	-	-	-	-	-	-	23	134	241	211	91	-	-	-	-	-	-	-	677
072 (0200)	-	-	-	-	-	-	84	221	318	271	144	20	-	-	-	-	-	-	997
063 (0175)	-	-	-	-	-	-	134	288	365	341	215	54	-	-	-	-	-	-	1347
054 (0150)	-	-	-	-	-	-	224	351	448	431	305	84	3	-	-	-	-	-	1756
045 (0125)	-	-	-	-	-	17	341	431	508	515	393	154	7	-	-	-	-	-	2232
036 (0100)	-	-	-	-	-	80	435	495	582	592	490	251	20	-	-	-	-	-	2788
027 (0075)	-	-	-	-	-	164	528	579	672	662	591	401	50	-	-	-	-	-	3470
018 (0050)	-	-	-	-	-	328	692	712	766	779	725	545	117	3	-	-	-	-	4339
009 (0025)	-	-	-	-	17	645	900	856	893	883	842	706	291	3	-	-	-	-	5494
001 (0003)	-	-	-	-	759	993	1000	983	990	987	963	900	635	13	-	-	-	-	7033
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	993	729	-	-	-	-	9474
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	2	15	34	51	59	57	48	32	14	2	0	0	0	0	
S.D.	0	0	0	0	2	11	22	31	34	33	28	20	11	3	0	0	0	0	
MEDIAN	.0	.0	.0	.0	3.8	13.1	29.7	44.5	55.2	55.6	44.1	29.8	12.5	3.6	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	7.0	25.0	56.4	83.2	95.2	91.5	73.9	49.7	22.7	6.9	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	4.9	16.0	39.4	57.5	68.2	66.1	53.4	36.1	15.1	4.7	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	2.7	10.3	23.0	34.6	43.2	44.0	35.4	23.9	9.9	2.4	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.8	5.4	13.3	21.5	24.6	25.2	21.2	13.6	5.3	.7	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	3	3	3	2	4	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	12	53	87	130	145	132	115	87	71	32	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	1	9	16	20	23	23	20	16	9	1	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	7	13	18	20	20	18	13	7	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	5	11	15	18	18	15	11	5	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-51	-38	-23	-8	8	23	38	51	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-48	-36	-22	-7	7	22	36	48	0	0	0	0	0	

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.5.12

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	3	48	23	3	-	-	-	-	-	-	-	77
072 (0200)	-	-	-	-	-	-	3	29	142	106	19	-	-	-	-	-	-	-	299
063 (0175)	-	-	-	-	-	-	3	110	200	181	61	-	-	-	-	-	-	-	555
054 (0150)	-	-	-	-	-	-	6	174	258	252	181	3	-	-	-	-	-	-	874
045 (0125)	-	-	-	-	-	-	26	242	313	313	268	10	-	-	-	-	-	-	1172
036 (0100)	-	-	-	-	-	-	135	329	413	429	390	113	-	-	-	-	-	-	1809
027 (0075)	-	-	-	-	-	-	235	432	513	558	506	281	-	-	-	-	-	-	2525
018 (0050)	-	-	-	-	-	3	365	629	694	719	674	471	6	-	-	-	-	-	3561
009 (0025)	-	-	-	-	171	171	716	913	945	948	887	755	152	161	-	-	-	-	5819
001 (0003)	-	-	-	-	277	965	1000	1000	1000	1000	997	997	952	197	-	-	-	-	8385
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	2	2	17	30	36	36	31	18	5	2	0	0	0	0	
S.D.	0	0	0	0	3	4	12	20	24	23	20	12	4	3	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.7	5.7	14.5	23.9	28.2	31.0	27.5	17.1	5.5	.6	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	6.8	8.7	30.2	50.6	63.0	60.6	52.0	31.3	8.5	1.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.8	6.7	17.1	29.8	37.2	38.3	35.2	21.4	6.5	.7	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.6	4.7	12.0	19.3	22.7	24.7	22.0	13.9	4.5	.5	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.3	2.7	6.6	12.6	14.2	14.8	12.7	7.5	2.5	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	1	4	4	3	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	9	26	80	82	84	84	84	62	22	9	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	3	9	14	16	16	14	9	3	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	2	8	13	15	15	13	8	2	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	2	8	13	15	15	13	8	2	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.6.1 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JANUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
072 (0200)	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	6
063 (0175)	-	-	-	-	-	-	-	-	13	13	-	-	-	-	-	-	-	-	26
054 (0150)	-	-	-	-	-	-	-	3	26	32	6	-	-	-	-	-	-	-	67
045 (0125)	-	-	-	-	-	-	-	10	65	77	16	-	-	-	-	-	-	-	168
036 (0100)	-	-	-	-	-	-	-	32	123	129	55	-	-	-	-	-	-	-	339
027 (0075)	-	-	-	-	-	-	3	135	239	245	116	6	-	-	-	-	-	-	744
018 (0050)	-	-	-	-	-	-	45	297	410	403	297	58	-	-	-	-	-	-	1510
009 (0025)	-	-	-	-	-	-	203	565	665	687	574	216	3	-	-	-	-	-	2913
001 (0003)	-	-	-	-	-	477	932	994	997	997	997	968	590	-	-	-	-	-	6952
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	1	6	13	18	18	13	6	1	0	0	0	0	0	
S.D.	0	0	0	0	0	1	5	11	15	15	11	5	1	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.0	1.0	5.7	11.2	14.8	14.9	11.4	6.0	2.2	.0	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.0	5.6	9.2	23.4	30.0	30.5	22.8	9.9	6.3	.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.0	2.3	6.8	14.5	18.5	18.2	14.7	7.0	3.6	.0	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.0	.8	4.6	8.3	11.3	11.8	8.5	4.9	1.0	.0	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.0	.4	2.4	4.6	5.7	6.1	4.7	2.8	.5	.0	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	0	6	27	54	73	72	56	30	10	0	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	0	2	5	7	7	5	2	0	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	0	3	7	8	8	7	3	0	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	0	5	9	10	10	9	5	0	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	0	-34	-21	-7	7	21	34	0	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	0	-35	-21	-7	7	21	35	0	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-49	-35	-21	-7	7	21	35	49	0	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.6.2

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

FEBRUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	4	25	25	4	-	-	-	-	-	-	-	58
108 (0300)	-	-	-	-	-	-	4	35	92	99	39	-	-	-	-	-	-	-	269
090 (0250)	-	-	-	-	-	-	7	110	181	188	92	7	-	-	-	-	-	-	585
081 (0225)	-	-	-	-	-	-	18	156	209	234	138	46	-	-	-	-	-	-	801
072 (0200)	-	-	-	-	-	-	74	220	270	287	199	53	-	-	-	-	-	-	1103
063 (0175)	-	-	-	-	-	4	124	319	337	365	255	82	-	-	-	-	-	-	1486
054 (0150)	-	-	-	-	-	7	191	390	408	426	333	145	7	-	-	-	-	-	1907
045 (0125)	-	-	-	-	-	39	266	447	504	493	418	216	35	-	-	-	-	-	2418
036 (0100)	-	-	-	-	-	82	351	511	578	567	507	301	74	-	-	-	-	-	2971
027 (0075)	-	-	-	-	-	160	457	624	695	681	624	461	156	-	-	-	-	-	3858
018 (0050)	-	-	-	-	7	291	635	755	787	805	766	638	284	4	-	-	-	-	4972
009 (0025)	-	-	-	-	71	564	816	894	901	915	897	837	574	82	-	-	-	-	6551
001 (0003)	-	-	-	39	684	972	993	1000	1000	1000	1000	1000	986	738	46	-	-	-	9458
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	2	14	30	45	51	51	43	29	14	3	0	0	0	0	
S.D.	0	0	0	0	3	13	23	32	35	36	30	21	12	3	0	0	0	0	
MEDIAN	.0	.0	.0	.5	3.4	11.1	24.8	37.5	45.4	44.1	36.7	25.0	11.3	3.9	.5	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.8	7.3	24.3	52.9	74.8	83.9	87.7	71.8	47.0	23.9	7.6	.8	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.6	4.7	14.4	31.8	52.4	55.0	57.8	46.9	30.4	14.4	5.1	.6	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.4	2.1	8.3	19.8	28.9	34.3	33.4	28.8	19.9	8.5	2.7	.4	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.2	.6	4.4	9.8	15.1	17.0	18.4	15.7	10.7	4.6	.8	.2	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	1	1	3	2	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	1	19	66	111	127	134	140	134	104	56	25	2	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	3	8	12	13	13	12	8	3	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	6	11	15	17	17	15	11	6	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	3	9	14	18	20	20	18	14	9	3	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-50	-36	-22	-7	7	22	36	50	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-51	-37	-23	-8	8	23	37	51	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-66	-52	-38	-23	-8	8	23	38	52	66	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.6.3

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MARCH

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-	-	-	6
180 (0500)	-	-	-	-	-	-	-	3	16	10	10	-	-	-	-	-	-	-	39
162 (0450)	-	-	-	-	-	-	13	90	135	106	74	6	-	-	-	-	-	-	194
144 (0400)	-	-	-	-	-	-	48	168	203	197	142	39	-	-	-	-	-	-	424
126 (0350)	-	-	-	-	-	6	113	252	297	261	239	97	13	-	-	-	-	-	797
108 (0300)	-	-	-	-	-	52	190	352	403	387	319	190	52	-	-	-	-	-	1278
090 (0250)	-	-	-	-	-	94	329	426	484	490	397	274	103	-	-	-	-	-	1945
081 (0225)	-	-	-	-	-	139	374	487	526	539	465	323	145	-	-	-	-	-	2597
072 (0200)	-	-	-	-	19	190	423	548	574	594	519	390	203	19	-	-	-	-	2998
063 (0175)	-	-	-	-	68	261	490	590	626	639	571	455	261	48	-	-	-	-	3479
054 (0150)	-	-	-	-	100	342	545	645	697	677	635	542	342	81	-	-	-	-	4009
045 (0125)	-	-	-	-	139	429	623	732	752	755	739	623	432	129	-	-	-	-	4606
036 (0100)	-	-	-	-	184	526	729	787	819	816	781	729	545	190	3	-	-	-	5353
027 (0075)	-	-	-	16	306	626	810	855	865	871	884	810	645	329	13	-	-	-	6109
018 (0050)	-	-	-	77	500	735	874	910	939	939	939	900	800	519	74	-	-	-	7030
009 (0025)	-	-	-	242	732	906	955	974	994	984	984	977	935	803	277	3	-	-	8206
001 (0003)	-	-	261	868	997	997	997	997	1000	997	997	997	997	997	903	297	-	-	9766
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12302
																			18000
MEAN	0	0	0	6	22	44	67	85	92	90	83	65	45	23	6	0	0	0	
S.D.	0	0	1	7	19	31	42	52	54	52	50	40	31	18	7	1	0	0	
MEDIAN	.0	.0	.7	5.7	18.0	38.4	61.4	79.1	86.6	88.2	75.2	58.3	39.6	18.9	6.2	.7	.0	.0	
1ST QUINTILE	.0	.0	2.9	11.3	34.8	70.7	106.7	137.1	144.8	143.2	133.2	105.9	72.5	35.4	12.4	3.6	.0	.0	
2ND QUINTILE	.0	.0	.8	7.0	22.6	48.0	76.2	96.3	108.5	105.7	89.6	70.6	48.2	23.6	7.4	.9	.0	.0	
3RD QUINTILE	.0	.0	.5	4.4	14.1	29.3	47.7	61.4	67.5	70.8	58.9	47.6	31.1	15.4	4.9	.6	.0	.0	
4TH QUINTILE	.0	.0	.3	1.9	6.9	14.6	28.1	34.3	38.6	38.4	34.3	28.1	18.0	9.1	2.3	.3	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	6	33	80	127	165	210	218	210	220	165	130	80	36	14	0	0	
ALTITUDE 05	0	0	0	0	5	12	17	21	23	23	21	17	12	5	0	0	0	0	
OF 15	0	0	0	2	9	15	21	25	27	27	25	21	15	9	2	0	0	0	
SUN 25	0	0	0	5	12	19	25	29	31	31	29	25	19	12	5	0	0	0	
AZIMUTH 05	0	0	0	0	-67	-54	-39	-24	-8	8	24	39	54	67	0	0	0	0	
OF 15	0	0	0	-82	-69	-55	-41	-25	-8	8	25	41	55	69	82	0	0	0	
SUN 25	0	0	0	-84	-71	-57	-42	-26	-9	9	26	42	57	71	84	0	0	0	

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TABLE 1.6.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS APRIL

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	17	3	-	3	-	-	-	-	-	-	23
252 (0700)	-	-	-	-	-	-	-	13	50	40	3	3	-	-	-	-	-	-	109
234 (0650)	-	-	-	-	-	-	7	53	113	93	37	7	-	-	-	-	-	-	310
216 (0600)	-	-	-	-	-	-	37	133	187	180	107	23	-	-	-	-	-	-	667
198 (0550)	-	-	-	-	-	-	80	217	260	283	213	63	-	-	-	-	-	-	1116
180 (0500)	-	-	-	-	-	20	170	303	320	363	317	113	13	-	-	-	-	-	1619
162 (0450)	-	-	-	-	-	70	297	397	420	450	370	223	43	-	-	-	-	-	2270
144 (0400)	-	-	-	-	-	173	373	480	490	547	480	353	107	7	-	-	-	-	3010
126 (0350)	-	-	-	-	50	273	467	573	610	583	557	440	233	30	-	-	-	-	3816
108 (0300)	-	-	-	-	117	363	557	643	707	670	637	510	337	93	-	-	-	-	4634
090 (0250)	-	-	-	3	223	490	663	710	767	757	713	620	453	170	10	-	-	-	5579
081 (0225)	-	-	-	23	293	533	720	743	817	790	757	683	530	223	13	-	-	-	6125
072 (0200)	-	-	-	50	370	597	753	790	840	843	800	740	613	323	37	-	-	-	6756
063 (0175)	-	-	-	87	463	683	817	843	880	870	823	783	650	400	70	-	-	-	7369
054 (0150)	-	-	-	147	543	773	843	887	910	900	873	837	727	490	133	-	-	-	8063
045 (0125)	-	-	-	230	657	837	893	920	927	930	900	887	813	617	227	-	-	-	8838
036 (0100)	-	-	10	387	753	883	937	947	950	953	923	913	870	710	360	23	-	-	9619
027 (0075)	-	-	63	513	847	933	960	970	977	963	957	927	900	813	510	60	-	-	10393
018 (0050)	-	-	163	697	910	973	980	983	993	987	983	973	957	913	697	187	-	-	11396
009 (0025)	-	3	450	917	973	997	997	1000	1000	997	997	987	993	980	910	483	3	-	12687
001 (0003)	-	533	983	997	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	987	547	-	15041
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	1	10	31	62	91	120	137	146	146	135	113	87	58	31	10	1	0	
S.D.	0	1	8	20	34	45	57	64	66	67	64	56	44	32	19	9	2	0	
MEDIAN	.0	1.5	8.2	27.9	58.8	87.9	119.4	140.1	142.5	152.7	139.3	110.6	84.5	53.3	27.6	8.7	1.7	.0	
1ST QUINTILE	.0	6.0	16.8	48.3	93.9	139.1	175.7	201.6	212.8	212.5	200.2	165.8	130.7	84.9	47.6	17.6	6.1	.0	
2ND QUINTILE	.0	3.0	10.6	35.1	69.1	102.8	138.8	161.3	165.6	172.3	157.1	134.3	98.2	63.0	33.6	11.5	3.2	.0	
3RD QUINTILE	.0	.9	6.7	22.7	49.5	71.7	100.7	119.1	127.5	122.5	116.3	93.3	73.4	46.2	22.7	7.1	.9	.0	
4TH QUINTILE	.0	.4	3.7	13.8	31.5	50.2	65.4	78.3	84.1	79.3	72.0	60.2	46.4	28.1	13.6	4.0	.4	.0	
MIN VALUE	0	0	0	0	0	6	8	12	12	7	6	6	4	3	0	0	0	0	
MAX VALUE	0	10	42	99	140	192	247	255	286	279	254	271	196	151	97	44	12	0	
ALTITUDE OF SUN 05	0	0	1	9	16	23	29	33	35	35	33	29	23	16	9	1	0	0	
ALTITUDE OF SUN 15	0	0	4	12	19	26	32	37	39	39	37	32	26	19	12	4	0	0	
ALTITUDE OF SUN 25	0	0	7	15	22	29	35	40	42	42	40	35	29	22	15	7	0	0	
AZIMUTH OF SUN 05	0	0	-99	-86	-73	-59	-44	-27	-9	9	27	44	59	73	86	99	0	0	
AZIMUTH OF SUN 15	0	0	-101	-88	-75	-61	-45	-28	-10	10	28	45	61	75	88	101	0	0	
AZIMUTH OF SUN 25	0	-116	-103	-90	-77	-62	-47	-29	-10	10	29	47	62	77	90	103	116	0	

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TABLE 1.6.5 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS MAY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3
306 (0850)	-	-	-	-	-	-	-	-	6	-	6	-	-	-	-	-	-	-	12
288 (0800)	-	-	-	-	-	-	-	13	52	48	6	-	-	-	-	-	-	-	119
270 (0750)	-	-	-	-	-	-	-	52	123	123	74	6	-	-	-	-	-	-	378
252 (0700)	-	-	-	-	-	-	19	126	210	200	142	42	-	-	-	-	-	-	739
234 (0650)	-	-	-	-	-	-	100	181	248	265	187	113	6	-	-	-	-	-	1100
216 (0600)	-	-	-	-	-	16	158	223	323	323	242	181	29	-	-	-	-	-	1495
198 (0550)	-	-	-	-	-	103	242	287	381	361	339	245	113	3	-	-	-	-	2074
180 (0500)	-	-	-	-	6	171	300	348	406	406	387	281	181	6	-	-	-	-	2492
162 (0450)	-	-	-	-	42	248	368	394	484	471	426	358	261	65	-	-	-	-	3117
144 (0400)	-	-	-	-	106	326	423	448	555	552	497	416	306	132	-	-	-	-	3761
126 (0350)	-	-	-	10	226	400	494	542	613	613	561	497	361	216	16	-	-	-	4549
108 (0300)	-	-	-	94	294	490	571	613	661	665	632	568	461	316	87	-	-	-	5452
090 (0250)	-	-	3	206	413	561	632	694	719	735	706	648	555	403	161	-	-	-	6436
081 (0225)	-	-	3	252	481	600	681	742	761	755	739	690	600	465	213	13	-	-	6995
072 (0200)	-	-	23	300	513	632	719	768	784	771	768	723	655	523	294	42	-	-	7515
063 (0175)	-	-	65	352	561	668	765	806	816	806	794	765	706	565	371	84	-	-	8124
054 (0150)	-	-	116	423	610	719	803	842	845	845	839	810	761	619	448	119	-	-	8799
045 (0125)	-	-	197	494	661	797	852	865	897	874	874	848	823	706	532	210	-	-	9630
036 (0100)	-	3	274	584	732	858	877	890	929	916	906	877	855	794	606	326	19	-	10446
027 (0075)	-	52	429	671	803	890	923	942	952	958	948	935	903	861	729	471	48	-	11515
018 (0050)	-	145	581	794	919	962	977	984	990	981	965	958	945	923	839	629	197	-	12769
009 (0025)	3	410	784	942	981	994	1000	1000	1000	997	997	994	984	984	948	842	519	16	14395
001 (0003)	655	990	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	994	719	17358
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	2	9	26	52	78	107	129	142	159	157	147	130	107	80	53	29	11	2	
S.D.	2	8	19	35	48	63	72	79	85	86	81	74	62	48	34	20	8	2	
MEDIAN	2.9	7.8	22.8	44.4	75.7	105.5	124.6	134.0	157.9	155.6	143.2	125.2	100.5	75.6	48.4	25.3	9.5	3.5	
1ST QUINTILE	6.6	16.1	44.6	91.0	129.9	173.2	207.0	225.9	254.1	252.0	229.7	210.7	175.7	129.4	83.3	46.0	17.9	6.9	
2ND QUINTILE	4.1	9.3	28.7	56.9	92.0	126.0	151.5	160.0	184.3	182.4	174.0	149.0	119.0	90.6	59.6	31.4	12.3	4.6	
3RD QUINTILE	1.7	6.4	17.2	34.3	55.8	81.0	99.4	111.3	130.0	129.8	116.1	100.8	81.0	57.2	36.7	19.7	7.6	2.4	
4TH QUINTILE	.6	3.6	8.4	17.6	27.4	44.6	54.7	64.4	67.5	64.5	61.8	56.0	48.3	35.2	21.2	10.8	4.3	.7	
MIN VALUE	0	0	2	3	6	5	11	10	11	6	8	7	6	3	3	1	0	0	
MAX VALUE	10	37	90	131	195	230	259	299	312	301	329	283	240	198	138	89	44	11	
ALTITUDE OF SUN 05	0	3	10	18	25	32	38	43	46	46	43	38	32	25	19	10	3	0	
ALTITUDE OF SUN 15	0	6	12	20	27	34	41	46	48	48	46	41	34	27	20	12	6	0	
ALTITUDE OF SUN 25	1	7	14	22	29	36	43	48	50	50	48	43	36	29	22	14	7	1	
AZIMUTH OF SUN 05	0	-117	-104	-92	-78	-64	-48	-30	-10	10	30	48	64	78	92	104	117	0	
AZIMUTH OF SUN 15	0	-118	-106	-93	-80	-66	-50	-31	-11	11	31	50	66	80	93	106	118	0	
AZIMUTH OF SUN 25	-132	-119	-107	-94	-81	-67	-51	-32	-11	11	32	51	67	81	94	107	119	132	

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TABLE 1.6.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JUNE

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	3	3	17	27	7	-	-	-	-	-	-	-	57
288 (0800)	-	-	-	-	-	-	7	37	120	123	57	-	-	-	-	-	-	-	344
270 (0750)	-	-	-	-	-	-	17	150	217	240	207	37	-	-	-	-	-	-	868
252 (0700)	-	-	-	-	-	-	110	247	297	303	270	157	-	-	-	-	-	-	1384
234 (0650)	-	-	-	-	-	10	230	323	343	373	343	250	30	-	-	-	-	-	1902
216 (0600)	-	-	-	-	-	137	290	360	397	443	383	320	157	-	-	-	-	-	2487
198 (0550)	-	-	-	-	7	227	327	407	453	470	443	367	283	10	-	-	-	-	2994
180 (0500)	-	-	-	-	73	303	380	450	513	520	480	420	343	97	-	-	-	-	3579
162 (0450)	-	-	-	-	220	353	430	500	553	560	503	447	390	230	7	-	-	-	4193
144 (0400)	-	-	-	7	297	420	510	547	590	600	560	503	433	297	13	-	-	-	4777
126 (0350)	-	-	-	140	350	470	580	627	643	670	627	570	493	340	150	-	-	-	5660
108 (0300)	-	-	-	250	430	533	663	690	723	723	690	640	537	420	287	-	-	-	6586
090 (0250)	-	-	43	320	517	623	723	760	773	777	770	727	643	487	377	60	-	-	7600
081 (0225)	-	-	120	367	563	663	750	797	797	827	800	763	700	557	423	157	-	-	8284
072 (0200)	-	-	203	423	607	717	793	817	833	837	843	813	753	597	480	253	-	-	8969
063 (0175)	-	-	267	490	663	767	830	840	870	890	877	840	783	690	527	287	-	-	9621
054 (0150)	-	-	323	570	733	810	867	863	893	913	900	880	827	747	607	347	3	-	10283
045 (0125)	-	40	390	637	787	860	903	910	917	930	933	920	867	807	687	427	50	-	11065
036 (0100)	-	147	467	720	847	900	920	940	950	943	950	943	907	850	773	540	193	-	11990
027 (0075)	-	270	573	817	913	940	967	963	977	967	970	973	953	907	827	673	337	-	13027
018 (0050)	3	477	730	907	953	980	987	983	977	980	983	987	967	963	903	813	520	10	14123
009 (0025)	240	740	920	967	983	997	997	997	1000	997	1000	997	993	993	987	947	833	303	15891
001 (0003)	977	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	990	17964
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	6	19	41	68	99	125	150	165	176	180	171	153	130	99	73	45	21	6	
S.D.	4	13	27	41	56	69	78	86	89	90	87	79	70	56	42	27	13	4	
MEDIAN	6.2	17.2	33.2	61.9	93.5	117.4	146.3	162.0	183.9	187.2	164.3	145.0	123.1	88.3	68.2	39.2	19.0	6.7	
1ST QUINTILE	10.5	32.1	72.3	116.2	164.4	203.4	238.5	260.7	273.2	276.2	270.8	243.7	209.9	166.1	119.4	77.0	35.6	12.2	
2ND QUINTILE	7.3	21.3	43.8	75.7	114.8	149.4	172.8	200.7	215.0	227.1	210.9	186.8	157.8	112.5	85.5	48.0	23.9	7.9	
3RD QUINTILE	5.1	13.8	25.5	50.0	73.4	94.6	121.7	132.1	140.6	144.0	133.3	118.3	97.3	71.7	54.8	31.9	15.7	5.5	
4TH QUINTILE	2.9	7.1	14.7	28.6	43.1	56.1	70.3	79.7	80.3	85.9	81.0	74.3	59.5	46.1	31.5	18.8	9.9	3.2	
MIN VALUE	0	0	2	3	5	6	8	8	10	7	11	8	8	7	4	3	1	0	
MAX VALUE	20	51	100	152	211	247	317	307	319	319	310	286	251	213	176	105	55	20	
ALTITUDE OF SUN 05	3	9	16	23	31	38	44	49	52	52	49	44	38	31	23	16	9	3	
ALTITUDE OF SUN 15	4	10	16	24	31	38	45	50	53	53	50	45	38	31	24	16	10	4	
ALTITUDE OF SUN 25	4	10	17	24	31	39	45	50	53	53	50	45	39	31	24	17	10	4	
AZIMUTH OF SUN 05	-133	-120	-108	-95	-82	-68	-52	-33	-11	11	33	52	68	82	95	108	120	133	
AZIMUTH OF SUN 15	-133	-121	-108	-96	-83	-68	-52	-33	-11	11	33	52	68	83	96	108	121	133	
AZIMUTH OF SUN 25	-133	-121	-108	-96	-83	-69	-52	-33	-12	12	33	52	69	83	96	108	121	133	

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TABLE 1.6.7 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JULY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
306 (0850)	-	-	-	-	-	-	-	-	10	6	3	-	-	-	-	-	-	-	19
288 (0800)	-	-	-	-	-	-	-	16	45	61	13	6	-	-	-	-	-	-	141
270 (0750)	-	-	-	-	-	-	3	71	94	135	74	10	-	-	-	-	-	-	387
252 (0700)	-	-	-	-	-	-	29	139	145	181	135	68	-	-	-	-	-	-	697
234 (0650)	-	-	-	-	-	16	94	171	203	203	203	148	16	-	-	-	-	-	1054
216 (0600)	-	-	-	-	-	32	132	206	245	265	252	181	77	-	-	-	-	-	1390
198 (0550)	-	-	-	-	3	100	174	258	310	306	335	255	181	-	-	-	-	-	1922
180 (0500)	-	-	-	-	26	158	242	335	410	397	394	326	239	32	-	-	-	-	2559
162 (0450)	-	-	-	-	97	194	290	397	448	455	461	371	303	103	-	-	-	-	3119
144 (0400)	-	-	-	3	168	245	377	477	490	539	529	458	332	181	3	-	-	-	3802
126 (0350)	-	-	-	45	226	319	442	552	584	629	610	542	413	258	35	-	-	-	4655
108 (0300)	-	-	-	148	284	426	535	626	668	719	700	626	484	329	100	-	-	-	5645
090 (0250)	-	-	16	216	365	545	645	726	774	797	768	726	606	429	197	6	-	-	6816
081 (0225)	-	-	45	258	413	584	697	765	823	819	800	768	668	477	268	29	-	-	7414
072 (0200)	-	-	100	310	477	665	739	810	848	858	832	797	713	561	319	71	-	-	8100
063 (0175)	-	-	155	355	565	732	787	858	881	906	871	842	774	619	397	116	-	-	8858
054 (0150)	-	-	213	432	639	787	848	903	910	929	923	884	839	690	481	197	-	-	9675
045 (0125)	-	13	277	532	732	845	903	935	929	952	942	929	865	771	594	284	6	-	10509
036 (0100)	-	55	365	648	832	906	965	955	958	974	955	948	929	852	706	400	32	-	11480
027 (0075)	-	152	510	761	890	948	984	987	981	984	974	971	961	913	803	577	139	-	12535
018 (0050)	-	268	687	910	965	984	990	990	987	990	994	997	990	974	913	761	345	3	13748
009 (0025)	68	616	929	984	1000	1000	1000	1000	1000	997	1000	1000	1000	1000	981	942	729	97	15343
001 (0003)	939	990	997	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	968	17891
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	3	14	34	57	82	105	125	146	155	160	155	141	118	87	58	35	15	4	
S.D.	3	10	23	36	49	58	66	75	77	77	75	70	63	48	34	21	9	3	
MEDIAN	5.0	12.0	27.6	47.9	69.6	96.8	114.8	138.5	142.1	152.4	151.7	135.0	105.6	78.5	52.5	30.9	14.4	5.3	
1ST QUINTILE	7.8	23.3	56.0	94.2	134.1	159.9	191.1	219.1	234.9	236.5	234.8	211.4	192.1	139.6	89.6	53.7	24.3	8.1	
2ND QUINTILE	6.0	14.6	33.8	57.7	83.4	112.4	137.6	161.3	181.8	179.1	178.4	156.0	128.9	95.2	62.7	36.0	16.7	6.2	
3RD QUINTILE	4.1	9.4	22.4	39.7	58.7	79.2	97.4	114.3	122.6	131.8	128.2	113.6	90.9	65.9	44.5	25.9	12.0	4.4	
4TH QUINTILE	2.3	5.1	13.8	24.6	38.9	52.0	61.1	74.0	85.2	88.8	81.0	71.4	59.4	41.8	27.3	16.1	6.9	2.5	
MIN VALUE	0	0	0	0	9	14	13	9	10	5	11	16	15	12	6	4	1	0	
MAX VALUE	14	53	98	148	208	242	274	304	330	310	309	291	240	188	145	90	53	18	
ALTITUDE 05	3	9	16	23	31	38	45	50	52	52	50	45	38	31	23	16	9	3	
OF 15	2	8	15	22	30	37	44	48	51	51	48	44	37	30	22	15	8	2	
SUN 25	1	7	14	21	28	36	42	47	49	49	47	42	36	28	21	14	7	1	
AZIMUTH 05	-133	-120	-108	-96	-83	-68	-52	-33	-11	11	33	52	68	83	96	108	120	133	
OF 15	-133	-120	-107	-95	-82	-67	-51	-32	-11	11	32	51	67	82	95	107	120	133	
SUN 25	-132	-119	-107	-94	-81	-66	-50	-32	-11	11	32	50	66	81	94	107	119	132	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.6.8 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS AUGUST

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	3
270 (0750)	-	-	-	-	-	-	3	10	3	3	-	-	-	-	-	-	-	-	19
252 (0700)	-	-	-	-	-	-	19	45	68	19	-	-	-	-	-	-	-	-	151
234 (0650)	-	-	-	-	-	-	68	152	139	90	10	3	-	-	-	-	-	-	468
216 (0600)	-	-	-	-	-	-	39	161	206	213	177	65	6	-	-	-	-	-	867
198 (0550)	-	-	-	-	-	6	119	213	284	252	245	155	10	-	-	-	-	-	1284
180 (0500)	-	-	-	-	-	52	181	297	339	319	303	248	74	-	-	-	-	-	1813
162 (0450)	-	-	-	-	-	123	248	326	403	374	358	306	139	3	-	-	-	-	2280
144 (0400)	-	-	-	-	32	200	326	410	465	487	432	361	235	13	-	-	-	-	2961
126 (0350)	-	-	-	-	100	303	400	503	542	542	513	426	284	94	-	-	-	-	3707
108 (0300)	-	-	-	-	187	390	510	590	616	626	590	487	371	181	-	-	-	-	4548
090 (0250)	-	-	-	42	303	484	619	690	694	719	677	597	458	248	39	-	-	-	5570
081 (0225)	-	-	-	84	355	542	674	713	748	748	735	655	503	297	71	-	-	-	6125
072 (0200)	-	-	-	139	416	584	729	771	787	790	765	706	568	361	123	-	-	-	6739
063 (0175)	-	-	-	190	471	635	755	829	826	829	813	765	632	439	181	-	-	-	7365
054 (0150)	-	-	10	271	535	703	816	858	874	865	852	797	706	529	258	6	-	-	8080
045 (0125)	-	-	45	361	613	784	861	884	900	887	890	832	777	616	329	39	-	-	8818
036 (0100)	-	-	103	474	710	845	894	932	919	923	916	877	852	716	458	97	-	-	9716
027 (0075)	-	-	194	594	832	903	932	955	968	948	961	932	913	810	587	216	3	-	10748
018 (0050)	-	10	381	729	903	968	971	984	981	981	984	971	942	913	748	394	3	-	11863
009 (0025)	-	100	677	945	981	994	1000	1000	1000	1000	997	997	990	974	919	700	129	-	13403
001 (0003)	177	839	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	871	242	16126
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	4	17	39	66	92	114	131	140	140	133	116	92	63	37	17	4	0	
S.D.	0	4	13	26	40	52	60	67	72	72	70	65	54	39	25	13	4	0	
MEDIAN	.6	4.7	14.4	34.1	58.9	87.5	109.6	126.6	135.8	139.7	128.9	105.9	81.6	56.9	33.1	14.9	5.0	.7	
1ST QUINTILE	1.0	7.9	26.7	61.9	106.0	144.0	174.9	202.5	218.0	219.2	209.9	189.3	150.6	102.9	60.8	28.2	8.2	2.4	
2ND QUINTILE	.7	5.8	17.4	41.9	74.4	106.1	126.0	146.1	162.8	157.9	151.8	133.2	102.0	67.5	40.0	17.8	6.1	.8	
3RD QUINTILE	.5	3.6	11.3	26.6	46.5	69.2	93.1	106.2	111.9	113.6	105.9	89.5	67.5	46.7	26.3	11.9	3.9	.5	
4TH QUINTILE	.2	1.4	6.0	15.0	29.4	42.6	56.4	67.5	69.0	69.7	65.4	53.2	42.2	28.0	15.3	6.3	1.8	.3	
MIN VALUE	0	0	1	3	4	5	9	14	11	9	5	4	2	2	2	0	0	0	
MAX VALUE	2	22	61	107	159	205	246	279	289	270	284	247	234	165	107	55	27	2	
ALTITUDE OF SUN 05	0	4	11	19	26	33	39	44	47	47	44	39	33	26	19	11	4	0	
ALTITUDE OF SUN 15	0	2	9	16	24	31	37	41	44	44	41	37	31	24	16	9	2	0	
ALTITUDE OF SUN 25	0	0	6	13	21	28	34	38	41	41	38	34	28	21	13	6	0	0	
AZIMUTH OF SUN 05	0	-118	-105	-92	-79	-65	-49	-31	-11	11	31	49	65	79	92	105	118	0	
AZIMUTH OF SUN 15	0	-117	-104	-91	-78	-63	-47	-30	-10	10	30	47	63	78	91	104	117	0	
AZIMUTH OF SUN 25	0	0	-102	-89	-76	-62	-46	-29	-10	10	29	46	62	76	89	102	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.6.9

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

SEPTEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	7	23	17	3	-	-	-	-	-	-	-	50
198 (0550)	-	-	-	-	-	-	-	40	63	63	33	-	-	-	-	-	-	-	199
180 (0500)	-	-	-	-	-	-	13	87	100	120	83	7	-	-	-	-	-	-	410
162 (0450)	-	-	-	-	-	-	53	160	180	167	133	40	-	-	-	-	-	-	733
144 (0400)	-	-	-	-	-	10	120	233	280	250	207	93	7	-	-	-	-	-	1200
126 (0350)	-	-	-	-	-	33	203	303	353	320	283	170	43	-	-	-	-	-	1708
108 (0300)	-	-	-	-	-	77	290	383	450	423	397	230	90	-	-	-	-	-	2340
090 (0250)	-	-	-	-	10	190	367	500	550	553	493	337	153	17	-	-	-	-	3170
081 (0225)	-	-	-	-	33	270	410	557	590	590	543	420	193	43	-	-	-	-	3649
072 (0200)	-	-	-	-	77	327	487	607	630	640	603	490	253	80	-	-	-	-	4194
063 (0175)	-	-	-	-	110	383	557	660	677	673	653	580	350	117	-	-	-	-	4760
054 (0150)	-	-	-	3	183	457	637	710	733	733	703	650	447	163	-	-	-	-	5419
045 (0125)	-	-	-	13	250	537	690	773	787	797	800	703	557	243	10	-	-	-	6160
036 (0100)	-	-	-	33	347	640	740	827	840	850	847	773	657	347	40	3	-	-	6944
027 (0075)	-	-	-	100	457	713	820	887	910	900	907	847	753	527	100	3	-	-	7924
018 (0050)	-	-	-	220	617	837	920	963	970	957	957	927	857	703	223	3	-	-	9154
009 (0025)	-	-	23	487	870	940	977	987	997	993	993	987	957	880	567	23	-	-	10681
001 (0003)	-	23	603	980	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	993	617	20	-	13236
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	2	11	31	55	77	95	102	100	94	76	54	32	12	2	0	0	
S.D.	0	0	2	11	23	36	48	55	58	57	53	45	34	22	10	3	0	0	
MEDIAN	.0	.5	2.4	8.8	24.6	49.2	70.3	90.0	99.0	97.3	88.7	71.0	49.7	28.4	10.8	2.6	.5	.0	
1ST QUINTILE	.0	.8	6.6	19.5	51.7	88.9	126.7	152.1	158.4	154.8	145.7	117.0	80.0	49.8	19.7	6.6	.8	.0	
2ND QUINTILE	.0	.6	3.8	11.9	31.7	60.9	83.1	105.4	117.3	112.0	107.4	83.2	58.4	33.4	13.4	3.9	.6	.0	
3RD QUINTILE	.0	.4	1.0	7.2	19.0	39.5	58.2	73.3	78.8	79.2	72.5	60.4	41.1	23.3	8.4	1.2	.4	.0	
4TH QUINTILE	.0	.2	.5	3.9	11.5	20.7	29.3	40.5	42.8	44.5	45.0	32.7	22.9	13.1	4.6	.5	.2	.0	
MIN VALUE	0	0	0	0	1	1	5	6	8	6	6	5	2	1	0	0	0	0	
MAX VALUE	0	1	13	56	97	145	194	227	230	229	217	190	151	106	49	38	1	0	
ALTITUDE 05	0	0	3	10	17	24	30	34	37	37	34	30	24	17	10	3	0	0	
OF 15	0	0	0	7	14	21	27	31	33	33	31	27	21	14	7	0	0	0	
SUN 25	0	0	0	3	11	17	23	27	29	29	27	23	17	11	3	0	0	0	
AZIMUTH 05	0	0	-100	-87	-74	-60	-44	-27	-9	9	27	44	60	74	87	100	0	0	
OF 15	0	0	0	-85	-72	-58	-43	-26	-9	9	26	43	58	72	85	0	0	0	
SUN 25	0	0	0	-83	-70	-56	-41	-25	-9	9	25	41	56	70	83	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.6.10

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

OCTOBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	6
144 (0400)	-	-	-	-	-	-	-	10	29	29	-	-	-	-	-	-	-	-	68
126 (0350)	-	-	-	-	-	-	-	26	87	65	26	-	-	-	-	-	-	-	204
108 (0300)	-	-	-	-	-	-	13	87	148	129	84	13	-	-	-	-	-	-	474
090 (0250)	-	-	-	-	-	3	65	197	245	219	177	52	-	-	-	-	-	-	958
081 (0225)	-	-	-	-	-	6	110	245	306	290	223	84	-	-	-	-	-	-	1264
072 (0200)	-	-	-	-	-	16	165	306	365	368	284	145	3	-	-	-	-	-	1652
063 (0175)	-	-	-	-	-	39	203	394	448	452	355	168	26	-	-	-	-	-	2085
054 (0150)	-	-	-	-	-	90	297	471	542	552	429	242	55	-	-	-	-	-	2678
045 (0125)	-	-	-	-	3	139	397	571	632	629	529	368	103	-	-	-	-	-	3371
036 (0100)	-	-	-	-	13	232	506	645	703	687	623	477	158	3	-	-	-	-	4047
027 (0075)	-	-	-	-	39	352	619	732	784	787	745	603	281	19	-	-	-	-	4961
018 (0050)	-	-	-	-	110	506	755	842	861	861	835	742	465	87	-	-	-	-	6064
009 (0025)	-	-	-	3	323	761	894	945	952	948	942	884	748	255	-	-	-	-	7655
001 (0003)	-	-	-	381	939	994	1000	1000	997	1000	1000	1000	994	971	377	-	-	-	10653
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	1	7	23	41	55	62	61	53	38	21	7	1	0	0	0	
S.D.	0	0	0	1	8	18	27	35	39	37	34	26	16	7	1	0	0	0	
MEDIAN	.0	.0	.0	.8	6.7	18.4	36.5	51.4	58.0	58.7	47.6	34.4	16.9	6.3	.8	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	4.8	14.2	39.1	63.7	89.4	98.4	93.8	85.5	59.1	32.9	11.9	4.8	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	1.0	8.0	24.2	44.8	62.3	68.2	68.6	57.5	42.4	21.2	7.4	1.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.6	5.4	14.7	28.5	41.5	48.2	48.4	38.2	27.2	13.7	5.1	.6	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.3	2.8	7.7	15.1	21.4	25.1	25.4	21.5	14.3	7.3	2.9	.3	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	1	2	0	3	3	2	0	0	0	0	0	0	
MAX VALUE	0	0	0	9	50	90	122	147	165	162	143	115	72	36	8	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	7	14	19	23	25	25	23	19	14	7	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	4	10	16	20	22	22	20	16	10	4	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	1	7	12	16	18	18	16	12	7	1	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-68	-55	-40	-25	-8	8	25	40	55	68	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-67	-53	-39	-24	-8	8	24	39	53	67	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-65	-52	-38	-23	-8	8	23	38	52	65	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.6.11 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS NOVEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	10
081 (0225)	-	-	-	-	-	-	-	3	23	7	-	-	-	-	-	-	-	-	33
072 (0200)	-	-	-	-	-	-	-	10	47	27	10	-	-	-	-	-	-	-	94
063 (0175)	-	-	-	-	-	-	-	23	70	57	13	-	-	-	-	-	-	-	163
054 (0150)	-	-	-	-	-	-	3	60	147	113	40	-	-	-	-	-	-	-	363
045 (0125)	-	-	-	-	-	-	13	107	193	180	83	10	-	-	-	-	-	-	586
036 (0100)	-	-	-	-	-	-	37	180	320	317	157	30	-	-	-	-	-	-	1041
027 (0075)	-	-	-	-	-	-	103	343	453	483	297	57	-	-	-	-	-	-	1736
018 (0050)	-	-	-	-	-	7	237	543	640	650	543	187	10	-	-	-	-	-	2817
009 (0025)	-	-	-	-	-	83	540	793	863	873	793	530	67	-	-	-	-	-	4542
001 (0003)	-	-	-	-	143	893	1000	1000	1000	1000	1000	1000	893	127	-	-	-	-	8056
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	3	13	23	29	29	22	11	3	0	0	0	0	0	
S.D.	0	0	0	0	0	3	10	16	20	18	14	9	3	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.6	4.9	10.2	19.9	24.7	26.1	19.6	9.8	4.8	.6	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.9	7.8	20.5	34.9	44.5	43.7	33.2	17.7	7.7	.9	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.7	5.9	13.2	24.4	30.6	31.5	23.2	12.4	5.8	.7	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.5	3.9	8.0	15.9	19.9	20.7	15.9	7.8	3.8	.5	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.2	1.9	4.5	8.7	11.5	11.9	8.7	4.4	1.9	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	1	1	3	3	2	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	2	20	59	82	95	84	74	49	23	1	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	4	9	12	14	14	12	9	4	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	1	6	10	11	11	10	6	1	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	0	4	7	9	9	7	4	0	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-50	-36	-22	-8	8	22	36	50	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-49	-36	-22	-7	7	22	36	49	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	0	-35	-21	-7	7	21	35	0	0	0	0	0	0	

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TABLE 1.6.12 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
072 (0200)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
063 (0175)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
054 (0150)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
045 (0125)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
036 (0100)	-	-	-	-	-	-	-	-	32	26	-	-	-	-	-	-	-	-	58
027 (0075)	-	-	-	-	-	-	-	16	100	100	6	-	-	-	-	-	-	-	222
018 (0050)	-	-	-	-	-	-	-	97	287	281	71	-	-	-	-	-	-	-	736
009 (0025)	-	-	-	-	-	-	35	503	652	668	461	13	-	-	-	-	-	-	2332
001 (0003)	-	-	-	-	-	129	932	990	990	994	984	958	135	-	-	-	-	-	6112
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	0	3	9	14	13	9	3	0	0	0	0	0	0	
S.D.	0	0	0	0	0	0	2	6	9	9	5	2	0	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.0	.6	4.9	9.1	12.7	12.9	8.4	4.9	.6	.0	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.0	.9	7.5	15.7	22.2	22.0	15.0	7.4	.9	.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.0	.7	5.7	11.3	15.2	15.2	10.4	5.7	.7	.0	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.0	.5	4.0	7.4	10.3	10.6	6.9	4.0	.5	.0	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.0	.2	2.2	4.1	5.5	5.8	3.8	2.3	.2	.0	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	0	8	12	31	40	44	30	13	1	0	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	0	2	6	7	7	6	2	0	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	0	1	5	6	6	5	1	0	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	0	1	4	6	6	4	1	0	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	0	-34	-21	-7	7	21	34	0	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	0	-34	-21	-7	7	21	34	0	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	0	-34	-21	-7	7	21	34	0	0	0	0	0	0	

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TABLE 1.7.1 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JANUARY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	3	10	13	-	-	-	-	-	-	-	-	26
090 (0250)	-	-	-	-	-	-	-	16	74	65	19	-	-	-	-	-	-	-	174
081 (0225)	-	-	-	-	-	-	3	48	123	110	26	-	-	-	-	-	-	-	310
072 (0200)	-	-	-	-	-	-	13	110	187	190	68	6	-	-	-	-	-	-	574
063 (0175)	-	-	-	-	-	-	23	181	271	242	139	23	-	-	-	-	-	-	879
054 (0150)	-	-	-	-	-	-	58	226	323	323	210	39	-	-	-	-	-	-	1179
045 (0125)	-	-	-	-	-	-	100	316	429	394	329	81	-	-	-	-	-	-	1649
036 (0100)	-	-	-	-	-	3	219	435	565	529	445	194	3	-	-	-	-	-	2393
027 (0075)	-	-	-	-	-	49	342	571	687	684	613	355	16	-	-	-	-	-	3297
018 (0050)	-	-	-	-	-	90	545	748	819	852	794	542	81	-	-	-	-	-	4471
009 (0025)	-	-	-	-	3	394	845	958	984	984	961	839	326	-	-	-	-	-	6294
001 (0003)	-	-	-	-	355	997	997	997	997	997	997	997	994	355	-	-	-	-	8683
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	1	8	23	37	44	44	36	23	8	0	0	0	0	0	
S.D.	0	0	0	0	1	7	16	23	27	26	21	15	6	1	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.8	7.6	20.0	31.7	40.3	37.9	33.1	20.0	6.9	.8	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	4.5	14.7	37.4	59.2	70.6	70.3	55.3	35.7	13.6	4.5	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.9	8.9	24.4	38.6	47.5	44.6	39.5	24.8	8.1	.9	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.6	6.3	16.4	25.5	33.4	31.9	27.7	16.2	5.7	.6	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.3	3.6	10.4	15.8	19.3	20.8	17.7	10.2	3.3	.3	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	9	37	87	111	123	122	104	79	37	4	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	2	8	13	15	15	13	8	2	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	4	10	14	16	16	14	10	4	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	5	12	16	18	18	16	12	5	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	

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TABLE 1.7.2 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS FEBRUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4
162 (0450)	-	-	-	-	-	-	-	7	43	53	7	-	-	-	-	-	-	-	110
144 (0400)	-	-	-	-	-	-	-	67	149	138	50	-	-	-	-	-	-	-	404
126 (0350)	-	-	-	-	-	-	11	128	220	213	128	11	-	-	-	-	-	-	711
108 (0300)	-	-	-	-	-	-	74	234	326	333	220	78	-	-	-	-	-	-	1265
090 (0250)	-	-	-	-	-	4	149	344	436	422	344	174	-	-	-	-	-	-	1873
081 (0225)	-	-	-	-	-	18	223	394	489	450	394	220	7	-	-	-	-	-	2195
072 (0200)	-	-	-	-	-	60	298	461	546	496	486	294	43	-	-	-	-	-	2684
063 (0175)	-	-	-	-	-	92	379	525	613	567	560	351	89	-	-	-	-	-	3176
054 (0150)	-	-	-	-	-	138	436	596	667	660	613	447	145	-	-	-	-	-	3702
045 (0125)	-	-	-	-	-	202	514	660	741	727	684	528	206	-	-	-	-	-	4262
036 (0100)	-	-	-	-	4	301	610	723	812	826	777	642	305	4	-	-	-	-	5004
027 (0075)	-	-	-	-	43	429	716	826	879	890	855	748	475	35	-	-	-	-	5896
018 (0050)	-	-	-	-	103	599	823	929	979	968	947	890	660	156	-	-	-	-	7054
009 (0025)	-	-	-	4	280	848	979	1000	1000	996	996	982	883	340	-	-	-	-	8308
001 (0003)	-	-	-	230	982	1000	1000	1000	1000	1000	1000	1000	1000	1000	287	-	-	-	10499
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	8	28	52	71	83	82	73	54	29	9	0	0	0	0	
S.D.	0	0	0	1	7	21	33	42	46	47	40	32	19	8	1	0	0	0	
MEDIAN	.0	.0	.0	.6	6.5	23.2	46.6	66.5	79.3	71.5	70.3	48.1	25.8	7.1	.7	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	2.1	13.1	45.3	83.8	113.8	131.1	129.1	111.9	84.9	45.9	15.8	3.4	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.8	7.6	29.0	59.7	80.2	95.9	94.4	80.4	58.4	31.0	8.3	.8	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.5	5.4	18.0	36.9	53.4	64.7	59.8	56.2	39.3	20.9	5.8	.6	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.3	3.1	10.7	19.9	29.3	37.5	38.4	33.3	23.7	12.3	3.4	.3	.0	.0	.0	
MIN VALUE	0	0	0	0	0	3	5	9	10	8	6	5	2	1	0	0	0	0	
MAX VALUE	0	0	0	17	36	91	136	164	177	194	163	133	81	36	7	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	8	14	19	21	21	19	14	8	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	3	11	17	22	25	25	22	17	11	3	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	6	14	21	25	28	28	25	21	14	6	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-50	-37	-23	-8	8	23	37	50	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-64	-52	-38	-24	-8	8	24	38	52	64	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-66	-54	-40	-25	-8	8	25	40	54	66	0	0	0	0	

ABERPORTH 52.13N 4.57W ALTITUDE 134M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.7.3 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS MARCH

HADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	3	19	-	-	-	-	-	-	-	-	22
234 (0650)	-	-	-	-	-	-	-	3	42	45	10	-	-	-	-	-	-	-	100
216 (0600)	-	-	-	-	-	-	-	39	113	123	52	-	-	-	-	-	-	-	327
198 (0550)	-	-	-	-	-	-	6	132	203	229	135	10	-	-	-	-	-	-	715
180 (0500)	-	-	-	-	-	-	45	245	323	345	239	58	-	-	-	-	-	-	1255
162 (0450)	-	-	-	-	-	6	139	335	387	406	332	155	3	-	-	-	-	-	1763
144 (0400)	-	-	-	-	-	10	235	397	432	474	413	245	32	-	-	-	-	-	2238
126 (0350)	-	-	-	-	-	97	339	487	506	539	494	345	110	-	-	-	-	-	2917
108 (0300)	-	-	-	-	-	184	410	577	587	603	548	448	184	3	-	-	-	-	3544
090 (0250)	-	-	-	-	10	316	494	632	674	661	652	516	294	29	-	-	-	-	4278
081 (0225)	-	-	-	-	42	365	545	671	732	716	677	571	377	55	-	-	-	-	4751
072 (0200)	-	-	-	-	81	432	600	706	765	777	726	635	445	116	-	-	-	-	5283
063 (0175)	-	-	-	-	126	519	658	768	800	806	765	690	506	168	-	-	-	-	5806
054 (0150)	-	-	-	-	194	574	732	810	845	852	823	748	597	235	-	-	-	-	6410
045 (0125)	-	-	-	-	290	639	790	852	887	890	858	816	671	339	-	-	-	-	7032
036 (0100)	-	-	-	3	439	706	858	916	952	939	923	865	774	429	26	-	-	-	7830
027 (0075)	-	-	-	39	545	797	926	968	977	981	952	913	826	571	74	-	-	-	8569
018 (0050)	-	-	-	113	710	939	974	997	994	994	977	965	903	752	184	-	-	-	9502
009 (0025)	-	-	-	377	897	994	997	1000	1000	1000	1000	990	987	890	381	-	-	-	10513
001 (0003)	-	-	248	971	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	990	297	-	-	12506
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	8	34	67	95	121	131	134	122	98	68	36	10	0	0	0	
S.D.	0	0	1	7	22	39	52	61	65	67	62	52	39	24	9	1	0	0	
MEDIAN	.0	.0	.7	7.3	30.8	65.0	88.9	123.4	127.5	136.8	124.0	94.2	63.9	31.5	7.4	.7	.0	.0	
1ST QUINTILE	.0	.0	2.5	15.0	53.4	105.8	150.6	187.2	198.6	202.9	186.8	153.0	105.4	58.7	17.3	3.6	.0	.0	
2ND QUINTILE	.0	.0	.8	8.7	38.4	76.3	110.5	143.4	156.8	163.8	146.9	116.4	78.0	38.9	8.8	.9	.0	.0	
3RD QUINTILE	.0	.0	.5	6.0	24.0	50.4	72.0	100.5	105.3	108.8	99.0	76.9	53.6	25.6	6.1	.6	.0	.0	
4TH QUINTILE	.0	.0	.3	3.3	13.7	26.8	43.7	56.1	63.0	64.9	57.6	47.1	31.5	14.9	3.5	.3	.0	.0	
MIN VALUE	0	0	0	0	2	5	8	14	16	13	9	5	5	2	0	0	0	0	
MAX VALUE	0	0	8	36	97	166	202	240	256	257	239	205	162	121	43	4	0	0	
ALTITUDE OF SUN 05	0	0	0	0	8	16	23	28	31	31	28	23	16	8	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	3	12	20	27	32	35	35	32	27	20	12	3	0	0	0	
ALTITUDE OF SUN 25	0	0	0	6	15	23	30	36	39	39	36	30	23	15	6	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-68	-55	-41	-26	-9	9	26	41	55	68	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	-83	-70	-57	-43	-27	-9	9	27	43	57	70	83	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-85	-73	-60	-45	-28	-10	10	28	45	60	73	85	0	0	0	

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TABLE 1.7.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS APRIL

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	6
288 (0800)	-	-	-	-	-	-	-	-	30	50	3	-	-	-	-	-	-	-	83
270 (0750)	-	-	-	-	-	-	-	30	103	133	50	-	-	-	-	-	-	-	316
252 (0700)	-	-	-	-	-	-	-	113	237	243	140	7	-	-	-	-	-	-	740
234 (0650)	-	-	-	-	-	-	50	220	327	337	280	93	-	-	-	-	-	-	1307
216 (0600)	-	-	-	-	-	-	147	340	387	423	350	197	-	-	-	-	-	-	1844
198 (0550)	-	-	-	-	-	17	260	417	443	487	430	307	47	-	-	-	-	-	2408
180 (0500)	-	-	-	-	-	77	360	470	493	537	507	390	127	-	-	-	-	-	2961
162 (0450)	-	-	-	-	-	207	410	530	570	577	593	473	267	-	-	-	-	-	3627
144 (0400)	-	-	-	-	20	320	470	613	637	647	633	557	377	50	-	-	-	-	4324
126 (0350)	-	-	-	-	97	387	537	663	693	707	677	607	450	170	-	-	-	-	4988
108 (0300)	-	-	-	-	217	480	623	747	773	763	740	660	537	300	-	-	-	-	5840
090 (0250)	-	-	-	17	343	557	727	810	833	827	817	727	640	410	30	-	-	-	6738
081 (0225)	-	-	-	37	383	617	753	863	887	870	847	770	687	473	80	-	-	-	7267
072 (0200)	-	-	-	97	440	663	817	887	920	897	877	823	730	537	143	-	-	-	7831
063 (0175)	-	-	-	140	500	727	857	903	947	923	887	860	763	603	203	-	-	-	8313
054 (0150)	-	-	-	237	587	780	900	930	957	947	910	887	797	663	283	-	-	-	8878
045 (0125)	-	-	-	323	657	867	923	950	977	967	930	903	857	707	377	-	-	-	9438
036 (0100)	-	-	3	463	767	903	957	970	980	980	960	947	903	790	527	20	-	-	10170
027 (0075)	-	-	30	570	843	950	983	993	990	990	980	977	943	870	660	67	-	-	10846
018 (0050)	-	-	120	703	920	990	997	997	997	993	990	987	977	933	783	193	-	-	11580
009 (0025)	-	-	387	880	997	1000	1000	1000	1000	1000	1000	993	993	987	900	437	-	-	12574
001 (0003)	-	213	970	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	973	280	-	14436
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	8	35	69	106	139	166	177	180	169	146	114	77	40	10	0	0	
S.D.	0	0	7	23	38	53	64	71	75	78	75	68	56	42	25	9	1	0	
MEDIAN	.0	.6	7.4	32.9	63.0	103.3	135.9	171.0	178.4	193.3	181.6	156.2	115.7	77.2	37.6	8.1	.7	.0	
1ST QUINTILE	.0	1.5	15.3	57.4	110.6	163.0	207.6	237.4	257.0	259.0	244.3	215.5	170.6	121.8	63.5	17.7	3.3	.0	
2ND QUINTILE	.0	.8	8.8	40.1	78.3	123.5	165.6	202.0	211.8	220.8	204.8	177.8	138.3	91.6	43.6	10.4	.8	.0	
3RD QUINTILE	.0	.5	6.1	25.0	52.3	83.6	112.8	146.8	153.9	156.1	158.9	128.5	97.0	63.4	31.1	6.6	.6	.0	
4TH QUINTILE	.0	.3	3.3	13.1	32.1	51.9	74.4	92.9	99.9	97.6	94.0	75.9	53.6	34.9	16.7	3.6	.3	.0	
MIN VALUE	0	0	0	3	7	16	17	13	13	12	11	8	6	5	1	0	0	0	
MAX VALUE	0	4	36	102	151	212	247	287	307	313	293	258	208	161	103	38	4	0	
ALTITUDE 05	0	0	0	9	18	27	34	40	43	43	40	34	27	18	9	0	0	0	
OF 15	0	0	3	12	21	30	38	44	47	47	44	38	30	21	12	3	0	0	
SUN 25	0	0	6	15	24	33	41	47	50	50	47	41	33	24	15	6	0	0	
AZIMUTH 05	0	0	0	-88	-75	-62	-47	-30	-10	10	30	47	62	75	88	0	0	0	
OF 15	0	0	-102	-90	-78	-64	-49	-31	-11	11	31	49	64	78	90	102	0	0	
SUN 25	0	0	-104	-92	-80	-67	-51	-33	-12	12	33	51	67	80	92	104	0	0	

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TABLE 1.7.5 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS MAY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	13	13	-	-	-	-	-	-	-	-	26
306 (0850)	-	-	-	-	-	-	-	29	94	142	19	3	-	-	-	-	-	-	287
288 (0800)	-	-	-	-	-	-	-	132	213	235	165	3	-	-	-	-	-	-	748
270 (0750)	-	-	-	-	-	-	29	245	294	300	277	65	-	-	-	-	-	-	1210
252 (0700)	-	-	-	-	-	-	161	303	365	352	348	194	3	-	-	-	-	-	1726
234 (0650)	-	-	-	-	-	3	252	345	426	419	400	303	26	-	-	-	-	-	2174
216 (0600)	-	-	-	-	-	87	319	413	465	455	445	384	152	3	-	-	-	-	2723
198 (0550)	-	-	-	-	-	206	374	461	529	523	481	435	306	6	-	-	-	-	3321
180 (0500)	-	-	-	-	13	332	429	529	597	577	529	497	400	65	-	-	-	-	3968
162 (0450)	-	-	-	-	119	381	494	577	629	597	597	555	468	184	-	-	-	-	4601
144 (0400)	-	-	-	-	255	455	545	639	687	645	674	594	535	342	-	-	-	-	5371
126 (0350)	-	-	-	6	361	535	616	687	735	706	716	645	594	410	39	-	-	-	6050
108 (0300)	-	-	-	110	445	603	674	742	765	745	765	713	648	494	181	-	-	-	6885
090 (0250)	-	-	-	281	532	677	752	800	816	797	794	781	716	571	348	-	-	-	7865
081 (0225)	-	-	-	335	561	719	781	823	826	810	832	803	745	632	400	3	-	-	8270
072 (0200)	-	-	3	403	613	771	826	855	848	855	861	823	771	697	481	13	-	-	8820
063 (0175)	-	-	23	471	652	800	871	877	881	903	900	858	819	742	545	71	-	-	9413
054 (0150)	-	-	123	526	713	839	900	916	906	923	923	890	868	803	623	148	-	-	10101
045 (0125)	-	-	210	597	771	868	923	939	948	948	955	916	897	845	681	297	-	-	10795
036 (0100)	-	-	326	674	848	910	952	958	974	968	968	942	935	894	755	406	-	-	11510
027 (0075)	-	-	445	777	910	955	981	974	987	984	981	968	945	939	848	581	-	-	12275
018 (0050)	-	26	635	890	968	977	994	997	997	994	990	997	987	968	935	726	48	-	13129
009 (0025)	-	229	852	974	1000	1000	1000	1000	1000	1000	1000	1000	997	990	984	877	310	-	14213
001 (0003)	90	974	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	971	113	16148
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	6	27	61	96	130	158	181	195	193	188	167	141	106	69	32	7	0	
S.D.	0	5	18	35	52	69	78	87	92	94	88	80	68	52	36	19	5	0	
MEDIAN	.5	6.1	24.4	58.3	96.6	133.9	159.9	187.7	206.2	204.1	190.9	179.1	153.4	106.6	69.3	31.2	6.7	.6	
1ST QUINTILE	.9	10.3	46.0	98.5	151.3	198.9	244.3	277.2	290.0	294.8	282.4	251.0	210.4	160.2	106.0	50.9	12.8	.9	
2ND QUINTILE	.7	7.2	30.4	72.4	117.6	157.4	189.5	219.4	241.7	239.1	234.0	210.4	180.0	128.6	81.0	36.5	7.9	.7	
3RD QUINTILE	.4	5.0	19.7	44.6	74.3	108.8	130.1	155.3	178.3	160.9	161.3	141.9	124.0	85.7	56.7	25.8	5.5	.5	
4TH QUINTILE	.2	2.9	11.2	25.2	41.6	63.0	77.2	90.0	95.6	87.9	88.6	82.2	66.6	54.4	31.6	13.6	3.1	.2	
MIN VALUE	0	0	3	4	9	9	13	17	12	13	14	13	7	5	1	2	0	0	
MAX VALUE	6	25	72	139	194	235	284	320	335	332	320	310	252	216	143	82	25	4	
ALTITUDE OF SUN 05	0	0	8	17	26	35	43	50	53	53	50	43	35	26	17	8	0	0	
ALTITUDE OF SUN 15	0	2	10	19	28	37	46	52	56	56	52	46	37	28	19	10	2	0	
ALTITUDE OF SUN 25	0	3	12	21	30	39	47	54	58	58	54	47	39	30	21	12	3	0	
AZIMUTH OF SUN 05	0	0	-106	-94	-82	-69	-54	-35	-12	12	35	54	69	82	94	106	0	0	
AZIMUTH OF SUN 15	0	-119	-107	-96	-84	-71	-55	-36	-13	13	36	55	71	84	96	107	119	0	
AZIMUTH OF SUN 25	0	-120	-109	-97	-86	-73	-57	-38	-13	13	38	57	73	86	97	109	120	0	

ABERPORTH 52.13N 4.57W ALTITUDE 134M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.7.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JUNE

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	3	13	50	50	-	-	-	-	-	-	-	-	116
306 (0850)	-	-	-	-	-	-	7	67	213	253	97	3	-	-	-	-	-	-	640
288 (0800)	-	-	-	-	-	-	23	230	320	377	310	20	-	-	-	-	-	-	1280
270 (0750)	-	-	-	-	-	-	110	320	367	410	383	150	-	-	-	-	-	-	1740
252 (0700)	-	-	-	-	-	-	257	387	407	467	433	357	-	-	-	-	-	-	2308
234 (0650)	-	-	-	-	-	30	360	433	473	510	483	420	117	-	-	-	-	-	2826
216 (0600)	-	-	-	-	-	207	413	497	520	547	533	480	323	-	-	-	-	-	3520
198 (0550)	-	-	-	-	-	320	477	533	557	583	577	537	440	17	-	-	-	-	4041
180 (0500)	-	-	-	-	60	393	530	570	627	633	620	590	503	187	-	-	-	-	4713
162 (0450)	-	-	-	-	267	463	593	613	677	673	670	643	563	380	3	-	-	-	5545
144 (0400)	-	-	-	3	370	527	627	650	727	727	707	677	613	463	10	-	-	-	6101
126 (0350)	-	-	-	63	437	563	680	717	753	767	763	730	660	527	173	-	-	-	6833
108 (0300)	-	-	-	270	523	630	737	773	803	813	817	773	700	613	387	-	-	-	7839
090 (0250)	-	-	3	400	593	693	793	827	840	867	847	823	770	650	507	13	-	-	8626
081 (0225)	-	-	10	460	627	747	843	847	867	880	870	847	803	693	567	50	-	-	9111
072 (0200)	-	-	87	520	677	773	857	887	893	913	893	890	847	747	620	133	-	-	9737
063 (0175)	-	-	210	587	720	807	883	930	930	920	917	917	863	790	673	293	-	-	10440
054 (0150)	-	-	337	637	760	857	917	963	957	940	943	933	893	827	710	440	-	-	11114
045 (0125)	-	-	437	700	810	897	943	977	970	967	947	960	930	850	747	537	-	-	11672
036 (0100)	-	-	507	777	883	947	963	977	980	983	963	967	960	913	833	630	13	-	12296
027 (0075)	-	23	627	877	923	977	987	993	990	990	977	980	987	963	903	703	83	-	12983
018 (0050)	-	260	793	943	973	987	1000	1000	993	993	997	993	993	980	957	860	380	-	14102
009 (0025)	-	610	947	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	983	957	703	-	15194
001 (0003)	673	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	787	17457
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	1	12	39	74	108	142	176	196	209	215	206	188	159	122	84	45	15	1	
S.D.	1	7	22	37	55	70	81	90	93	94	91	81	70	57	40	24	8	1	
MEDIAN	3.1	11.8	36.9	75.0	112.8	151.6	190.2	214.5	223.7	238.2	227.9	209.7	180.9	133.6	91.1	48.4	14.7	3.9	
1ST QUINTILE	6.6	20.3	63.7	114.1	167.8	216.7	259.0	291.3	307.4	310.7	297.3	265.7	226.7	178.8	123.7	68.2	23.5	7.0	
2ND QUINTILE	4.2	14.4	48.3	90.0	135.9	178.2	220.4	246.9	255.2	275.5	263.9	239.7	204.2	157.7	106.1	56.4	17.4	4.9	
3RD QUINTILE	1.9	9.3	29.0	60.7	88.1	116.1	158.3	167.4	186.9	191.9	188.4	176.6	148.7	110.7	75.4	38.9	11.9	2.9	
4TH QUINTILE	.6	5.1	17.6	33.9	46.8	64.9	88.7	99.0	109.1	113.1	113.7	98.3	81.8	60.6	39.5	21.4	6.4	.9	
MIN VALUE	0	1	3	8	10	10	20	22	15	15	13	10	9	8	5	3	0	0	
MAX VALUE	8	30	90	148	194	243	324	338	335	332	321	317	251	213	172	101	40	7	
ALTITUDE OF SUN 05	0	5	13	22	31	40	49	56	60	60	56	49	40	31	22	13	5	0	
ALTITUDE OF SUN 15	0	6	14	23	32	41	49	56	61	61	56	49	41	32	23	14	6	0	
ALTITUDE OF SUN 25	0	6	14	23	32	41	50	57	61	61	57	50	41	32	23	14	6	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-87	-74	-59	-39	-14	14	39	59	74	87	99	110	121	0	
AZIMUTH OF SUN 15	0	-122	-110	-99	-88	-75	-59	-39	-14	14	39	59	75	88	99	110	122	0	
AZIMUTH OF SUN 25	0	-122	-110	-99	-88	-75	-59	-40	-14	14	40	59	75	88	99	110	122	0	

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TABLE 1.7.7 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JULY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	6
324 (0900)	-	-	-	-	-	-	-	-	10	13	-	-	-	-	-	-	-	-	23
306 (0850)	-	-	-	-	-	-	-	10	103	145	39	-	-	-	-	-	-	-	297
288 (0800)	-	-	-	-	-	-	-	132	184	281	210	-	-	-	-	-	-	-	807
270 (0750)	-	-	-	-	-	-	42	223	281	332	323	71	-	-	-	-	-	-	1272
252 (0700)	-	-	-	-	-	-	129	316	365	406	390	219	-	-	-	-	-	-	1825
234 (0650)	-	-	-	-	-	3	206	358	435	458	445	326	39	-	-	-	-	-	2270
216 (0600)	-	-	-	-	-	87	303	442	519	535	506	400	194	-	-	-	-	-	2986
198 (0550)	-	-	-	-	-	181	377	484	565	603	548	465	323	-	-	-	-	-	3546
180 (0500)	-	-	-	-	19	271	442	526	626	648	606	545	426	77	-	-	-	-	4186
162 (0450)	-	-	-	-	129	352	516	590	665	690	652	584	519	223	-	-	-	-	4920
144 (0400)	-	-	-	-	245	445	594	648	719	732	706	635	597	332	-	-	-	-	5653
126 (0350)	-	-	-	16	326	519	648	716	790	768	787	716	632	458	81	-	-	-	6457
108 (0300)	-	-	-	113	400	610	719	781	835	813	832	781	694	552	245	-	-	-	7375
090 (0250)	-	-	-	235	500	684	777	855	890	855	871	842	765	648	384	-	-	-	8306
081 (0225)	-	-	3	297	542	726	823	871	910	865	894	858	800	674	458	13	-	-	8734
072 (0200)	-	-	10	371	606	761	845	890	916	887	913	884	829	710	513	68	-	-	9203
063 (0175)	-	-	55	413	655	813	897	913	926	903	923	913	842	761	571	148	-	-	9733
054 (0150)	-	-	152	497	739	855	910	945	965	948	932	929	881	823	639	274	-	-	10489
045 (0125)	-	-	252	626	810	913	948	965	987	971	968	948	919	865	710	371	-	-	11253
036 (0100)	-	-	335	703	871	935	977	987	987	984	981	965	942	894	806	465	-	-	11832
027 (0075)	-	6	458	787	939	974	990	994	990	994	994	987	968	929	868	613	16	-	12507
018 (0050)	-	71	671	910	977	987	997	997	1000	994	1000	994	987	984	932	777	155	-	13433
009 (0025)	-	335	884	984	997	997	1000	1000	1000	1000	1000	997	1000	997	990	926	497	-	14604
001 (0003)	284	990	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	990	368	16629
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	7	29	60	95	129	162	186	204	208	202	177	150	111	73	37	10	0	
S.D.	0	5	19	34	50	62	73	82	83	89	84	75	66	52	37	21	7	0	
MEDIAN	.7	7.0	25.2	53.8	90.0	130.6	165.9	191.1	220.1	224.2	217.8	190.1	165.7	118.0	74.1	33.9	9.0	.8	
1ST QUINTILE	3.4	13.6	49.7	95.2	151.0	194.2	235.4	274.5	285.0	298.7	289.1	254.3	215.2	164.8	112.9	59.3	16.8	4.7	
2ND QUINTILE	.8	8.2	31.2	65.8	108.0	152.7	191.6	225.0	243.0	253.5	248.7	216.0	184.5	134.3	88.1	42.2	11.6	.9	
3RD QUINTILE	.6	5.8	21.0	46.8	72.8	110.0	142.0	158.9	187.7	198.8	181.9	156.4	142.5	99.0	59.2	27.8	7.3	.6	
4TH QUINTILE	.3	3.3	12.5	26.0	46.3	65.3	85.5	103.4	122.0	113.2	120.8	102.4	81.0	57.3	36.6	16.6	4.1	.3	
MIN VALUE	0	0	3	4	5	5	15	11	18	11	18	7	12	7	4	0	0	0	
MAX VALUE	6	27	88	137	191	239	282	313	349	342	317	285	246	197	141	85	35	4	
ALTITUDE OF SUN 05	0	5	14	22	32	41	49	56	60	60	56	49	41	32	22	14	5	0	
ALTITUDE OF SUN 15	0	4	13	22	31	40	48	55	59	59	55	48	40	31	22	13	4	0	
ALTITUDE OF SUN 25	0	3	11	20	29	38	47	53	57	57	53	47	38	29	20	11	3	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-87	-74	-59	-39	-14	14	39	59	74	87	99	110	121	0	
AZIMUTH OF SUN 15	0	-121	-109	-98	-86	-73	-58	-38	-14	14	38	58	73	86	98	109	121	0	
AZIMUTH OF SUN 25	0	-120	-108	-97	-85	-72	-56	-37	-13	13	37	56	72	85	97	108	120	0	

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TABLE 1.7.8 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS AUGUST

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	3	7	3	-	-	-	-	-	-	-	13
306 (0850)	-	-	-	-	-	-	-	-	16	20	3	-	-	-	-	-	-	-	39
288 (0800)	-	-	-	-	-	-	-	10	62	65	10	3	-	-	-	-	-	-	150
270 (0750)	-	-	-	-	-	-	-	36	130	124	59	3	-	-	-	-	-	-	352
252 (0700)	-	-	-	-	-	-	13	121	238	202	150	26	-	-	-	-	-	-	750
234 (0650)	-	-	-	-	-	-	88	208	322	287	261	85	-	-	-	-	-	-	1251
216 (0600)	-	-	-	-	-	-	166	313	394	349	349	202	10	-	-	-	-	-	1783
198 (0550)	-	-	-	-	3	39	264	404	466	436	417	283	59	-	-	-	-	-	2371
180 (0500)	-	-	-	-	3	150	358	469	502	505	479	368	163	-	-	-	-	-	2997
162 (0450)	-	-	-	-	7	254	427	537	564	547	537	476	267	16	-	-	-	-	3632
144 (0400)	-	-	-	-	49	362	508	629	616	632	603	524	371	78	-	-	-	-	4372
126 (0350)	-	-	-	-	143	453	593	681	648	691	635	606	446	202	3	-	-	-	5101
108 (0300)	-	-	-	3	296	524	658	726	736	720	681	664	537	316	10	-	-	-	5871
090 (0250)	-	-	-	52	414	625	739	782	792	795	752	720	616	443	68	-	-	-	6798
081 (0225)	-	-	-	121	495	681	775	821	827	834	801	746	661	502	147	-	-	-	7411
072 (0200)	-	-	-	182	541	707	811	850	853	847	837	782	730	564	238	-	-	-	7942
063 (0175)	-	-	-	244	606	743	847	873	883	870	876	808	769	619	303	-	-	-	8441
054 (0150)	-	-	3	345	678	808	883	902	912	896	902	853	814	678	384	13	-	-	9071
045 (0125)	-	-	13	443	736	866	919	935	941	935	925	906	866	743	476	33	-	-	9737
036 (0100)	-	-	55	554	818	912	948	954	964	961	945	938	909	811	593	104	-	-	10466
027 (0075)	-	-	163	684	873	958	967	980	980	971	980	961	941	886	700	189	-	-	11233
018 (0050)	-	-	329	827	935	990	993	990	987	990	987	980	987	958	824	362	-	-	12139
009 (0025)	-	7	622	954	990	997	997	997	997	997	1000	993	997	990	967	687	10	-	13202
001 (0003)	-	573	987	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	570	-	15130
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	1	14	44	78	113	142	163	174	172	163	144	114	81	47	16	1	0	
S.D.	0	2	11	26	41	55	66	74	83	82	79	70	56	43	28	12	2	0	
MEDIAN	.0	2.0	12.7	40.4	80.0	114.1	145.8	171.8	181.0	181.3	173.5	153.0	115.3	81.3	43.2	14.2	2.0	.0	
1ST QUINTILE	.0	6.3	25.0	69.4	119.3	171.3	209.8	235.7	258.3	252.5	243.9	216.3	173.6	126.3	75.8	26.4	6.3	.0	
2ND QUINTILE	.0	3.4	15.8	48.9	92.1	136.5	169.0	198.8	214.5	205.4	202.5	174.7	137.0	96.1	52.4	16.9	3.4	.0	
3RD QUINTILE	.0	.9	9.7	32.8	63.8	94.5	124.1	149.7	149.5	150.8	144.8	127.3	93.6	66.1	35.4	11.4	.9	.0	
4TH QUINTILE	.0	.5	5.1	19.7	38.0	55.1	74.8	85.8	87.9	88.8	81.2	65.8	56.8	37.5	19.7	6.1	.5	.0	
MIN VALUE	0	0	0	4	5	6	5	5	8	8	9	5	7	6	3	1	0	0	
MAX VALUE	0	11	54	108	207	209	256	302	324	335	324	292	221	169	131	61	11	0	
ALTITUDE OF SUN 05	0	1	9	18	27	36	44	51	55	55	51	44	36	27	18	9	1	0	
ALTITUDE OF SUN 15	0	0	7	16	25	34	42	48	52	52	48	42	34	25	16	7	0	0	
ALTITUDE OF SUN 25	0	0	4	13	23	31	39	45	49	49	45	39	31	23	13	4	0	0	
AZIMUTH OF SUN 05	0	-118	-107	-95	-83	-70	-54	-35	-12	12	35	54	70	83	95	107	118	0	
AZIMUTH OF SUN 15	0	0	-105	-93	-81	-68	-52	-34	-12	12	34	52	68	81	93	105	0	0	
AZIMUTH OF SUN 25	0	0	-103	-91	-79	-66	-50	-32	-11	11	32	50	66	79	91	103	0	0	

ABERPORTH 52.13N 4.57W ALTITUDE 134M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.7.9

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

SEPTEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	13	10	-	-	-	-	-	-	-	-	23
252 (0700)	-	-	-	-	-	-	-	7	33	37	3	-	-	-	-	-	-	-	80
234 (0650)	-	-	-	-	-	-	-	23	90	97	43	-	-	-	-	-	-	-	253
216 (0600)	-	-	-	-	-	-	7	73	203	190	94	3	-	-	-	-	-	-	570
198 (0550)	-	-	-	-	-	-	20	183	297	303	191	50	-	-	-	-	-	-	1044
180 (0500)	-	-	-	-	-	3	87	273	367	387	331	124	-	-	-	-	-	-	1572
162 (0450)	-	-	-	-	-	20	187	397	443	453	428	241	23	-	-	-	-	-	2192
144 (0400)	-	-	-	-	-	50	340	490	507	543	522	365	104	-	-	-	-	-	2921
126 (0350)	-	-	-	-	-	133	457	570	607	603	602	472	207	-	-	-	-	-	3651
108 (0300)	-	-	-	-	17	293	547	643	707	690	662	555	344	27	-	-	-	-	4485
090 (0250)	-	-	-	-	73	450	653	727	790	780	749	656	452	103	-	-	-	-	5433
081 (0225)	-	-	-	-	130	493	693	767	827	810	783	709	538	183	-	-	-	-	5933
072 (0200)	-	-	-	-	167	550	730	813	843	840	819	756	609	267	-	-	-	-	6394
063 (0175)	-	-	-	3	253	630	777	860	887	873	846	799	672	363	3	-	-	-	6966
054 (0150)	-	-	-	13	363	710	813	883	923	917	903	839	756	490	23	-	-	-	7633
045 (0125)	-	-	-	50	493	763	857	950	947	940	946	900	789	570	57	-	-	-	8262
036 (0100)	-	-	-	90	607	820	940	970	963	970	960	943	846	673	127	-	-	-	8909
027 (0075)	-	-	-	193	710	890	977	990	980	983	977	963	940	803	257	-	-	-	9663
018 (0050)	-	-	-	370	857	963	993	997	993	987	990	990	993	907	453	-	-	-	10493
009 (0025)	-	-	27	693	973	997	997	1000	1000	1000	997	1000	1000	980	747	27	-	-	11438
001 (0003)	-	-	653	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	627	-	-	13280
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	2	17	46	81	112	136	148	148	139	116	86	53	19	2	0	0	
S.D.	0	0	2	12	26	40	51	59	65	66	61	53	41	27	13	2	0	0	
MEDIAN	.0	.0	3.0	14.4	44.4	79.9	117.4	141.8	146.0	152.6	148.2	119.9	85.0	52.9	16.6	2.7	.0	.0	
1ST QUINTILE	.0	.0	6.8	26.6	68.5	118.5	160.5	194.6	216.5	214.4	196.8	168.3	127.2	79.2	30.9	6.7	.0	.0	
2ND QUINTILE	.0	.0	4.2	17.2	51.4	95.7	134.8	161.4	172.2	176.5	167.2	138.1	98.7	60.4	20.4	4.0	.0	.0	
3RD QUINTILE	.0	.0	1.7	11.6	36.6	66.4	99.0	118.6	127.3	126.9	126.5	100.0	73.1	42.4	13.5	1.4	.0	.0	
4TH QUINTILE	.0	.0	.6	6.2	21.5	39.2	57.3	74.5	87.6	84.0	76.8	62.8	43.3	27.2	7.3	.5	.0	.0	
MIN VALUE	0	0	0	1	2	8	8	15	11	10	8	10	10	5	1	0	0	0	
MAX VALUE	0	0	11	64	116	187	226	257	280	276	256	220	172	117	65	15	0	0	
ALTITUDE OF SUN 05	0	0	1	10	19	28	36	41	45	45	41	36	28	19	10	1	0	0	
ALTITUDE OF SUN 15	0	0	0	7	16	25	32	38	41	41	38	32	25	16	7	0	0	0	
ALTITUDE OF SUN 25	0	0	0	4	13	22	29	34	37	37	34	29	22	13	4	0	0	0	
AZIMUTH OF SUN 05	0	0	-100	-89	-76	-63	-48	-30	-11	11	30	48	63	76	89	100	0	0	
AZIMUTH OF SUN 15	0	0	0	-86	-74	-61	-46	-29	-10	10	29	46	61	74	86	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-84	-72	-59	-44	-28	-9	9	28	44	59	72	84	0	0	0	

ABERPORTH 52.13N 4.57W ALTITUDE 134M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.7.10

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

OCTOBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	10	13	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	6	35	52	16	-	-	-	-	-	-	-	23
162 (0450)	-	-	-	-	-	-	3	52	116	103	55	-	-	-	-	-	-	-	109
144 (0400)	-	-	-	-	-	-	23	155	248	203	126	19	-	-	-	-	-	-	329
126 (0350)	-	-	-	-	-	-	84	261	342	332	206	94	-	-	-	-	-	-	774
108 (0300)	-	-	-	-	-	23	171	368	439	452	323	155	3	-	-	-	-	-	1319
090 (0250)	-	-	-	-	-	61	319	445	542	519	426	303	58	-	-	-	-	-	1934
081 (0225)	-	-	-	-	-	94	365	487	594	555	494	358	90	-	-	-	-	-	2673
072 (0200)	-	-	-	-	-	123	406	555	652	626	555	432	126	-	-	-	-	-	3037
063 (0175)	-	-	-	-	-	197	484	623	716	697	629	506	210	-	-	-	-	-	3475
054 (0150)	-	-	-	-	16	284	584	694	771	745	713	584	313	3	-	-	-	-	4062
045 (0125)	-	-	-	-	52	390	655	784	835	806	765	681	423	35	-	-	-	-	4707
036 (0100)	-	-	-	-	90	500	761	835	881	858	839	761	523	77	-	-	-	-	5626
027 (0075)	-	-	-	-	158	661	829	913	926	929	884	835	639	184	-	-	-	-	6125
018 (0050)	-	-	-	-	287	790	913	971	961	971	965	913	803	358	-	-	-	-	6958
009 (0025)	-	-	-	23	648	942	987	990	1000	994	1000	997	932	658	29	-	-	-	7932
001 (0003)	-	-	-	584	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	597	-	-	-	9200
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	11178
																			18000
MEAN	0	0	0	2	15	41	67	86	98	96	84	67	42	16	2	0	0	0	
S.D.	0	0	0	2	13	26	38	46	50	50	45	37	25	12	2	0	0	0	
MEDIAN	.0	.0	.0	2.2	12.7	36.0	61.6	79.3	97.3	95.1	80.1	63.7	38.1	13.7	2.4	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	6.5	24.1	62.7	104.5	136.4	150.5	144.5	127.4	102.5	64.1	26.2	6.6	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	3.6	15.2	44.2	73.3	100.5	115.2	115.8	94.5	75.9	46.9	16.7	3.8	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	1.0	10.2	30.4	52.0	66.0	80.1	75.3	66.5	52.5	30.0	10.7	1.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.5	5.5	17.4	30.8	42.2	49.9	45.9	40.7	31.3	18.2	5.6	.5	.0	.0	.0	
MIN VALUE	0	0	0	0	1	2	2	7	10	7	11	7	3	0	0	0	0	0	
MAX VALUE	0	0	0	12	62	119	162	182	207	207	189	159	111	60	14	0	0	0	
ALTITUDE OF SUN 05	0	0	0	1	10	18	25	30	33	33	30	25	18	10	1	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	7	15	22	27	29	29	27	22	15	7	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	4	12	19	23	26	26	23	19	12	4	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	-81	-69	-56	-42	-26	-9	9	26	42	56	69	81	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-67	-54	-41	-25	-9	9	25	41	54	67	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-65	-53	-39	-24	-8	8	24	39	53	65	0	0	0	0	

ABERPORTH 52.13N 4.57W ALTITUDE 134M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.7.11

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

NOVEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
108 (0300)	-	-	-	-	-	-	-	-	13	7	-	-	-	-	-	-	-	-	20
090 (0250)	-	-	-	-	-	-	-	23	90	60	17	-	-	-	-	-	-	-	190
081 (0225)	-	-	-	-	-	-	3	93	210	153	83	3	-	-	-	-	-	-	545
072 (0200)	-	-	-	-	-	-	10	180	257	223	117	10	-	-	-	-	-	-	797
063 (0175)	-	-	-	-	-	-	37	250	310	287	177	23	-	-	-	-	-	-	1084
054 (0150)	-	-	-	-	-	-	93	300	377	360	263	57	-	-	-	-	-	-	1450
045 (0125)	-	-	-	-	-	-	167	393	450	453	387	130	-	-	-	-	-	-	1980
036 (0100)	-	-	-	-	-	13	287	490	543	537	467	217	7	-	-	-	-	-	2561
027 (0075)	-	-	-	-	-	40	397	597	647	650	590	363	13	-	-	-	-	-	3297
018 (0050)	-	-	-	-	-	117	533	720	770	797	720	543	77	-	-	-	-	-	4277
009 (0025)	-	-	-	-	-	277	737	873	910	890	887	743	263	-	-	-	-	-	5580
001 (0003)	-	-	-	-	7	613	937	983	993	987	983	947	610	17	-	-	-	-	7077
000	-	-	-	-	740	1000	1000	1000	1000	1000	1000	1000	1000	757	-	-	-	-	9497
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	2	14	33	49	56	54	46	31	13	2	0	0	0	0	
S.D.	0	0	0	0	2	10	20	28	33	30	26	18	9	2	0	0	0	0	
MEDIAN	.0	.0	.0	.0	3.6	12.0	29.2	44.2	49.2	49.0	42.6	29.2	11.9	3.8	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	6.9	22.3	51.5	78.4	91.5	84.0	69.6	46.8	21.0	7.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	4.7	14.7	35.8	53.4	60.2	59.1	52.5	34.2	14.4	4.9	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	2.5	9.3	24.0	35.8	40.1	40.0	35.3	24.4	9.3	2.7	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.8	5.1	15.2	22.3	25.1	26.7	22.7	15.5	5.1	.8	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	1	2	4	8	6	5	3	1	0	0	0	0	0	
MAX VALUE	0	0	0	0	11	50	92	120	158	130	120	90	53	13	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	1	9	15	20	22	22	20	15	9	1	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	6	13	17	19	19	17	13	6	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	4	10	15	17	17	15	10	4	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-51	-38	-23	-8	8	23	38	51	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	

ABERPORTH 52.13N 4.57W ALTITUDE 134M PERIOD OF OBSERVATIONS 1966-1975

TABLE 1.7.12 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF GLOBAL SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
378 (1050)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
360 (1000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342 (0950)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
324 (0900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306 (0850)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288 (0800)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270 (0750)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
252 (0700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	6	6	-	-	-	-	-	-	-	-	12
081 (0225)	-	-	-	-	-	-	-	3	45	68	-	-	-	-	-	-	-	-	116
072 (0200)	-	-	-	-	-	-	3	19	123	129	10	-	-	-	-	-	-	-	284
063 (0175)	-	-	-	-	-	-	3	81	206	177	77	-	-	-	-	-	-	-	544
054 (0150)	-	-	-	-	-	-	6	184	265	287	174	3	-	-	-	-	-	-	919
045 (0125)	-	-	-	-	-	-	19	258	368	390	261	16	-	-	-	-	-	-	1312
036 (0100)	-	-	-	-	-	-	119	355	494	481	377	100	-	-	-	-	-	-	1926
027 (0075)	-	-	-	-	-	-	232	500	648	645	500	258	-	-	-	-	-	-	2783
018 (0050)	-	-	-	-	-	6	426	729	835	832	735	471	-	-	-	-	-	-	4034
009 (0025)	-	-	-	-	-	126	765	955	984	961	958	800	110	-	-	-	-	-	5659
001 (0003)	-	-	-	-	45	994	1000	1000	1000	1000	1000	1000	997	26	-	-	-	-	8062
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	5	18	32	40	40	32	19	5	0	0	0	0	0	
S.D.	0	0	0	0	0	3	12	18	22	22	18	11	3	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.5	5.6	16.0	27.0	35.6	35.0	27.0	17.2	5.5	.5	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.8	8.3	29.5	52.1	63.7	61.1	51.3	30.3	8.2	.8	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.6	6.5	19.2	33.2	42.7	44.0	34.3	21.0	6.4	.6	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.4	4.6	13.4	23.1	29.8	29.5	23.2	14.5	4.6	.4	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.2	2.8	7.8	15.2	19.7	19.5	15.4	9.0	2.8	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	3	4	7	4	3	2	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	3	19	79	81	94	93	80	57	15	1	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	3	9	13	15	15	13	9	3	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	2	8	12	14	14	12	8	2	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	2	8	12	14	14	12	8	2	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.1

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JANUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099 (0275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
072 (0200)	-	-	-	-	-	-	-	3	10	-	-	-	-	-	-	-	-	-	13
063 (0175)	-	-	-	-	-	-	-	3	39	23	6	-	-	-	-	-	-	-	71
054 (0150)	-	-	-	-	-	-	-	32	74	81	35	3	-	-	-	-	-	-	225
045 (0125)	-	-	-	-	-	-	3	77	197	197	103	23	-	-	-	-	-	-	600
036 (0100)	-	-	-	-	-	3	19	206	348	394	281	52	-	-	-	-	-	-	1303
027 (0075)	-	-	-	-	-	3	113	494	590	597	523	181	-	-	-	-	-	-	2501
018 (0050)	-	-	-	-	-	6	435	716	787	774	723	519	32	-	-	-	-	-	3992
009 (0025)	-	-	-	-	-	248	839	916	916	923	900	790	268	-	-	-	-	-	5800
001 (0003)	-	-	-	-	129	961	997	1000	1000	1000	1000	994	945	158	-	-	-	-	8184
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	1	17	26	31	31	27	18	7	0	0	0	0	0	
S.D.	0	0	0	0	1	4	8	13	15	15	14	10	5	1	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.6	6.2	16.6	26.8	30.3	31.3	27.9	18.5	6.3	.6	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.9	10.8	24.6	36.4	44.8	44.9	40.1	26.5	11.6	1.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.7	7.3	19.0	29.9	34.1	35.7	31.6	21.2	7.4	.7	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.5	5.1	14.3	22.7	26.5	26.8	23.5	15.3	5.1	.5	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.2	2.8	9.9	14.2	17.1	16.4	14.1	8.6	2.7	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	4	4	4	4	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	8	42	47	77	87	71	63	54	25	8	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	2	8	13	15	15	13	8	2	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	4	10	14	16	16	14	10	4	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	5	12	16	19	19	16	12	5	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.2

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

FEBRUARY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4
099 (0275)	-	-	-	-	-	-	-	4	4	11	-	-	-	-	-	-	-	-	19
090 (0250)	-	-	-	-	-	-	-	11	11	21	11	-	-	-	-	-	-	-	54
081 (0225)	-	-	-	-	-	-	-	25	35	60	14	-	-	-	-	-	-	-	134
072 (0200)	-	-	-	-	-	-	7	53	121	117	53	-	-	-	-	-	-	-	351
063 (0175)	-	-	-	-	-	-	25	160	252	216	149	28	4	-	-	-	-	-	834
054 (0150)	-	-	-	-	-	-	89	277	376	376	298	117	4	-	-	-	-	-	1537
045 (0125)	-	-	-	-	-	7	216	454	574	553	514	284	18	-	-	-	-	-	2620
036 (0100)	-	-	-	-	-	50	404	674	759	777	691	482	71	-	-	-	-	-	3908
027 (0075)	-	-	-	-	-	227	645	816	883	890	855	716	273	-	-	-	-	-	5305
018 (0050)	-	-	-	-	11	571	869	926	940	957	954	894	610	32	-	-	-	-	6764
009 (0025)	-	-	-	-	206	844	979	986	986	986	993	986	872	266	-	-	-	-	8104
001 (0003)	-	-	-	39	926	1000	1000	1000	1000	1000	1000	1000	1000	947	124	-	-	-	10036
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	6	20	33	43	49	49	45	36	21	6	0	0	0	0	
S.D.	0	0	0	0	4	10	14	18	19	19	17	14	10	5	0	0	0	0	
MEDIAN	.0	.0	.0	.5	5.7	19.9	32.4	43.1	48.4	47.7	45.6	35.3	20.9	6.3	.6	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.8	9.3	28.4	46.1	59.9	66.6	64.5	59.9	49.5	30.3	11.5	.9	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.6	6.8	22.5	36.2	47.7	52.9	52.8	49.8	39.7	23.6	7.4	.7	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.4	4.6	17.0	28.7	39.0	43.7	43.1	40.6	31.5	18.3	5.1	.5	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.2	2.4	10.5	20.8	28.0	33.0	34.2	30.0	22.8	11.5	2.7	.2	.0	.0	.0	
MIN VALUE	0	0	0	0	0	4	4	7	8	4	8	2	1	0	0	0	0	0	
MAX VALUE	0	0	0	1	21	50	78	100	112	107	94	69	71	25	4	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	8	14	19	22	22	19	14	8	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	3	11	17	22	25	25	22	17	11	3	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	6	14	21	26	28	28	26	21	14	6	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-50	-37	-23	-8	8	23	37	50	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-64	-52	-38	-24	-8	8	24	38	52	64	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-66	-54	-40	-25	-8	8	25	40	54	66	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.3

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MARCH

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	6	6	13	3	-	-	-	-	-	-	-	3
126 (0350)	-	-	-	-	-	-	-	16	26	26	13	-	-	-	-	-	-	-	28
117 (0325)	-	-	-	-	-	-	-	19	58	52	29	3	-	-	-	-	-	-	161
108 (0300)	-	-	-	-	-	-	10	55	106	113	61	16	-	-	-	-	-	-	361
099 (0275)	-	-	-	-	-	-	35	100	200	190	148	42	-	-	-	-	-	-	715
090 (0250)	-	-	-	-	-	13	61	174	316	297	216	103	6	-	-	-	-	-	1186
081 (0225)	-	-	-	-	-	29	139	274	423	406	332	165	32	-	-	-	-	-	1800
072 (0200)	-	-	-	-	-	59	239	406	532	542	455	258	74	-	-	-	-	-	2545
063 (0175)	-	-	-	-	-	90	355	542	645	655	603	400	161	3	-	-	-	-	3454
054 (0150)	-	-	-	-	13	194	471	658	732	739	719	590	261	16	-	-	-	-	4393
045 (0125)	-	-	-	-	42	355	616	755	813	832	803	716	406	71	-	-	-	-	5409
036 (0100)	-	-	-	-	139	558	771	852	910	910	877	810	613	171	-	-	-	-	6611
027 (0075)	-	-	-	3	335	768	903	942	965	974	961	916	794	368	6	-	-	-	7935
018 (0050)	-	-	-	35	626	897	971	990	994	1000	997	977	923	603	58	-	-	-	9071
009 (0025)	-	-	-	229	894	977	994	1000	1000	1000	1000	997	990	894	319	-	-	-	10294
001 (0003)	-	-	129	942	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	948	116	-	-	12135
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	6	23	39	54	65	74	74	69	58	43	24	7	0	0	0	
S.D.	0	0	1	5	11	17	22	25	27	27	26	23	18	12	6	1	0	0	
MEDIAN	.0	.0	.6	6.0	21.9	38.6	52.2	65.8	74.6	74.8	69.3	58.3	40.9	21.9	6.7	.6	.0	.0	
1ST QUINTILE	.0	.0	.9	10.3	33.2	53.7	75.5	87.7	99.0	98.2	92.1	77.6	59.5	34.7	13.1	.9	.0	.0	
2ND QUINTILE	.0	.0	.7	7.1	25.0	43.0	59.5	72.4	82.9	81.5	76.0	63.0	45.4	25.8	8.0	.7	.0	.0	
3RD QUINTILE	.0	.0	.5	4.8	18.8	34.2	46.0	58.5	66.6	67.4	63.2	53.3	36.6	18.1	5.4	.5	.0	.0	
4TH QUINTILE	.0	.0	.2	2.6	12.2	24.8	34.0	40.8	46.4	48.1	45.3	37.0	26.6	11.9	2.9	.2	.0	.0	
MIN VALUE	0	0	0	0	1	3	8	10	16	21	12	4	4	4	0	0	0	0	
MAX VALUE	0	0	4	29	55	94	116	138	142	142	149	118	90	63	30	4	0	0	
ALTITUDE OF SUN 05	0	0	0	0	8	17	23	29	31	31	29	23	17	8	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	3	12	20	27	32	35	35	32	27	20	12	3	0	0	0	
ALTITUDE OF SUN 25	0	0	0	6	15	23	31	36	39	39	36	31	23	15	6	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-68	-55	-41	-26	-9	9	26	41	55	68	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	-83	-70	-57	-43	-27	-9	9	27	43	57	70	83	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-85	-73	-60	-45	-28	-10	10	28	45	60	73	85	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.4

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

APRIL

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	7	17	-	-	-	-	-	-	-	-	3
162 (0450)	-	-	-	-	-	-	-	7	10	30	10	-	-	-	-	-	-	-	24
153 (0425)	-	-	-	-	-	-	3	10	40	43	20	3	-	-	-	-	-	-	57
144 (0400)	-	-	-	-	-	-	3	33	57	70	43	3	-	-	-	-	-	-	119
135 (0375)	-	-	-	-	-	-	7	57	100	133	63	13	-	-	-	-	-	-	209
126 (0350)	-	-	-	-	-	3	27	90	173	183	113	40	-	-	-	-	-	-	373
117 (0325)	-	-	-	-	-	7	50	163	237	263	170	83	-	-	-	-	-	-	629
108 (0300)	-	-	-	-	-	20	127	243	330	350	233	153	13	-	-	-	-	-	973
099 (0275)	-	-	-	-	-	50	197	303	423	403	317	233	53	3	-	-	-	-	1469
090 (0250)	-	-	-	-	3	103	283	407	497	510	423	353	117	3	-	-	-	-	1982
081 (0225)	-	-	-	-	7	170	380	513	613	583	550	437	197	20	-	-	-	-	2699
072 (0200)	-	-	-	-	37	280	510	627	707	673	663	527	330	63	-	-	-	-	3470
063 (0175)	-	-	-	-	80	433	660	743	777	787	743	640	480	153	7	-	-	-	4417
054 (0150)	-	-	-	3	220	563	743	817	843	857	813	747	597	317	23	3	-	-	5503
045 (0125)	-	-	-	30	373	727	843	887	910	903	897	823	713	497	73	3	-	-	6546
036 (0100)	-	-	-	83	597	830	923	960	967	960	953	920	823	677	197	3	-	-	7679
027 (0075)	-	-	-	300	760	913	957	987	993	993	980	963	907	817	417	7	-	-	8893
018 (0050)	-	-	23	630	890	967	987	993	1000	1000	997	990	967	917	733	73	-	-	9994
009 (0025)	-	-	200	863	967	997	1000	1000	1000	1000	1000	1000	993	977	873	340	-	-	11167
001 (0003)	-	47	883	993	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	923	110	-	12210
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	13956
																			18000
MEAN	0	0	6	21	40	59	73	84	91	92	85	75	60	44	26	8	0	0	
S.D.	0	0	5	11	17	23	27	31	33	35	31	29	24	18	13	7	0	0	
MEDIAN	.0	.5	5.5	21.5	39.9	58.4	72.7	82.1	89.8	90.8	84.5	74.7	61.5	44.9	24.6	6.8	.6	.0	
1ST QUINTILE	.0	.8	9.0	31.1	55.3	78.5	98.7	112.8	122.2	124.1	112.7	102.7	80.8	60.4	35.9	13.7	.9	.0	
2ND QUINTILE	.0	.6	6.7	24.3	43.9	64.9	79.6	90.6	101.2	99.5	92.0	85.0	67.8	49.9	27.7	8.2	.7	.0	
3RD QUINTILE	.0	.4	4.3	18.8	35.8	52.0	66.6	74.1	82.0	79.3	77.0	66.2	53.8	39.9	21.8	5.4	.4	.0	
4TH QUINTILE	.0	.2	2.0	11.4	24.2	38.6	48.9	56.1	59.9	61.3	55.7	47.7	37.9	28.1	13.7	2.7	.2	.0	
MIN VALUE	0	0	0	0	4	8	17	16	24	21	16	11	8	3	1	0	0	0	
MAX VALUE	0	4	24	57	90	126	156	166	179	180	169	158	114	103	64	58	4	0	
ALTITUDE OF SUN 05	0	0	0	9	18	27	34	40	43	43	40	34	27	18	9	0	0	0	
ALTITUDE OF SUN 15	0	0	3	12	21	30	38	44	47	47	44	38	30	21	12	3	0	0	
ALTITUDE OF SUN 25	0	0	6	15	24	33	41	47	50	50	47	41	33	24	15	6	0	0	
AZIMUTH OF SUN 05	0	0	0	-88	-75	-62	-47	-30	-10	10	30	47	62	75	88	0	0	0	
AZIMUTH OF SUN 15	0	0	-102	-90	-78	-65	-49	-32	-11	11	32	49	65	78	90	102	0	0	
AZIMUTH OF SUN 25	0	0	-104	-92	-80	-67	-52	-33	-12	12	33	52	67	80	92	104	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.5

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MAY

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	6
198 (0550)	-	-	-	-	-	-	-	3	3	6	3	-	-	-	-	-	-	-	15
189 (0525)	-	-	-	-	-	-	-	3	10	19	10	-	-	-	-	-	-	-	42
180 (0500)	-	-	-	-	-	-	-	16	32	42	29	3	-	-	-	-	-	-	122
171 (0475)	-	-	-	-	-	-	3	35	61	68	39	10	-	-	-	-	-	-	216
162 (0450)	-	-	-	-	-	-	16	65	94	116	74	13	3	-	-	-	-	-	381
153 (0425)	-	-	-	-	-	3	35	116	139	142	123	32	3	-	-	-	-	-	593
144 (0400)	-	-	-	-	-	10	81	158	203	194	168	74	10	-	-	-	-	-	898
135 (0375)	-	-	-	-	-	23	113	210	261	268	216	129	16	-	-	-	-	-	1236
126 (0350)	-	-	-	-	-	39	187	303	358	342	303	194	45	-	-	-	-	-	1771
117 (0325)	-	-	-	-	-	68	245	371	442	403	374	245	94	-	-	-	-	-	2242
108 (0300)	-	-	-	-	6	142	345	458	529	484	445	348	171	10	-	-	-	-	2938
099 (0275)	-	-	-	-	39	219	442	568	613	571	519	445	252	35	-	-	-	-	3703
090 (0250)	-	-	-	-	77	316	500	645	687	655	584	532	361	97	-	-	-	-	4454
081 (0225)	-	-	-	-	158	423	577	713	758	716	671	600	442	203	13	-	-	-	5274
072 (0200)	-	-	-	13	284	577	674	790	806	790	739	645	558	329	29	-	-	-	6234
063 (0175)	-	-	-	58	435	690	774	855	842	868	806	761	648	465	100	-	-	-	7302
054 (0150)	-	-	-	155	555	771	832	897	897	916	890	832	748	581	239	-	-	-	8313
045 (0125)	-	-	-	319	681	832	894	932	945	952	935	897	839	706	429	13	-	-	9374
036 (0100)	-	-	32	535	800	900	952	965	974	981	971	948	910	832	639	61	-	-	10500
027 (0075)	-	-	171	716	900	948	984	990	994	997	994	984	965	919	794	290	-	-	11646
018 (0050)	-	3	497	855	961	987	994	1000	1000	1000	1000	994	984	968	894	619	-	-	12756
009 (0025)	-	103	797	971	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	984	855	152	-	13859
001 (0003)	-	835	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	990	858	6	15689
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	4	18	37	57	75	91	104	109	108	102	91	76	59	41	21	5	0	
S.D.	0	3	9	16	23	29	35	37	39	40	40	35	30	23	17	10	4	0	
MEDIAN	.0	4.7	17.9	37.5	58.1	76.5	90.0	104.6	111.0	106.3	101.3	93.3	76.5	60.3	42.0	21.3	5.1	.5	
1ST QUINTILE	.0	7.9	26.2	51.5	78.0	101.2	124.0	136.7	144.4	143.3	138.0	124.9	104.8	81.3	56.5	30.5	8.5	.8	
2ND QUINTILE	.0	5.8	20.7	41.6	65.1	82.9	102.9	114.0	121.5	117.4	113.7	103.2	85.7	67.3	46.4	24.0	6.2	.6	
3RD QUINTILE	.0	3.6	14.9	32.8	50.8	70.2	78.9	95.3	100.4	95.9	88.3	81.0	67.8	52.6	37.7	18.5	3.9	.4	
4TH QUINTILE	.0	1.4	8.9	21.6	36.0	49.7	59.0	70.6	73.1	70.8	63.8	58.1	48.9	38.3	26.5	11.1	1.7	.2	
MIN VALUE	0	0	2	5	9	13	17	23	23	25	21	17	11	2	2	0	0	0	
MAX VALUE	0	18	44	75	110	134	175	200	201	208	212	181	167	111	85	48	17	1	
ALTITUDE OF SUN 05	0	0	8	17	26	35	43	50	54	54	50	43	35	26	17	8	0	0	
ALTITUDE OF SUN 15	0	2	10	19	28	37	46	52	56	56	52	46	37	28	19	10	2	0	
ALTITUDE OF SUN 25	0	3	12	21	30	39	47	54	58	58	54	47	39	30	21	12	3	0	
AZIMUTH OF SUN 05	0	0	-106	-94	-82	-69	-54	-35	-12	12	35	54	69	82	94	106	0	0	
AZIMUTH OF SUN 15	0	-119	-107	-96	-84	-71	-56	-36	-13	13	36	56	71	84	96	107	119	0	
AZIMUTH OF SUN 25	0	-120	-109	-98	-86	-73	-57	-38	-13	13	38	57	73	86	98	109	120	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JUNE

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
225 (0625)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
216 (0600)	-	-	-	-	-	-	-	-	7	3	-	-	-	-	-	-	-	-	10
207 (0575)	-	-	-	-	-	-	-	7	10	17	-	-	-	-	-	-	-	-	34
198 (0550)	-	-	-	-	-	-	-	10	20	27	-	-	-	-	-	-	-	-	57
189 (0525)	-	-	-	-	-	-	-	20	50	37	7	3	-	-	-	-	-	-	117
180 (0500)	-	-	-	-	-	-	10	47	97	70	40	20	-	-	-	-	-	-	284
171 (0475)	-	-	-	-	-	-	13	83	150	120	103	20	-	-	-	-	-	-	489
162 (0450)	-	-	-	-	-	-	40	150	220	180	150	47	7	-	-	-	-	-	794
153 (0425)	-	-	-	-	-	-	60	190	270	273	200	77	13	-	-	-	-	-	1083
144 (0400)	-	-	-	-	-	-	90	240	330	313	260	153	27	-	-	-	-	-	1413
135 (0375)	-	-	-	-	-	20	180	310	383	390	303	227	70	7	-	-	-	-	1890
126 (0350)	-	-	-	-	-	80	263	367	447	450	367	310	123	13	-	-	-	-	2420
117 (0325)	-	-	-	-	10	133	367	483	520	487	430	410	223	33	-	-	-	-	3096
108 (0300)	-	-	-	-	23	227	463	540	567	530	487	490	290	67	-	-	-	-	3684
099 (0275)	-	-	-	-	60	323	533	590	637	593	547	533	373	147	3	-	-	-	4339
090 (0250)	-	-	-	-	147	447	607	667	690	660	610	590	460	217	10	-	-	-	5105
081 (0225)	-	-	-	-	287	550	687	733	733	717	683	647	530	317	57	-	-	-	5941
072 (0200)	-	-	-	63	447	643	753	797	803	773	770	727	597	443	127	-	-	-	6943
063 (0175)	-	-	-	197	573	727	807	827	833	813	817	793	693	547	243	3	-	-	7873
054 (0150)	-	-	3	307	667	810	870	890	880	890	870	850	770	650	430	17	-	-	8904
045 (0125)	-	-	13	477	777	887	923	923	933	923	910	907	837	747	563	57	-	-	9877
036 (0100)	-	-	140	667	840	930	953	963	973	963	963	937	903	827	693	263	-	-	11015
027 (0075)	-	-	390	820	917	967	990	993	990	990	987	973	957	933	823	530	3	-	12263
018 (0050)	-	33	690	920	977	997	1000	1000	993	997	993	987	990	973	920	747	67	-	13284
009 (0025)	-	437	903	980	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	990	937	537	-	14781
001 (0003)	140	980	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	990	250	16360
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	8	24	44	65	83	99	110	117	114	107	100	84	66	48	27	10	0	
S.D.	1	5	11	18	24	30	36	43	47	47	44	40	35	28	20	12	5	1	
MEDIAN	.6	8.1	23.7	43.9	68.2	85.4	103.2	114.3	119.5	114.3	106.1	105.9	84.9	67.1	49.3	28.0	9.7	.7	
1ST QUINTILE	.9	14.3	33.8	62.8	86.6	110.6	132.8	151.2	164.6	160.1	153.0	138.3	119.1	92.2	66.3	38.8	15.5	2.6	
2ND QUINTILE	.7	9.8	26.7	49.1	74.6	93.4	113.9	123.4	132.6	133.5	121.3	117.9	96.2	75.1	55.4	31.4	11.6	.8	
3RD QUINTILE	.5	6.6	20.7	39.2	60.4	76.2	90.9	97.8	103.8	98.1	91.4	88.4	71.7	58.4	42.4	24.1	7.9	.5	
4TH QUINTILE	.2	3.7	13.4	28.2	41.7	55.1	64.2	71.1	72.4	65.9	66.3	61.9	50.0	39.0	28.6	15.5	4.4	.3	
MIN VALUE	0	0	2	5	12	11	18	21	15	13	13	13	13	7	8	2	0	0	
MAX VALUE	4	26	56	80	121	143	180	210	239	218	194	189	163	138	101	63	29	4	
ALTITUDE OF SUN 05	0	5	13	22	31	40	49	56	60	60	56	49	40	31	22	13	5	0	
ALTITUDE OF SUN 15	0	5	14	23	32	41	50	57	61	61	57	50	41	32	23	14	5	0	
ALTITUDE OF SUN 25	0	6	14	23	32	41	50	57	61	61	57	50	41	32	23	14	6	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-87	-74	-59	-39	-14	14	39	59	74	87	99	110	121	0	
AZIMUTH OF SUN 15	0	-122	-110	-99	-88	-75	-59	-40	-14	14	40	59	75	88	99	110	122	0	
AZIMUTH OF SUN 25	0	-122	-111	-99	-88	-75	-60	-40	-14	14	40	60	75	88	99	111	122	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.7

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JULY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	3	6	-	-	-	-	-	-	-	-	-	9
198 (0550)	-	-	-	-	-	-	-	6	29	13	6	3	-	-	-	-	-	-	57
189 (0525)	-	-	-	-	-	-	-	16	52	32	10	3	-	-	-	-	-	-	113
180 (0500)	-	-	-	-	-	-	3	45	90	71	42	16	-	-	-	-	-	-	267
171 (0475)	-	-	-	-	-	-	16	97	129	103	55	19	-	-	-	-	-	-	419
162 (0450)	-	-	-	-	-	3	35	132	184	155	97	39	-	-	-	-	-	-	645
153 (0425)	-	-	-	-	-	6	68	184	255	242	181	74	3	-	-	-	-	-	1013
144 (0400)	-	-	-	-	-	26	126	229	319	290	252	129	16	-	-	-	-	-	1387
135 (0375)	-	-	-	-	-	45	203	294	381	335	342	194	58	-	-	-	-	-	1852
126 (0350)	-	-	-	-	3	110	268	387	452	400	406	271	126	3	-	-	-	-	2426
117 (0325)	-	-	-	-	6	168	345	461	516	477	471	358	223	10	-	-	-	-	3035
108 (0300)	-	-	-	-	39	219	426	539	571	526	532	426	281	48	-	-	-	-	3607
099 (0275)	-	-	-	-	68	290	477	587	623	597	568	497	381	94	-	-	-	-	4182
090 (0250)	-	-	-	-	119	394	568	661	674	629	619	535	468	190	-	-	-	-	4857
081 (0225)	-	-	-	6	219	481	626	713	732	687	694	600	526	294	29	-	-	-	5607
072 (0200)	-	-	-	16	352	565	697	761	768	742	732	668	613	406	87	-	-	-	6407
063 (0175)	-	-	-	68	461	671	774	819	803	800	768	739	674	535	145	-	-	-	7257
054 (0150)	-	-	-	197	555	752	826	855	852	845	826	790	719	603	339	3	-	-	8162
045 (0125)	-	-	13	374	658	819	894	906	906	881	861	852	790	674	506	32	-	-	9166
036 (0100)	-	-	42	523	787	894	948	955	948	958	939	916	890	787	642	152	-	-	10381
027 (0075)	-	-	258	694	897	952	971	977	987	987	984	965	958	913	787	429	-	-	11759
018 (0050)	-	-	529	848	968	990	990	997	1000	1000	997	994	990	958	890	694	19	-	12864
009 (0025)	-	206	823	965	990	1000	1000	1000	1000	1000	1000	997	1000	997	974	861	281	-	14094
001 (0003)	19	919	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	939	35	15906
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	6	19	37	59	79	96	109	114	110	107	95	83	63	44	24	7	0	
S.D.	0	4	10	17	26	34	39	44	48	47	46	41	35	27	19	12	5	0	
MEDIAN	.5	5.7	19.0	37.4	59.3	79.0	96.7	112.5	119.3	112.8	112.7	98.3	85.0	65.4	45.3	24.6	6.3	.5	
1ST QUINTILE	.8	9.3	29.4	53.8	82.7	111.4	135.4	149.8	160.0	157.3	150.6	134.3	119.1	89.1	60.4	34.4	11.8	.8	
2ND QUINTILE	.6	6.8	22.3	43.4	68.0	89.4	110.9	124.4	132.6	126.0	126.8	111.4	97.0	72.5	50.7	27.9	7.6	.6	
3RD QUINTILE	.4	4.6	15.8	31.9	50.1	69.0	85.0	97.4	103.0	98.2	93.4	81.0	73.3	54.4	38.8	21.2	5.1	.4	
4TH QUINTILE	.2	2.3	9.7	20.8	34.9	47.6	58.5	65.9	63.8	63.0	58.0	52.5	44.1	35.1	25.9	12.3	2.7	.2	
MIN VALUE	0	0	0	4	7	13	15	16	18	18	15	8	13	8	4	0	0	0	
MAX VALUE	4	17	50	81	128	162	180	214	211	205	205	203	153	127	86	54	23	4	
ALTITUDE OF SUN 05	0	5	13	22	32	41	49	56	60	60	56	49	41	32	22	13	5	0	
ALTITUDE OF SUN 15	0	4	13	22	31	40	48	55	59	59	55	48	40	31	22	13	4	0	
ALTITUDE OF SUN 25	0	3	11	20	29	38	47	54	57	57	54	47	38	29	20	11	3	0	
AZIMUTH OF SUN 05	0	-121	-110	-99	-88	-75	-59	-39	-14	14	39	59	75	88	99	110	121	0	
AZIMUTH OF SUN 15	0	-121	-109	-98	-87	-74	-58	-39	-14	14	39	58	74	87	98	109	121	0	
AZIMUTH OF SUN 25	0	-120	-108	-97	-85	-72	-57	-37	-13	13	37	57	72	85	97	108	120	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.8 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS AUGUST

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
216 (0600)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
207 (0575)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
198 (0550)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
189 (0525)	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	6
180 (0500)	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	13
171 (0475)	-	-	-	-	-	-	-	6	6	19	10	-	-	-	-	-	-	-	41
162 (0450)	-	-	-	-	-	-	-	19	35	32	19	3	-	-	-	-	-	-	108
153 (0425)	-	-	-	-	-	-	3	48	68	61	39	10	-	-	-	-	-	-	229
144 (0400)	-	-	-	-	-	-	10	81	116	126	77	16	-	-	-	-	-	-	426
135 (0375)	-	-	-	-	-	-	26	110	168	203	126	35	-	-	-	-	-	-	668
126 (0350)	-	-	-	-	-	3	74	184	239	287	239	77	13	-	-	-	-	-	1116
117 (0325)	-	-	-	-	-	19	139	287	342	339	310	165	23	-	-	-	-	-	1624
108 (0300)	-	-	-	-	3	48	216	384	410	406	368	258	48	3	-	-	-	-	2144
099 (0275)	-	-	-	-	6	100	319	477	500	494	452	332	113	13	-	-	-	-	2806
090 (0250)	-	-	-	-	16	187	426	545	555	558	519	442	203	19	-	-	-	-	3470
081 (0225)	-	-	-	-	42	323	539	619	635	652	613	523	326	42	-	-	-	-	4314
072 (0200)	-	-	-	3	106	435	632	681	694	700	674	606	435	123	-	-	-	-	5089
063 (0175)	-	-	-	13	232	568	719	745	755	761	748	687	552	277	19	-	-	-	6076
054 (0150)	-	-	-	39	381	681	771	839	858	839	823	755	642	413	42	-	-	-	7083
045 (0125)	-	-	-	129	545	771	842	906	916	916	897	832	771	548	145	3	-	-	8221
036 (0100)	-	-	-	261	719	848	916	955	968	958	955	919	877	710	348	3	-	-	9437
027 (0075)	-	-	16	474	835	932	987	984	994	984	984	974	939	839	581	19	-	-	10542
018 (0050)	-	-	145	781	935	990	1000	1000	1000	1000	997	997	987	945	768	210	-	-	11755
009 (0025)	-	-	494	935	994	1000	1000	1000	1000	1000	1000	1000	1000	984	929	532	3	-	12871
001 (0003)	-	313	984	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	974	361	-	14632
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	1	10	28	48	66	82	93	96	97	93	82	66	48	30	11	1	0	
S.D.	0	1	7	13	19	25	31	36	37	39	36	32	26	20	14	8	2	0	
MEDIAN	.0	.7	8.9	26.2	47.5	67.6	84.1	96.0	99.0	98.2	92.6	83.6	67.0	48.2	30.1	9.9	.8	.0	
1ST QUINTILE	.0	3.9	16.6	40.2	65.3	89.1	109.9	124.6	130.9	135.4	129.1	113.6	90.3	67.5	42.6	18.5	4.6	.0	
2ND QUINTILE	.0	.9	11.4	30.1	53.0	74.8	92.2	106.5	109.3	108.8	104.6	93.4	74.9	54.9	34.0	12.7	.9	.0	
3RD QUINTILE	.0	.6	7.3	23.3	42.2	60.5	75.1	83.3	84.9	86.0	82.2	72.7	58.2	42.1	26.1	7.8	.6	.0	
4TH QUINTILE	.0	.3	4.0	16.9	29.7	41.6	50.3	57.7	59.1	58.5	56.8	48.7	42.5	29.7	16.2	4.1	.3	.0	
MIN VALUE	0	0	0	2	5	17	18	21	20	18	17	17	10	4	2	0	0	0	
MAX VALUE	0	7	33	73	108	130	155	175	177	226	177	165	132	108	67	45	16	0	
ALTITUDE 05	0	1	9	18	27	36	45	51	55	55	51	45	36	27	18	9	1	0	
OF 15	0	0	7	16	25	34	42	48	52	52	48	42	34	25	16	7	0	0	
SUN 25	0	0	4	13	23	31	39	45	49	49	45	39	31	23	13	4	0	0	
AZIMUTH 05	0	-118	-107	-95	-83	-70	-55	-36	-13	13	36	55	70	83	95	107	118	0	
OF 15	0	0	-105	-93	-81	-68	-53	-34	-12	12	34	53	68	81	93	105	0	0	
SUN 25	0	0	-103	-91	-79	-66	-50	-32	-11	11	32	50	66	79	91	103	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.9

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

SEPTEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	7
153 (0425)	-	-	-	-	-	-	-	3	7	3	-	-	-	-	-	-	-	-	13
144 (0400)	-	-	-	-	-	-	-	20	20	17	3	-	-	-	-	-	-	-	60
135 (0375)	-	-	-	-	-	-	7	40	43	50	13	3	-	-	-	-	-	-	156
126 (0350)	-	-	-	-	-	-	10	57	90	87	40	7	-	-	-	-	-	-	291
117 (0325)	-	-	-	-	-	3	23	113	143	140	87	17	-	-	-	-	-	-	526
108 (0300)	-	-	-	-	-	3	33	190	233	253	147	43	-	-	-	-	-	-	902
099 (0275)	-	-	-	-	-	13	77	237	307	357	250	87	10	-	-	-	-	-	1338
090 (0250)	-	-	-	-	-	27	157	310	403	437	333	147	47	-	-	-	-	-	1861
081 (0225)	-	-	-	-	-	47	243	430	500	517	420	250	70	-	-	-	-	-	2477
072 (0200)	-	-	-	-	3	97	340	513	597	600	530	397	140	-	-	-	-	-	3217
063 (0175)	-	-	-	-	13	227	490	623	723	713	643	527	240	23	-	-	-	-	4222
054 (0150)	-	-	-	-	57	390	617	727	793	777	747	643	440	73	-	-	-	-	5264
045 (0125)	-	-	-	-	143	553	757	837	870	850	817	757	600	167	-	-	-	-	6351
036 (0100)	-	-	-	3	290	717	860	917	923	920	880	837	750	373	7	-	-	-	7477
027 (0075)	-	-	-	30	593	847	940	967	977	983	960	930	847	627	43	-	-	-	8744
018 (0050)	-	-	-	193	817	950	980	990	997	997	993	973	937	843	247	-	-	-	9917
009 (0025)	-	-	-	627	943	993	1000	1000	997	997	1000	997	993	930	610	-	-	-	11087
001 (0003)	-	-	413	990	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	980	427	3	-	12813
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	1	12	30	48	63	76	82	82	75	63	49	32	13	1	0	0	
S.D.	0	0	2	7	13	20	25	30	31	32	29	25	21	14	8	2	0	0	
MEDIAN	.0	.0	.9	11.6	29.8	47.9	62.3	73.4	81.0	82.9	74.5	64.9	50.6	31.5	11.7	.9	.5	.0	
1ST QUINTILE	.0	.0	5.1	17.9	41.5	64.9	85.5	106.1	111.3	112.2	103.4	85.4	66.6	43.6	20.1	5.3	.8	.0	
2ND QUINTILE	.0	.0	1.3	13.7	32.7	53.4	68.4	83.3	90.3	94.2	83.1	71.8	55.8	35.0	14.2	1.5	.6	.0	
3RD QUINTILE	.0	.0	.7	9.6	26.7	42.4	55.2	64.9	71.8	72.0	66.4	57.3	45.0	28.0	9.2	.7	.4	.0	
4TH QUINTILE	.0	.0	.3	5.2	18.7	30.3	41.2	48.0	53.2	51.2	47.2	40.2	31.4	19.8	4.9	.3	.2	.0	
MIN VALUE	0	0	0	0	3	4	13	13	8	4	13	8	8	2	0	0	0	0	
MAX VALUE	0	0	8	38	79	123	139	156	169	158	151	136	105	71	42	8	1	0	
ALTITUDE OF SUN 05	0	0	1	10	20	28	36	42	45	45	42	36	28	20	10	1	0	0	
ALTITUDE OF SUN 15	0	0	0	7	16	25	32	38	41	41	38	32	25	16	7	0	0	0	
ALTITUDE OF SUN 25	0	0	0	4	13	22	29	34	37	37	34	29	22	13	4	0	0	0	
AZIMUTH OF SUN 05	0	0	-100	-89	-76	-63	-48	-31	-11	11	31	48	63	76	89	100	0	0	
AZIMUTH OF SUN 15	0	0	0	-86	-74	-61	-46	-29	-10	10	29	46	61	74	86	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-84	-72	-59	-44	-28	-9	9	28	44	59	72	84	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.10

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

OCTOBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	3	3	3	-	-	-	-	-	-	-	-	3
117 (0325)	-	-	-	-	-	-	-	3	6	6	6	-	-	-	-	-	-	-	9
108 (0300)	-	-	-	-	-	-	-	6	13	16	6	-	-	-	-	-	-	-	21
099 (0275)	-	-	-	-	-	-	-	19	39	61	16	-	-	-	-	-	-	-	41
090 (0250)	-	-	-	-	-	-	-	32	84	87	55	6	-	-	-	-	-	-	135
081 (0225)	-	-	-	-	-	-	6	68	168	171	116	16	-	-	-	-	-	-	264
072 (0200)	-	-	-	-	-	3	29	158	229	271	200	58	-	-	-	-	-	-	545
063 (0175)	-	-	-	-	-	13	97	294	381	406	323	155	13	-	-	-	-	-	948
054 (0150)	-	-	-	-	-	29	226	429	506	523	458	268	39	-	-	-	-	-	1682
045 (0125)	-	-	-	-	-	68	384	568	648	645	577	461	119	-	-	-	-	-	2478
036 (0100)	-	-	-	-	6	210	590	697	774	781	748	642	277	6	-	-	-	-	3470
027 (0075)	-	-	-	-	26	442	723	810	871	884	858	774	497	52	-	-	-	-	4731
018 (0050)	-	-	-	-	155	706	852	932	958	968	932	884	726	210	-	-	-	-	5937
009 (0025)	-	-	-	3	516	881	971	997	997	990	990	981	903	513	-	-	-	-	7323
001 (0003)	-	-	-	381	971	1000	1000	1000	1000	1000	1000	1000	1000	974	387	-	-	-	8742
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	10713
																			18000
MEAN	0	0	0	1	11	25	39	49	55	56	52	42	27	11	1	0	0	0	
S.D.	0	0	0	2	7	13	17	22	24	24	23	18	14	8	2	0	0	0	
MEDIAN	.0	.0	.0	.8	9.4	25.0	39.9	49.4	54.4	55.8	50.8	43.1	26.9	9.4	.8	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	4.8	16.9	36.6	55.8	69.2	76.3	78.4	72.0	59.4	40.4	18.6	4.9	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	1.0	11.9	28.6	44.3	55.9	61.6	63.4	57.9	47.8	31.0	12.4	1.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.6	7.5	21.6	35.3	42.8	48.0	48.3	43.8	38.1	23.0	7.5	.7	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.3	4.0	13.2	21.6	27.8	33.6	34.3	31.7	24.9	14.2	4.0	.3	.0	.0	.0	
MIN VALUE	0	0	0	0	0	1	4	8	8	8	8	7	3	0	0	0	0	0	
MAX VALUE	0	0	0	12	42	74	87	129	136	126	119	91	69	42	8	0	0	0	
ALTITUDE OF SUN 05	0	0	0	1	10	18	25	31	33	33	31	25	18	10	1	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	7	15	22	27	30	30	27	22	15	7	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	4	12	19	24	26	26	24	19	12	4	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	-81	-69	-57	-42	-26	-9	9	26	42	57	69	81	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-67	-55	-41	-25	-9	9	25	41	55	67	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-65	-53	-39	-24	-8	8	24	39	53	65	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.11 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS NOVEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099 (0275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	7
072 (0200)	-	-	-	-	-	-	-	-	13	17	-	-	-	-	-	-	-	-	30
063 (0175)	-	-	-	-	-	-	-	23	53	53	23	7	-	-	-	-	-	-	159
054 (0150)	-	-	-	-	-	-	7	77	173	170	93	13	-	-	-	-	-	-	533
045 (0125)	-	-	-	-	-	-	30	190	347	363	193	40	-	-	-	-	-	-	1163
036 (0100)	-	-	-	-	-	7	123	397	540	550	390	127	3	-	-	-	-	-	2137
027 (0075)	-	-	-	-	-	43	340	630	707	717	647	340	30	-	-	-	-	-	3434
018 (0050)	-	-	-	-	-	117	630	807	837	873	820	633	133	-	-	-	-	-	4850
009 (0025)	-	-	-	-	7	540	873	950	960	973	930	877	567	3	-	-	-	-	6680
001 (0003)	-	-	-	-	450	983	1000	1000	1000	1000	1000	1000	973	463	-	-	-	-	8869
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	1	10	22	32	37	38	32	23	11	1	0	0	0	0	
S.D.	0	0	0	0	2	7	11	14	17	16	14	12	7	2	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.9	9.9	22.0	32.0	37.9	38.4	32.1	22.1	10.4	.9	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	5.5	16.2	32.8	44.6	52.6	52.6	44.7	32.9	16.6	5.6	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	1.9	12.0	25.1	35.9	42.5	43.2	35.6	25.2	12.5	2.1	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.7	7.9	18.9	28.2	32.8	33.3	28.6	19.0	8.3	.7	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.4	4.3	11.7	18.4	20.6	22.2	19.0	11.8	4.4	.4	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	1	4	4	5	4	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	13	38	59	68	77	81	71	66	39	9	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	1	9	15	20	22	22	20	15	9	1	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	6	13	17	20	20	17	13	6	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	4	11	15	17	17	15	11	4	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-63	-51	-38	-23	-8	8	23	38	51	63	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-49	-36	-22	-8	8	22	36	49	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-48	-35	-22	-7	7	22	35	48	0	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.1.12

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099 (0275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
072 (0200)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
063 (0175)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
054 (0150)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
045 (0125)	-	-	-	-	-	-	-	-	16	23	-	-	-	-	-	-	-	-	39
036 (0100)	-	-	-	-	-	-	-	16	103	106	13	-	-	-	-	-	-	-	238
027 (0075)	-	-	-	-	-	-	-	113	268	277	155	10	-	-	-	-	-	-	823
018 (0050)	-	-	-	-	-	-	32	394	490	545	368	32	-	-	-	-	-	-	1861
009 (0025)	-	-	-	-	-	-	258	658	755	758	652	313	-	-	-	-	-	-	3394
001 (0003)	-	-	-	-	-	23	739	919	942	948	894	748	39	-	-	-	-	-	5252
000	1000	1000	1000	1000	1000	913	997	1000	1000	1000	1000	997	903	-	-	-	-	-	7810
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	4	14	23	27	28	23	14	4	0	0	0	0	0	
S.D.	0	0	0	0	0	2	6	10	12	12	11	7	3	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.0	4.7	13.5	23.4	26.7	28.5	22.8	14.1	4.7	.0	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.0	7.4	20.3	33.2	39.7	40.1	34.1	21.6	7.5	.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.0	5.6	15.3	26.8	30.6	31.9	26.0	16.2	5.7	.0	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.0	3.8	11.6	20.0	23.3	24.7	19.6	12.1	3.8	.0	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.0	2.0	7.1	13.1	15.8	16.0	12.5	7.3	2.0	.0	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	2	4	4	2	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	0	12	33	50	61	64	50	41	15	0	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	3	9	13	16	16	13	9	3	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	2	8	12	15	15	12	8	2	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	2	8	12	14	14	12	8	2	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-47	-35	-21	-7	7	21	35	47	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-47	-34	-21	-7	7	21	34	47	0	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.1

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JANUARY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099 (0275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
072 (0200)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
063 (0175)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
054 (0150)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
045 (0125)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
036 (0100)	-	-	-	-	-	-	-	3	13	26	3	-	-	-	-	-	-	-	45
027 (0075)	-	-	-	-	-	-	-	26	97	97	35	-	-	-	-	-	-	-	255
018 (0050)	-	-	-	-	-	-	19	203	342	326	197	13	-	-	-	-	-	-	1100
009 (0025)	-	-	-	-	-	-	174	565	658	687	571	194	3	-	-	-	-	-	2852
001 (0003)	-	-	-	-	-	448	919	994	997	997	994	961	516	-	-	-	-	-	6826
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	1	5	11	14	14	11	5	1	0	0	0	0	0	
S.D.	0	0	0	0	0	1	4	8	9	9	8	4	1	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.0	.9	5.5	10.6	13.5	13.7	10.7	5.8	1.2	.0	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.0	5.4	8.7	18.2	23.2	23.0	17.9	8.9	5.9	.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.0	1.9	6.6	13.1	16.3	16.2	13.1	6.9	2.8	.0	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.0	.7	4.4	8.3	10.7	11.2	8.5	4.8	.8	.0	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.0	.4	2.3	4.6	5.6	6.1	4.7	2.7	.4	.0	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	0	5	21	43	40	39	38	21	9	0	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	0	2	5	7	7	5	2	0	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	0	3	7	8	8	7	3	0	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	0	5	9	10	10	9	5	0	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	0	-34	-21	-7	7	21	34	0	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	0	-35	-21	-7	7	21	35	0	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	-49	-35	-21	-7	7	21	35	49	0	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.2

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

FEBRUARY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099 (0275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4
072 (0200)	-	-	-	-	-	-	-	4	7	14	-	-	-	-	-	-	-	-	25
063 (0175)	-	-	-	-	-	-	-	4	25	35	7	-	-	-	-	-	-	-	71
054 (0150)	-	-	-	-	-	-	4	46	89	92	39	-	-	-	-	-	-	-	270
045 (0125)	-	-	-	-	-	4	18	135	202	199	113	28	-	-	-	-	-	-	699
036 (0100)	-	-	-	-	-	7	99	287	372	365	248	99	-	-	-	-	-	-	1477
027 (0075)	-	-	-	-	-	35	287	496	621	592	504	273	35	-	-	-	-	-	2843
018 (0050)	-	-	-	-	-	170	571	745	780	801	748	585	177	4	-	-	-	-	4581
009 (0025)	-	-	-	-	46	532	812	894	897	911	897	837	546	43	-	-	-	-	6415
001 (0003)	-	-	-	32	638	972	993	1000	1000	1000	1000	1000	982	688	32	-	-	-	9337
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	2	10	20	27	31	31	27	20	11	2	0	0	0	0	
S.D.	0	0	0	0	3	8	11	14	16	16	14	11	7	3	0	0	0	0	
MEDIAN	.0	.0	.0	.5	2.9	9.8	20.3	26.9	31.4	30.6	27.1	20.5	10.1	3.3	.5	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.8	6.9	17.3	31.2	41.2	45.2	44.9	39.2	30.8	17.4	7.1	.8	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.6	4.2	12.3	23.4	31.1	35.0	34.6	30.7	23.3	12.6	4.6	.6	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.4	1.5	7.8	16.9	23.2	27.8	26.7	23.5	17.5	8.0	2.1	.4	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.2	.6	4.1	9.4	14.7	16.5	18.0	14.9	10.3	4.3	.6	.2	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	1	1	3	2	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	1	17	53	55	79	81	80	69	53	33	18	1	0	0	0	
ALTITUDE 05	0	0	0	0	0	3	8	12	13	13	12	8	3	0	0	0	0	0	
OF 15	0	0	0	0	0	6	11	15	17	17	15	11	6	0	0	0	0	0	
SUN 25	0	0	0	0	3	9	14	18	20	20	18	14	9	3	0	0	0	0	
AZIMUTH 05	0	0	0	0	0	-50	-36	-22	-7	7	22	36	50	0	0	0	0	0	
OF 15	0	0	0	0	0	-51	-37	-23	-8	8	23	37	51	0	0	0	0	0	
SUN 25	0	0	0	0	-66	-52	-38	-23	-8	8	23	38	52	66	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.3 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS MARCH

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
117 (0325)	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	6
108 (0300)	-	-	-	-	-	-	-	-	6	3	6	-	-	-	-	-	-	-	15
099 (0275)	-	-	-	-	-	-	-	10	23	32	16	-	3	-	-	-	-	-	84
090 (0250)	-	-	-	-	-	-	3	19	68	84	45	3	3	-	-	-	-	-	225
081 (0225)	-	-	-	-	-	-	19	87	165	168	90	26	3	-	-	-	-	-	558
072 (0200)	-	-	-	-	-	3	71	171	258	281	174	55	3	-	-	-	-	-	1016
063 (0175)	-	-	-	-	-	23	139	316	400	406	281	110	16	-	-	-	-	-	1691
054 (0150)	-	-	-	-	-	74	268	468	568	532	445	258	52	3	-	-	-	-	2668
045 (0125)	-	-	-	-	16	161	458	613	687	674	623	419	177	6	-	-	-	-	3834
036 (0100)	-	-	-	-	58	358	645	745	803	781	723	610	352	42	-	-	-	-	5117
027 (0075)	-	-	-	-	165	558	794	848	858	868	868	768	574	165	-	-	-	-	6466
018 (0050)	-	-	-	16	400	719	874	910	939	932	935	900	784	445	6	-	-	-	7860
009 (0025)	-	-	-	219	726	906	952	974	987	984	984	974	932	800	248	3	-	-	9689
001 (0003)	-	-	232	852	997	997	997	997	1000	997	997	997	997	997	874	252	-	-	12183
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	5	16	29	42	50	56	56	51	41	30	17	5	0	0	0	
S.D.	0	0	0	5	11	16	19	22	23	24	22	18	15	10	5	1	0	0	
MEDIAN	.0	.0	.7	5.4	15.2	29.6	43.0	52.0	57.6	56.3	51.2	41.2	30.0	16.6	5.8	.7	.0	.0	
1ST QUINTILE	.0	.0	2.1	9.8	25.7	43.2	58.7	70.2	77.6	78.5	69.8	57.5	43.8	25.9	10.8	2.7	.0	.0	
2ND QUINTILE	.0	.0	.8	6.7	18.0	34.1	47.7	58.0	63.0	63.4	56.5	46.1	34.1	19.4	7.1	.8	.0	.0	
3RD QUINTILE	.0	.0	.5	4.2	12.5	24.7	38.2	45.8	51.6	49.7	46.2	36.5	25.9	14.1	4.5	.5	.0	.0	
4TH QUINTILE	.0	.0	.3	1.7	6.8	14.1	26.3	31.2	36.2	34.0	31.2	24.8	17.0	9.0	1.9	.3	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	5	23	51	76	94	103	112	129	120	94	104	55	21	10	0	0	
ALTITUDE OF SUN 05	0	0	0	0	5	12	17	21	23	23	21	17	12	5	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	2	9	15	21	25	27	27	25	21	15	9	2	0	0	0	
ALTITUDE OF SUN 25	0	0	0	5	12	19	25	29	31	31	29	25	19	12	5	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-67	-54	-39	-24	-8	8	24	39	54	67	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	-82	-69	-55	-41	-25	-9	8	25	41	55	69	82	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-84	-71	-57	-42	-26	-9	9	26	42	57	71	84	0	0	0	

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TABLE 2.6.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS APRIL

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	3	-	-	3	-	-	-	-	-	-	-	6
153 (0425)	-	-	-	-	-	-	-	3	-	-	3	-	-	-	-	-	-	-	6
144 (0400)	-	-	-	-	-	-	-	3	3	7	3	-	-	-	-	-	-	-	16
135 (0375)	-	-	-	-	-	-	3	13	13	20	13	7	-	-	-	-	-	-	69
126 (0350)	-	-	-	-	-	-	10	37	50	37	47	7	-	-	-	-	-	-	188
117 (0325)	-	-	-	-	-	7	27	80	130	130	83	17	-	-	-	-	-	-	474
108 (0300)	-	-	-	-	-	7	57	173	243	200	143	37	3	-	-	-	-	-	863
099 (0275)	-	-	-	-	-	17	113	250	313	277	240	77	7	-	-	-	-	-	1294
090 (0250)	-	-	-	-	-	47	210	357	427	410	367	197	20	3	-	-	-	-	2038
081 (0225)	-	-	-	-	-	133	363	463	557	530	493	310	110	3	-	-	-	-	2962
072 (0200)	-	-	-	3	10	220	467	587	670	670	590	480	240	13	-	-	-	-	3950
063 (0175)	-	-	-	3	67	347	613	713	777	770	667	617	373	57	-	-	-	-	5004
054 (0150)	-	-	-	7	180	557	710	793	840	837	783	733	543	190	3	-	-	-	6176
045 (0125)	-	-	-	30	377	710	823	887	900	900	850	820	733	380	23	-	-	-	7433
036 (0100)	-	-	-	93	600	830	913	937	943	943	910	907	833	593	127	-	-	-	8629
027 (0075)	-	-	3	327	807	920	960	970	977	963	957	927	897	793	317	3	-	-	9821
018 (0050)	-	-	77	637	907	973	980	983	993	987	980	973	957	910	657	100	-	-	11114
009 (0025)	-	-	400	910	970	997	997	1000	1000	997	997	987	993	980	910	440	-	-	12578
001 (0003)	-	503	980	993	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	983	503	-	14956
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	1	8	22	39	56	69	78	83	82	77	68	55	39	22	9	1	0	
S.D.	0	1	6	11	15	20	25	28	28	28	29	25	20	15	10	6	1	0	
MEDIAN	.0	1.0	7.6	22.0	40.0	56.4	70.0	78.3	84.9	83.3	80.4	70.7	56.3	39.9	22.2	8.1	1.0	.0	
1ST QUINTILE	.0	5.8	14.6	31.9	53.1	74.1	90.9	104.8	111.4	108.0	102.7	89.8	74.8	53.5	32.5	15.4	5.8	.0	
2ND QUINTILE	.0	2.6	9.0	24.9	44.1	60.7	77.8	86.3	92.1	90.7	87.6	76.2	61.6	44.2	24.8	10.1	2.6	.0	
3RD QUINTILE	.0	.8	6.2	19.1	36.0	51.5	63.8	71.1	77.6	76.5	70.8	64.1	51.3	35.7	19.5	6.6	.8	.0	
4TH QUINTILE	.0	.4	3.5	12.6	27.3	38.3	46.8	53.3	59.7	59.0	51.7	47.1	39.0	26.5	12.9	3.7	.4	.0	
MIN VALUE	0	0	0	0	0	6	8	12	12	7	6	6	4	3	0	0	0	0	
MAX VALUE	0	8	33	76	79	121	138	163	147	150	162	142	108	93	57	32	8	0	
ALTITUDE OF SUN 05	0	0	1	9	16	23	29	33	35	35	33	29	23	16	9	1	0	0	
ALTITUDE OF SUN 15	0	0	4	12	19	26	32	37	39	39	37	32	26	19	12	4	0	0	
ALTITUDE OF SUN 25	0	0	7	15	22	29	35	40	42	42	40	35	29	22	15	7	0	0	
AZIMUTH OF SUN 05	0	0	-99	-86	-73	-59	-44	-27	-9	9	27	44	59	73	86	99	0	0	
AZIMUTH OF SUN 15	0	0	-101	-88	-75	-61	-45	-28	-10	10	28	45	61	75	88	101	0	0	
AZIMUTH OF SUN 25	0	-116	-103	-90	-77	-62	-47	-29	-10	10	29	47	62	77	90	103	116	0	

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TABLE 2.6.5

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

MAY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
171 (0475)	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	6
162 (0450)	-	-	-	-	-	-	3	10	16	26	10	-	-	-	-	-	-	-	13
153 (0425)	-	-	-	-	-	-	3	16	45	45	13	6	-	-	-	-	-	-	65
144 (0400)	-	-	-	-	-	-	13	42	103	81	45	23	3	-	-	-	-	-	128
135 (0375)	-	-	-	-	-	-	45	84	177	171	100	45	3	-	-	-	-	-	310
126 (0350)	-	-	-	-	-	13	90	168	242	252	194	100	13	-	-	-	-	-	625
117 (0325)	-	-	-	-	-	45	139	268	335	306	274	174	29	-	-	-	-	-	1072
108 (0300)	-	-	-	-	3	90	219	355	416	384	345	235	84	-	-	-	-	-	1570
099 (0275)	-	-	-	-	6	139	313	435	481	461	419	323	148	10	-	-	-	-	2131
090 (0250)	-	-	-	-	19	248	381	506	539	542	506	410	245	32	3	-	-	-	2735
081 (0225)	-	-	-	-	106	358	487	590	606	600	597	500	335	100	6	-	-	-	3431
072 (0200)	-	-	-	10	239	465	584	652	655	645	635	581	468	232	13	-	-	-	4285
063 (0175)	-	-	-	35	361	535	661	700	713	710	687	642	577	358	48	-	-	-	5179
054 (0150)	-	-	-	168	471	639	732	790	774	787	774	735	661	487	148	-	-	-	6027
045 (0125)	-	-	6	310	581	752	819	832	861	839	832	810	765	606	342	23	-	-	7166
036 (0100)	-	-	55	487	710	848	865	877	916	910	897	861	839	745	513	84	-	-	8378
027 (0075)	-	-	290	661	800	890	919	942	948	958	948	935	903	852	706	345	10	-	9607
018 (0050)	-	45	568	790	916	942	971	981	990	981	965	958	945	923	835	619	55	-	11107
009 (0025)	-	387	781	942	981	994	1000	1000	1000	997	997	994	984	984	948	842	500	10	12484
001 (0003)	626	990	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	994	687	14341
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	17297
MEAN	1	8	19	35	51	67	78	87	93	91	87	79	67	52	36	21	9	2	18000
S.D.	1	5	11	17	24	30	34	37	40	40	38	35	29	22	17	11	6	2	
MEDIAN	2.6	7.5	20.2	35.3	51.6	67.5	79.8	90.8	96.1	94.7	90.6	81.0	69.4	53.0	36.7	21.9	9.0	3.2	
1ST QUINTILE	6.4	13.9	30.4	52.0	74.6	94.0	110.1	123.1	131.8	131.8	125.3	113.2	94.2	74.2	51.6	32.0	15.1	6.8	
2ND QUINTILE	3.9	8.8	23.4	40.4	59.8	77.5	88.4	102.9	109.8	106.1	101.3	91.0	76.6	60.1	41.9	25.2	11.0	4.4	
3RD QUINTILE	1.3	6.2	16.6	30.2	43.7	57.4	70.1	79.5	81.8	81.0	80.3	69.2	60.5	45.5	31.9	18.6	7.4	2.0	
4TH QUINTILE	.5	3.5	8.3	17.4	27.0	40.5	47.0	51.9	51.3	51.8	50.0	46.2	40.7	31.4	20.4	10.7	4.1	.6	
MIN VALUE	0	0	2	3	6	5	11	10	10	6	8	7	6	3	3	1	0	0	
MAX VALUE	7	24	51	76	114	134	162	163	190	185	168	158	144	106	93	50	29	9	
ALTITUDE OF SUN 05	0	3	10	18	25	32	38	43	46	46	43	38	32	25	18	10	3	0	
ALTITUDE OF SUN 15	0	6	12	20	27	34	41	46	48	48	46	41	34	27	20	12	6	0	
ALTITUDE OF SUN 25	1	7	14	22	29	36	43	48	50	50	48	43	36	29	22	14	7	1	
AZIMUTH OF SUN 05	0	-117	-104	-92	-78	-64	-48	-30	-10	10	30	48	64	78	92	104	117	0	
AZIMUTH OF SUN 15	0	-118	-106	-93	-80	-66	-50	-31	-11	11	31	50	66	80	93	106	118	0	
AZIMUTH OF SUN 25	-132	-119	-107	-94	-81	-67	-51	-32	-11	11	32	51	67	81	94	107	119	132	

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TABLE 2.6.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS JUNE

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3
180 (0500)	-	-	-	-	-	-	-	-	7	3	10	-	-	-	-	-	-	-	20
171 (0475)	-	-	-	-	-	-	-	3	20	17	17	-	-	-	-	-	-	-	57
162 (0450)	-	-	-	-	-	-	-	13	50	57	30	7	-	-	-	-	-	-	157
153 (0425)	-	-	-	-	-	-	3	47	87	103	67	17	-	-	-	-	-	-	324
144 (0400)	-	-	-	-	-	-	27	97	137	153	103	23	-	-	-	-	-	-	540
135 (0375)	-	-	-	-	-	7	63	137	187	193	163	53	-	-	-	-	-	-	803
126 (0350)	-	-	-	-	-	20	103	247	253	270	233	90	7	-	-	-	-	-	1223
117 (0325)	-	-	-	-	-	63	203	313	330	337	293	173	43	3	-	-	-	-	1758
108 (0300)	-	-	-	-	7	137	293	377	423	417	363	233	90	10	-	-	-	-	2350
099 (0275)	-	-	-	-	30	203	390	433	510	503	437	340	207	30	-	-	-	-	3083
090 (0250)	-	-	-	-	87	283	467	530	570	557	507	450	293	63	-	-	-	-	3807
081 (0225)	-	-	-	7	187	393	520	613	623	640	587	533	410	160	13	-	-	-	4686
072 (0200)	-	-	-	47	300	483	603	683	693	683	670	620	503	300	60	-	-	-	5645
063 (0175)	-	-	-	140	430	580	680	737	743	770	730	680	590	440	167	-	-	-	6687
054 (0150)	-	-	3	310	563	660	767	787	810	827	797	770	680	553	317	23	-	-	7867
045 (0125)	-	-	57	477	677	763	837	853	870	870	857	850	773	687	507	80	-	-	9158
036 (0100)	-	-	267	620	783	847	877	907	927	913	913	897	870	770	653	297	7	-	10548
027 (0075)	-	37	477	780	910	933	960	960	973	963	967	973	950	890	773	553	60	-	12159
018 (0050)	-	353	730	907	953	980	987	983	977	980	983	987	967	963	903	810	367	-	13830
009 (0025)	133	733	920	967	983	997	997	997	1000	997	1000	997	993	993	987	947	823	153	15617
001 (0003)	977	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	983	17957
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	5	14	26	42	57	70	83	91	96	96	92	82	71	57	43	28	15	5	
S.D.	3	7	12	18	24	30	35	39	41	41	40	33	29	23	18	12	7	3	
MEDIAN	5.5	14.5	26.2	43.6	58.3	70.4	84.4	92.8	100.0	99.3	90.9	84.6	72.3	58.2	45.3	28.9	15.4	5.7	
1ST QUINTILE	8.4	22.4	38.9	59.8	80.0	99.4	117.3	129.8	133.2	134.2	130.2	113.0	99.5	78.4	61.0	40.0	22.9	8.5	
2ND QUINTILE	6.5	16.9	30.3	49.1	65.1	80.3	97.8	104.3	110.2	109.9	103.5	94.1	81.8	65.6	50.1	32.4	17.3	6.6	
3RD QUINTILE	4.6	12.2	22.6	37.3	51.1	60.8	72.3	82.4	84.9	85.3	79.6	74.1	62.0	50.8	39.3	25.4	13.4	4.7	
4TH QUINTILE	2.7	7.0	14.7	25.6	34.8	41.0	49.8	52.2	55.3	58.3	53.6	50.6	42.5	33.8	25.1	18.4	9.5	2.8	
MIN VALUE	0	0	2	3	5	6	8	8	10	7	11	8	8	7	4	3	1	0	
MAX VALUE	13	35	55	84	116	142	157	171	186	181	189	169	133	117	85	60	39	17	
ALTITUDE OF SUN 05	3	9	16	23	31	38	44	49	52	52	49	44	38	31	23	16	9	3	
ALTITUDE OF SUN 15	4	10	16	24	31	38	45	50	53	53	50	45	38	31	24	16	10	4	
ALTITUDE OF SUN 25	4	10	17	24	31	39	45	50	53	53	50	45	39	31	24	17	10	4	
AZIMUTH OF SUN 05	-133	-120	-108	-95	-82	-68	-52	-33	-11	11	33	52	68	82	95	108	120	133	
AZIMUTH OF SUN 15	-133	-121	-108	-96	-83	-68	-52	-33	-11	11	33	52	68	83	96	108	121	133	
AZIMUTH OF SUN 25	-133	-121	-108	-96	-83	-69	-52	-33	-12	12	33	52	69	83	96	108	121	133	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.7

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

JULY

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	3	3	16	3	-	-	-	-	-	-	-	25
171 (0475)	-	-	-	-	-	-	-	3	13	26	10	3	-	-	-	-	-	-	55
162 (0450)	-	-	-	-	-	-	-	23	65	65	29	10	-	-	-	-	-	-	192
153 (0425)	-	-	-	-	-	-	6	52	110	106	71	23	3	-	-	-	-	-	371
144 (0400)	-	-	-	-	-	-	23	90	161	165	119	42	3	-	-	-	-	-	603
135 (0375)	-	-	-	-	-	-	65	158	226	242	190	74	13	-	-	-	-	-	968
126 (0350)	-	-	-	-	-	3	132	248	306	365	258	142	26	-	-	-	-	-	1480
117 (0325)	-	-	-	-	-	35	197	342	390	416	355	213	52	3	-	-	-	-	2003
108 (0300)	-	-	-	-	3	84	300	426	481	500	458	313	103	13	-	-	-	-	2681
099 (0275)	-	-	-	-	10	197	394	516	558	561	526	384	200	23	-	-	-	-	3369
090 (0250)	-	-	-	3	48	306	503	597	642	635	629	484	310	58	-	-	-	-	4215
081 (0225)	-	-	-	3	100	406	587	639	710	694	694	584	432	174	6	-	-	-	5029
072 (0200)	-	-	-	39	223	526	642	713	765	755	755	642	519	281	19	-	-	-	5879
063 (0175)	-	-	-	74	371	652	703	774	806	819	813	729	639	432	87	-	-	-	6899
054 (0150)	-	-	3	219	516	732	784	845	848	855	861	800	752	571	239	6	-	-	8031
045 (0125)	-	-	32	397	645	803	848	890	887	913	906	868	803	697	455	29	-	-	9173
036 (0100)	-	-	168	558	784	887	942	942	935	958	923	926	897	800	623	184	-	-	10527
027 (0075)	-	6	426	726	877	935	984	981	977	981	968	955	955	900	771	468	6	-	11916
018 (0050)	-	123	661	903	965	984	990	990	987	990	994	997	987	974	906	739	210	-	13400
009 (0025)	29	594	926	981	1000	1000	1000	1000	1000	997	1000	1000	1000	1000	981	942	719	48	15217
001 (0003)	919	990	997	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	955	17855
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	3	11	24	39	54	72	86	96	102	103	99	87	73	57	41	26	12	4	
S.D.	2	6	11	17	21	27	33	37	40	40	38	34	28	22	16	11	6	2	
MEDIAN	4.8	10.8	24.2	39.2	55.0	74.0	90.2	100.6	105.8	108.0	102.4	88.6	74.0	58.6	42.6	25.9	12.9	5.0	
1ST QUINTILE	7.5	16.5	34.9	55.2	73.7	98.8	116.7	130.8	138.6	139.9	133.7	118.6	99.0	78.8	56.3	35.5	18.4	7.7	
2ND QUINTILE	5.7	12.7	27.9	44.8	61.2	81.5	98.5	110.8	116.0	119.8	113.1	97.6	83.4	64.9	47.3	29.2	14.6	5.9	
3RD QUINTILE	3.9	8.9	20.3	33.8	48.1	66.7	78.9	89.4	94.5	94.3	92.5	78.5	65.9	51.9	37.2	22.6	11.1	4.1	
4TH QUINTILE	2.1	4.8	13.3	23.2	34.5	45.4	51.8	59.7	64.3	65.7	65.0	54.0	45.5	36.0	25.1	15.3	6.7	2.4	
MIN VALUE	0	0	0	0	9	13	13	9	10	5	11	16	15	12	5	3	0	0	
MAX VALUE	12	33	61	96	108	126	158	180	183	185	181	178	155	122	82	54	28	13	
ALTITUDE OF SUN 05	3	9	16	23	31	38	45	50	52	52	50	45	38	31	23	16	9	3	
ALTITUDE OF SUN 15	2	8	15	22	30	37	44	48	51	51	48	44	37	30	22	15	8	2	
ALTITUDE OF SUN 25	1	7	14	21	28	36	42	47	49	49	47	42	36	28	21	14	7	1	
AZIMUTH OF SUN 05	-133	-120	-108	-96	-83	-68	-52	-33	-11	11	33	52	68	83	96	108	120	133	
AZIMUTH OF SUN 15	-133	-120	-107	-95	-82	-67	-51	-32	-11	11	32	51	67	82	95	107	120	133	
AZIMUTH OF SUN 25	-132	-119	-107	-94	-81	-66	-50	-32	-11	11	32	50	66	81	94	107	119	132	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.8 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS AUGUST

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
153 (0425)	-	-	-	-	-	-	-	-	10	16	3	-	-	-	-	-	-	-	29
144 (0400)	-	-	-	-	-	-	-	6	42	32	10	3	-	-	-	-	-	-	93
135 (0375)	-	-	-	-	-	-	3	26	71	90	26	3	-	-	-	-	-	-	219
126 (0350)	-	-	-	-	-	3	19	81	145	142	65	26	-	-	-	-	-	-	481
117 (0325)	-	-	-	-	-	6	45	155	226	245	145	48	-	-	-	-	-	-	870
108 (0300)	-	-	-	-	-	13	106	229	300	329	248	119	13	-	-	-	-	-	1357
099 (0275)	-	-	-	-	-	52	190	326	390	423	339	194	32	-	-	-	-	-	1946
090 (0250)	-	-	-	-	3	106	300	397	471	516	445	297	87	6	-	-	-	-	2628
081 (0225)	-	-	-	-	13	194	429	503	561	577	516	410	174	13	-	-	-	-	3390
072 (0200)	-	-	-	-	45	339	542	606	645	655	610	510	306	55	-	-	-	-	4313
063 (0175)	-	-	-	3	139	468	616	703	710	716	697	623	426	158	3	-	-	-	5262
054 (0150)	-	-	-	29	271	574	716	765	787	790	752	684	561	294	19	-	-	-	6242
045 (0125)	-	-	-	94	461	694	797	832	861	826	835	739	665	458	94	-	-	-	7356
036 (0100)	-	-	3	248	629	810	861	910	897	884	881	829	794	610	242	3	-	-	8601
027 (0075)	-	-	55	465	816	884	929	952	965	935	948	926	903	777	484	52	-	-	10091
018 (0050)	-	-	239	713	903	965	971	977	981	981	984	971	942	910	742	277	3	-	11559
009 (0025)	-	68	661	932	981	990	997	1000	1000	997	997	994	990	974	916	694	84	-	13275
001 (0003)	142	813	997	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	997	858	181	15988
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	3	12	27	42	59	72	80	86	86	80	71	57	42	27	13	3	0	
S.D.	0	3	8	13	18	25	29	32	35	37	33	30	24	19	13	7	3	0	
MEDIAN	.6	4.4	12.4	25.7	42.9	60.3	75.3	81.3	87.1	91.5	83.0	72.9	58.1	42.5	26.4	13.2	4.7	.6	
1ST QUINTILE	.9	7.6	19.9	38.8	58.8	80.6	98.2	111.5	119.9	120.9	112.2	98.5	79.2	60.2	38.6	21.1	7.8	1.0	
2ND QUINTILE	.7	5.4	14.6	29.7	47.9	67.7	83.0	89.7	97.9	101.2	93.8	81.8	65.0	48.2	30.1	15.3	5.7	.7	
3RD QUINTILE	.5	3.3	10.3	22.1	37.6	52.1	64.9	72.5	76.8	78.3	73.0	64.8	50.6	36.6	23.0	11.0	3.7	.5	
4TH QUINTILE	.2	1.1	5.7	14.4	27.8	36.8	44.6	49.3	52.4	51.5	48.8	38.9	35.5	25.4	15.0	6.2	1.6	.2	
MIN VALUE	0	0	0	1	3	4	8	13	11	8	5	4	2	2	2	0	0	0	
MAX VALUE	2	15	39	63	91	130	135	148	163	159	156	152	115	90	69	38	20	2	
ALTITUDE OF SUN 05	0	4	11	19	26	33	39	44	47	47	44	39	33	26	19	11	4	0	
ALTITUDE OF SUN 15	0	2	9	16	24	31	37	41	44	44	41	37	31	24	16	9	2	0	
ALTITUDE OF SUN 25	0	0	6	13	21	28	34	38	41	41	38	34	28	21	13	6	0	0	
AZIMUTH OF SUN 05	0	-118	-105	-92	-79	-65	-49	-31	-11	11	31	49	65	79	92	105	118	0	
AZIMUTH OF SUN 15	0	-117	-104	-91	-78	-63	-47	-30	-10	10	30	47	63	78	91	104	117	0	
AZIMUTH OF SUN 25	0	0	-102	-89	-76	-62	-46	-29	-10	10	29	46	62	76	89	102	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.9

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

SEPTEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	7	20	20	7	-	-	-	-	-	-	-	10
108 (0300)	-	-	-	-	-	-	-	20	50	47	23	-	-	-	-	-	-	-	54
099 (0275)	-	-	-	-	-	-	7	57	117	87	70	-	-	-	-	-	-	-	140
090 (0250)	-	-	-	-	-	-	30	120	213	200	110	27	-	-	-	-	-	-	338
081 (0225)	-	-	-	-	-	3	73	250	317	300	177	80	7	-	-	-	-	-	700
072 (0200)	-	-	-	-	-	17	183	337	413	420	307	170	23	-	-	-	-	-	1207
063 (0175)	-	-	-	-	-	80	277	477	513	493	443	300	83	3	-	-	-	-	1870
054 (0150)	-	-	-	-	7	173	437	580	637	630	567	453	193	13	-	-	-	-	2669
045 (0125)	-	-	-	-	60	337	577	697	720	723	717	607	317	60	-	-	-	-	3690
036 (0100)	-	-	-	-	150	520	687	800	810	830	817	717	513	157	-	-	-	-	4815
027 (0075)	-	-	-	3	337	687	807	877	907	893	900	827	720	363	3	-	-	-	6001
018 (0050)	-	-	-	127	590	830	917	960	970	953	953	923	857	643	157	-	-	-	7324
009 (0025)	-	-	7	450	863	937	973	987	997	990	990	987	950	877	490	3	-	-	8880
001 (0003)	-	7	550	973	993	997	1000	1000	1000	1000	1000	1000	1000	1000	983	550	10	-	10501
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	13063
																			18000
MEAN	0	0	1	9	22	36	49	59	64	63	59	50	37	23	10	1	0	0	
S.D.	0	0	2	7	12	18	22	26	28	27	25	21	17	12	7	2	0	0	
MEDIAN	.0	.5	1.7	8.2	21.2	37.0	50.0	61.0	64.2	62.5	58.9	51.3	36.6	22.6	8.8	1.7	.5	.0	
1ST QUINTILE	.0	.8	6.2	16.0	33.6	52.5	70.4	84.5	91.2	90.0	79.4	69.9	53.5	34.1	16.8	6.1	.8	.0	
2ND QUINTILE	.0	.6	3.2	10.4	24.8	41.9	56.1	68.0	73.2	73.5	65.8	57.1	41.2	25.8	11.4	3.2	.6	.0	
3RD QUINTILE	.0	.4	.9	6.7	17.7	31.7	43.1	52.5	56.7	56.0	52.0	45.4	32.2	19.4	7.2	.9	.4	.0	
4TH QUINTILE	.0	.2	.4	3.6	11.1	19.9	27.5	36.0	37.0	38.5	37.5	29.2	21.7	12.0	4.0	.4	.2	.0	
MIN VALUE	0	0	0	0	0	0	4	6	7	6	6	5	2	1	0	0	0	0	
MAX VALUE	0	1	11	27	59	82	107	125	131	131	125	98	88	69	28	9	1	0	
ALTITUDE OF SUN 05	0	0	3	10	17	24	30	34	37	37	34	30	24	17	10	3	0	0	
ALTITUDE OF SUN 15	0	0	0	7	14	21	27	31	33	33	31	27	21	14	7	0	0	0	
ALTITUDE OF SUN 25	0	0	0	3	11	17	23	27	29	29	27	23	17	11	3	0	0	0	
AZIMUTH OF SUN 05	0	0	-100	-87	-74	-60	-44	-27	-9	9	27	44	60	74	87	100	0	0	
AZIMUTH OF SUN 15	0	0	0	-85	-72	-58	-43	-26	-9	9	26	43	58	72	85	0	0	0	
AZIMUTH OF SUN 25	0	0	0	-83	-70	-56	-41	-25	-9	9	25	41	56	70	83	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.10

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

OCTOBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099 (0275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
072 (0200)	-	-	-	-	-	-	-	3	10	-	-	-	-	-	-	-	-	-	13
063 (0175)	-	-	-	-	-	-	-	16	29	32	13	-	-	-	-	-	-	-	90
054 (0150)	-	-	-	-	-	-	10	71	119	103	48	3	-	-	-	-	-	-	354
045 (0125)	-	-	-	-	-	-	42	165	239	235	132	19	-	-	-	-	-	-	832
036 (0100)	-	-	-	-	-	3	135	284	413	419	271	90	6	-	-	-	-	-	1621
027 (0075)	-	-	-	-	-	52	306	497	610	619	468	258	23	-	-	-	-	-	2833
018 (0050)	-	-	-	-	-	194	500	677	755	761	706	484	135	3	-	-	-	-	4215
009 (0025)	-	-	-	-	32	387	732	835	852	858	829	713	371	26	-	-	-	-	5635
001 (0003)	-	-	-	-	284	742	887	942	952	948	942	881	726	223	-	-	-	-	7527
000	1000	1000	1000	310	913	990	1000	1000	997	1000	1000	1000	994	948	323	-	-	-	10475
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	1	6	16	27	36	40	39	35	26	15	6	1	0	0	0	
S.D.	0	0	0	1	5	10	14	17	18	18	16	13	9	5	1	0	0	0	
MEDIAN	.0	.0	.0	.7	6.3	15.1	27.0	35.9	41.0	41.4	34.8	26.4	14.7	5.9	.7	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	3.8	12.0	26.7	41.6	51.4	56.9	56.4	49.6	39.1	24.5	10.1	4.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.9	7.5	17.7	31.6	40.1	45.7	45.9	39.1	30.3	17.3	7.0	.9	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.6	5.0	12.6	23.1	30.9	36.5	36.9	31.0	22.4	12.2	4.8	.6	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.3	2.4	7.1	14.1	20.0	22.8	23.4	20.1	13.3	6.8	2.6	.3	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	1	2	0	3	3	2	0	0	0	0	0	0	
MAX VALUE	0	0	0	5	25	46	66	81	90	80	77	64	51	28	6	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	7	14	19	23	25	25	23	19	14	7	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	4	10	16	20	22	22	20	16	10	4	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	1	7	12	16	18	18	16	12	7	1	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	-68	-55	-40	-25	-8	8	25	40	55	68	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	-67	-53	-39	-24	-8	8	24	39	53	67	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	-65	-52	-38	-23	-8	8	23	38	52	65	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.11 FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS NOVEMBER

RADN.GT.EQ. J/CM2(WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099 (0275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
072 (0200)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
063 (0175)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
054 (0150)	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	7
045 (0125)	-	-	-	-	-	-	-	7	27	7	-	-	-	-	-	-	-	-	41
036 (0100)	-	-	-	-	-	-	-	27	77	70	3	-	-	-	-	-	-	-	177
027 (0075)	-	-	-	-	-	-	10	120	257	263	120	3	-	-	-	-	-	-	773
018 (0050)	-	-	-	-	-	-	113	457	590	567	433	103	-	-	-	-	-	-	2263
009 (0025)	-	-	-	-	-	63	513	787	863	867	793	480	50	-	-	-	-	-	4416
001 (0003)	-	-	-	-	107	857	1000	1000	1000	1000	1000	1000	850	87	-	-	-	-	7901
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	3	10	17	20	20	16	9	3	0	0	0	0	0	
S.D.	0	0	0	0	0	3	6	9	10	10	8	6	3	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.6	4.6	9.3	16.8	20.4	20.0	16.3	8.7	4.5	.5	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.9	7.6	16.0	24.9	29.9	29.9	24.7	15.7	7.5	.9	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.7	5.6	11.5	19.5	23.1	22.9	18.9	10.9	5.5	.7	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.4	3.6	7.6	14.1	17.7	17.0	13.8	7.2	3.5	.4	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.2	1.6	4.3	8.5	11.1	11.0	8.7	4.1	1.5	.2	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	1	1	2	3	1	1	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	2	15	34	49	60	45	40	30	13	1	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	4	9	12	14	14	12	9	4	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	1	6	10	11	11	10	6	1	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	0	4	7	9	9	7	4	0	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	-50	-36	-22	-8	8	22	36	50	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	-49	-36	-22	-7	7	22	36	49	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	0	-35	-21	-7	7	21	35	0	0	0	0	0	0	

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 2.6.12

FREQUENCIES PER THOUSAND OF OCCURRENCES OF HOURLY VALUES OF DIFFUSE SOLAR RADIATION AT AND ABOVE SPECIFIED LIMITS

DECEMBER

RADN.GT.EQ. J/CM2 (WH/M2)	HOURS L.A.T. 03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	TOTAL
234 (0650)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225 (0625)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 (0600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207 (0575)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198 (0550)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
189 (0525)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180 (0500)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171 (0475)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162 (0450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
153 (0425)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
144 (0400)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
135 (0375)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126 (0350)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117 (0325)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108 (0300)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
099 (0275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090 (0250)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
081 (0225)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
072 (0200)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
063 (0175)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
054 (0150)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
045 (0125)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
036 (0100)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
027 (0075)	-	-	-	-	-	-	-	-	13	10	-	-	-	-	-	-	-	-	23
018 (0050)	-	-	-	-	-	-	-	26	139	135	19	-	-	-	-	-	-	-	319
009 (0025)	-	-	-	-	-	-	26	468	642	665	432	6	-	-	-	-	-	-	2239
001 (0003)	-	-	-	-	-	94	916	987	984	981	971	932	68	-	-	-	-	-	5933
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	18000
MEAN	0	0	0	0	0	0	3	8	11	11	8	3	0	0	0	0	0	0	
S.D.	0	0	0	0	0	0	2	5	6	6	4	2	0	0	0	0	0	0	
MEDIAN	.0	.0	.0	.0	.0	.6	4.7	8.5	11.5	11.8	8.0	4.7	.5	.0	.0	.0	.0	.0	
1ST QUINTILE	.0	.0	.0	.0	.0	.9	7.4	14.5	16.9	16.9	14.1	7.3	.9	.0	.0	.0	.0	.0	
2ND QUINTILE	.0	.0	.0	.0	.0	.7	5.6	10.4	13.3	13.5	9.7	5.6	.6	.0	.0	.0	.0	.0	
3RD QUINTILE	.0	.0	.0	.0	.0	.4	3.8	7.0	9.8	10.1	6.5	3.9	.4	.0	.0	.0	.0	.0	
4TH QUINTILE	.0	.0	.0	.0	.0	.2	2.0	3.9	5.3	5.6	3.5	2.1	.2	.0	.0	.0	.0	.0	
MIN VALUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAX VALUE	0	0	0	0	0	8	11	22	28	30	22	9	1	0	0	0	0	0	
ALTITUDE OF SUN 05	0	0	0	0	0	0	2	6	7	7	6	2	0	0	0	0	0	0	
ALTITUDE OF SUN 15	0	0	0	0	0	0	1	5	6	6	5	1	0	0	0	0	0	0	
ALTITUDE OF SUN 25	0	0	0	0	0	0	1	4	6	6	4	1	0	0	0	0	0	0	
AZIMUTH OF SUN 05	0	0	0	0	0	0	-34	-21	-7	7	21	34	0	0	0	0	0	0	
AZIMUTH OF SUN 15	0	0	0	0	0	0	-34	-21	-7	7	21	34	0	0	0	0	0	0	
AZIMUTH OF SUN 25	0	0	0	0	0	0	-34	-21	-7	7	21	34	0	0	0	0	0	0	

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 3.1 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE

RANGE GT.OR EQ. (TENTHS OF HRS)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
160	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	3	17	6	-	-	-	-	-	2
140	-	-	-	-	32	50	45	3	-	-	-	-	11
130	-	-	-	17	71	97	74	35	-	-	-	-	25
120	-	-	-	47	113	107	100	61	3	-	-	-	36
115	-	-	-	63	129	120	110	97	13	-	-	-	45
110	-	-	-	93	152	130	119	110	17	-	-	-	52
105	-	-	10	133	177	153	126	132	27	-	-	-	64
100	-	-	19	147	203	180	142	155	57	-	-	-	76
095	-	-	39	180	239	210	161	171	80	3	-	-	91
090	-	4	84	220	258	243	194	197	100	3	-	-	109
085	-	14	113	250	297	257	210	255	147	10	-	-	130
080	-	39	139	280	326	300	239	277	167	35	3	-	151
075	3	46	158	313	348	327	252	297	213	45	7	-	168
070	6	82	181	337	384	357	284	323	233	74	13	-	190
065	19	96	206	357	435	397	303	352	260	87	37	-	213
060	35	117	239	393	468	423	323	394	297	116	53	19	240
055	42	149	287	420	500	447	361	423	343	142	73	32	269
050	45	191	348	463	523	480	406	458	363	177	100	45	300
045	68	234	390	513	545	497	435	481	407	232	123	61	332
040	110	277	416	563	587	547	487	506	450	277	160	87	372
035	132	333	477	593	619	570	497	545	480	342	207	123	410
030	184	422	526	610	655	610	548	577	510	397	237	161	453
025	226	475	568	670	684	647	577	603	553	432	283	194	492
020	277	521	606	707	726	677	606	642	603	468	343	226	533
015	342	571	642	737	771	713	655	668	653	532	403	294	581
010	419	621	674	760	826	753	735	719	710	577	463	352	634
008	452	635	697	787	855	763	758	742	743	597	490	381	658
006	484	652	735	810	871	810	787	774	773	629	520	419	689
004	497	702	761	823	894	827	819	819	817	674	553	455	720
002	552	755	810	850	910	860	858	855	860	719	583	513	760
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	1.3	2.6	3.6	5.0	5.7	5.4	4.7	4.8	3.9	2.4	1.7	1.1	3.5
S.D.	1.8	2.5	3.2	4.0	4.3	4.6	4.4	4.2	3.4	2.5	2.0	1.6	3.7
MEDIAN	.4	2.2	3.3	4.6	5.5	4.5	3.5	4.1	3.2	1.8	.7	.2	2.4
1S QUINTILE	2.8	4.9	6.6	9.3	10.1	9.7	8.8	9.0	7.6	4.8	3.6	2.4	6.8
2ND QUINTILE	1.1	3.1	4.3	5.9	6.8	6.4	5.1	5.9	4.6	3.0	1.5	.7	3.6
3RD QUINTILE	.2	1.2	2.1	3.3	3.8	3.1	2.1	2.6	2.0	.8	.2	.2	1.3
4TH QUINTILE	.1	.2	.2	.7	1.2	.6	.5	.5	.5	.1	.1	.1	.2
MIN VALUE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX VALUE	7.5	9.0	10.6	13.5	15.1	15.6	15.2	14.4	12.1	9.6	8.1	6.4	15.6

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 3.2 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE

RANGE GT.OR EQ. (TENTHS OF HRS)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
160	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	20	26	-	-	-	-	-	4
140	-	-	-	-	13	33	52	-	-	-	-	-	8
130	-	-	-	13	58	60	103	13	-	-	-	-	21
120	-	-	-	60	77	93	110	32	-	-	-	-	31
115	-	-	-	67	97	107	116	58	-	-	-	-	37
110	-	-	-	87	110	113	135	71	13	-	-	-	44
105	-	-	13	120	142	120	148	71	47	-	-	-	55
100	-	-	26	147	155	147	148	84	73	-	-	-	65
095	-	-	52	167	187	173	155	97	100	6	-	-	78
090	-	-	77	200	219	207	161	116	113	13	-	-	93
085	-	14	116	227	239	267	200	129	153	26	-	-	114
080	-	28	142	267	303	287	245	148	187	45	-	-	138
075	-	43	155	313	335	313	271	174	233	65	13	-	160
070	-	64	206	347	348	347	303	245	273	84	20	-	187
065	-	64	232	380	419	380	310	323	307	103	53	6	215
060	19	85	271	453	432	407	329	342	353	129	87	13	244
055	45	113	310	473	452	420	355	361	400	174	127	26	272
050	103	163	348	500	503	467	419	387	433	200	160	45	311
045	116	220	394	540	555	500	445	432	473	252	207	65	350
040	129	270	419	560	581	553	471	477	533	303	260	84	387
035	161	291	452	580	606	627	490	510	567	374	300	155	426
030	213	369	484	613	658	660	535	535	600	419	313	181	465
025	277	433	510	627	690	680	561	600	633	471	353	219	504
020	329	461	535	667	710	733	632	652	660	529	393	245	545
015	387	532	555	700	755	773	684	677	707	561	447	303	590
010	419	589	652	760	800	833	716	748	760	581	480	361	641
008	458	631	658	807	806	853	735	768	767	594	520	387	665
006	490	674	671	807	826	880	761	787	807	639	533	432	692
004	529	709	723	833	865	893	794	839	833	684	567	477	728
002	587	766	774	867	884	933	858	865	853	742	647	516	774
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	1.5	2.4	3.5	5.0	5.4	5.4	4.7	4.2	4.4	2.6	2.0	1.2	3.5
S.D.	1.9	2.4	3.3	4.0	4.1	4.2	4.5	3.6	3.4	2.6	2.3	1.7	3.6
MEDIAN	.6	1.7	2.7	5.0	5.0	4.5	3.4	3.7	4.3	2.3	.9	.3	2.6
1ST QUINTILE	3.1	4.7	7.1	9.0	9.3	9.1	8.5	7.3	7.9	5.0	4.6	2.8	6.8
2ND QUINTILE	1.3	2.8	4.4	6.4	6.6	6.1	5.2	4.9	5.5	3.2	1.9	.7	3.8
3RD QUINTILE	.2	1.0	1.3	3.2	3.6	3.7	2.2	2.5	3.0	.8	.3	.2	1.4
4TH QUINTILE	.1	.2	.2	.8	1.0	1.3	.4	.6	.6	.2	.1	.1	.2
MIN VALUE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX VALUE	5.2	8.7	10.6	13.3	14.2	15.4	15.2	13.2	11.3	9.7	7.7	6.6	15.4

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 3.3 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE

RANGE GT.OR EQ. (TENTHS OF HRS)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
160	-	-	-	-	-	-	5	-	-	-	-	-	-
150	-	-	-	-	-	33	14	-	-	-	-	-	4
140	-	-	-	-	32	71	41	-	-	-	-	-	12
130	-	-	-	24	55	86	55	14	-	-	-	-	20
120	-	-	-	67	74	105	60	37	-	-	-	-	29
115	-	-	5	76	83	124	92	51	5	-	-	-	36
110	-	-	5	110	97	133	106	55	10	-	-	-	43
105	-	-	23	129	115	148	138	69	24	-	-	-	54
100	-	-	41	148	143	186	143	83	57	-	-	-	67
095	-	-	55	171	175	224	152	115	67	9	-	-	81
090	-	15	88	195	198	252	161	124	86	23	-	-	95
085	-	36	115	238	221	286	180	147	114	41	-	-	115
080	5	51	124	271	253	319	230	180	148	55	-	-	137
075	9	86	171	310	286	338	253	203	186	92	10	-	162
070	18	112	198	343	336	357	281	235	233	106	52	23	191
065	41	157	235	390	359	395	286	272	271	129	76	28	220
060	55	183	267	429	369	429	332	309	310	143	124	32	248
055	83	208	304	476	387	490	382	346	352	166	171	51	284
050	106	254	346	514	415	533	419	387	400	217	200	74	322
045	115	294	387	552	475	567	470	452	433	258	229	88	360
040	115	320	433	562	507	619	498	488	471	286	267	124	390
035	147	340	452	586	562	652	567	539	543	327	290	161	430
030	198	365	488	624	608	705	618	585	600	359	343	194	474
025	221	401	512	662	654	719	645	627	629	392	381	212	504
020	309	452	571	690	719	757	700	654	643	429	419	253	550
015	382	492	608	724	733	805	728	714	695	479	467	286	593
010	429	558	664	781	788	833	783	765	748	576	490	318	644
008	470	604	682	805	816	852	802	793	771	604	514	323	669
006	493	609	724	833	829	862	825	811	776	622	533	373	691
004	493	640	742	843	848	886	857	834	795	664	567	415	715
002	530	706	765	862	899	919	899	866	814	728	610	470	755
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	1.5	2.6	3.6	5.2	5.0	5.8	4.8	4.4	4.1	2.5	2.2	1.2	3.6
S.D.	2.0	2.9	3.3	4.0	4.1	4.4	4.1	3.6	3.3	2.8	2.5	1.9	3.6
MEDIAN	.4	1.4	2.8	5.2	4.1	5.4	4.0	3.9	3.8	1.4	.9	.2	2.6
1ST QUINTILE	3.0	5.7	7.0	8.9	9.0	9.8	8.3	7.6	7.4	5.2	5.0	2.8	6.8
2ND QUINTILE	1.3	2.5	4.4	6.4	5.3	6.4	5.3	4.9	5.0	2.4	2.3	.5	3.9
3RD QUINTILE	.2	.8	1.6	3.3	3.1	4.2	3.2	2.8	3.0	.8	.3	.2	1.4
4TH QUINTILE	.1	.1	.2	.8	.9	1.6	.8	.7	.4	.2	.1	.1	.2
MIN VALUE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX VALUE	8.1	9.4	11.5	13.6	14.8	15.9	16.0	13.9	11.5	9.7	7.9	7.3	16.0

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 3.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE

RANGE GT.OR EQ. (TENTHS OF HRS)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
160	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	4	75	16	-	-	-	-	-	8
140	-	-	-	-	56	196	97	8	-	-	-	-	30
130	-	-	-	42	141	271	185	52	-	-	-	-	58
120	-	-	-	79	238	329	250	165	8	-	-	-	90
115	-	-	-	113	270	346	302	194	21	-	-	-	104
110	-	-	20	171	290	375	351	246	88	-	-	-	129
105	-	-	44	208	343	400	379	270	133	4	-	-	149
100	-	-	101	242	391	442	431	298	167	24	-	-	176
095	-	18	161	283	411	483	456	339	217	60	-	-	203
090	-	31	194	338	444	513	500	399	258	125	4	-	235
085	-	49	250	371	460	546	520	419	300	165	8	-	258
080	-	80	278	421	484	567	536	444	342	198	17	-	281
075	16	120	302	463	516	588	556	468	375	250	46	12	310
070	28	156	327	471	544	613	569	492	425	306	75	24	337
065	44	196	359	500	585	625	605	536	458	323	79	40	363
060	65	249	395	533	621	646	649	560	483	383	121	65	398
055	81	284	440	563	637	683	685	609	529	419	154	89	432
050	85	342	472	608	677	700	714	625	546	448	188	113	460
045	117	382	500	625	702	713	730	669	600	508	221	157	494
040	141	404	548	671	726	738	770	710	646	552	267	190	531
035	181	427	589	708	758	763	798	746	679	565	296	214	561
030	230	444	629	746	770	775	819	770	692	617	329	270	592
025	282	516	653	775	790	804	843	806	717	645	392	302	628
020	331	551	710	800	819	817	851	843	746	661	450	319	658
015	379	578	746	833	839	833	871	859	788	698	504	383	693
010	448	631	778	854	863	854	895	883	833	742	558	440	732
008	484	662	794	871	875	854	903	899	850	754	596	460	750
006	520	702	810	875	891	858	903	915	875	782	629	488	771
004	569	720	839	892	903	871	915	923	892	815	646	516	792
002	621	747	859	917	927	904	923	923	904	851	704	548	819
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	1.6	3.2	4.8	6.4	7.5	8.3	8.0	6.9	5.7	4.4	2.3	1.7	5.1
S.D.	2.0	3.0	3.7	4.1	4.7	5.2	4.7	4.3	3.8	3.4	2.5	2.2	4.4
MEDIAN	.7	2.6	4.5	6.5	7.8	9.2	9.0	6.9	5.8	4.6	1.5	.5	4.4
1ST QUINTILE	3.3	6.5	9.0	10.6	12.4	14.0	12.8	11.4	9.7	8.0	4.8	3.8	9.6
2ND QUINTILE	1.4	4.1	5.9	8.2	9.8	10.5	10.3	9.0	7.3	5.8	2.4	1.4	6.0
3RD QUINTILE	.3	1.3	3.4	5.1	6.3	7.3	6.6	5.6	4.5	3.2	.8	.2	2.9
4TH QUINTILE	.1	.2	.7	2.0	2.3	2.6	3.5	2.6	1.4	.5	.1	.1	.3
MIN VALUE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX VALUE	7.9	9.7	11.4	13.5	15.2	15.6	15.5	14.4	12.2	10.6	9.1	7.7	15.6

KEW 51.47N 0.32W ALTITUDE 54 PERIOD OF OBSERVATIONS 1966-1975

TABLE 3.5 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE

RANGE GT.OR EQ. (TENTHS OF HRS)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
160	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	13	6	-	-	-	-	-	2
140	-	-	-	-	23	97	45	-	-	-	-	-	14
130	-	-	-	7	84	153	90	26	-	-	-	-	30
120	-	-	-	27	148	220	142	74	-	-	-	-	51
115	-	-	-	53	168	257	161	116	3	-	-	-	64
110	-	-	-	80	203	293	177	174	21	-	-	-	80
105	-	-	6	110	232	323	213	210	51	-	-	-	96
100	-	-	32	137	258	353	265	232	71	-	-	-	113
095	-	-	55	170	284	387	297	261	103	19	-	-	132
090	-	14	90	190	319	413	323	290	133	45	-	-	152
085	-	36	119	220	365	430	355	319	173	77	-	-	175
080	-	50	158	260	381	467	374	345	231	110	10	-	200
075	3	89	194	303	413	503	413	368	310	135	30	-	231
070	10	114	239	340	429	530	448	413	333	177	53	-	258
065	26	153	277	403	458	577	497	442	393	235	103	10	298
060	35	178	323	427	503	593	513	481	430	268	130	39	327
055	68	210	345	453	526	613	552	519	460	332	180	65	361
050	90	238	397	473	565	657	590	587	503	374	213	97	399
045	119	267	423	507	613	687	629	606	550	403	257	119	432
040	145	302	461	553	668	727	655	648	597	426	290	148	469
035	168	327	494	567	697	747	690	697	653	458	333	174	501
030	206	359	555	583	726	763	735	716	707	484	367	194	534
025	229	388	577	633	755	797	781	755	733	516	403	245	568
020	261	441	613	663	781	820	810	784	750	552	440	303	602
015	297	495	645	720	823	853	848	816	777	590	463	339	639
010	352	541	687	750	858	880	871	858	807	629	533	387	680
008	368	552	723	763	868	890	887	874	813	655	563	410	698
006	413	601	745	790	884	907	900	874	830	687	590	452	723
004	445	626	771	817	900	913	906	900	850	703	627	484	746
002	513	648	790	833	926	927	932	916	867	748	667	513	774
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	1.3	2.5	3.9	4.9	6.3	7.4	6.5	6.0	5.0	3.4	2.4	1.4	4.3
S.D.	2.0	2.9	3.3	4.0	4.4	4.7	4.3	4.1	3.4	3.2	2.5	1.9	4.0
MEDIAN	.2	1.5	3.5	4.6	6.0	7.5	6.4	5.8	5.0	2.8	1.2	.3	3.5
1ST QUINTILE	3.1	5.7	7.4	8.8	11.0	12.3	10.7	10.6	8.3	6.8	5.2	2.9	8.0
2ND QUINTILE	.7	2.4	4.9	6.5	7.7	9.3	7.7	7.1	6.4	4.6	2.5	.9	5.0
3RD QUINTILE	.2	.6	2.2	2.8	4.6	5.8	4.9	4.7	4.0	1.4	.6	.2	2.0
4TH QUINTILE	.1	.1	.2	.5	1.8	2.4	2.2	1.8	1.1	.2	.1	.1	.2
MIN VALUE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX VALUE	7.5	9.2	10.9	13.4	14.9	15.1	15.3	13.8	11.5	9.9	8.2	6.8	15.3

LERWICK 60.13N 1.18W ALTITJDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 3.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE

RANGE GT.OR EQ. (TENTHS OF HRS)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
160	-	-	-	-	-	20	-	-	-	-	-	-	2
150	-	-	-	-	10	43	13	-	-	-	-	-	5
140	-	-	-	-	19	87	26	6	-	-	-	-	12
130	-	-	-	-	39	130	39	19	-	-	-	-	19
120	-	-	-	10	58	167	58	65	-	-	-	-	30
115	-	-	-	20	84	193	68	87	-	-	-	-	38
110	-	-	-	47	110	213	90	97	13	-	-	-	48
105	-	-	13	77	126	233	106	113	20	-	-	-	58
100	-	-	16	97	142	260	123	129	23	-	-	-	66
095	-	-	23	127	177	273	135	142	27	-	-	-	76
090	-	-	32	143	184	290	152	177	57	3	-	-	87
085	-	11	45	183	219	320	168	197	73	3	-	-	102
080	-	18	68	217	239	333	184	216	90	16	-	-	115
075	-	28	94	263	274	360	226	239	113	39	-	-	137
070	-	39	117	303	290	397	245	268	140	55	-	-	155
065	-	68	146	330	316	420	277	287	173	74	7	-	175
060	-	93	184	370	339	457	316	316	193	97	7	-	198
055	-	146	227	400	365	477	352	352	220	126	13	-	223
050	10	171	246	463	397	520	387	381	270	158	17	-	252
045	10	199	282	490	426	547	410	410	293	200	40	3	276
040	23	238	330	543	468	570	435	432	343	232	60	6	307
035	52	281	369	567	516	603	465	439	380	281	83	16	337
030	74	317	427	610	545	617	510	490	407	316	130	26	372
025	94	349	466	667	574	637	565	535	447	371	167	39	409
020	119	388	495	690	590	670	594	577	493	406	230	65	443
015	161	445	553	703	626	707	661	623	553	458	310	110	492
010	187	502	608	757	668	723	706	677	600	523	407	158	542
008	216	523	631	770	700	743	732	690	610	555	450	194	567
006	258	552	650	783	716	763	755	710	623	584	480	258	594
004	300	587	673	820	742	783	777	732	650	639	527	287	626
002	339	662	702	843	781	810	823	784	707	668	580	358	671
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	.6	2.1	2.8	4.6	4.5	5.9	4.3	4.2	2.9	2.1	1.1	.4	3.0
S.D.	1.1	2.4	2.9	3.6	4.3	5.1	4.1	4.1	3.1	2.4	1.4	.8	3.6
MEDIAN	.2	1.0	2.0	4.4	3.7	5.2	3.1	2.9	1.9	1.2	.5	.2	1.4
1S QUINTILE	.9	4.5	5.8	8.3	8.8	11.3	7.8	8.4	5.9	4.5	2.2	.8	6.0
2ND QUINTILE	.2	1.9	3.2	5.5	5.0	6.9	4.7	4.7	3.1	2.1	1.0	.2	2.6
3RD QUINTILE	.1	.4	1.1	3.1	1.9	3.6	2.0	1.8	1.0	.5	.2	.1	.6
4TH QUINTILE	.1	.1	.1	.5	.2	.3	.3	.2	.1	.1	.1	.1	.1
MIN VALUE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX VALUE	5.2	8.9	10.9	12.8	15.6	17.1	15.4	14.8	11.3	9.4	6.8	4.8	17.1

ABERPORTH 52.13N 4.57W ALTITUDE 134M PERIOD OF OBSERVATIONS 1966-1975

TABLE 3.7 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE

RANGE GT.OR EQ. (TENTHS OF HRS)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
160	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	10	37	6	-	-	-	-	-	4
140	-	-	-	-	42	110	42	-	-	-	-	-	16
130	-	-	-	3	103	177	94	19	-	-	-	-	33
120	-	-	-	50	152	250	145	65	3	-	-	-	56
115	-	-	-	80	181	273	165	90	13	-	-	-	67
110	-	-	3	120	197	287	177	119	30	-	-	-	78
105	-	-	13	140	232	310	203	148	67	-	-	-	93
100	-	-	52	173	255	337	242	200	97	6	-	-	114
095	-	7	77	197	290	367	274	223	123	16	-	-	132
090	-	25	106	253	316	400	294	248	167	35	-	-	154
085	-	25	135	273	348	427	316	268	203	74	-	-	173
080	-	46	155	313	371	460	358	303	233	81	7	-	194
075	-	82	203	353	400	480	384	339	290	103	23	-	222
070	13	110	252	403	452	503	426	374	307	145	37	-	252
065	23	160	277	447	494	527	455	410	333	165	53	19	280
060	45	181	319	467	523	563	494	442	353	203	73	39	309
055	68	206	345	487	555	600	523	465	387	235	87	52	334
050	84	238	387	510	581	630	561	506	430	284	120	77	368
045	97	274	432	553	606	650	600	558	487	332	163	103	405
040	113	317	471	593	655	670	639	610	540	361	190	119	440
035	129	356	503	627	677	687	690	642	603	400	230	148	475
030	152	384	542	660	706	717	700	665	650	448	300	181	509
025	210	431	587	690	742	747	729	681	687	474	327	232	545
020	258	484	623	733	771	773	768	716	710	535	367	281	585
015	310	544	658	743	777	803	816	748	737	571	430	323	622
010	368	580	710	777	803	837	842	794	787	639	477	394	667
008	413	591	732	787	816	837	858	813	813	655	503	426	687
006	435	630	752	800	842	870	861	832	843	684	540	448	712
004	484	658	777	833	877	890	887	852	863	726	560	487	741
002	532	712	813	863	903	907	910	868	897	787	623	535	779
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	1.3	2.7	4.0	5.4	6.3	7.2	6.2	5.4	4.7	3.1	1.9	1.3	4.1
S.D.	1.9	2.8	3.4	4.0	4.6	5.0	4.4	4.1	3.5	2.9	2.2	1.9	4.1
MEDIAN	.3	1.9	3.6	5.2	6.4	7.1	5.9	5.1	4.4	2.3	.8	.4	3.1
1S QUINTILE	2.6	5.6	7.5	9.5	11.0	12.7	10.6	10.0	8.5	6.0	3.9	2.8	7.9
2ND QUINTILE	.9	2.8	4.9	7.0	7.5	9.0	7.3	6.6	5.4	3.5	1.7	1.0	4.6
3RD QUINTILE	.2	.8	2.3	3.9	4.6	5.5	4.5	4.1	3.5	1.3	.3	.2	1.8
4TH QUINTILE	.1	.1	.3	.6	1.1	1.6	1.7	.9	.9	.2	.1	.1	.2
MIN VALUE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MAX VALUE	7.3	9.6	11.2	13.3	15.3	15.6	15.0	13.7	12.8	10.2	8.2	6.9	15.6

VALENTIA OBSERVATORY 51.93N 10.25W ALTITUDE 9M PERIOD OF OBSERVATIONS 1966-1975

TABLE 4.1 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE EXPRESSED AS A PERCENTAGE OF POSSIBLE

RANGE GT.OR EQ. (PERCENTAGES)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
100	-	-	-	-	-	-	-	-	-	-	-	-	-
095	-	-	-	-	-	-	-	-	-	-	-	-	-
090	-	-	-	17	32	30	19	32	-	-	-	-	11
085	-	18	26	53	55	53	52	52	23	-	3	-	28
080	16	35	48	97	94	90	77	84	37	19	13	10	52
075	29	60	77	133	119	100	97	113	67	39	27	19	73
070	42	71	113	177	155	113	113	142	110	65	50	29	98
065	45	85	158	217	203	143	132	174	150	68	60	45	123
060	58	113	177	267	242	183	161	229	200	87	83	58	155
055	68	149	213	303	290	243	203	281	247	110	107	68	190
050	100	209	258	333	342	280	235	306	287	152	123	90	226
045	129	238	316	377	390	330	277	345	333	197	163	123	268
040	142	298	368	430	452	397	306	400	370	242	200	145	312
035	190	333	410	483	497	427	352	452	420	310	227	181	357
030	229	426	468	543	542	493	419	484	463	371	263	194	407
025	268	482	523	593	606	543	481	539	500	423	333	232	460
020	326	532	571	640	648	593	529	587	550	455	360	284	506
015	384	574	626	697	690	647	581	635	610	526	440	342	562
010	439	621	661	740	765	700	645	668	663	577	483	381	611
005	497	684	742	803	865	763	758	761	770	645	543	455	690
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	16.0	26.2	30.5	36.3	36.9	32.4	28.9	33.2	30.8	23.0	18.7	14.4	27.3
S.D.	21.2	31.3	26.7	28.7	27.8	27.6	27.1	28.7	26.6	23.6	23.0	20.7	26.7
MEDIAN	5.0	23.2	27.1	33.6	34.7	29.3	23.0	28.5	25.0	16.8	8.6	4.6	20.7
1S QUINTILE	33.7	50.8	56.8	67.1	65.3	58.6	55.4	62.6	60.0	44.7	40.0	29.2	53.6
2ND QUINTILE	13.5	31.4	36.2	42.8	44.2	39.5	31.4	40.0	37.0	27.2	17.5	8.7	30.7
3RD QUINTILE	4.0	12.2	17.4	24.3	25.5	19.4	13.5	18.6	15.8	8.3	4.4	3.7	11.1
4TH QUINTILE	2.0	3.2	3.9	5.2	8.3	4.2	4.1	4.2	4.3	2.8	2.2	1.8	3.2

BIRR 53.08N 7.88W ALTITUDE 70M PERIOD OF OBSERVATIONS 1971-1975

TABLE 4.2 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE EXPRESSED AS A PERCENTAGE OF POSSIBLE

RANGE GT.OR EQ. (PERCENTAGES)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
100	-	-	-	-	-	-	-	-	-	-	-	-	-
095	-	-	-	-	-	-	-	-	-	-	-	-	-
090	-	-	-	20	6	13	39	-	-	-	-	-	7
085	-	14	13	47	32	33	65	19	20	13	13	6	23
080	6	21	65	93	65	53	77	39	53	32	20	13	45
075	6	50	77	127	84	73	110	65	87	45	53	13	66
070	19	57	129	153	110	93	116	71	120	58	60	26	84
065	65	78	168	200	148	113	148	103	167	84	100	45	118
060	90	92	187	247	187	140	148	123	227	116	167	65	149
055	116	113	245	293	245	193	174	135	287	135	173	84	183
050	123	170	284	353	316	267	206	200	353	187	220	116	233
045	148	248	329	407	355	307	271	303	387	232	267	155	284
040	187	262	368	473	426	380	316	348	433	290	300	174	330
035	232	312	426	507	445	413	348	381	473	329	320	206	366
030	277	369	445	553	523	467	419	432	540	413	340	226	417
025	316	426	490	587	587	527	465	503	587	458	380	245	464
020	387	461	510	620	652	640	523	555	627	523	420	303	518
015	394	532	542	660	703	680	568	626	660	555	453	342	559
010	458	596	613	700	748	760	677	684	720	581	513	387	619
005	529	681	677	807	813	853	735	774	806	645	567	477	696
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	18.0	24.1	29.5	36.0	34.0	31.9	28.8	28.7	34.4	25.1	23.1	15.7	27.4
S.D.	22.4	24.0	28.2	28.6	26.1	24.6	27.4	24.4	26.8	24.6	26.5	21.9	26.2
MEDIAN	7.0	17.3	22.5	36.0	31.5	27.3	22.0	25.2	33.0	21.8	11.1	4.8	21.7
1ST QUINTILE	38.6	48.1	58.9	65.0	58.9	54.5	50.9	50.0	62.3	48.6	52.1	35.9	53.3
2ND QUINTILE	14.5	27.3	37.2	45.6	41.8	37.0	31.3	33.1	43.6	30.8	22.5	9.3	31.7
3RD QUINTILE	4.2	9.8	10.9	23.0	24.0	21.8	13.5	16.8	23.4	8.5	4.6	3.8	11.6
4TH QUINTILE	2.1	3.1	3.1	5.3	6.0	7.8	3.8	4.4	5.0	2.8	2.3	1.9	3.3

KILKENNY 52.67N 7.27W ALTITUDE 163M PERIOD OF OBSERVATIONS 1969-1975

TABLE 4.3 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE EXPRESSED AS A PERCENTAGE OF POSSIBLE

RANGE GT.OR EQ. (PERCENTAGES)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
100	-	-	-	-	-	-	-	-	-	-	-	-	-
095	5	5	-	5	5	-	14	9	-	-	-	-	4
090	9	10	18	52	23	33	18	9	-	9	-	23	17
085	23	41	46	86	41	71	46	18	10	14	24	28	37
080	32	46	78	105	60	86	55	32	33	37	33	32	52
075	41	91	92	133	78	95	55	55	67	69	52	46	73
070	65	137	124	162	101	110	88	88	90	78	114	55	101
065	74	162	147	195	147	133	129	106	129	106	162	74	130
060	106	188	198	252	175	181	152	143	162	134	171	78	161
055	115	218	235	300	217	238	171	171	243	157	200	101	196
050	115	269	263	357	263	295	212	217	295	198	233	124	236
045	129	305	313	414	309	338	263	267	333	235	257	157	276
040	171	330	378	481	359	376	286	313	395	267	295	189	319
035	198	340	419	519	382	457	373	382	429	313	343	203	363
030	221	365	452	562	442	533	424	470	505	346	376	221	409
025	286	406	493	586	525	595	493	535	576	382	405	253	461
020	350	452	530	643	599	676	594	590	629	419	443	281	517
015	410	492	585	681	673	719	654	645	648	456	467	309	561
010	470	563	650	733	733	795	728	714	714	562	500	323	624
005	493	624	724	819	820	852	802	811	771	631	562	415	694
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	17.8	26.7	30.1	37.1	31.6	34.8	29.6	29.6	32.0	23.6	24.5	15.8	27.7
S.D.	24.0	36.7	28.2	28.9	26.0	26.0	25.0	24.5	25.6	25.9	28.1	24.7	27.0
MEDIAN	4.9	14.4	24.1	37.5	26.5	32.2	24.7	27.7	30.3	12.9	10.0	4.3	21.5
1ST QUINTILE	34.6	58.0	59.7	64.6	57.0	58.3	51.5	51.8	57.7	49.7	55.0	36.1	54.5
2ND QUINTILE	15.8	25.7	37.3	46.2	33.5	38.5	32.4	34.0	39.3	22.6	25.9	5.8	31.0
3RD QUINTILE	3.9	7.0	13.8	23.8	19.9	24.7	19.5	19.1	22.7	7.2	4.6	3.4	11.9
4TH QUINTILE	2.0	2.7	3.6	6.1	6.1	9.6	5.1	5.6	4.4	2.7	2.3	1.7	3.3

JERSEY 49.20N 2.18W ALTITUDE 85M PERIOD OF OBSERVATIONS 1968-1975

TABLE 4.4 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE EXPRESSED AS A PERCENTAGE OF POSSIBLE

RANGE GT.OR EQ. (PERCENTAGES)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
100	-	-	-	-	-	-	-	-	-	-	-	-	-
095	-	-	-	-	8	25	20	16	-	4	4	-	7
090	8	4	12	42	60	133	101	101	38	52	13	16	49
085	16	44	73	108	145	225	165	165	108	101	29	24	101
080	32	71	129	167	222	283	218	206	171	153	42	36	144
075	40	111	202	225	274	329	270	274	229	194	71	56	190
070	65	147	258	283	323	367	351	319	267	234	83	77	231
065	77	191	282	333	375	404	403	363	325	302	117	93	273
060	85	236	310	396	435	471	448	419	392	335	154	117	317
055	89	276	359	454	464	513	516	456	446	383	183	153	358
050	121	329	415	483	512	563	536	488	475	415	213	173	394
045	141	378	448	533	556	600	569	532	525	472	263	202	435
040	177	396	480	563	613	625	621	585	550	528	292	226	471
035	222	427	540	608	645	671	681	617	604	552	313	278	514
030	262	453	585	671	694	708	726	690	667	589	375	302	560
025	310	507	629	713	738	738	770	734	688	629	417	310	599
020	355	547	669	763	770	771	815	786	725	661	467	359	641
015	395	578	722	800	798	808	843	835	758	694	517	415	681
010	472	627	774	838	839	829	867	863	808	738	571	460	724
005	556	707	810	871	879	854	903	907	875	786	633	516	775
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	18.5	31.7	40.3	46.1	48.7	51.4	51.1	48.7	45.0	41.0	25.3	20.3	39.0
S.D.	23.4	29.4	30.1	29.4	30.2	32.2	29.7	30.1	30.0	31.4	26.8	26.3	31.3
MEDIAN	8.3	25.6	38.3	48.3	51.3	56.5	56.2	48.6	47.5	42.5	16.7	6.4	36.6
1ST QUINTILE	37.4	64.0	75.1	77.2	81.4	86.4	81.7	80.7	77.5	74.3	52.2	45.3	73.8
2ND QUINTILE	14.7	39.4	51.3	59.7	62.9	65.5	65.3	61.7	59.3	52.3	27.0	16.3	49.3
3RD QUINTILE	4.5	12.8	28.3	35.9	41.1	45.0	42.0	37.7	35.4	28.6	7.7	4.1	24.9
4TH QUINTILE	2.3	3.4	6.4	15.0	14.8	16.1	21.7	18.6	10.8	4.7	2.7	2.1	4.4

KEW 51.47N 0.32W ALTITUDE 5M PERIOD OF OBSERVATIONS 1966-1975

TABLE 4.5 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE EXPRESSED AS A PERCENTAGE OF POSSIBLE

RANGE GT.OR EQ. (PERCENTAGES)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
100	-	-	-	-	-	-	-	-	-	-	-	-	-
095	-	-	-	-	-	-	-	-	-	-	-	-	-
090	3	7	-	7	13	30	10	16	-	13	-	-	8
085	6	28	19	33	71	87	61	58	20	35	23	10	38
080	13	57	48	77	113	140	103	110	77	68	53	16	73
075	29	89	74	117	158	203	139	174	103	106	97	48	111
070	39	117	126	160	203	253	171	223	157	142	120	61	148
065	58	146	177	200	255	310	216	261	227	190	157	90	191
060	87	181	239	233	300	367	287	306	277	229	190	97	233
055	113	203	277	290	365	413	332	345	353	284	217	119	276
050	132	246	310	353	403	443	371	371	407	355	257	148	316
045	152	263	377	417	429	510	426	445	460	394	287	174	361
040	187	310	410	450	481	567	500	490	493	416	330	187	402
035	206	331	452	480	535	607	545	581	563	452	360	213	444
030	223	359	497	530	597	657	610	613	620	468	390	252	485
025	248	395	558	567	674	727	652	684	687	510	420	303	536
020	284	441	584	607	719	753	719	716	730	535	453	329	573
015	332	491	635	663	758	810	800	771	757	581	480	361	620
010	358	544	684	720	815	840	848	816	787	619	547	410	666
005	439	619	748	780	874	890	887	874	823	694	620	484	728
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	15.7	25.4	32.7	35.2	40.7	44.8	40.2	41.3	39.5	32.1	26.4	17.7	32.7
S.D.	23.1	28.4	27.7	28.3	28.0	28.3	26.7	27.8	26.7	29.6	28.6	24.4	28.8
MEDIAN	4.5	14.2	29.8	33.0	38.2	45.7	40.0	39.5	39.5	26.2	13.5	4.8	28.5
1ST QUINTILE	36.6	55.7	63.1	65.0	70.3	75.2	66.8	72.3	66.9	63.7	58.1	37.5	63.9
2ND QUINTILE	7.4	24.5	41.5	46.3	50.4	56.4	47.4	48.0	50.6	43.6	28.3	11.0	40.2
3RD QUINTILE	3.6	6.3	18.4	20.9	29.8	35.9	30.8	32.0	31.8	12.5	6.4	3.9	17.1
4TH QUINTILE	1.8	2.6	4.0	4.5	11.4	15.9	15.0	11.8	8.2	3.3	2.6	1.9	3.7

LERWICK 60.13N 1.18W ALTITUDE 82M PERIOD OF OBSERVATIONS 1966-1975

TABLE 4.6 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE EXPRESSED AS A PERCENTAGE OF POSSIBLE

RANGE GT.OR EQ. (PERCENTAGES)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
100	-	-	-	-	-	-	-	-	-	-	-	-	-
095	-	-	-	-	-	-	-	-	-	-	-	-	-
090	-	-	3	-	-	7	-	6	-	3	-	-	2
085	-	14	13	7	10	20	3	13	-	10	-	-	7
080	-	32	16	33	19	47	23	32	17	16	-	-	19
075	6	39	35	60	42	90	32	71	33	23	10	3	37
070	10	60	52	90	68	123	45	100	53	45	13	3	55
065	16	103	74	120	106	160	71	119	77	65	23	3	78
060	23	132	106	153	139	213	87	165	107	87	30	6	104
055	32	157	132	220	171	250	126	184	140	113	50	16	132
050	42	196	184	280	206	280	148	229	180	155	67	29	166
045	68	246	242	320	261	320	181	265	197	200	93	32	201
040	90	263	274	377	300	360	235	300	243	239	123	39	236
035	100	310	303	450	339	417	300	355	317	281	147	61	281
030	106	342	358	520	390	477	365	403	367	319	203	77	326
025	142	363	429	563	445	543	406	435	393	377	253	106	371
020	165	413	474	617	519	583	465	481	443	397	320	132	417
015	184	456	535	673	571	623	545	548	500	448	380	174	469
010	235	509	600	710	610	677	639	613	573	523	450	258	532
005	303	577	658	780	700	737	716	697	623	610	530	310	603
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	8.4	22.4	23.8	31.7	26.1	31.4	23.6	26.7	22.8	21.0	14.7	7.1	21.6
S.D.	16.2	25.7	24.0	25.0	25.0	27.2	22.6	26.3	23.9	23.4	18.5	13.3	24.1
MEDIAN	3.6	10.8	17.9	31.4	21.3	28.3	17.8	18.6	15.0	11.5	6.9	3.6	12.5
1S QUINTILE	13.4	49.6	48.6	56.5	50.9	61.2	43.2	53.2	44.7	45.0	30.3	13.5	45.1
2N. QUINTILE	4.3	21.3	27.0	38.4	29.1	36.5	25.7	30.3	24.3	19.7	13.6	4.3	21.8
3RD QUINTILE	2.9	4.7	10.0	21.6	11.3	17.9	12.1	11.0	7.3	5.6	4.3	2.9	5.2
4T. QUINTILE	1.4	2.4	2.9	4.5	3.3	3.8	3.5	3.3	2.7	2.6	2.1	1.4	2.5

ABERPORTH 52.13N 4.57W ALTITUDE 134M PERIOD OF OBSERVATIONS 1966-1975

TABLE 4.7 FREQUENCIES PER THOUSAND OF OCCURRENCES OF DAILY VALUES OF BRIGHT SUNSHINE EXPRESSED AS A PERCENTAGE OF POSSIBLE

RANGE GT.OR EQ. (PERCENTAGES)	JAN	FEB	MAR	APL	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
100	-	-	-	-	-	-	-	-	-	-	-	-	-
095	-	-	-	-	-	-	-	-	-	-	-	-	-
090	6	14	10	10	35	50	23	13	3	6	3	6	15
085	10	28	45	53	84	107	55	42	33	48	30	16	46
080	16	57	84	103	132	163	97	84	83	65	37	29	79
075	32	85	94	167	161	223	135	116	137	90	53	48	112
070	58	117	142	190	203	273	171	161	170	103	60	52	142
065	77	164	177	240	248	290	210	229	210	142	87	68	178
060	81	192	232	280	297	337	268	258	283	181	107	100	218
055	87	210	281	340	339	383	297	300	303	223	143	110	251
050	106	246	316	420	384	433	345	358	340	255	163	126	291
045	116	281	365	463	452	487	394	406	390	306	190	148	333
040	135	320	413	487	506	523	461	452	437	345	233	171	374
035	165	352	461	513	555	573	519	506	487	390	273	203	417
030	216	388	497	590	597	633	574	571	583	432	320	248	471
025	252	438	542	633	661	667	639	635	643	465	350	281	517
020	297	480	594	673	703	700	700	671	693	513	390	306	560
015	348	552	635	730	752	750	742	697	713	558	443	358	606
010	406	587	681	757	777	803	816	748	763	632	497	426	658
005	484	637	752	797	816	837	858	819	843	700	560	487	716
000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
MEAN	15.4	27.1	33.4	38.9	40.4	43.0	38.3	37.1	37.3	28.9	21.1	17.1	31.5
S.D.	22.4	28.1	28.4	28.8	29.0	30.2	27.2	27.9	27.5	27.7	25.3	23.8	28.7
MEDIAN	4.8	18.6	29.7	37.5	40.6	43.2	36.6	35.6	34.3	21.4	9.8	4.9	26.8
1S. QUINTILE	31.6	57.8	62.9	69.0	70.4	76.9	66.3	67.1	66.3	57.7	43.8	35.5	62.3
2ND QUINTILE	10.5	28.8	41.4	51.3	48.8	53.3	44.6	45.6	43.9	33.8	19.1	11.9	37.0
3RD QUINTILE	3.9	8.7	19.3	28.8	29.8	32.8	28.0	27.7	28.6	12.2	4.5	3.9	15.7
4TH QUINTILE	1.9	2.8	4.0	4.9	7.1	10.3	11.1	6.3	7.7	3.3	2.3	1.9	3.5

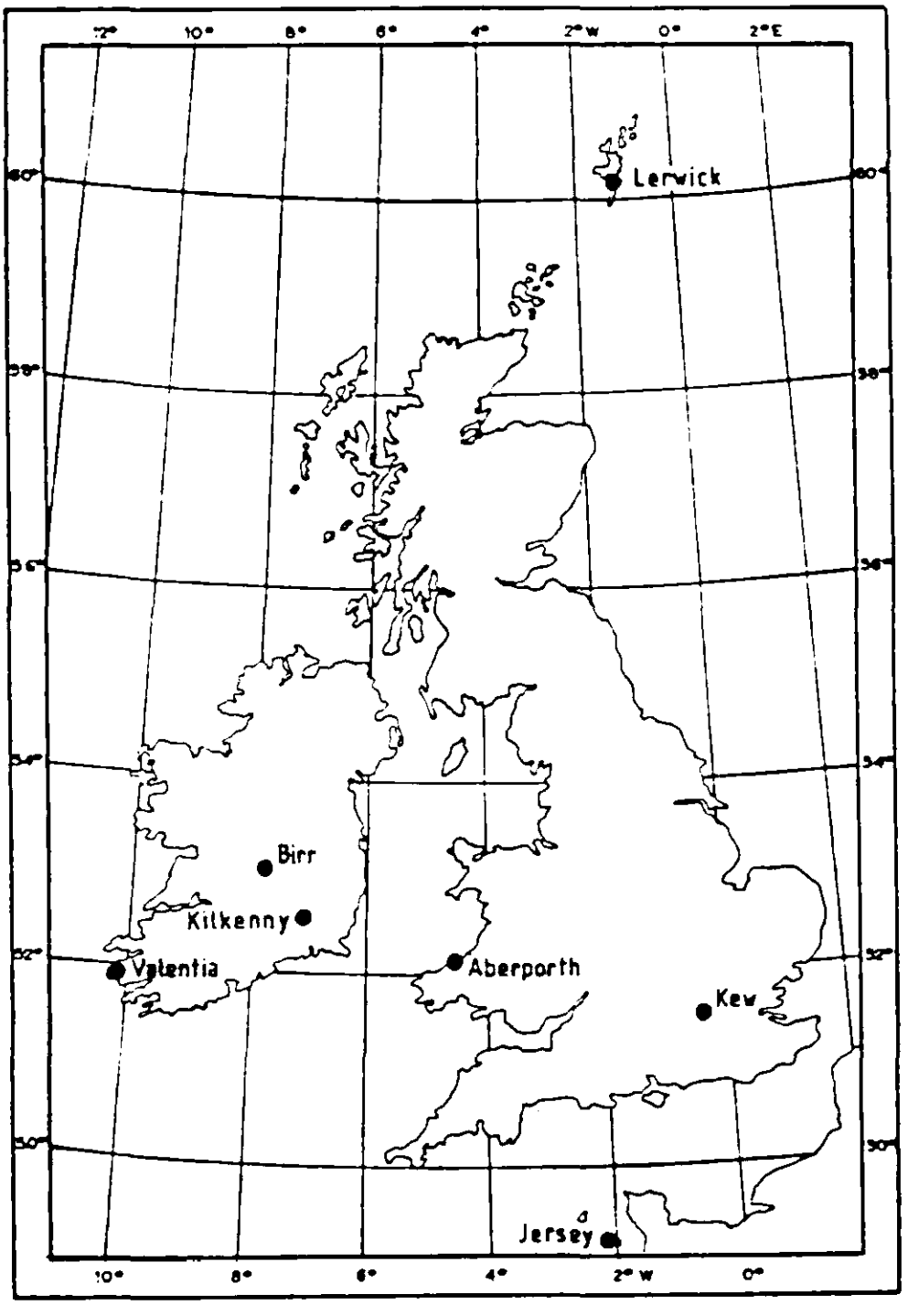
12°
10°
8°
6°
4°
2° W
0°
2° E
60°
58°
56°
54°
52°
50°
Lerwick
Birr
Kilkenny
Valentia
Aberporth
Kew
Jersey
10°
8°
6°
4°
2° W
0°

Fig. 1.

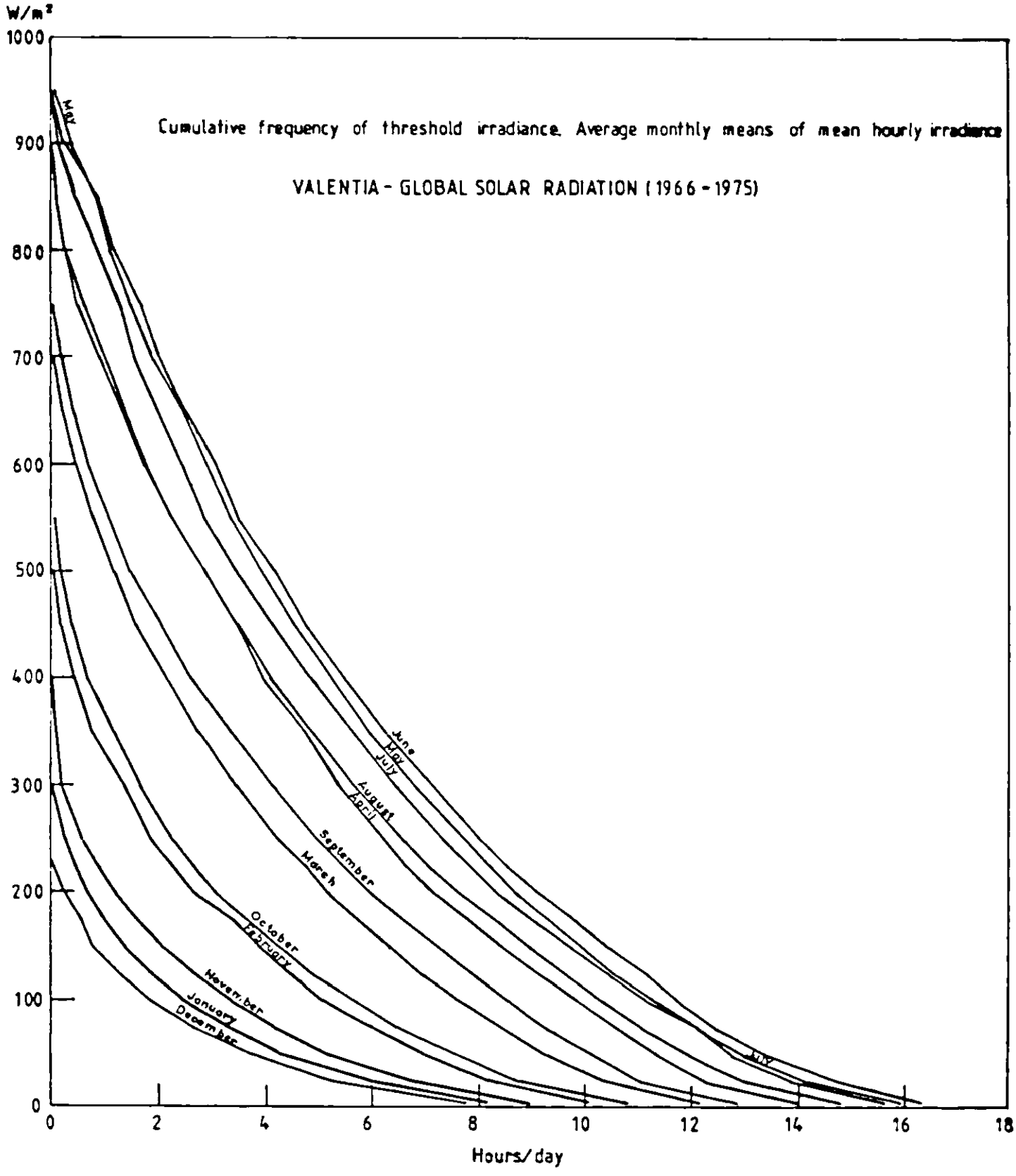
W/m²
1000
900
800
700
600
500
400
300
200
100
0
Cumulative frequency of threshold irradiance. Average monthly means of mean hourly irradiance
VALENTIA - GLOBAL SOLAR RADIATION (1966 - 1975)
May
June
May
July
August
April
September
March
October
February
November
January
December
July
0
2
4
6
8
10
12
14
16
18
Hours/day

Fig. 2.

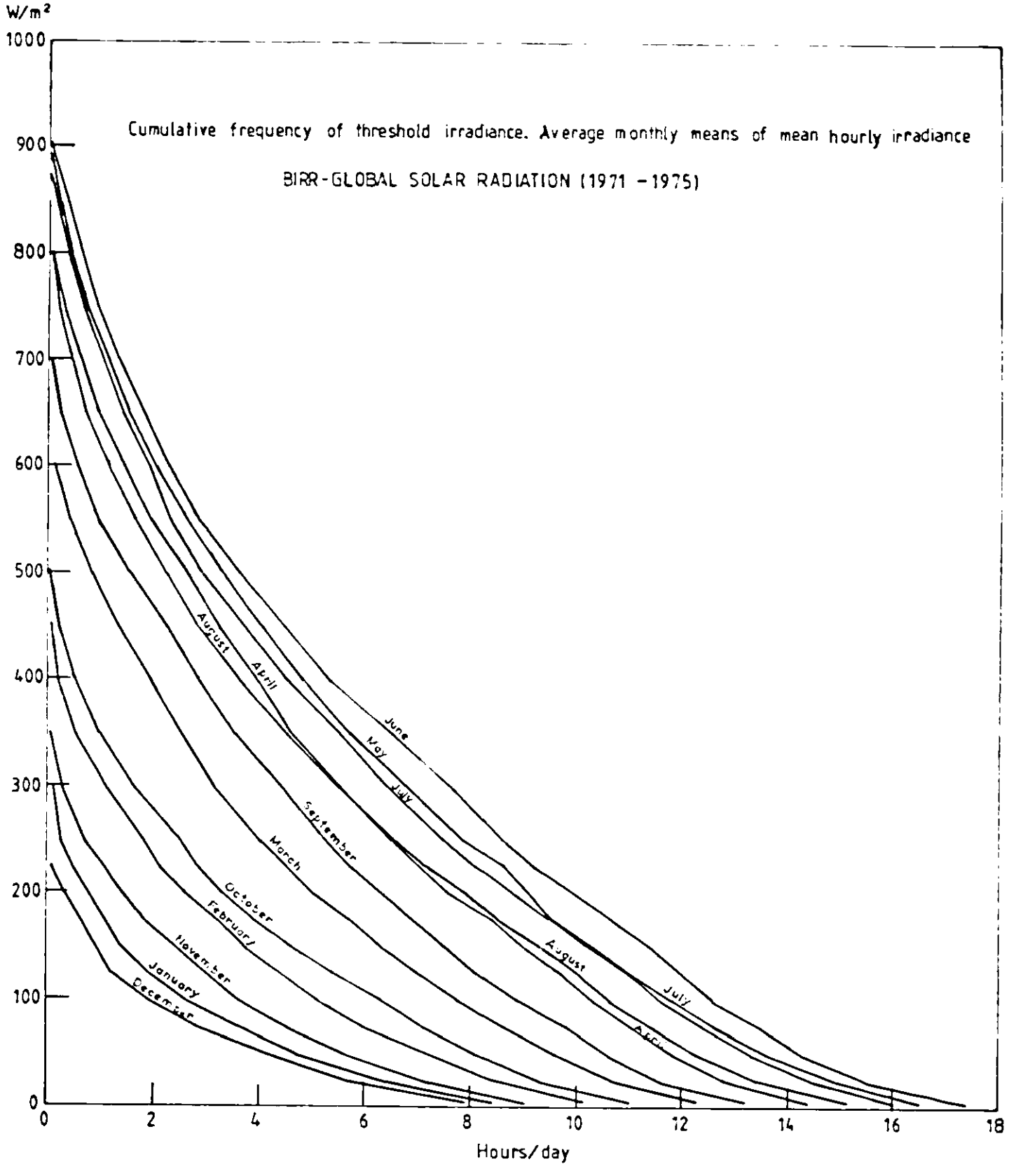
W/m²
1000
900
800
700
600
500
400
300
200
100
0
Cumulative frequency of threshold irradiance. Average monthly means of mean hourly irradiance
BIRR-GLOBAL SOLAR RADIATION (1971 - 1975)
June
May
July
August
April
September
March
October
February
November
January
December
July
August
April
0
2
4
6
8
10
12
14
16
18
Hours/day

Fig. 3.

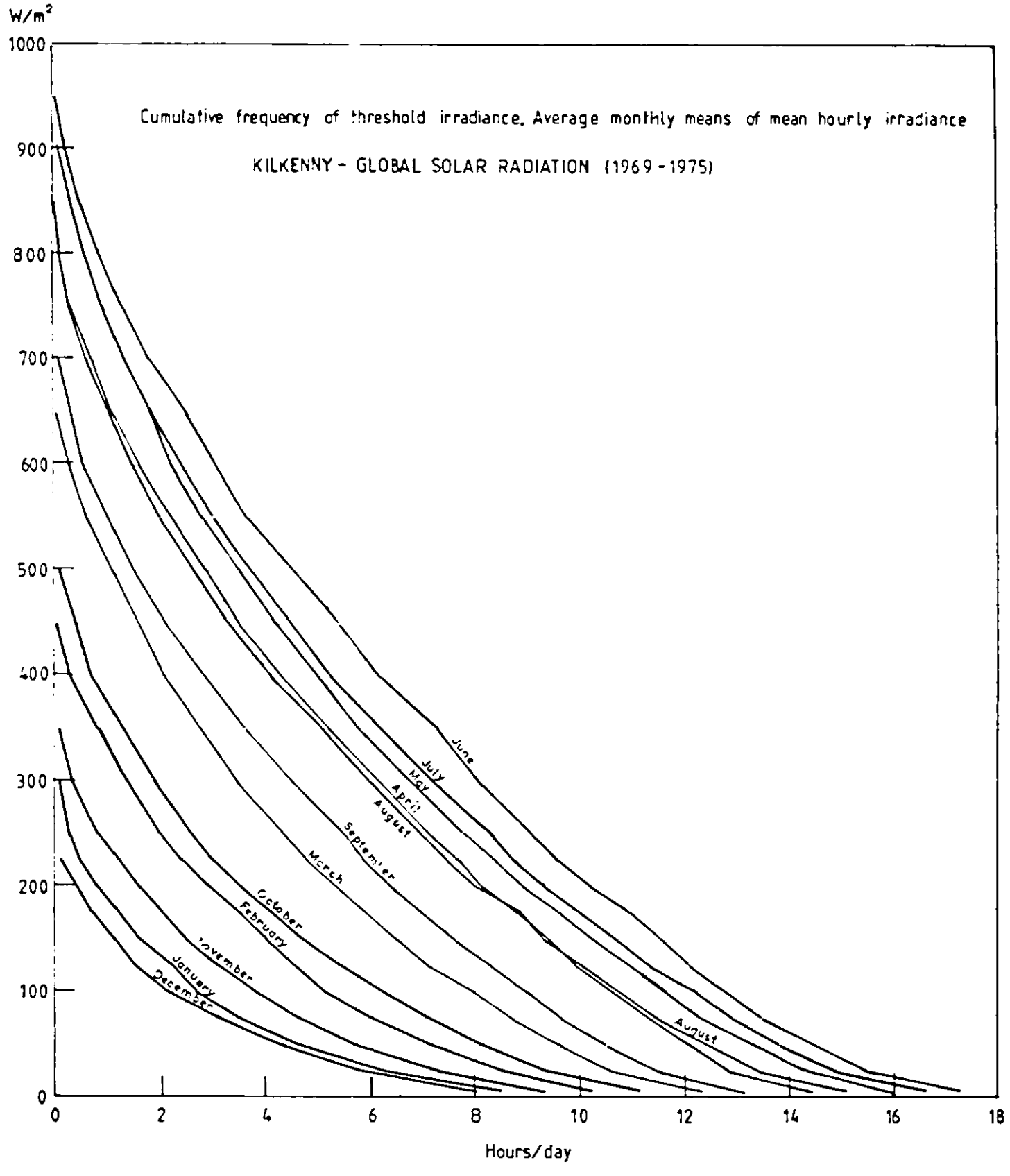
W/m²
1000
900
800
700
600
500
400
300
200
100
0
Cumulative frequency of threshold irradiance. Average monthly means of mean hourly irradiance
KILKENNY - GLOBAL SOLAR RADIATION (1969-1975)
June
July
May
April
August
September
March
October
February
November
January
December
August
0
2
4
6
8
10
12
14
16
18
Hours/day

Fig. 4.

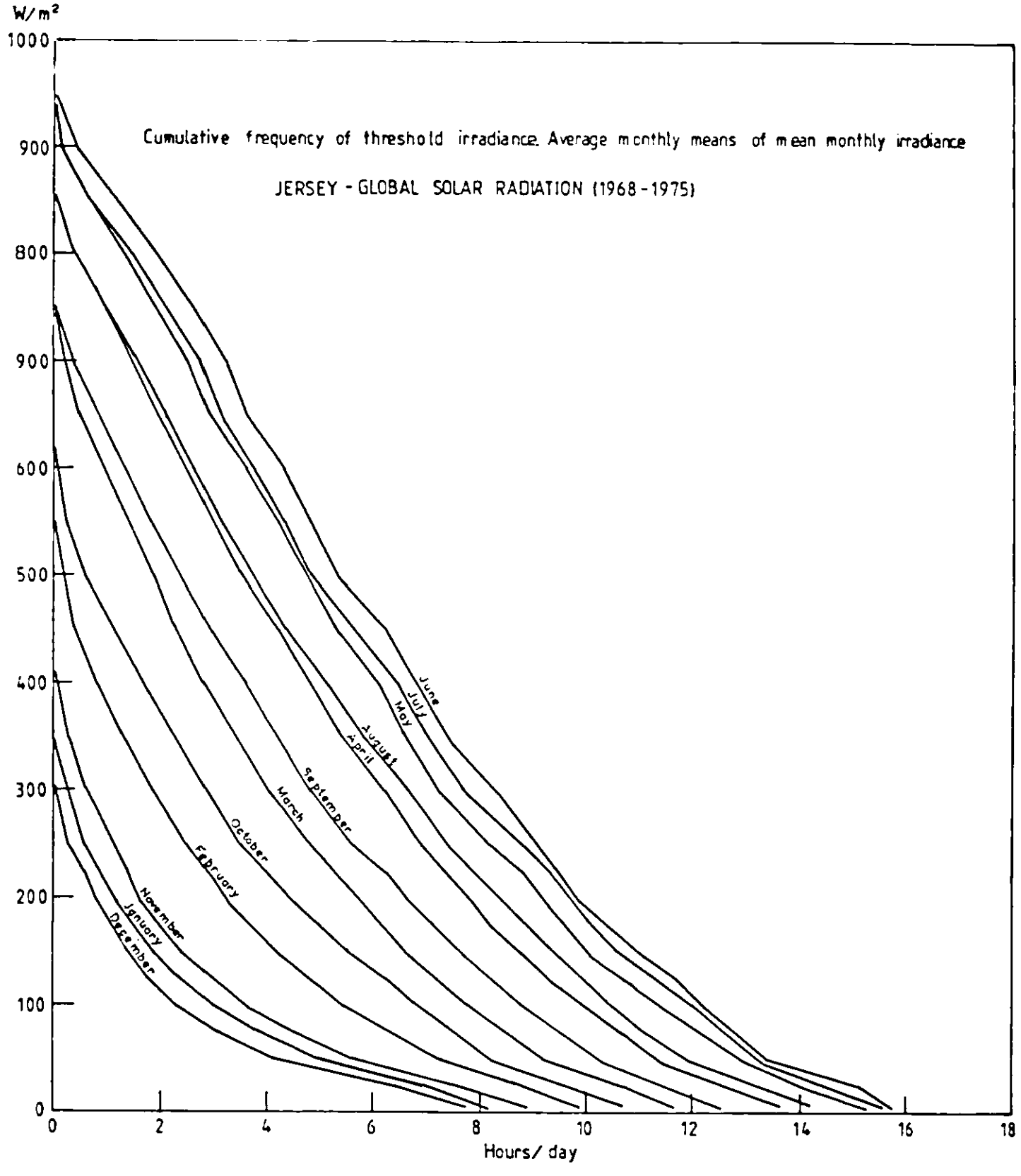
W/m²
1000
900
800
900
600
500
400
300
200
100
0
Cumulative frequency of threshold irradiance. Average monthly means of mean monthly irradiance
JERSEY - GLOBAL SOLAR RADIATION (1968 - 1975)
June
July
May
August
April
September
March
October
February
November
January
December
0
2
4
6
8
10
12
14
16
18
Hours/ day

Fig. 5.

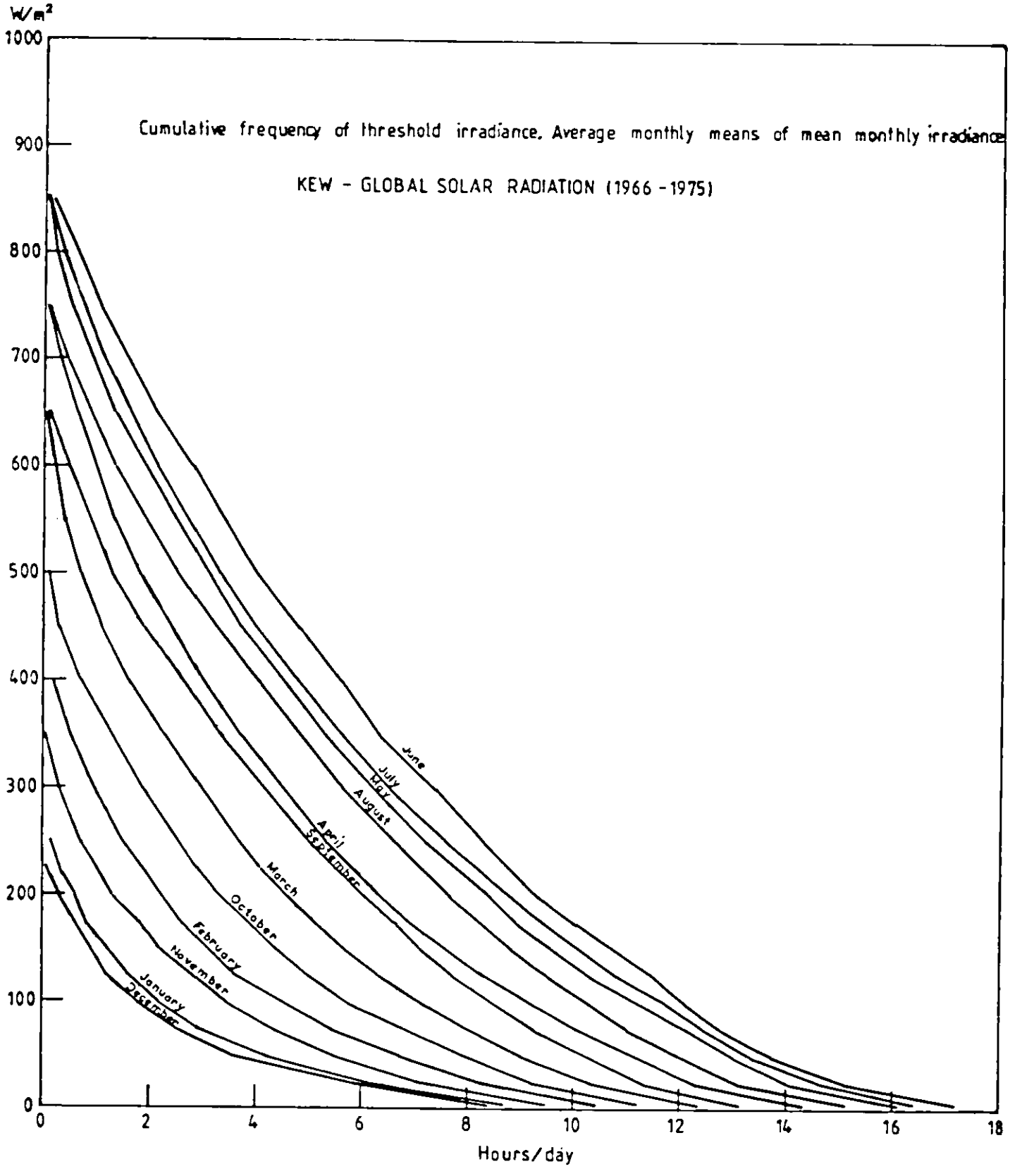
W/m²
1000
900
800
700
600
500
400
300
200
100
0
Cumulative frequency of threshold irradiance. Average monthly means of mean monthly irradiance
KEW - GLOBAL SOLAR RADIATION (1966 - 1975)
June
July
May
August
April
September
March
October
February
November
January
December
0
2
4
6
8
10
12
14
16
18
Hours/day

Fig. 6.

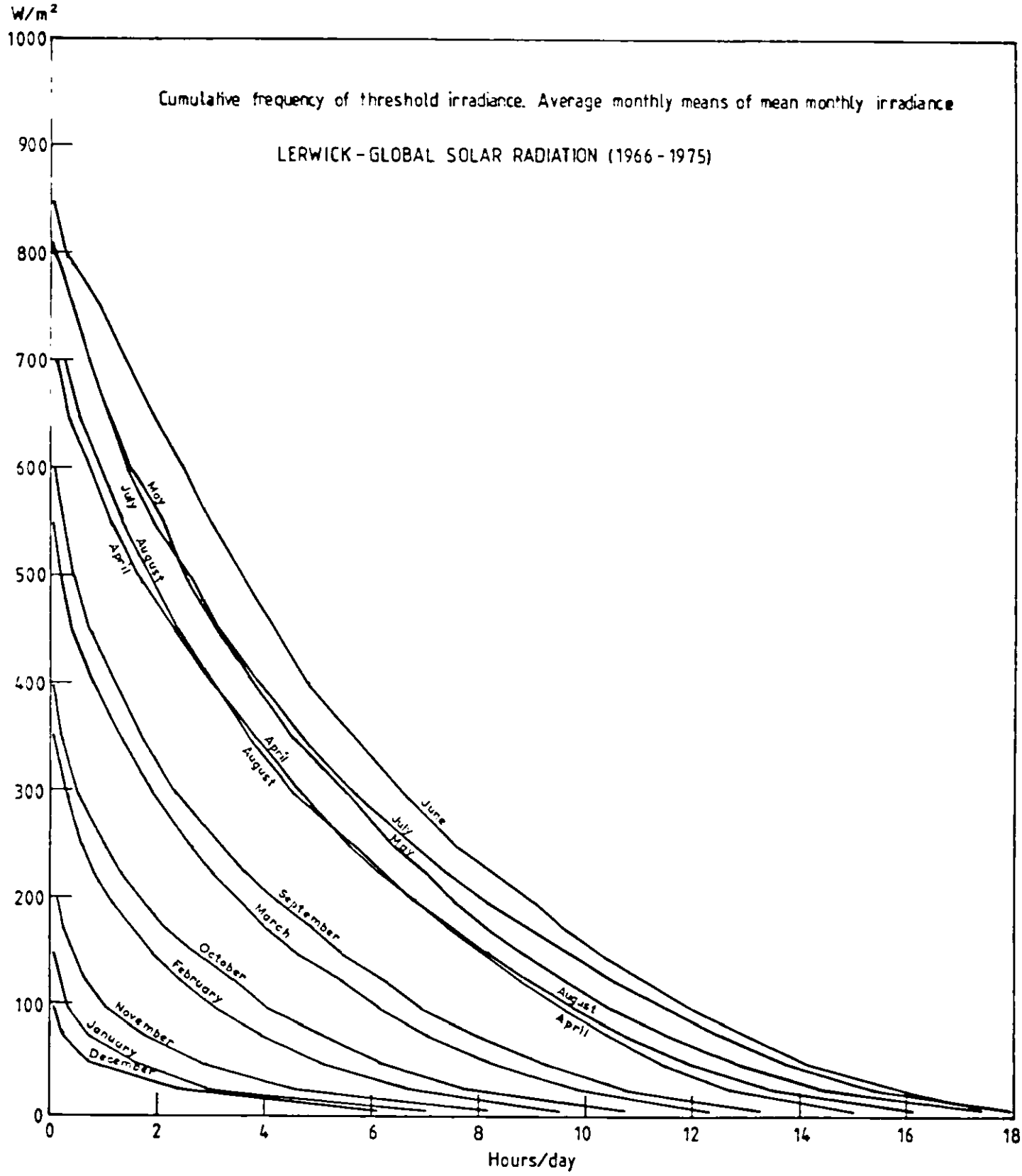
W/m²
1000
900
800
700
600
500
400
300
200
100
0
Cumulative frequency of threshold irradiance. Average monthly means of mean monthly irradiance
LERWICK - GLOBAL SOLAR RADIATION (1966 - 1975)
May
July
August
April
April
August
June
July
May
August
April
September
March
October
February
November
January
December
0
2
4
6
8
10
12
14
16
18
Hours/day

Fig. 7.

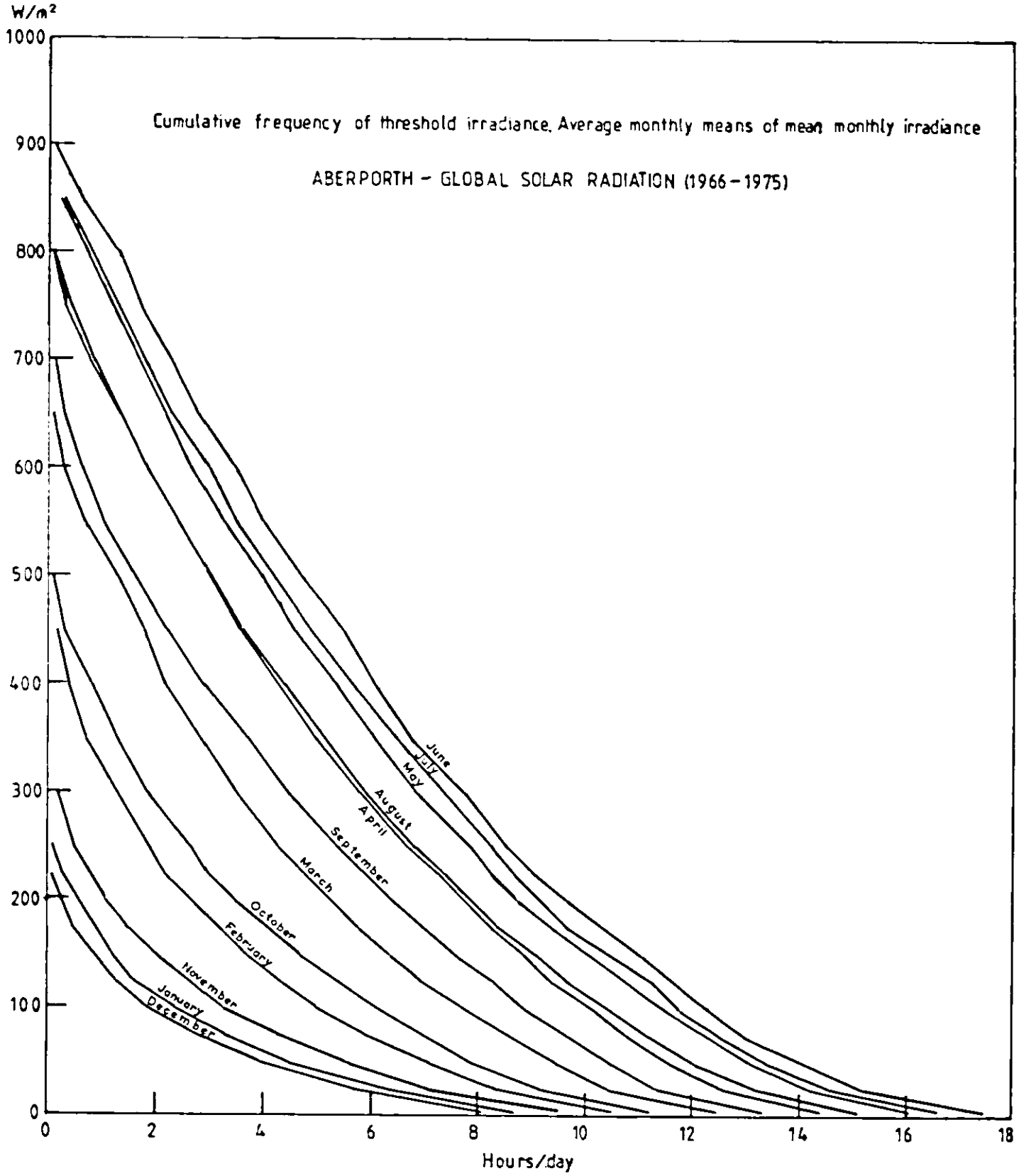
W/m²
1000
900
800
700
600
500
400
300
200
100
0
Cumulative frequency of threshold irradiance. Average monthly means of mean monthly irradiance
ABERPORTH – GLOBAL SOLAR RADIATION (1966–1975)
June
July
May
August
April
September
March
October
February
November
January
December
0
2
4
6
8
10
12
14
16
18
Hours/day

Fig. 8.

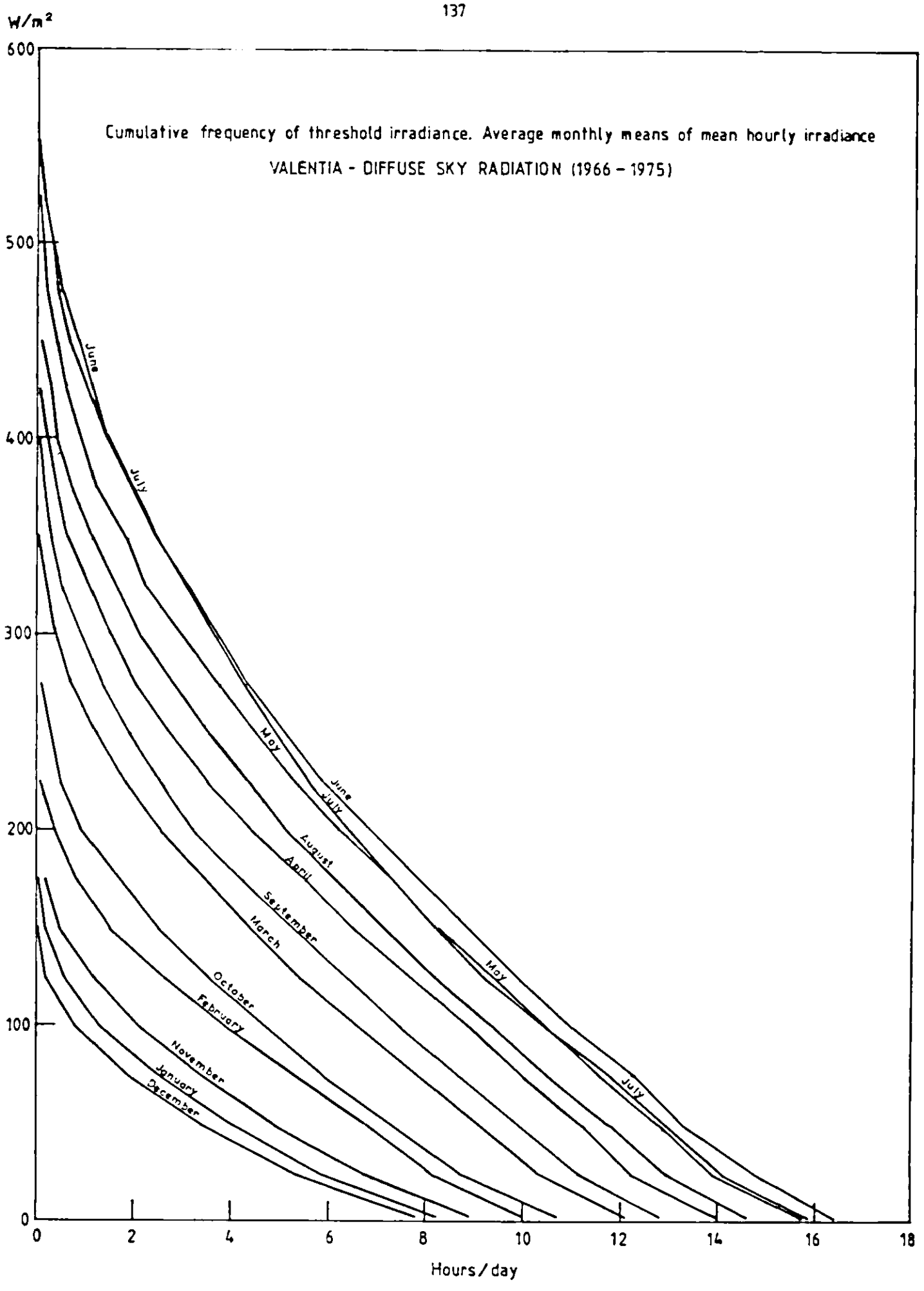
W/m²
600
500
400
300
200
100
0
0
2
4
6
8
10
12
14
16
18
Hours / day
Cumulative frequency of threshold irradiance. Average monthly means of mean hourly irradiance
VALENTIA - DIFFUSE SKY RADIATION (1966 – 1975)
June
July
May
June
July
August
April
September
March
May
October
February
November
January
December
July

Fig. 9.

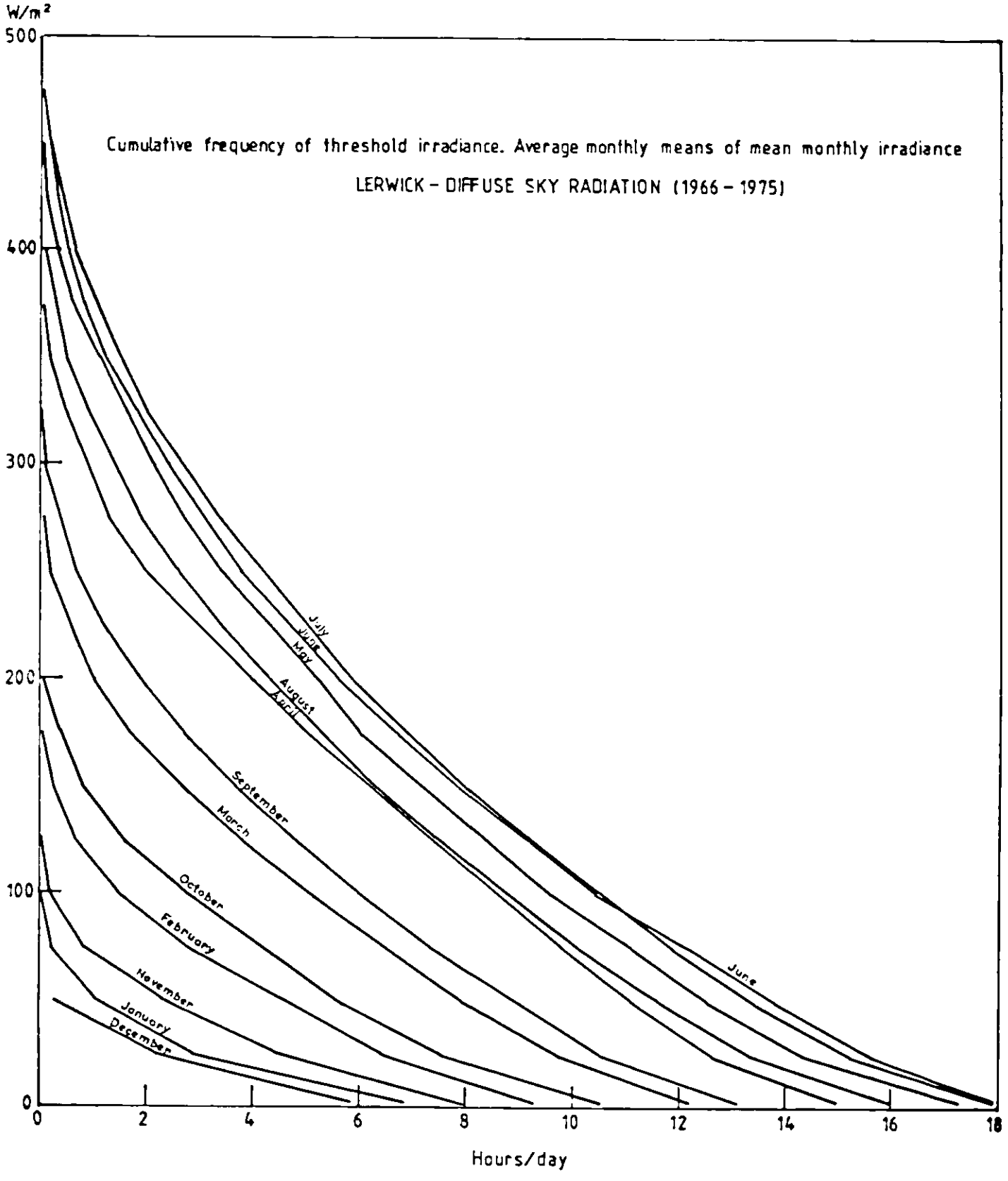
W/m²
500
400
300
200
100
0
Cumulative frequency of threshold irradiance. Average monthly means of mean monthly irradiance
LERWICK – DIFFUSE SKY RADIATION (1966 – 1975)
July
June
May
August
April
September
March
October
February
November
January
December
June
0
2
4
6
8
10
12
14
16
18
Hours/day

Fig. 10.