

UNIVERSITY OF BERGEN
GEOPHYSICAL INSTITUTE

**THE RADIATION OBSERVATORY
RADIATION YEARBOOK No.31**

RADIATION OBSERVATIONS IN BERGEN, NORWAY

($\Phi = 60^{\circ}24' N$, $\lambda = 5^{\circ}19' E$, $H = 45 m.$)

1995



UNIVERSITETET I BERGEN
GEOFYSISK INSTITUTT, AVDELING FOR METEOROLOGI
1996

METEOROLOGICAL REPORT SERIES
UNIVERSITY OF BERGEN

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Radiation Yearbook No. 31
Radiation Observations in Bergen, Norway

($\Phi = 60^{\circ} 24' N$, $\lambda = 5^{\circ} 19' E$, $H = 45$ m.)

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INTRODUCTION

The present issue of the Radiation Yearbook from the Geophysical Institute is volume No. 31.

The datalogging system used consists of a Fluke Helios I Computer Front End, a Commodore PC40 Personal Computer and a Star LC-10 Printer. The Helios I CFE is equipped with scanner cards that can handle dc-voltages in four ranges with a resolution of 0.5 μV for the best range of sensitivity (64 mV full scale). A Basic-program controls the Helios I CFE from the PC 40. Each sensor is scanned every 20 s, and the momentary values are displayed on a screen. Hourly values are accumulated and stored in the PC 40 for subsequent processing and they are also printed on paper.

Until March 3.1995, the GLOBAL RADIATION was measured by means of an Eppley PSP No. 12441 with sensitivity 9.509 $\mu\text{V}/\text{Wm}^{-2}$ (given by Eppley in July 1973 and adjusted for the change from IPS 1956 to WRR). On the cloudless days June 12. and July 12. 1995, this factor was checked against EPAC 13617 (see below). In the sun/shade procedure used, the sun is shaded during alternate periods of 10 minutes, and data from the last four minutes of each 10 minute period are used in the calculations. The average sensitivity was found to be 9.33 $\mu\text{V}/\text{Wm}^{-2}$ for solar elevations 40-49°, and 9.17 $\mu\text{V}/\text{Wm}^{-2}$ for solar elevations 25-40°. These results were considered a verification of the 1973 factor for not too low solar elevations. The original sensitivity was therefore kept unchanged.

From March 3. on, the global radiation is measured by CM II pyranometer No. 913438. The sensitivity of this pyranometer was checked against EPAC 13617 on the following 6 cloudless days: April 26. and May 10. 1993, May 10. and May 13. 1994, June 12. and July 12. 1995. The sensitivity was found to be 4.840, 4.818, and 4.817 $\mu\text{V}/\text{Wm}^{-2}$ in, respectively, 1993 (26 ten minute periods), 1994 (21 ten minute periods), and 1995 (15 ten minute periods). No single ten minute value was outside the range 4.78 - 4.90 $\mu\text{V}/\text{Wm}^{-2}$. As an average for these three years, the sensitivity was found to be 4.824, 4.817, 4.822, and 4.813 $\mu\text{V}/\text{Wm}^{-2}$ for solar elevations 9-20° (8), 20-30° (5), 30-40° (19), 40-50° (30), respectively. From this it was decided to use CMII₉₁₃₄₃₈ with sensitivity 4.818 $\mu\text{V}/\text{Wm}^{-2}$ (=1.0165 times the original K&Z sensitivity from 1991).

Until March 3. 1995, the DIFFUSE (SKY) RADIATION was measured with an Eppley PSP No. 12696 (misprinted as 12606 in the 1989 and earlier issues of this Yearbook). The applied sensitivity 9.366 $\mu\text{V}/\text{Wm}^{-2}$ is that given by Eppley in January 1974 and adjusted according to the change from IPS 1956 to WRR. When measuring the sky radiation the direct solar radiation is constantly shadowed off by means of a 6 cm diameter circular disc mounted on a 30 cm long rotating arm. No kind of shade-ring correction is therefore applied to the measured diffuse radiation.

From March 3. on, the diffuse sky radiation is measured by the pyranometer CMII₉₂₄₄₁₉. From 17. October 1992 to 25. August 1993, CMII pyranometers No. 924419 and No. 913438 were run in parallel. Using the original K&Z sensitivities, we found that for 10 cloudless days (April - June 1993) the average noon hour ratio was CMII₉₂₄₄₁₉:CMII₉₁₃₄₃₈ = 1.003 (with all individual hourly ratios confined within a ± 0.010 interval). Furthermore, for the 15 completely overcast days during February - August 1993 with noon hour diffuse irradiance exceeding 0.42 MJm⁻², the average noon hour ratio was CMII₉₂₄₄₁₉:CMII₉₁₃₄₃₈ = 1.007 (with all individual hourly ratios confined within a ± 0.008 interval). The ratio between these two pyranometers is thus pretty independent of the angular distribution of the incident irradiance. From this it was decided to use CMII₉₂₄₄₁₉ with a sensitivity 4.430 $\mu\text{V}/\text{Wm}^{-2}$ (1.0216 times the original K&Z sensitivity from 1992). Note that the ratio 1.005 (=1.0216/1.0165) between the two sensitivity correction factors are chosen to make the average overcast/cloudless noon hour ratio CMII₉₂₄₄₁₉:CMII₉₁₃₄₃₈ (= 1.005) equal to unity. During the overcast days July 2., 20., 24. and August 9., 15. 1995 (excluding three hours with hourly NIP irradiation exceeding 10⁴Jm⁻²) the average CMII₉₂₄₄₁₉:CMII₉₁₃₄₃₈ ratio was 0.997. On the cloudless days June 12 and July 12. 1995, however, the CMII₉₂₄₄₁₉:CMII₉₁₃₄₃₈ ratio was 0.976, as an average for the last 4 minutes of 17 shading periods with solar elevation > 28° and average diffuse irradiance = 82 Wm⁻². Although we have no explanation of this discrepancy, we decided to keep the CMII₉₂₄₄₁₉ sensitivity 4.430 $\mu\text{V}/\text{Wm}^{-2}$ fixed in 1995.

To facilitate the simulation of CMII₉₁₃₄₃₈ global radiation data from the PSP12441 global radiation data reported up to March 3. 1995, the following regression equation was developed from parallel hourly recordings during 1993, 1994, and 1995:

$$CMII_{913438} - CMII_{924419} = (0.01 + 0.20e^{-h/h^*})(G - D) + (0.01 + 0.11e^{-h/h^*})D, \quad (1)$$

where h is solar elevation, h^* is 17° , G is the reported global radiation, and H is the reported diffuse irradiation. Regression equations developed separately for each of the three years, did not differ significantly from this bulk equation. The regression equation (1) demonstrates a significant difference in cosine response between these two pyranometers, while the EPAC calibrations indicate that the CMII is the pyranometer having the most adequate cosine response.

As will be seen on Fig. 1, the anemometer mast sticks rather high up into the sky. The mast is, however, not compact, and it is estimated to screen off at most 0.7% of the sky radiation, an amount considered to be negligible. Further, the mountains surrounding Bergen (mean altitude ca 6°) screen off approximately 1.5% of an isotropic sky radiation on a horizontal surface. Since the albedo of the hillsides varies in the course of the year, no correction is applied to the measured diffuse radiation, due to the elevated horizon, either.

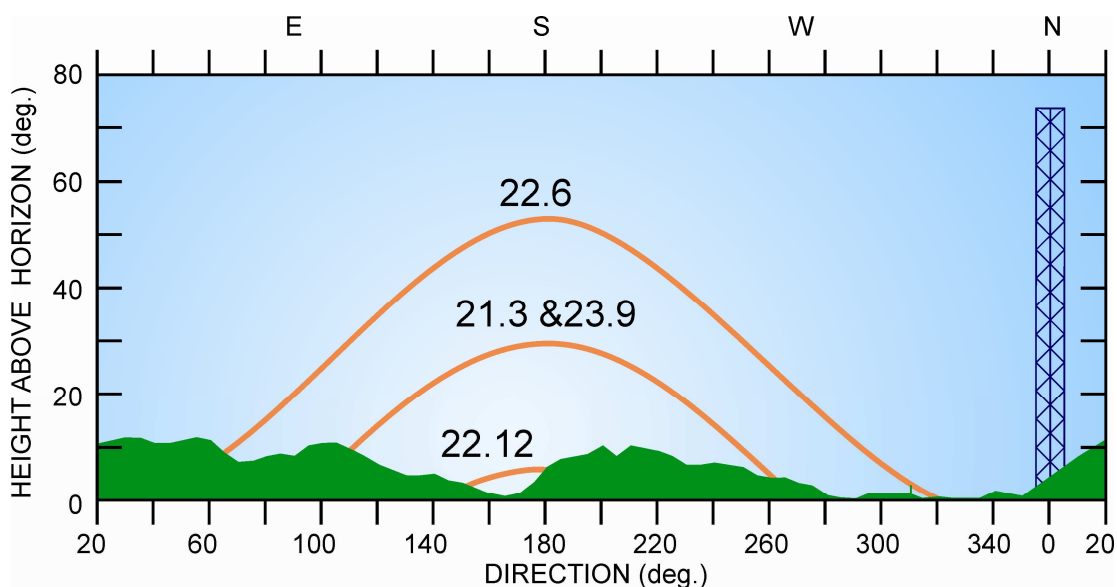


Figure 1. Panorama of the horizon with sun paths, as viewed from the observation tower of the Geophysical institute.

The global radiation and the diffuse radiation are equalized in the computer for hours when the mean solar altitude is so low that the apparent position of the sun will be behind the mountains surrounding Bergen (Fig.1). For the summer half year (March to September) this equalizing of global and diffuse radiation is done for hourly mean solar altitudes less than 6° in the morning and less than 2° in the afternoon. In the winter half year the limiting solar altitudes are 2° and 7° for the morning and afternoon, respectively. It should be mentioned that the pyranometers for global and diffuse (sky) radiation are ventilated [1], in order to prevent the hemisphere from being covered by snow or dew, and to minimize zero-point deviations.

Until May 8., the NORMAL INCIDENCE BEAM RADIATION was measured by an Eppley Normal Incidence Pyrheliometer, Model NIP No. 29000, with sensitivity $8.19 \mu\text{V}/\text{Wm}^{-2}$ given by Eppley in 1992. The NIP is mounted on an Eppley Automatic Solar Tracker Model SMT-3. Due to occasional occurrence of dew on the inside of the front "window", NIP₂₉₀₀₀ was replaced by NIP₂₉₀₁₉ (sensitivity $8.15 \mu\text{V}/\text{Wm}^{-2}$ given by Eppley in 1992) on May 8. 1995. On the cloudless days 12. June and 12. July 1995 NIP₂₉₀₁₉ was run in parallel with EPAC 13617, and an average sensitivity $8.27 \mu\text{V}/\text{Wm}^{-2}$ was obtained for 15 four minute periods at solar elevations between 28° and 48° . This sensitivity was considered a verification of the original sensitivity, which was therefore kept unchanged.

ULTRA VIOLET RADIATION on a horizontal surface is measured by means of an Eppley Total Ultra Violet Radiometer TUVR No. 30072 [2] with wavelength response $.290\text{-}385 \mu\text{m}$. Ignoring a temperature response of $+0.1\%$ per $^\circ\text{C}$ between -40 and $+25^\circ\text{C}$, we run this TUVR with the sensitivity $202 \mu\text{V}/\text{Wm}^{-2}$ (10°C) given by Eppley upon delivery in November 1994. From July 13. on, the (erythemal) UV-B RADIATION is measured in MED (Minimum Erythemal Dose) by the Solar Light UV Biometer 501A No. 1489. During June 7 - 8, this SL501A₁₄₈₉ was mounted in parallel with SL501₀₅₈₇ (owned by the Norwegian Radiation Protection Agency) for outdoor comparison at the roof of Chemical Institute, Blindern, Oslo. For two periods with high irradiance (maximum values in the range $2.5 - 3.0 \text{ MED/hr}$), the mean ratio SL501A₁₄₈₉/SL501₀₅₈₇ was 0.895 and 0.889.

The ratio between ultraviolet and all-wave global radiation varies with solar elevation and cloudiness. As preliminary examples, on the cloudless day August 4. the UV-B:all-wave ratio increased from some $0.34 \text{ MED}/\text{MJm}^{-2}$ at 20° solar elevation to some $0.87 \text{ MED}/\text{MJm}^{-2}$ at 45° , while the TUV:all-wave ratio increased

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from 0.037 to 0.042. On the overcast day August 15. the UV-B:all-wave ratio increased from some 0.64 MED/MJm⁻² at 20° to some 1.07 MED/MJm⁻² at 45°, while the TUV:all-wave ratio decreased from 0.059 to 0.056.

For the measurement of long-wave radiation a ventilated Eppley pyrgeometer No. 13176 with coated silicon hemisphere is used. This makes it possible to compute the DOWNWARD ATMOSPHERIC RADIATION, since the temperature of the instrument is also recorded. The calibration factor used for the pyrgeometer in 1995 was $K_L = 3.342 \mu\text{V}/\text{Wm}^{-2}$. In June-July 1995 this pyrgeometer was run in parallel with the unventilated pyrgeometer No. 27704 having calibration factor $4.00 \mu\text{V}/\text{Wm}^{-2}$ as given by Eppley in October 1989. Under cloudless sky, the downward atmospheric radiation measured with No. 27704 was slightly higher than that measured with No. 13176. The average difference was 3.2% and 2.6% for, respectively, 4 cloudless days and 3 cloudless nights. Under overcast sky, No. 27704 was slightly lower than No. 13176. For 3 overcast days and 3 overcast nights the average difference was, respectively, -0.4% and -1.3%.

The equations used for the evaluation of the long-wave radiation components are:

$$A = \sigma T_i^4 + \frac{U}{K_L} \quad (1)$$

$$Q_e^L = \sigma T_L^4 - A \quad (2)$$

where U is the voltage output of the pyrgeometer, KL is the calibration factor, and T, is the instrument temperature of the pyrgeometer. Moreover, from the downward atmospheric radiation A obtained from (2) and the measured air temperature T_L, the EFFECTIVE OUTGOING RADIATION, Q_e^L, from a black surface at air temperature is readily obtained from (3).

The DURATION OF SUNSHINE is measured by a Campbell-Stoke sunshine recorder with blue paper strips. The strips are read according to the rules of WMO [3]. Maximum possible duration gives the number of hours the sun is above the natural horizon, as found from the records on days with clear skies at sunrise or sunset. The DURATION OF SUNSHINE is also given as the number of minutes during which the Eppley Normal Incidence Pyrheliometer (NIP No. 29000) recorded irradiance above 120 Wm⁻² (with one instantaneous recording counted as 20 seconds). (Missing Campbell-Stoke data are, in a few indicated cases, replaced by NIP durations above 200 W m⁻²). Since 120 W m⁻² is lower than the reported [4] threshold ($205 \pm 35 \text{ W m}^{-2}$) for burning on our Campbell-Stoke paper strips, the NIP sunshine duration slightly exceeds that from Campbell Stoke. Thus, during March - October the sunshine duration was 1005 and 1072 hours recorded by Campbell Stoke and NIP, respectively. During the 4 remaining winter months the corresponding figures were 113 and 123 hours. This 7-9% duration difference is reasonably consistent with a modelled [9,10] long-term average difference of 13.5% between durations above 205 and 120 W m⁻².

The necessary routine calibrations of the pyranometers and the NIP pyrheliometer are carried out by means of the absolute self-calibrating cavity pyrheliometer, EPAC 13617. This pyrheliometer was compared to the World Radiation Reference Scale (WRR) during the IV, V, VI and VII International Pyrheliometer Comparisons at the World Radiation Centre, Davos [5-8]. Table 1 shows that the ratio between our EPAC 13617 and WRR has been extremely stable from 1975 to 1990, varying within a range of less than 0.1%.

Moreover, during IPC IV the central 84% of the individual ratios was contained within an interval of width 0.0035, while during IPC VII the central 83% of the individual ratios was contained within an interval of width 0.005.

Table 2. Average ratios between our EPAC 13617 (with manufacturers calibration factor 10024 m⁻²) and, respectively, the working reference instrument PMO2 (or PACRAD III) and the World Radiation Reference Scale (WRR) during 4 International Pyrheliometer Comparisons. Number N of individual ratios and their standard deviations are also given.

Comparison	N	EPAC-13617/PMO2	std.dev.	EPAC-13617/WRR
IPC V (1975)	1610	0.9987	0.0019	0.9968
IPC V (1980)	77	0.9962	0.0093	0.9976
IPC V (1985)	233	0.9962	0.0020	0.9972
IPC V (1990)	246	0.9972	0.0019	0.9977

*) EPAC-13617/PACRAD-III

On the cloudless day 15. April 1994, Eppley AHF 29224 (purchased by the Norwegian Polar Institute in 1994, and run with manufacturer's calibration factor $19986M^{-2}$) and our EPAC 13617 (with the IPC VII calibration factor $10047M^{-2}$) were operated side by side during 10 runs. Each run was scheduled in the same way as at IPC VII, and yielded 8 individual parallel readings 90s apart. For these 10 runs the average AHF/EPAC ratio was 1.0029, with standard deviation 0.0007 and range 0.0021.

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Bergen, May 1996
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VIII

LEGEND TO THE TABLES

The tables consist of 4 groups.

A.

Hourly values.

The tables, pp. 1 - 60, contain the hourly (and daily) values of the following elements:

GLOBAL RADIATION (total solar radiation from sun and sky on a horizontal surface).

DIFFUSE (sky) RADIATION (solar) on a horizontal surface.

ULTRAVIOLET RADIATION from sun and sky on a horizontal surface.

UV-B RADIATION (erythemal radiation from sun and sky on a horizontal surface).

NORMAL INCIDENCE BEAM RADIATION (solar).

DOWNWARD (INCOMING) ATMOSPHERIC RADIATION on a horizontal surface.

EFFECTIVE OUTGOING RADIATION from a horizontal black surface at air temperature.

DURATION OF SUNSHINE (MIN.) from Campbell-Stoke sunshine recorder (with TOTAL given in 0.1 hr).

This sunshine duration is the one occurring in the Tables B - C.

DURATION OF SUNSHINE (MIN. NIP>120 W/SQM) from Normal Incidence Pyrheliometer (with TOTAL given in min).

The tables are listed in the order mentioned separately for each month.

The other groups of tables represent summaries for the year of the values given in Tables A.

B.

Daily values.

C.

Mean diurnal variation.

In groups B and C each element is listed separately in monthly succession.

D.

Monthly and annual means.

This is one table which gives a summary of all measured radiation components (including the duration of sunshine expressed as percentages of the maximum possible duration), for the months and for the year.

In the tables the hourly values are valid for the hours centred at exact hours LAT (solar time).

Radiation values are given in 10^{-2} - or 10^{-3} MJ/m² referred to the WRR-scale. The UV-B radiation is given in 0.01 MED (Minimum Erythemal Dose).

The duration of sunshine is given in minutes (min), except for totals and for the maximum possible duration (with completely clear skies). These latter values are given in tenths of an hour.

In the tables a dash (-) indicates missing observations, an A in the row for mean values stands for an approximate mean value, based on more than 25 (325) values, but less than a complete month (year).

M indicates an average value based on less than 25 (325) days, but more than 10 (250) days.

A. HOURLY VALUES JANUARY

JAN 1995		HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	4	10	21	20	11	4	6	24	34	35	37	36	37	37	33	25	21	23	24	23	23	31	31	29	579
2	35	36	41	42	42	42	42	43	43	42	44	44	43	43	42	41	39	37	35	34	33	31	30	29	933
3	15	5	5	5	6	6	7	8	15	16	34	36	26	15	15	9	9	9	9	10	18	10	9	12	309
4	22	21	14	12	10	17	15	10	10	13	10	13	9	13	10	12	11	10	7	8	9	9	9	9	283
5	9	10	10	10	10	10	18	34	34	31	28	28	22	19	12	10	10	10	8	6	5	7	8	8	357
6	9	8	9	12	9	9	11	9	8	7	7	7	7	7	7	7	7	8	7	5	4	3	3	4	174
7	4	5	4	4	4	3	3	4	4	5	5	5	3	3	2	2	1	2	1	2	1	1	1	1	70
8	1	2	4	13	19	7	12	27	26	9	9	7	7	3	2	3	3	3	3	3	3	9	9	17	201
9	14	8	7	5	4	11	15	18	11	5	1	.	1	1	.	.	1	2	3	3	3	2	2	2	119
10	4	5	8	14	16	24	15	10	6	7	5	8	7	4	3	1	8	22	18	23	15	7	7	6	243
11	14	11	6	5	7	5	4	3	1	1	1	2	1	1	1	3	7	8	23	33	30	36	37	37	277
12	37	37	38	37	37	36	36	36	35	34	34	33	27	26	21	17	14	15	16	16	11	10	7	11	621
13	6	3	1	.	1	1	1	1	.	.	.	.	.	.	.	.	.	.	.	2	3	5	7	5	36
14	3	2	3	3	3	2	2	3	2	2	3	3	3	1	1	5	8	6	13	17	21	15	19	23	163
15	15	23	23	12	12	21	4	19	12	13	12	20	15	16	11	14	15	8	5	2	1	1	1	1	276
16	1	1	3	3	3	2	3	2	1	2	1	2	3	3	3	4	4	2	2	3	2	2	2	1	55
17	1	3	3	1	2	1	.	.	.	1	2	2	2	5	7	5	4	3	10	14	15	12	10	7	110
18	7	5	3	4	3	3	3	4	5	5	10	9	8	9	9	7	7	12	3	3	4	8	8	10	149
19	6	9	16	25	30	21	20	14	18	23	24	23	12	10	12	11	15	19	19	22	35	34	27	21	466
20	17	14	21	24	18	21	21	12	6	7	10	12	11	5	3	5	6	4	1	1	5	13	9	5	251
21	3	5	5	3	5	9	19	20	30	21	14	5	5	7	13	7	17	13	13	19	20	28	28	22	331
22	21	24	28	33	29	34	31	28	26	25	24	18	15	28	27	22	12	15	15	19	19	29	22	18	562
23	15	18	16	15	13	17	24	26	21	21	17	16	16	15	20	24	21	19	10	13	20	15	9	32	433
24	34	35	35	36	36	35	33	12	26	14	1	5	2	2	6	3	8	5	4	2	2	1	3	7	347
25	1	7	2	2	6	9	19	17	19	12	22	9	3	5	14	5	9	21	15	16	22	21	27	12	295
26	14	2	5	7	10	17	6	4	11	12	17	20	3	17	15	5	4	2	16	15	15	11	9	3	240
27	8	1	6	23	6	3	1	15	31	35	29	20	10	3	3	8	21	5	13	29	30	28	28	20	376
28	18	17	17	19	19	20	22	24	26	31	31	28	27	25	26	26	24	26	27	28	27	25	25	26	584
29	28	27	30	31	30	29	28	29	30	33	32	31	19	18	24	26	4	1	1	8	7	19	21	16	522
30	24	18	29	22	3	.	7	28	31	35	39	39	40	35	34	33	34	33	33	32	33	35	38	30	685
31	26	28	33	31	26	20	13	11	8	3	.	.	1	3	2	1	2	5	10	3	2	2	3	3	236
MEAN	13	13	14	15	14	14	14	16	17	16	16	16	12	12	12	11	11	11	12	13	14	15	14	14	332

A. HOURLY VALUES JANUARY

JAN 1995		DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	56	27	.	.	.	.	.	.	.	.	.	.	.	.	.	83
2	34	60	29	.	.	.	.	.	.	.	.	.	.	.	.	.	123
3	36	60	28	.	.	.	.	.	.	.	.	.	.	.	.	.	124
4
5	16	4	7	.	.	.	.	.	.	.	.	.	.	.	.	.	27
6
7
8	2	.	.	.	.	.	.	.	.	.	.	.	.	.	2
9
10
11
12	50	25	30	.	.	.	.	.	.	.	.	.	.	.	.	.	105
13
14
15	2	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9
16
17
18
19	4	.	.	.	.	.	.	.	.	.	.	.	.	.	4
20
21
22	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
23	9	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20
24	2	34	.	.	.	.	.	.	.	.	.	.	.	.	.	.	36
25	5	12	9	1	.	.	.	.	.	.	.	.	.	.	.	.	27
26	16	6	3	.	.	.	.	.	.	.	.	.	.	.	.	25
27	14	39	47	.	.	.	.	.	.	.	.	.	.	.	.	.	100
28	7	34	25	27	.	.	.	.	.	.	.	.	.	.	.	.	93
29	21	43	47	60	46	.	.	.	.	.	.	.	.	.	.	.	217
30	22	40	60	60	52	.	.	.	.	.	.	.	.	.	.	.	234
31
MEAN	0	0	0	0	0	0	0	0	2	10	14	9	4	0	0	0	0	0	0	0	0	0	0	0	40

JAN 1995		DURATION OF SUNSHINE (MIN.)																								TOTAL*	MAX*	PCT
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL*	MAX*	PCT	
1	12	60	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	17	22	77
2	36	60	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	21	22	95
3	36	60	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	21	22	95
4	0	22	0
5	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	23	4
6	0	23	0
7	0	23	0
8	0	24	0
9	0	25	0
10	0	26	0
11	0	26	0
12	42	12	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10	27	37
13	0	27	0
14	0	28	0
15	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	29	3
16	0	30	0
17	0	31	0
18	0	32	0
19	0	32	0
20	0	33	0
21	0	34	0
22	0	35	0
23	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	36	3
24	24	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	37	11
25	12	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	38	8
26	12	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	39	8
27	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	39	8
28	18	54	42	.	.	.	.	.	.	.	.	.	.	.	.	.	.	19	40	48
29	18	42	42	60	42	.	.	.	.	.	.	.	.	.	.	.	.	34	41	83
30	24	36	60	60	48	.	.	.	.	.	.	.	.	.	.	.	.	38	42	90
31	0	44	0
MEAN	0	0	0	0	0	0	0	0	2	8	11	9	4	0	0	0	0	0	0	0	0	0	0	0	0	6	31	18

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

A. HOURLY VALUES FEBRUARY

FEB 1995		HOURLY SUMS OF NORMAL INCIDENCE BEAM RADIATION (0.01 MJ/SQM)																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL	
1
2	3	42	192	.	75	1	313
3
4
5
6
7	32	109	215	113	469
8	35	1	.	47	45	.	.	.	.	.	.	.	.	.	.	.	128	
9	1	5	114	68	84	.	.	.	.	.	.	.	.	.	.	272	
10	108	167	178	205	28	.	.	.	.	.	.	.	.	.	.	.	.	686	
11	1	131	178	163	86	151	37	.	.	.	.	.	.	.	.	.	.	747	
12
13	1	3	31	1	3	2	.	.	.	.	.	.	.	.	.	41	
14	2	.	.	.	.	.	.	.	.	.	.	.	.	2	
15	1	14	.	.	.	.	.	.	.	.	.	.	.	.	.	15	
16
17	1	4	35	.	.	1	.	.	.	.	.	.	.	.	.	.	.	41	
18	41	85	253	182	20	24	10	.	.	.	.	.	.	.	.	.	.	615	
19	1	.	.	.	.	.	.	.	.	.	.	.	1	
20
21	42	23	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	65	
22	3	46	.	2	.	.	.	.	.	.	.	.	.	.	.	51	
23	28	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	43	
24	27	33	20	67	69	133	64	19	.	.	.	.	.	.	.	.	432	
25	95	242	272	272	111	22	32	118	10	.	.	.	.	.	.	.	.	1174	
26	114	247	234	116	.	.	1	.	.	.	.	.	.	.	.	.	.	712	
27
28	4	37	39	1	5	5	1	.	.	.	.	.	.	.	.	.	.	92	
MEAN	0	0	0	0	0	0	0	9	32	38	42	41	25	16	7	1	0	0	0	0	0	0	0	0	211	

FEB 1995		HOURLY SUMS OF DOWNWARD ATMOSPHERIC RADIATION (0.01 MJ/SQM)																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	118	119	119	117	118	118	119	120	120	117	116	119	118	118	118	115	113	107	113	112	113	115	112	105	2779
2	95	86	85	89	98	103	99	102	107	103	95	85	98	99	97	83	80	82	85	90	83	95	105	107	2251
3	111	113	114	115	116	116	116	117	118	119	121	122	123	123	121	120	121	121	121	121	121	121	119	119	2849
4	117	115	117	117	113	113	116	115	113	111	112	112	113	111	108	105	108	110	110	110	109	106	98	109	2668
5	108	108	111	112	114	116	116	117	117	118	118	121	122	123	123	123	123	123	123	124	124	124	124	125	2857
6	125	126	126	125	122	120	118	118	116	118	118	118	118	117	115	114	102	111	109	96	105	111	113	111	2772
7	103	101	105	99	101	99	108	106	105	108	103	92	80	89	103	110	109	112	112	109	110	111	108	103	2486
8	90	86	87	86	97	92	99	93	92	102	112	102	98	101	87	98	94	93	96	105	92	94	96	99	2291
9	96	104	92	103	100	77	78	95	103	103	109	97	96	99	100	91	82	99	109	111	111	108	107	105	2375
10	103	104	95	97	86	90	87	88	80	80	83	86	105	107	103	93	92	87	82	80	100	100	77	79	2184
11	88	96	87	82	90	76	74	75	77	78	80	81	79	81	89	88	92	100	103	100	104	107	111	111	2149
12	112	112	112	111	111	111	110	110	111	111	113	113	113	113	113	113	109	113	113	115	116	117	118	120	2710
13	122	121	120	118	120	120	118	116	113	113	116	98	97	106	90	87	97	118	118	116	119	118	118	118	2697
14	119	120	120	120	120	121	119	116	118	118	118	112	117	118	119	121	121	121	121	118	119	119	115	117	2847
15	117	113	116	117	118	118	118	119	118	118	118	114	108	114	118	118	118	119	119	119	120	120	119	120	2816
16	120	120	121	121	121	120	121	120	120	120	120	119	118	115	113	116	117	116	117	115	110	107	116	116	2819
17	114	111	113	111	109	103	108	111	105	105	111	113	114	113	108	116	111	112	115	113	113	113	102	110	2654
18	108	108	113	112	109	106	103	111	101	100	89	100	115	107	105	111	104	106	95	97	108	112	111	106	2537
19	98	111	110	114	115	116	116	116	116	116	117	118	111	108	114	114	115	112	108	103	102	98	111	109	2668
20	111	106	103	106	106	108	103	108	110	113	113	113	113	114	110	98	106	100	101	106	115	114	114	115	2606
21	109	107	104	95	85	90	93	91	90	96	100	104	109	110	111	110	106	100	102	101	106	100	100	110	2429
22	108	99	103	109	110	113	114	114	113	107	97	111	111	114	116	116	116	116	117	118	117	113	108	114	2674
23	110	110	109	98	111	111	104	111	112	112	115	115	114	115	114	114	114	108	109	110	110	113	114	114	2667
24	113	110	109	112	114	112	111	110	101	103	106	101	94	101	84	83	82	84	99	91	81	90	110	107	2408
25	100	95	96	102	111	109	97	88	85	84	92	100	106	108	103	96	93	93	88	90	102	101	87	82	2308
26	89	87	78	77	77	77	77	78	80	82	99	110	111	111	111	110	110	106	108	108	90	78	78	83	2215
27	100	103	106	105	104	105	111	111	112	113	114	115	115	115	114	115	114	114	115	116	118	121	123	124	2703
28	123	116	111	110	105	105	108	105	103	99	102	108	104	105	99	108	114	114	115	116	116	116	117	116	2635
MEAN	108	107	107	106	107	106	106	106	106	106	107	107	108	109	107	107	106	107	108	108	108	109	108	109	2573

A. HOURLY VALUES FEBRUARY

FEB 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								TOTAL
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	3	3	2	5	5	4	4	3	4	7	8	6	7	6	4	5	7	13	6	7	7	3	5	13	137
2	22	29	28	24	15	8	12	9	4	9	18	32	18	16	17	30	31	29	28	23	30	19	9	10	470
3	8	5	3	2	1	1	2	1	1	1	.	.	.	3	5	5	5	5	5	5	5	5	6	6	80
4	6	8	6	7	8	9	6	7	8	9	10	10	8	10	13	14	13	8	7	8	8	12	20	10	225
5	10	9	6	6	4	1	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	38
6	.	.	.	1	2	4	5	4	6	3	2	1	1	.	1	2	14	5	8	20	10	3	1	3	96
7	10	13	9	15	13	17	7	9	12	7	13	25	37	28	13	4	3	1	1	5	3	1	4	10	260
8	21	26	23	23	12	16	10	16	18	7	-2	9	15	9	23	12	16	17	13	4	18	15	13	11	345
9	14	5	17	5	8	30	29	11	3	5	.	18	19	15	13	20	28	10	.	-2	-1	2	3	5	257
10	6	5	13	10	20	16	19	17	29	31	28	27	6	3	7	17	18	23	26	28	9	8	31	29	426
11	20	12	21	26	18	32	34	33	34	36	39	33	37	33	23	22	19	12	10	13	11	8	5	3	534
12	3	3	3	3	2	3	3	5	4	2	1	1	.	.	.	.	6	3	3	3	3	2	1	.	54
13	.	1	3	4	2	2	4	6	9	10	8	26	27	18	34	36	27	7	6	10	7	5	3	3	258
14	5	5	7	8	7	4	4	8	6	6	7	12	5	3	1	1	1	1	1	5	3	3	7	4	114
15	5	10	6	4	3	3	3	4	5	4	10	17	10	3	5	4	3	3	2	2	2	2	2	1	113
16	1	1	1	1	2	2	2	2	1	2	2	2	4	8	10	7	5	6	5	7	12	14	5	4	106
17	7	9	8	9	11	17	10	8	15	16	10	9	8	9	13	5	9	7	4	7	6	6	16	8	227
18	9	10	4	5	8	10	15	7	16	19	33	22	5	14	15	9	15	12	23	21	10	7	8	13	310
19	21	9	11	5	5	3	3	4	2	1	2	3	11	15	5	1	1	6	13	18	18	21	7	9	194
20	8	14	17	13	14	13	18	11	10	6	2	.	1	1	7	20	12	18	18	12	2	1	1	2	221
21	8	10	14	23	33	27	25	28	30	23	20	17	11	10	8	8	11	17	15	14	9	15	15	5	396
22	8	17	13	7	8	4	2	1	4	14	26	13	12	10	7	5	2	.	1	.	2	2	8	2	168
23	8	8	9	21	8	4	13	6	5	6	2	1	.	.	2	.	.	6	5	5	5	3	.	.	117
24	2	5	5	3	2	5	6	7	16	15	13	20	27	18	35	35	35	32	15	24	33	23	4	6	386
25	13	19	17	11	2	3	15	25	31	35	28	21	12	10	18	21	23	21	25	24	12	12	26	30	454
26	23	25	32	32	33	33	32	33	34	36	20	6	5	3	3	3	3	7	6	5	23	34	33	28	492
27	13	10	8	8	10	9	3	3	3	2	3	1	.	.	.	1	1	1	1	1	.	.	.	1	79
28	2	8	12	13	16	16	12	15	18	22	21	14	18	17	23	12	5	5	4	5	2	3	2	3	268
MEAN	9	10	11	11	10	11	11	10	12	12	12	12	11	9	11	11	11	10	9	10	9	8	8	8	244

A. HOURLY VALUES FEBRUARY

FEB 1995	DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																									
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL	
1
2	2	16	52	24	.	.	.	.	.	.	.	.	.	.	.	.	94
3
4
5
6
7	11	31	57	33	.	.	.	.	.	.	.	.	.	.	.	132
8	17	.	14	17	.	.	.	.	.	.	.	.	.	.	.	.	.	48
9	2	35	27	29	.	.	.	.	.	.	.	.	.	.	.	.	93
10	40	53	48	53	10	.	.	.	.	.	.	.	.	.	.	.	.	204
11	58	59	56	36	60	22	.	.	.	.	.	.	.	.	.	.	.	291
12
13	1	12	.	2	.	.	.	.	.	.	.	.	.	.	.	15
14	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
15	6	.	.	.	.	.	.	.	.	.	.	.	.	.	6
16
17	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13
18	16	24	60	44	6	11	5	.	.	.	.	.	.	.	.	.	.	166
19
20
21	23	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	37
22	1	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	19
23	16	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	24
24	10	11	7	20	18	40	21	8	.	.	.	.	.	.	.	.	.	135
25	31	60	60	60	34	7	10	45	4	.	.	.	.	.	.	.	.	311
26	35	60	55	29	.	.	.	.	.	.	.	.	.	.	.	.	.	179
27
28	1	11	11	.	2	2	.	.	.	.	.	.	.	.	.	.	.	27
MEAN	0	0	0	0	0	0	0	3	10	11	11	12	8	5	3	0	0	0	0	0	0	0	0	0	0	64

FEB 1995	DURATION OF SUNSHINE (MIN.)																								TOTAL*	MAX*	PCT		
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1	0	46	0
2	12	54	24	.	.	.	.	.	.	.	.	.	.	.	.	.	.	15	48	31
3	0	49	0
4	0	50	0
5	0	51	0
6	0	52	0
7	12	30	60	36	.	.	.	.	.	.	.	.	.	.	.	.	.	23	53	43
8	12	.	6	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	54	9
9	18	18	36	.	.	.	.	.	.	.	.	.	.	.	.	.	12	56	21
10	24	48	42	54	18	.	.	.	.	.	.	.	.	.	.	.	.	.	31	58	53
11	42	54	60	18	60	24	.	.	.	.	.	.	.	.	.	.	.	.	43	60	72
12	0	61	0
13	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	62	2
14	0	63	0
15	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	65	2
16	0	66	0
17	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	68	3
18	6	18	60	48	6	6	6	.	.	.	.	.	.	.	.	.	.	.	25	71	35	
19	0	72	0
20	0	74	0
21	12	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	76	4
22	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	77	4
23	6	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	78	3
24	6	6	12	24	24	36	24	6	.	.	.	.	.	.	.	.	.	.	.	23	79	29
25	60	60	60	30	6	6	42	6	.	.	.	.	.	.	.	.	.	.	.	45	79	57
26	36	60	54	24	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	29	80	36
27	0	80	0
28	12	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	81	5
MEAN	0	0	0	0	0	0	0	2	8	10	11	10	8	5	4	0	0	0	0	0	0	0	0	0	0	10	65	15	

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

A. HOURLY VALUES MARCH

MAR 1995		HOURLY SUMS OF GLOBAL RADIATION (0.01 MJ/SQM)																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	2	10	34	80	77	59	51	35	35	15	2	.	.	.	.	.	.	.	400
2	3	15	28	35	98	69	120	89	22	13	3	.	.	.	.	.	.	.	495
3
4	5	23	78	99	146	147	64	69	34	27	3	.	.	.	.	.	.	.	695
5	7	26	42	58	77	68	75	64	42	28	6	.	.	.	.	.	.	.	493
6	3	14	41	78	157	168	98	70	91	33	8	.	.	.	.	.	.	.	761
7	4	20	41	64	48	40	37	12	28	19	6	.	.	.	.	.	.	.	319
8	3	11	10	14	18	11	10	8	8	4	2	.	.	.	.	.	.	.	99
9	3	22	50	105	103	80	95	80	51	17	5	.	.	.	.	.	.	.	611
10	13	38	75	87	102	104	86	64	51	29	8	.	.	.	.	.	.	.	657
11	5	17	22	31	59	62	71	77	88	28	6	.	.	.	.	.	.	.	466
12	3	5	6	8	10	10	13	14	9	3	.	.	.	.	.	.	.	81
13	5	23	37	41	46	55	51	37	24	13	4	.	.	.	.	.	.	.	336
14	1	3	6	7	8	10	11	10	6	4	2	.	.	.	.	.	.	.	68
15	1	10	51	92	77	68	55	35	26	29	23	10	1	.	.	.	.	.	.	478
16	1	12	52	68	123	155	129	68	44	28	11	8	.	.	.	.	.	.	.	699
17	5	6	9	16	21	19	14	16	8	8	3	.	.	.	.	.	.	.	125
18	1	8	35	41	27	34	40	30	18	23	52	28	3	.	.	.	.	.	.	340
19	3	21	20	27	49	18	21	46	28	23	15	1	.	.	.	.	.	.	272
20	1	10	41	56	61	69	60	53	31	36	23	18	2	.	.	.	.	.	.	461
21	3	21	87	66	123	180	144	118	129	128	56	13	3	.	.	.	.	.	.	1071
22	1	5	10	15	19	14	14	11	8	6	4	3	.	.	.	.	.	.	.	110
23	3	5	8	9	10	14	20	24	18	11	5	1	.	.	.	.	.	.	128
24	1	5	21	39	13	40	49	37	45	81	34	17	3	.	.	.	.	.	.	385
25	1	7	22	76	104	111	28	45	53	70	45	43	7	.	.	.	.	.	.	612
26	2	5	11	29	63	17	124	117	119	40	40	18	11	.	.	.	.	.	.	596
27	6	21	82	105	98	136	79	110	81	44	39	19	5	.	.	.	.	.	.	825
28	9	28	40	93	124	160	197	200	171	86	38	13	4	.	.	.	.	.	.	1163
29	6	26	69	52	81	141	193	200	177	145	101	53	17	.	.	.	.	.	.	1261
30	4	13	29	77	91	88	82	54	56	48	26	10	3	.	.	.	.	.	.	581
31	3	8	12	19	24	29	31	23	20	25	46	10	3	.	.	.	.	.	.	253
MEAN A	0	0	0	0	0	1	8	27	44	60	76	72	65	56	45	27	11	2	0	0	0	0	0	0	495

MAR 1995		HOURLY SUMS OF SKY RADIATION ON A HORIZONTAL SURFACE (0.01 MJ/SQM)																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	2	10	30	56	56	49	41	32	31	15	2	.	.	.	.	.	.	.	324
2	3	14	27	29	50	68	95	64	19	13	3	.	.	.	.	.	.	.	385
3
4	5	12	20	37	33	74	62	62	34	27	3	.	.	.	.	.	.	.	369
5	7	24	41	55	71	65	69	60	41	26	6	.	.	.	.	.	.	.	465
6	3	14	40	50	65	55	64	66	58	28	8	.	.	.	.	.	.	.	451
7	4	20	38	52	47	40	37	12	26	17	6	.	.	.	.	.	.	.	299
8	3	11	10	14	18	11	10	8	8	4	2	.	.	.	.	.	.	.	99
9	3	19	36	49	53	69	62	51	38	17	5	.	.	.	.	.	.	.	402
10	13	32	52	72	75	85	75	60	48	28	8	.	.	.	.	.	.	.	548
11	5	17	22	31	59	61	67	64	64	28	6	.	.	.	.	.	.	.	424
12	3	5	6	8	10	10	13	14	9	3	.	.	.	.	.	.	.	81
13	5	23	37	41	46	55	51	37	24	13	4	.	.	.	.	.	.	.	336
14	1	3	6	7	8	10	11	10	6	4	2	.	.	.	.	.	.	.	68
15	1	10	29	52	59	65	54	35	26	29	23	10	1	.	.	.	.	.	.	394
16	1	12	26	43	37	35	46	55	44	27	11	8	.	.	.	.	.	.	.	345
17	5	6	9	16	21	19	14	16	8	8	3	.	.	.	.	.	.	.	125
18	1	8	25	37	27	34	40	30	18	23	46	24	3	.	.	.	.	.	.	316
19	3	21	20	26	48	17	20	45	28	23	15	1	.	.	.	.	.	.	267
20	1	10	35	46	50	56	55	50	31	36	23	18	2	.	.	.	.	.	.	413
21	3	14	30	48	56	76	80	79	88	76	41	13	3	.	.	.	.	.	.	607
22	1	5	10	15	19	14	14	11	8	6	4	3	.	.	.	.	.	.	.	110
23	3	5	8	9	10	14	20	24	18	11	5	1	.	.	.	.	.	.	128
24	1	5	21	39	13	40	49	37	39	74	34	17	3	.	.	.	.	.	.	372
25	1	7	22	50	62	82	27	43	51	59	43	25	7	.	.	.	.	.	.	479
26	2	5	11	29	60	14	56	93	86	29	39	18	11	.	.	.	.	.	.	453
27	6	15	53	53	50	77	64	69	64	38	38	19	5	.	.	.	.	.	.	551
28	9	28	38	51	66	57	39	28	42	72	36	13	4	.	.	.	.	.	.	483
29	6	22	37	45	58	50	33	29	29	23	20	18	12	.	.	.	.	.	.	382
30	4	13	29	72	89	87	82	54	56	48	26	10	3	.	.	.	.	.	.	573
31	3	8	12	19	24	29	31	23	20	25	45	10	3	.	.	.	.	.	.	252
MEAN A	0	0	0	0	0	1	8	20	33	41	46	46	45	41	34	23	10	2	0	0	0	0	0	0	350

A. HOURLY VALUES MARCH

MAR 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	3	5	8	16	22	18	14	7	15	21	11	16	14	11	10	13	11	17	6	3	17	8	10	3	279
2	8	4	8	25	31	24	31	30	23	27	29	21	11	18	31	31	31	20	15	17	3	13	12	3	466
3	2	9	18	26	23	32	31	28	32	36	37	36	31	20	10	15	31	35	35	35	35	35	35	34	661
4	34	33	33	33	32	31	31	32	33	31	32	18	10	12	8	8	9	19	31	32	27	27	36	30	622
5	26	11	34	35	36	33	30	28	23	23	24	22	22	18	25	28	29	26	23	16	10	11	15	15	563
6	13	12	14	11	15	22	15	13	23	28	32	35	32	27	29	33	32	28	22	11	13	8	12	10	490
7	10	20	20	10	10	10	13	13	22	21	12	10	5	1	5	25	32	32	26	22	13	14	20	16	382
8	15	12	14	12	11	11	13	14	12	11	7	3	4	3	5	8	10	11	13	21	28	24	12	10	284
9	9	8	9	10	10	13	12	29	26	28	31	25	24	26	28	14	18	19	24	18	13	25	16	14	449
10	15	15	23	19	26	29	33	31	31	26	27	25	24	21	24	27	30	31	33	34	32	28	25	28	637
11	32	37	38	35	30	28	21	18	20	22	25	24	25	22	28	20	13	13	12	13	10	9	7	4	506
12	4	3	3	3	3	4	4	3	5	5	5	5	5	5	5	5	4	3	3	4	5	5	7	6	104
13	5	5	5	5	5	8	5	6	6	5	5	5	5	6	6	6	7	6	7	6	6	6	6	6	138
14	6	8	7	7	7	7	7	6	3	2	1	1	.	.	1	.	.	1	1	1	1	3	5	7	82
15	6	5	8	15	11	12	11	26	27	20	15	10	9	11	10	13	8	16	30	28	16	19	20	26	372
16	22	19	29	34	36	37	37	36	32	36	37	35	27	12	9	7	8	15	24	28	14	4	2	4	544
17	2	2	1	.	.	1	3	2	2	.	.	1	1	.	1	2	2	1	3	6	1	2	1	.	34
18	.	.	1	.	1	.	1	12	4	.	.	1	3	6	5	18	17	21	14	10	5	5	6	5	135
19	6	6	4	5	3	1	.	.	.	.	.	.	1	2	2	1	5	3	9	4	2	2	5	8	69
20	20	23	19	22	21	13	11	10	8	10	10	7	7	5	6	7	8	10	13	16	11	33	36	23	349
21	17	33	34	30	35	35	34	36	30	33	28	27	29	22	21	23	17	21	25	18	9	7	7	7	578
22	4	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2	2	3	3	18
23	1	2	1	.	.	.	.	.	.	-1	-1	-1	.	1	.	1	1	.	.	.	.	.	.	.	4
24	.	.	.	.	2	2	3	4	8	2	3	5	6	10	9	13	11	14	17	5	1	.	.	2	117
25	7	12	5	10	2	2	4	6	22	15	13	4	2	5	8	5	26	23	25	35	33	5	1	5	275
26	14	17	13	5	.	.	1	1	4	7	3	10	14	13	10	10	4	22	25	33	33	33	36	38	346
27	39	39	39	39	36	35	35	26	30	18	17	11	20	15	10	19	14	21	15	9	6	1	4	7	505
28	17	8	4	3	4	6	5	13	28	27	31	36	38	33	23	16	11	14	26	36	37	37	36	35	524
29	34	28	31	31	34	35	31	30	26	25	33	37	37	37	39	40	37	28	34	19	19	28	32	20	745
30	13	8	13	15	8	8	8	7	10	10	8	8	7	8	8	7	5	3	3	2	2	1	1	.	163
31	.	.	.	.	.	.	.	.	.	.	.	-1	.	.	2	7	9	8	20	23	20	10	4	9	111
MEAN	12	12	14	15	15	15	14	15	16	16	15	14	13	12	12	14	14	16	17	16	14	13	13	12	340

A. HOURLY VALUES MARCH

MAR 1995		DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	7	25	18	10	8	3	8	.	.	.	.	.	.	.	.	.	79
2	3	2	3	37	.	18	22	4	.	.	.	.	.	.	.	.	.	89
3	2	60	60	60	60	38	43	29	.	.	.	.	.	.	.	.	.	352
4	23	60	48	60	43	.	6	.	.	.	.	.	.	.	.	.	.	240
5
6	28	60	60	31	4	49	14	.	.	.	.	.	.	.	.	246
7	2	11	.	.	.	1	1	.	.	.	.	.	.	.	.	.	15
8
9	5	21	40	30	5	20	31	15	.	.	.	.	.	.	.	.	.	167
10	4	50	24	25	23	5	.	.	.	.	.	.	.	.	.	.	.	131
11	1	16	44	.	.	.	.	.	.	.	.	.	61
12
13
14
15	31	45	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	91
16	3	37	23	56	59	45	9	.	.	.	.	.	.	.	.	.	.	.	232
17
18	7	2	.	.	.	.	.	.	8	22	.	.	.	.	.	.	.	39
19
20	6	9	8	8	3	1	.	.	.	.	.	.	.	.	.	.	.	35
21	11	60	16	42	56	42	32	40	48	17	.	.	.	.	.	.	.	.	364
22
23
24	6	5	.	.	.	.	.	.	.	.	.	11
25	28	27	18	.	.	1	.	9	1	39	3	.	.	.	.	.	.	126
26	1	18	19	18	9	.	1	9	.	.	.	.	.	.	.	75
27	8	36	35	24	30	10	19	14	7	.	.	.	.	.	.	.	.	.	183
28	2	29	29	43	56	60	52	12	.	.	.	.	.	.	.	.	.	283
29	5	37	4	11	40	59	60	60	60	60	58	24	.	.	.	.	.	.	478
30	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
31
MEAN	0	0	0	0	0	0	1	8	13	15	18	14	10	10	10	3	4	1	0	0	0	0	0	0	106

MAR 1995		DURATION OF SUNSHINE (MIN.)																								TOTAL*	MAX*	PCT
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL*	MAX*	PCT	
1	24	18	6	6	6	6	6	.	.	.	.	.	.	.	.	.	12	82	15	
2	6	42	.	18	24	6	.	.	.	.	.	.	.	.	.	.	.	16	83	19	
3	18	60	60	60	42	42	24	.	.	.	.	.	.	.	.	.	.	51	83	61	
4	12	60	48	60	42	.	6	.	.	.	.	.	.	.	.	.	.	38	84	45	
5	0	85	0	
6	18	54	60	18	42	6	.	.	.	.	.	.	.	.	.	.	.	33	86	38	
7	12	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	.	3	86	3	
8	0	87	0	
9	6	12	42	24	6	12	24	12	.	.	.	.	.	.	.	.	.	.	23	88	26	
10	24	6	24	12	.	.	.	.	.	.	.	.	.	.	.	.	.	11	89	12	
11	6	30	.	.	.	.	.	.	.	.	.	.	6	90	7	
12	0	91	0	
13	0	92	0	
14	0	93	0	
15	30	36	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	94	14	
16	36	24	48	60	42	6	.	.	.	.	.	.	.	.	.	.	.	.	36	95	38	
17	0	96	0	
18	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	97	1	
19	0	98	0	
20	6	6	6	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	99	4	
21	12	60	12	42	54	42	18	30	48	18	.	.	.	.	.	.	.	.	.	56	100	56	
22	0	100	0	
23	0	101	0	
24	6	6	.	.	.	.	.	.	.	.	.	.	2	102	2	
25	24	30	18	.	.	.	12	42	6	.	.	.	.	.	.	.	.	.	22	103	21	
26	18	12	18	6	.	.	6	.	.	.	.	.	.	.	.	10	104	10	
27	6	30	36	24	30	6	18	12	6	.	.	.	.	.	.	.	.	.	.	28	105	27	
28	30	36	42	54	60	54	12	.	.	.	.	.	.	.	.	.	.	.	48	106	45	
29	6	30	6	12	42	60	60	60	60	60	24	.	.	.	.	.	.	.	.	80	107	75	
30	0	108	0	
31	0	109	0	
MEAN	0	0	0	0	0	0	1	7	9	14	17	13	9	9	9	3	3	1	0	0	0	0	0	0	16	95	17	

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

A. HOURLY VALUES APRIL

APR 1995 HOURLY SUMS OF GLOBAL RADIATION (0.01 MJ/SQM)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	4	10	21	42	44	36	53	56	92	40	34	15	3	.	.	.	.	.	.	450
2	4	6	21	37	44	28	26	38	54	44	46	34	8	.	.	.	.	.	.	390
3	9	26	51	40	79	24	97	125	100	98	75	32	23	.	.	.	.	.	.	779
4	8	37	77	104	183	143	197	121	108	116	117	46	13	1	.	.	.	.	.	1271
5	1	7	14	33	36	66	67	49	53	44	36	28	27	4	.	.	.	.	.	.	465
6	3	10	22	33	43	48	51	57	46	45	24	22	6	.	.	.	.	.	.	410
7	2	7	24	51	146	147	159	127	156	121	66	54	29	1	.	.	.	.	.	1090
8	1	15	49	45	95	193	177	169	108	135	130	84	67	10	1	.	.	.	.	.	1279
9	5	13	23	41	118	146	234	186	197	159	125	75	23	3	.	.	.	.	.	1348
10	1	8	18	36	32	23	33	37	39	36	26	16	11	3	1	.	.	.	.	.	320
11	5	13	13	21	47	81	165	165	49	31	7	5	3	.	.	.	.	.	.	605
12	4	13	22	47	57	95	117	50	67	51	28	9	4	1	.	.	.	.	.	565
13	1	5	13	22	26	36	37	39	53	50	40	63	17	3	.	.	.	.	.	432
14	2	12	33	33	50	55	44	33	44	35	15	11	5	4	.	.	.	.	.	.	376
15	1	13	39	42	54	77	109	141	190	204	137	138	85	39	7	.	.	.	.	.	1276
16	4	35	84	137	185	184	178	130	162	212	159	76	36	49	7	.	.	.	.	.	1638
17	5	38	92	140	183	216	242	250	243	222	207	142	82	21	5	.	.	.	.	.	2088
18	5	39	92	141	185	220	240	250	261	209	199	136	112	77	11	.	.	.	.	.	2177
19	5	20	31	97	137	208	62	126	122	144	93	105	93	30	6	.	.	.	.	.	1279
20	1	6	16	45	52	74	103	106	57	131	72	53	54	44	15	.	.	.	.	.	829
21	7	11	57	116	130	84	68	68	142	87	107	118	83	25	5	.	.	.	.	.	1108
22	5	34	86	134	165	192	199	176	158	223	130	49	26	11	7	.	.	.	.	.	1595
23	3	16	43	53	112	184	219	206	147	166	142	134	88	44	10	.	.	.	.	.	1567
24	7	19	41	62	53	125	134	138	206	195	172	127	85	42	12	.	.	.	.	.	1418
25	7	18	44	73	144	199	225	235	229	213	186	147	101	56	20	1	.	.	.	.	1898
26	9	48	80	84	110	155	114	165	65	25	17	13	10	5	1	.	.	.	.	.	901
27	4	10	27	46	81	144	254	290	192	69	92	37	11	4	1	.	.	.	.	.	1262
28	4	16	38	68	110	187	126	165	165	47	72	34	102	29	5	2	.	.	.	.	1170
29	.	.	.	1	14	33	39	91	186	138	157	130	175	80	67	49	30	59	29	3	.	.	.	.	1281
30	.	.	.	1	17	62	109	163	201	220	135	240	230	230	178	153	109	62	18	1	.	.	.	.	2129
MEAN	0	0	0	0	3	17	39	65	91	125	122	141	132	121	100	74	52	25	6	0	0	0	0	0	1113

APR 1995 HOURLY SUMS OF SKY RADIATION ON A HORIZONTAL SURFACE (0.01 MJ/SQM)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	4	10	21	41	44	33	52	53	72	39	34	15	3	.	.	.	.	.	.	421
2	4	6	21	37	44	28	26	37	54	43	41	29	8	.	.	.	.	.	.	378
3	9	26	51	40	69	21	73	103	70	55	49	27	18	.	.	.	.	.	.	611
4	8	34	43	71	73	75	71	79	72	74	72	35	12	1	.	.	.	.	.	720
5	1	7	14	33	36	65	65	49	53	44	36	28	27	4	.	.	.	.	.	.	462
6	3	10	22	33	43	48	50	56	42	45	24	22	6	.	.	.	.	.	.	404
7	2	7	24	51	57	84	78	82	63	66	37	30	18	1	.	.	.	.	.	600
8	1	15	29	39	63	47	73	84	88	87	68	52	39	10	1	.	.	.	.	.	696
9	5	13	23	41	71	79	36	37	34	30	23	19	12	3	.	.	.	.	.	426
10	1	8	18	36	32	23	33	37	39	36	26	16	11	3	1	.	.	.	.	.	320
11	5	13	13	21	47	79	135	118	49	31	7	5	3	.	.	.	.	.	.	526
12	4	13	22	47	55	80	85	50	67	51	28	9	4	1	.	.	.	.	.	516
13	1	5	13	22	26	36	37	27	39	53	50	40	47	15	3	.	.	.	.	.	414
14	2	12	33	33	50	55	44	33	44	35	15	11	5	4	.	.	.	.	.	.	376
15	1	13	39	42	54	75	92	108	107	105	88	66	35	18	7	.	.	.	.	.	850
16	4	13	20	25	55	73	70	98	120	120	102	70	34	43	7	.	.	.	.	.	854
17	5	13	18	22	26	27	35	39	34	34	64	34	21	12	5	.	.	.	.	.	389
18	5	12	17	20	23	24	26	31	54	44	44	46	55	51	9	.	.	.	.	.	461
19	5	20	31	31	54	69	54	76	80	88	76	55	55	21	6	.	.	.	.	.	721
20	1	6	16	44	51	72	101	98	57	78	67	51	44	30	10	.	.	.	.	.	726
21	7	11	52	71	70	78	65	67	120	74	62	77	58	22	4	.	.	.	.	.	838
22	5	18	28	35	49	59	94	120	126	57	76	49	26	11	7	.	.	.	.	.	760
23	3	16	43	53	75	91	91	78	112	92	81	62	39	26	8	.	.	.	.	.	870
24	7	19	40	62	53	96	116	111	87	74	69	49	37	24	9	.	.	.	.	.	853
25	7	18	40	60	60	54	52	49	49	43	37	32	27	20	10	1	.	.	.	.	559
26	9	22	49	72	96	102	95	109	62	25	17	13	10	5	1	.	.	.	.	.	687
27	4	10	27	46	76	105	126	99	105	67	82	35	11	4	1	.	.	.	.	.	798
28	4	16	38	67	101	132	76	130	138	43	58	32	64	26	5	2	.	.	.	.	932
29	.	.	.	1	14	29	37	60	59	80	87	110	97	74	63	49	30	38	23	3	.	.	.	.	854
30	.	.	.	1	17	22	24	34	60	83	94	70	74	54	58	42	35	24	11	1	.	.	.	.	704
MEAN	0	0	0	0	3	12	25	38	52	65	68	74	77	62	56	41	30	17	4	0	0	0	0	0	624

A. HOURLY VALUES APRIL

APR 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	15	4	5	8	9	7	7	2	5	6	4	5	5	8	8	9	9	7	6	5	9	3	4	12	162
2	7	6	10	8	6	9	5	7	8	10	5	3	5	10	8	14	19	15	27	18	9	9	8	10	236
3	8	9	9	6	6	10	12	13	9	8	4	8	14	8	18	17	17	27	31	11	8	2	.	.	255
4	.	3	1	6	11	4	15	18	16	28	24	30	20	19	21	20	24	17	23	23	22	27	13	15	400
5	16	15	19	9	7	7	5	4	4	3	3	2	2	2	1	1	1	2	1	1	1	.	.	.	106
6	1	3	3	4	4	2	2	2	3	4	4	5	3	4	5	3	6	5	4	3	1	.	1	1	73
7	.	.	.	.	1	1	2	4	9	29	18	16	16	23	22	23	28	24	20	24	13	11	18	10	311
8	18	15	28	12	14	20	30	27	23	31	23	18	14	18	24	24	25	26	18	26	14	22	30	17	517
9	8	6	5	4	1	.	-1	-1	.	10	20	37	37	37	37	39	39	37	34	29	26	22	13	11	450
10	8	6	6	5	3	3	2	1	1	1	.	.	1	1	1	.	.	1	3	3	3	3	3	2	57
11	3	3	5	3	3	3	4	3	4	5	6	9	15	8	7	5	4	3	2	.	1	1	2	3	102
12	5	1	2	1	.	.	.	.	1	3	8	15	12	12	19	8	6	6	6	5	5	4	4	3	126
13	7	4	3	3	2	1	1	1	.	1	.	.	1	3	5	4	21	31	22	19	15	15	6	6	171
14	4	6	9	8	8	7	6	4	4	5	5	4	3	1	1	.	.	.	.	.	.	.	1	1	77
15	.	.	1	1	2	10	10	5	8	8	11	13	18	19	21	24	33	36	37	36	34	35	30	32	424
16	31	32	33	33	34	35	37	37	32	28	21	9	15	14	6	5	3	8	26	28	18	28	34	34	581
17	33	33	33	33	33	33	36	36	39	38	36	36	36	36	27	36	40	39	38	37	36	36	36	36	852
18	35	31	26	28	34	37	40	41	40	40	40	39	37	39	36	30	19	14	20	24	27	29	28	27	761
19	24	29	30	29	25	18	11	22	27	23	23	11	17	18	17	22	22	21	13	19	26	15	3	1	466
20	3	2	2	1	.	1	1	3	2	6	10	15	10	23	15	14	25	23	26	22	23	33	28	34	322
21	34	36	36	36	17	6	22	25	23	12	11	1	8	12	8	10	4	1	3	4	13	25	22	17	386
22	31	26	25	30	25	35	38	39	38	37	33	28	25	37	28	17	15	14	13	10	10	8	8	10	580
23	23	18	13	5	4	6	8	9	25	31	31	33	24	27	28	33	35	35	32	30	29	28	27	26	560
24	25	19	7	13	16	10	12	13	10	13	22	16	33	34	34	37	39	36	35	33	25	24	29	28	563
25	28	21	26	23	11	10	14	24	30	33	35	36	34	35	37	37	39	38	39	37	36	34	33	33	723
26	33	32	33	33	32	33	18	19	14	21	14	15	6	5	3	3	3	3	3	5	7	7	5	6	353
27	7	8	7	5	5	4	4	5	12	19	18	22	19	14	13	10	5	4	3	3	5	6	8	9	215
28	6	8	8	6	6	4	6	6	12	11	9	11	11	8	8	9	18	18	10	17	23	13	13	26	267
29	17	23	13	17	22	20	10	15	28	18	18	13	20	15	11	15	28	14	19	17	29	35	34	33	484
30	33	33	32	33	33	34	35	34	32	32	31	35	36	35	35	36	37	37	37	35	33	33	29	32	812
MEAN	15	14	14	13	12	12	13	14	15	17	16	16	17	18	17	17	19	18	18	17	17	17	16	16	380

A. HOURLY VALUES APRIL

APR 1995		DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	2	.	1	11	.	.	.	.	.	.	.	.	.	.	14
2	5	7	.	.	.	.	.	.	.	12
3	7	10	12	18	22	21	8	24	.	.	.	.	.	.	.	122
4	4	26	24	51	26	50	18	19	27	40	21	.	.	.	.	.	.	.	306
5
6	2	.	.	.	.	.	.	.	.	.	.	2
7	39	22	29	22	38	28	21	38	43	.	.	.	.	.	.	280
8	29	3	19	54	38	31	8	22	36	25	35	1	.	.	.	.	.	.	301
9	19	25	60	51	60	59	60	60	58	.	.	.	.	.	.	452
10
11	19	20	.	.	.	.	.	.	.	.	.	.	.	.	39
12	7	15	.	.	.	.	.	.	.	.	.	.	.	.	22
13	36	1	.	.	.	.	.	.	37
14
15	7	12	28	43	25	47	49	60	18	.	.	.	.	.	289
16	38	58	60	59	41	37	13	18	36	27	5	.	19	1	.	.	.	.	.	412
17	41	60	60	60	60	60	60	60	60	60	57	58	49	19	14	.	.	.	.	.	718
18	43	60	60	60	60	60	60	60	60	56	60	47	58	59	8	.	.	.	.	.	751
19	34	36	47	4	16	16	21	13	36	41	22	.	.	.	.	.	.	.	286
20	3	.	.	24	3	2	12	40	30	.	.	.	.	.	114
21	3	32	30	2	.	.	8	6	22	25	24	5	.	.	.	.	.	.	157
22	41	60	60	60	60	60	52	24	60	26	.	.	.	.	.	.	.	.	.	.	503
23	35	60	58	60	37	43	36	60	60	57	3	.	.	.	.	.	.	509
24	21	8	14	58	60	60	60	60	60	6	.	.	.	.	.	407
25	5	12	51	60	60	60	60	60	60	60	60	60	53	.	.	.	.	.	661
26	53	35	11	10	23	9	24	1	.	.	.	.	.	.	.	.	.	.	.	.	166
27	23	58	60	30	.	6	1	.	.	.	.	.	.	.	.	.	178
28	3	24	19	16	13	1	7	1	30	2	.	.	.	.	.	.	116	
29	8	.	17	48	21	24	10	26	2	2	.	.	40	22	.	.	.	.	.	220	
30	.	.	.	19	60	60	60	60	60	60	20	59	60	60	60	60	60	60	28	.	.	.	.	786	
MEAN	0	0	0	0	1	9	12	15	19	24	20	24	21	23	21	21	24	21	6	0	0	0	0	0	262

APR 1995		DURATION OF SUNSHINE (MIN.)																										
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL*	MAX*	PCT	
1	12	2	112	2
2	6	12	3	113	3
3	6	6	12	18	24	24	6	18	.	.	.	.	.	.	.	.	.	19	114	17	
4	42	42	60	18	24	36	36	12	.	.	.	.	.	.	.	.	.	45	115	39	
5	0	117	0	
6	0	118	0	
7	36	18	30	36	48	54	24	30	18	.	.	.	.	.	.	.	.	49	119	41	
8	24	6	24	54	42	36	.	24	30	24	36	.	.	.	.	.	.	.	.	50	121	41	
9	12	24	60	60	60	60	60	60	18	.	.	.	.	.	.	.	.	69	125	55	
10	0	126	0	
11	6	24	.	.	.	.	.	.	.	.	.	.	.	.	.	5	127	4	
12	6	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	128	2	
13	30	6	.	.	.	.	.	.	.	.	6	129	5	
14	0	130	0	
15	6	12	24	42	24	48	48	48	.	.	.	.	.	.	.	.	42	131	32	
16	36	54	60	54	36	30	12	18	36	24	.	.	.	.	.	.	.	.	.	.	60	132	45	
17	36	60	60	60	60	60	60	60	60	54	60	48	24	.	.	.	.	.	.	.	117	133	88	
18	.	.	.	42	60	60	60	60	60	60	60	60	54	60	48	54	48	.	.	.	.	.	.	.	121	134	90
19	36	36	42	12	12	18	12	24	42	18	.	.	.	.	.	.	.	.	42	135	31	
20	24	6	12	42	18	.	.	.	.	.	.	.	.	17	136	13	
21	30	30	.	.	.	.	6	18	18	36	6	.	.	.	.	.	.	.	.	24	136	18	
22	36	60	60	60	60	30	12	60	18	.	.	.	.	.	.	.	.	.	.	.	76	137	55	
23	24	54	54	54	6	36	36	54	60	42	.	.	.	.	.	.	.	.	70	138	51	
24	12	6	12	54	60	60	60	60	48	.	.	.	.	.	.	.	.	62	138	45	
25	12	42	60	60	60	60	60	60	60	60	60	42	.	.	.	.	.	.	.	106	139	76	
26	.	.	.	54	30	12	6	30	12	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	29	140	21
27	36	60	30	30	6	.	.	.	.	.	.	.	.	.	.	.	.	22	141	16	
28	18	18	12	6	6	6	30	.	.	.	.	.	.	.	.	.	.	15	142	11	
29	.	.	.	6	18	42	18	24	6	24	.	.	.	36	18	.	.	.	.	.	.	.	.	.	32	143	22
30	.	.	18	60	60	60	60	60	54	18	60	60	60	60	60	60	30	.	.	.	.	.	.	.	130	144	90
MEAN	0	0	0	0	1	9	12	14	17	22	20	22	19	23	22	20	23	16	4	0	0	0	0	0	41	130	30	

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

A. HOURLY VALUES MAY

Table with 25 columns (1-24 for hours, TOTAL for sum) and 31 rows (1-31 for days). Title: MAY 1995 HOURLY SUMS OF NORMAL INCIDENCE BEAM RADIATION (0.01 MJ/SQM). Data values range from 0 to 3103.

Table with 25 columns (1-24 for hours, TOTAL for sum) and 31 rows (1-31 for days). Title: MAY 1995 HOURLY SUMS OF DOWNWARD ATMOSPHERIC RADIATION (0.01 MJ/SQM). Data values range from 87 to 307.

A. HOURLY VALUES MAY

MAY 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	25	8	21	24	25	28	21	13	10	9	9	8	7	6	4	4	5	5	5	5	4	5	4	4	259
2	5	4	3	5	17	27	32	32	31	29	26	26	23	23	23	15	11	10	15	13	14	14	8	7	413
3	5	5	3	3	4	3	3	3	2	3	3	2	2	5	3	5	12	13	3	3	3	5	5	5	103
4	5	8	24	27	8	5	6	21	24	31	30	31	31	25	20	19	25	12	12	10	5	7	14	15	415
5	20	7	3	5	2	2	2	5	9	9	8	8	8	6	4	5	5	3	3	2	1	1	3	3	124
6	3	4	2	1	1	1	2	3	3	2	4	3	4	2	2	2	3	2	.	1	1	1	1	1	49
7	3	3	2	3	3	7	10	6	6	24	22	8	23	13	17	16	12	10	4	2	2	3	3	3	205
8	3	3	3	3	4	4	5	9	9	10	14	17	17	15	14	16	24	23	18	17	18	25	26	21	318
9	22	29	32	33	33	27	19	24	18	27	25	20	16	16	26	34	32	27	26	30	32	30	30	31	639
10	30	31	31	30	24	10	23	27	32	32	36	36	36	36	36	37	37	37	37	37	36	36	36	36	779
11	36	36	33	36	37	38	38	39	32	26	21	26	30	28	22	26	26	26	27	36	36	36	35	35	761
12	34	33	33	33	34	37	36	35	32	34	31	27	19	16	28	36	37	38	38	37	36	36	36	35	791
13	36	35	34	34	34	36	38	37	34	33	29	26	23	13	3	2	18	10	11	24	29	23	21	19	602
14	25	22	15	11	22	26	25	21	21	12	11	14	10	5	3	3	2	2	3	5	10	14	16	7	305
15	2	1	2	2	3	2	5	5	5	10	10	8	9	8	8	5	3	13	15	4	7	15	17	15	174
16	14	16	15	20	10	20	20	15	14	13	16	20	14	15	21	18	18	31	24	21	26	16	26	27	450
17	31	27	28	13	10	8	18	9	11	6	8	21	25	24	18	24	35	36	33	36	32	22	26	33	534
18	34	33	33	33	34	37	37	27	18	13	12	19	24	29	30	32	36	26	12	21	29	25	19	26	639
19	13	23	31	26	24	21	20	13	8	4	1	1	1	.	.	1	5	7	5	5	6	5	3	2	225
20	1	1	2	1	1	1	1	.	.	2	5	4	3	7	11	11	14	20	17	24	17	16	23	29	211
21	15	28	34	24	13	31	36	23	19	17	18	21	31	32	34	35	36	37	37	37	35	34	33	32	692
22	32	32	31	31	33	36	34	33	28	32	32	30	31	24	25	26	20	17	13	17	23	19	13	19	631
23	17	24	22	23	27	30	33	35	36	34	33	32	32	31	32	31	31	24	17	15	13	14	13	10	609
24	10	9	10	9	11	13	13	15	17	16	18	24	32	23	18	16	23	38	37	37	36	34	31	31	521
25	31	25	33	30	31	33	36	37	35	25	28	18	15	11	9	9	10	10	10	9	8	9	8	7	477
26	6	6	6	6	6	8	11	9	10	11	11	10	15	22	19	16	11	8	8	8	10	8	13	7	245
27	10	6	14	26	30	28	30	31	20	18	23	29	29	30	28	28	23	25	24	18	14	12	12	23	531
28	32	32	32	31	35	37	38	38	39	32	31	30	28	20	18	13	17	18	16	17	10	12	16	27	619
29	18	31	27	13	10	10	9	6	6	9	7	8	6	4	4	3	1	12	24	28	18	16	13	5	288
30	9	22	19	25	2	15	31	33	32	27	27	23	22	28	24	14	19	13	17	23	29	26	22	22	524
31	24	14	7	2	2	2	2	3	26	33	33	31	28	24	30	26	25	29	25	8	2	2	2	2	382
MEAN	18	18	19	18	17	19	20	20	19	19	19	19	19	17	17	17	19	19	17	18	17	17	17	17	436

A. HOURLY VALUES MAY

MAY 1995		DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	31	35	11	7	84
2	38	60	49	60	59	56	50	52	47	24	2	497
3	3	.	1	7	7	18
4	27	47	60	60	60	58	42	9	9	23	.	.	.	.	.	.	395	
5	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2	
6
7	2	1	.	46	35	1	46	6	.	.	.	.	.	.	.	.	.	137	
8	30	32	.	.	.	.	16	.	.	.	.	.	.	78	
9	6	.	.	5	1	11	20	5	.	.	27	45	22	.	.	.	.	.	.	142	
10	32	11	14	11	41	53	60	60	60	60	60	60	60	60	59	28	.	.	.	729	
11	33	60	60	60	40	7	48	60	31	37	8	12	5	20	26	27	.	.	.	534	
12	34	60	60	14	58	60	37	1	29	24	41	60	59	60	60	22	.	.	.	679	
13	35	60	60	60	60	60	21	28	26	.	.	.	36	7	.	21	.	.	.	474	
14	26	60	60	27	.	.	1	.	.	.	.	.	.	.	.	.	.	.	174	
15	1	.	15	5	14	12	4	11	3	.	.	1	2	.	.	.	.	68	
16	11	19	13	20	14	39	47	21	19	16	50	32	31	30	25	.	.	.	387	
17	7	4	24	.	10	34	51	47	10	60	60	54	60	1	.	.	.	422	
18	39	60	59	33	17	9	18	28	49	50	8	24	59	27	28	16	.	.	.	524	
19	9	25	18	7	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	60	
20	4	.	.	.	.	.	1	9	1	.	.	.	.	15	
21	21	60	56	3	14	11	22	36	53	60	59	60	60	60	60	47	.	.	.	682	
22	44	60	60	60	60	60	60	60	60	51	33	32	.	.	.	.	.	.	.	640	
23	49	60	60	60	60	60	60	60	59	60	60	55	2	.	.	.	.	.	.	645	
24	14	1	.	18	50	60	16	.	.	13	60	60	34	.	.	.	326	
25	46	60	60	60	60	29	39	.	.	.	.	.	.	.	.	.	.	.	.	354	
26	4	3	.	.	.	.	.	.	.	.	.	7	
27	53	59	47	18	16	52	60	60	45	9	2	25	.	.	.	.	446		
28	48	60	60	60	60	39	56	60	41	.	.	.	12	.	.	.	.	.	496		
29	29	47	40	.	.	.	116	
30	13	44	56	59	49	50	45	19	54	22	.	.	.	.	.	.	.	.	411		
31	42	60	60	60	60	60	47	60	57	54	51	20	6	.	.	577		
MEAN	0	0	0	0	11	22	27	23	27	23	27	27	27	22	16	17	17	16	15	9	0	0	0	326	

MAY 1995		DURATION OF SUNSHINE (MIN.)																								TOTAL*	MAX*	PCT
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1	12	24	6	6	8	145	6	
2	30	48	30	60	54	54	42	42	24	12	66	145	46	
3	6	6	2	146	1	
4	30	42	60	60	60	60	60	18	6	6	18	.	.	.	.	.	.	.	60	146	41		
5	0	147	0	
6	0	148	0	
7	42	36	.	42	6	.	.	.	.	.	.	.	.	.	.	.	21	148	14		
8	18	18	.	.	.	.	12	.	.	.	.	.	.	.	.	.	8	149	5		
9	.	.	.	6	.	.	.	6	18	6	.	.	24	42	12	.	.	.	.	.	.	.	.	19	150	13
10	.	.	.	30	12	12	6	42	48	60	60	60	60	60	60	60	60	60	18	.	.	.	.	118	150	79
11	.	.	.	36	60	60	60	42	6	42	48	24	36	6	12	6	6	30	6	.	.	.	.	80	151	53
12	.	.	.	36	60	60	12	60	60	36	.	30	24	36	60	60	60	60	12	.	.	.	.	111	151	74
13	.	.	.	36	60	60	60	60	60	18	36	30	.	.	24	6	.	6	.	.	.	.	.	76	152	50
14	.	.	.	6	48	48	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	153	13
15	12	6	12	6	6	6	6	6	.	.	.	.	.	.	.	.	.	9	153	6		
16	.	.	.	6	18	6	18	12	24	48	18	18	12	48	30	30	36	24	.	.	.	.	.	58	154	38
17	.	.	.	6	18	12	30	48	48	6	54	60	54	54	.	.	.	.	.	.	.	.	.	65	154	42
18	.	.	42	60	60	30	18	6	6	18	48	48	12	6	54	24	24	18	.	.	.	.	.	79	154	51
19	.	.	12	18	12	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	154	5
20	6	.	.	.	.	.	.	6	.	.	.	.	.	.	.	2	155	1		
21	.	.	18	60	42	.	12	6	18	30	48	60	60	60	60	60	60	42	.	.	.	.	.	106	155	68
22	.	.	42	60	60	60	54	60	60	54	60	48	24	36	.	.	.	.	.	.	.	.	.	103	155	66
23	.	.	36	60	60	60	60	60	60	60	42	60	60	36	6	.	.	.	.	.	.	.	.	100	156	64
24	6	48	48	18	.	6	48	54	6	.	.	60	60	24	.	.	.	.	.	44	157	28		
25	.	.	42	60	60	60	60	30	36	.	.	.	.	.	.	.	.	.	.	.	.	.	.	58	157	37
26	0	158	0		
27	54	54	18	12	6	42	48	60	48	.	12	.	.	.	.	.	.	.	.	59	158	37		
28	.	.	48	60	60	60	54	24	42	54	30	.	.	6	.	.	.	.	.	.	.	.	.	73	158	46
29	30	42	12	.	.	.	.	.	.	14	159	9		
30	.	.	12	42	60	60	54	54	42	24	48	18	.	.	.	.	.	.	.	.	.	.	.	69	159	43
31	42	60	60	60	60	42	60	54	48	42	12	6	.	.	.	.	.	.	91	160	57		
MEAN	0	0	0	0	11	20	25	21	24	21	24	25	25	20	15	15	15	15	14	5	0	0	0	49	153	32		

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

A. HOURLY VALUES JUNE

JUN 1995		HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	2	1	2	2	2	2	2	2	2	3	3	4	3	3	3	3	3	2	1	1	2	2	2	1	53
2	.	.	.	.	2	3	2	6	4	4	8	7	10	13	10	13	8	9	10	8	8	12	7	7	151
3	8	5	7	8	15	10	20	14	10	18	21	23	27	23	28	23	25	33	36	36	35	33	32	31	521
4	31	31	31	31	32	35	36	38	38	37	36	35	36	35	25	32	33	31	24	27	32	30	29	30	775
5	28	27	28	28	29	31	28	33	33	31	29	22	10	11	8	4	3	2	3	2	2	2	3	2	399
6	2	3	2	3	3	4	6	9	18	34	30	18	15	11	10	16	14	8	5	3	3	2	4	3	226
7	3	8	7	11	23	35	33	14	4	8	19	23	14	24	25	25	23	21	23	33	32	29	25	12	474
8	10	11	13	15	15	15	28	34	29	24	26	23	19	18	17	15	16	15	13	7	5	6	5	3	382
9	5	7	8	8	13	13	16	23	29	32	34	27	21	28	26	30	33	36	33	33	28	32	31	30	576
10	29	26	13	13	5	10	23	28	16	17	21	17	15	15	13	9	8	8	8	15	9	11	10	17	356
11	12	12	30	25	24	23	12	10	9	12	15	15	16	13	17	28	31	34	35	35	35	33	33	32	541
12	32	32	30	31	33	36	37	36	36	31	33	36	35	33	31	36	39	40	39	39	37	33	28	29	822
13	27	28	30	26	30	36	39	39	37	36	30	21	19	26	36	39	39	40	40	39	38	36	35	35	801
14	35	36	34	34	36	37	29	29	27	19	18	28	31	32	33	31	29	27	23	23	17	16	13	11	648
15	10	8	6	5	5	6	13	26	28	24	17	11	9	10	14	14	10	10	10	7	7	6	8	12	276
16	8	6	4	6	9	8	8	6	5	5	6	9	9	8	11	13	9	9	7	8	8	10	11	7	190
17	7	6	7	6	5	7	9	11	9	9	10	9	8	4	2	2	3	9	12	8	3	2	3	2	153
18	2	3	5	4	4	3	5	5	3	3	2	2	2	4	5	5	5	7	10	5	5	5	6	7	107
19	7	10	8	10	11	12	14	16	10	11	16	20	32	33	33	34	33	32	20	9	8	7	6	5	397
20	5	4	4	4	4	5	4	5	4	3	3	2	1	1	.	1	1	2	13	18	20	28	32	32	196
21	31	24	25	11	6	10	9	3	9	17	16	11	10	9	18	9	7	16	8	8	5	7	10	8	287
22	10	8	5	5	6	6	8	11	10	14	23	23	25	30	32	33	33	33	31	32	32	31	29	29	499
23	29	29	28	28	29	31	32	32	33	33	33	33	31	31	32	33	33	33	33	32	30	29	29	22	738
24	19	27	14	20	16	24	29	28	27	28	28	28	28	30	30	31	31	32	30	29	28	27	26	26	636
25	27	27	26	26	28	31	33	31	32	31	30	30	30	31	31	33	34	32	33	34	33	31	21	23	718
26	33	33	31	29	29	30	31	33	32	33	32	33	33	34	35	36	36	37	37	37	36	35	34	33	802
27	33	33	33	33	35	37	38	37	36	37	37	36	37	38	39	40	40	41	39	39	37	35	32	32	874
28	31	33	33	33	35	36	35	25	19	22	27	31	31	19	5	4	4	4	4	5	5	4	4	4	453
29	5	10	25	11	18	26	33	34	35	34	34	35	36	38	39	39	39	39	37	35	21	15	13	12	663
30	11	10	9	10	9	8	8	8	5	5	6	14	23	36	36	36	35	36	37	37	36	37	36	36	524
MEAN	16	17	17	16	17	19	21	21	20	21	21	21	21	21	21	22	22	23	22	21	20	20	19	18	475

A. HOURLY VALUES JULY

JUL 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	36	36	36	36	36	36	35	36	36	36	34	35	32	36	36	35	38	39	36	36	33	28	24	21	822
2	13	10	13	9	8	8	8	7	10	8	6	5	4	3	2	2	2	3	3	2	2	2	2	1	133
3	1	.	1	1	2	3	3	9	7	5	5	4	5	6	5	6	13	10	6	4	5	6	7	5	119
4	5	7	17	14	5	4	6	6	6	8	7	14	12	9	12	13	10	9	12	17	10	10	8	15	236
5	9	10	18	10	8	14	7	14	12	16	14	16	12	15	20	12	9	9	8	7	5	3	1	1	250
6	1	1	.	.	.	.	1	3	1	1	.	2	4	3	7	20	20	26	26	25	18	13	10	10	192
7	11	4	3	3	4	4	5	5	5	5	6	7	7	8	10	10	11	23	28	26	12	13	13	10	233
8	8	8	9	5	5	6	10	9	12	15	17	20	23	22	18	13	11	10	13	17	18	18	31	32	350
9	32	32	32	31	34	36	35	37	36	37	35	36	36	36	36	35	37	36	36	36	34	33	33	33	834
10	31	31	30	30	33	35	36	39	39	38	37	36	35	36	37	38	39	39	39	39	36	35	33	33	854
11	31	30	24	27	33	36	34	37	38	36	34	33	34	36	37	38	39	39	37	38	36	33	32	31	823
12	30	30	30	30	33	36	38	39	40	38	36	34	32	34	35	35	38	38	36	35	21	16	11	13	758
13	10	9	9	9	10	9	8	10	13	10	5	4	5	4	11	10	12	10	14	14	20	18	18	23	265
14	21	20	10	3	2	5	15	25	20	23	26	21	18	24	19	21	23	15	16	10	11	10	13	10	381
15	12	11	13	2	2	2	3	6	6	13	14	18	16	17	19	8	5	6	10	.	2	2	1	2	190
16	1	4	6	8	.	.	3	5	15	12	12	18	16	18	12	11	8	6	7	5	5	5	5	5	187
17	5	5	.	.	.	1	.	2	2	3	4	5	10	13	14	28	29	24	25	20	17	18	16	11	252
18	9	5	5	5	3	1	.	2	15	9	4	3	5	9	10	15	10	9	8	7	5	2	1	1	143
19	2	4	3	1	3	4	5	4	5	7	8	8	8	11	11	7	7	5	5	5	5	5	5	3	131
20	1	2	2	1	1	2	1	.	.	.	.	.	-1	.	.	-1	.	-1	-1	-1	-1	-1	-1	.	2
21	1	.	-1	-1	.	.	.	.	3	3	7	7	5	4	6	6	13	6	5	1	2	4	1	2	74
22	1	.	2	4	3	7	6	5	8	4	.	1	.	4	11	12	13	17	13	5	2	3	1	5	127
23	7	6	9	8	6	6	25	19	13	13	12	10	9	10	5	2	.	.	-1	-1	-1	-1	-1	-1	154
24	-1	-2	-1	-1	.	-2	-2	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	.	-1	.	.	-1	-3	-29
25	-1	.	5	.	2	4	7	8	8	9	10	28	30	24	25	29	34	35	34	29	31	30	28	27	436
26	26	23	19	11	19	22	29	21	25	31	29	29	30	33	32	30	31	32	33	33	32	31	28	29	658
27	29	29	27	27	29	29	34	36	38	37	36	35	34	34	35	35	35	33	28	32	31	31	29	29	772
28	26	26	22	20	17	18	18	23	22	18	17	14	9	8	7	7	8	7	8	8	10	11	20	15	359
29	20	15	13	17	15	10	13	8	10	17	15	4	3	3	3	8	8	6	5	5	5	3	3	4	213
30	3	3	3	3	3	3	3	3	8	26	28	27	27	28	29	30	30	29	29	28	26	15	3	2	389
31	2	2	1	1	1	1	3	3	20	27	28	29	29	28	28	28	29	29	23	14	9	12	17	17	381
MEAN	12	12	12	10	10	11	13	14	15	16	16	16	16	17	17	17	18	18	17	16	14	13	13	12	345

A. HOURLY VALUES AUGUST

AUG 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	10	6	3	2	3	3	5	7	12	16	21	28	27	26	31	32	32	34	33	31	28	28	27	26	471
2	24	26	22	4	3	3	7	8	8	28	30	30	29	30	31	28	28	33	31	28	27	26	23	26	533
3	27	25	15	3	2	3	4	13	11	10	8	11	12	8	12	27	27	27	31	33	30	31	31	31	432
4	31	31	30	30	31	33	33	34	36	36	35	36	35	35	36	35	35	34	34	33	31	30	29	29	792
5	28	28	26	17	6	18	11	9	9	22	33	32	28	31	31	32	31	9	5	5	4	5	5	5	430
6	5	5	5	6	6	6	8	5	6	5	3	5	10	13	10	7	7	8	13	11	12	16	8	21	201
7	26	11	25	18	19	25	24	24	26	26	29	33	31	33	25	28	20	32	34	33	35	35	35	35	662
8	34	33	33	32	32	36	37	37	36	36	34	33	33	32	33	33	34	35	20	8	8	13	13	8	683
9	8	7	6	6	6	6	8	7	8	9	9	8	8	10	10	8	7	11	9	10	8	5	5	7	186
10	4	4	5	5	5	6	8	13	8	8	15	33	33	34	35	35	35	36	36	35	33	31	31	31	519
11	30	30	29	28	28	33	33	32	34	32	33	33	34	36	37	37	36	38	38	35	34	33	33	33	799
12	33	33	33	33	32	34	37	36	36	38	35	35	36	37	38	39	41	38	32	29	27	30	25	24	811
13	23	21	20	10	4	2	3	3	4	8	3	3	4	14	11	8	9	15	10	10	9	9	9	8	220
14	8	7	7	4	9	8	4	4	7	8	11	21	13	12	11	9	8	7	6	5	5	4	4	4	186
15	3	2	2	1	2	2	3	2	3	3	1	1	.	3	4	4	3	1	1	3	4	5	4	4	61
16	4	3	3	1	.	.	.	.	1	1	1	1	1	2	1	3	3	4	5	4	2	2	6	5	53
17	4	2	2	4	5	6	6	7	9	10	17	20	13	14	15	12	15	21	28	30	29	25	24	23	341
18	21	26	25	20	19	23	32	36	32	34	35	35	35	34	34	35	35	35	33	31	30	30	30	29	729
19	26	16	6	8	14	28	29	29	29	27	15	16	19	30	31	26	23	27	29	31	31	31	30	30	581
20	26	26	28	19	9	10	5	8	9	32	33	33	33	34	35	36	38	38	39	36	34	32	30	29	652
21	30	29	29	28	28	30	31	33	33	32	32	33	33	32	30	25	23	25	22	24	25	23	16	11	657
22	13	21	21	15	15	18	23	18	16	9	5	5	5	3	3	3	1	1	.	.	1	1	1	1	199
23	1	3	4	5	9	14	13	15	16	20	18	21	12	24	29	25	28	31	22	22	29	23	10	8	402
24	6	8	3	2	2	4	5	8	11	9	13	10	11	7	7	12	13	11	8	5	4	5	4	5	173
25	5	3	.	.	.	.	.	.	.	.	.	1	2	3	4	11	7	26	33	33	33	34	35	34	264
26	30	27	25	8	12	16	19	15	16	13	10	9	9	12	15	22	28	13	24	16	9	10	9	8	375
27	6	6	7	6	9	5	6	11	13	18	18	13	19	23	24	28	34	33	31	34	36	36	36	36	488
28	36	37	36	36	36	36	36	36	30	20	20	26	21	24	31	27	30	32	35	34	34	34	35	34	756
29	34	34	34	35	34	35	36	37	36	35	32	26	24	27	29	34	35	31	36	36	35	35	35	35	800
30	35	35	35	35	35	35	37	38	37	36	36	37	36	37	36	32	31	35	33	33	33	31	30	29	827
31	29	28	28	27	21	18	6	4	5	9	9	9	10	13	28	30	30	31	29	28	28	26	23	18	487
MEAN	19	18	18	14	14	16	16	17	17	19	19	21	20	22	23	23	23	24	24	23	22	22	21	20	476

A. HOURLY VALUES SEPTEMBER

SEP 1995		HOURLY SUMS OF GLOBAL RADIATION (0.01 MJ/SQM)																								TOTAL
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL	
1	5	15	31	58	89	159	221	209	190	163	124	81	34	5	.	.	.	.	.	1384	
2	2	12	49	64	133	192	228	167	45	100	73	32	12	4	.	.	.	.	.	1113	
3	9	25	67	93	139	137	98	96	116	44	14	7	4	.	.	.	.	.	.	849	
4	6	23	39	69	54	39	40	98	181	102	48	43	12	3	.	.	.	.	.	757	
5	7	15	57	37	72	56	68	75	193	98	34	32	12	1	.	.	.	.	.	757	
6	3	6	44	96	136	180	156	111	102	36	31	37	17	1	.	.	.	.	.	956	
7	4	8	22	49	67	100	107	162	126	106	92	27	25	2	.	.	.	.	.	897	
8	15	26	57	134	177	146	170	181	156	159	94	45	11	1	.	.	.	.	.	1372	
9	9	23	27	66	155	173	135	147	104	92	34	36	7	1	.	.	.	.	.	1009	
10	6	33	93	134	166	170	182	114	85	39	51	37	9	.	.	.	.	.	.	1119	
11	6	25	96	123	171	190	129	122	96	104	109	62	14	.	.	.	.	.	.	1247	
12	6	32	39	65	134	152	111	90	69	54	32	15	5	.	.	.	.	.	.	804	
13	3	10	23	28	25	31	71	53	59	87	46	12	5	.	.	.	.	.	.	453	
14	2	10	33	50	105	122	100	79	73	53	54	33	5	.	.	.	.	.	.	719	
15	2	8	23	29	37	28	51	81	59	37	37	21	10	.	.	.	.	.	.	423	
16	5	24	47	69	156	179	171	182	142	121	88	47	11	.	.	.	.	.	.	1242	
17	2	8	26	69	109	89	78	85	70	26	21	12	4	.	.	.	.	.	.	599	
18	3	13	23	26	30	35	31	68	49	41	28	17	5	.	.	.	.	.	.	369	
19	3	23	31	43	85	38	33	33	29	65	21	5	2	.	.	.	.	.	.	411	
20	1	10	26	51	41	49	46	33	29	20	14	5	1	.	.	.	.	.	.	326	
21	10	65	112	55	57	80	113	89	124	70	15	3	.	.	.	.	.	.	793	
22	7	14	21	18	18	34	49	40	22	17	5	1	.	.	.	.	.	.	246	
23	13	24	53	57	63	72	57	37	25	36	17	3	.	.	.	.	.	.	457	
24	3	11	22	30	37	35	35	40	40	32	18	5	.	.	.	.	.	.	308	
25	12	23	21	22	15	10	11	9	7	7	18	5	.	.	.	.	.	.	160	
26	1	5	9	29	50	75	54	66	44	22	30	16	3	.	.	.	.	.	.	404	
27	1	2	6	8	11	24	26	20	22	25	14	8	2	.	.	.	.	.	.	169	
28	8	40	69	125	148	172	137	136	116	53	25	2	.	.	.	.	.	.	1031	
29	1	10	54	100	131	155	166	165	147	114	20	14	2	.	.	.	.	.	.	1079	
30	6	49	98	131	154	160	157	140	108	70	22	1	.	.	.	.	.	.	1096	
MEAN	0	0	0	0	0	3	14	38	63	90	100	101	100	89	72	46	25	8	1	0	0	0	0	0	752	

SEP 1995		HOURLY SUMS OF SKY RADIATION ON A HORIZONTAL SURFACE (0.01 MJ/SQM)																								TOTAL
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL	
1	5	15	31	58	86	95	43	33	24	22	20	17	15	5	.	.	.	.	.	469	
2	2	12	49	64	69	57	69	85	37	68	54	30	12	4	.	.	.	.	.	612	
3	9	21	47	64	75	90	89	92	94	44	14	7	4	.	.	.	.	.	.	650	
4	6	23	38	62	54	39	40	79	44	51	46	26	10	3	.	.	.	.	.	521	
5	7	15	44	37	68	56	67	64	98	69	33	32	12	1	.	.	.	.	.	603	
6	3	6	38	68	87	63	66	90	87	36	31	37	17	1	.	.	.	.	.	630	
7	4	8	22	49	66	90	92	87	77	51	39	20	11	2	.	.	.	.	.	618	
8	15	25	41	51	56	44	79	57	46	41	50	36	11	1	.	.	.	.	.	553	
9	9	21	27	51	71	69	80	67	67	48	29	21	7	1	.	.	.	.	.	568	
10	6	13	16	20	25	33	42	72	66	39	47	36	9	.	.	.	.	.	.	424	
11	6	15	26	37	56	42	82	71	70	68	50	17	8	.	.	.	.	.	.	548	
12	6	21	35	47	44	44	72	86	67	54	32	15	5	.	.	.	.	.	.	528	
13	3	10	23	28	25	31	70	51	58	75	46	12	5	.	.	.	.	.	.	437	
14	2	10	33	48	82	88	90	76	71	51	49	30	5	.	.	.	.	.	.	635	
15	2	8	23	29	37	28	51	75	56	37	37	21	10	.	.	.	.	.	.	414	
16	5	24	43	58	49	43	59	38	39	37	27	25	8	.	.	.	.	.	.	455	
17	2	8	26	43	73	70	78	83	70	26	21	12	4	.	.	.	.	.	.	516	
18	3	13	23	26	30	35	31	68	49	41	28	17	5	.	.	.	.	.	.	369	
19	3	21	26	43	82	38	33	33	29	65	21	5	2	.	.	.	.	.	.	401	
20	1	10	26	51	41	49	46	33	29	20	14	5	1	.	.	.	.	.	.	326	
21	10	15	54	49	57	77	77	64	60	28	15	3	.	.	.	.	.	.	509	
22	7	14	21	18	18	34	49	40	22	17	5	1	.	.	.	.	.	.	246	
23	13	24	44	50	62	70	57	37	25	33	17	3	.	.	.	.	.	.	435	
24	3	11	22	30	37	35	35	40	40	32	18	5	.	.	.	.	.	.	308	
25	12	23	21	22	14	10	11	9	7	7	18	5	.	.	.	.	.	.	159	
26	1	5	9	28	49	64	50	61	43	20	27	16	3	.	.	.	.	.	.	376	
27	1	2	6	8	11	24	26	20	22	25	14	8	2	.	.	.	.	.	.	169	
28	8	37	42	35	34	41	77	32	27	24	10	2	.	.	.	.	.	.	369	
29	1	10	14	21	20	22	24	28	27	24	18	13	2	.	.	.	.	.	.	224	
30	6	11	14	15	16	18	18	19	15	12	7	1	.	.	.	.	.	.	152	
MEAN	0	0	0	0	0	3	13	27	40	49	48	55	59	50	40	30	18	6	1	0	0	0	0	0	441	

A. HOURLY VALUES SEPTEMBER

SEP 1995																										
HOURLY SUMS OF ULTRAVIOLET RADIATION ON A HORIZONTAL SURFACE (KJ/SQM)																										
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL	
1	3	8	15	28	39	67	87	82	73	60	44	26	12	3	.	.	.	.	.	547	
2	2	7	20	32	54	71	82	64	20	41	31	16	5	1	.	.	.	.	.	446	
3	5	15	29	41	57	59	46	46	50	22	8	4	2	.	.	.	.	.	.	384	
4	4	12	18	33	28	21	22	49	70	46	26	21	9	2	.	.	.	.	.	361	
5	5	10	24	20	36	28	34	36	69	39	16	12	5	1	.	.	.	.	.	335	
6	3	4	22	39	54	68	64	52	47	19	15	15	6	.	.	.	.	.	.	408	
7	2	5	11	23	31	42	46	65	52	44	31	15	8	1	.	.	.	.	.	376	
8	5	13	24	47	65	62	70	71	62	56	36	16	5	1	.	.	.	.	.	533	
9	5	14	18	32	54	64	59	60	47	28	16	8	5	1	.	.	.	.	.	411	
10	5	15	30	46	60	66	71	56	40	21	22	15	5	.	.	.	.	.	.	452	
11	3	13	28	41	57	68	56	56	44	38	35	19	7	.	.	.	.	.	.	465	
12	3	12	19	28	51	62	54	44	33	26	18	9	3	.	.	.	.	.	.	362	
13	2	5	11	14	13	16	33	24	28	33	21	6	2	.	.	.	.	.	.	208	
14	1	5	14	22	38	48	44	36	34	24	21	12	3	.	.	.	.	.	.	302	
15	2	5	12	15	18	15	26	36	28	20	16	9	3	.	.	.	.	.	.	205	
16	2	8	18	31	55	66	66	67	55	44	29	15	4	.	.	.	.	.	.	460	
17	2	7	15	32	46	44	37	40	34	13	11	6	2	.	.	.	.	.	.	289	
18	1	6	12	13	15	18	16	32	24	21	13	9	3	.	.	.	.	.	.	183	
19	2	8	12	19	34	19	18	17	15	31	11	3	2	.	.	.	.	.	.	191	
20	1	5	11	21	21	25	24	18	16	11	8	3	1	.	.	.	.	.	.	165	
21	7	21	31	21	26	39	47	34	35	25	8	1	.	.	.	.	.	.	295	
22	3	7	11	10	10	18	25	20	12	8	4	1	.	.	.	.	.	.	129	
23	6	15	25	27	31	36	29	19	13	15	8	2	.	.	.	.	.	.	226	
24	2	6	11	15	18	18	18	20	18	15	7	1	.	.	.	.	.	.	149	
25	5	10	10	12	8	6	7	5	4	3	5	2	.	.	.	.	.	.	77	
26	2	5	12	26	31	26	29	20	9	10	6	1	.	.	.	.	.	.	177	
27	1	3	5	6	12	13	10	11	12	7	3	.	.	.	.	.	.	.	83	
28	4	15	29	46	57	63	51	51	39	21	10	2	.	.	.	.	.	.	388	
29	6	17	30	43	53	58	57	50	37	18	8	1	.	.	.	.	.	.	378	
30	5	17	31	44	54	57	56	48	36	22	9	1	.	.	.	.	.	.	380	
MEAN	0	0	0	0	0	2	7	16	26	36	41	43	43	37	28	19	10	3	0	0	0	0	0	0	312	

SEP 1995																										
HOURLY DOSES OF UV-B RADIATION ON A HORIZONTAL SURFACE (0.01 MED/HR)																										
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL	
1	1	6	15	36	57	110	146	136	109	76	42	18	5	1	.	.	.	.	.	758	
2	1	5	18	37	72	102	119	91	26	46	29	12	2	.	.	.	.	.	.	560	
3	2	10	26	48	77	90	74	72	72	28	8	3	1	.	.	.	.	.	.	511	
4	2	8	17	39	41	34	37	80	98	55	25	14	4	1	.	.	.	.	.	455	
5	2	6	19	23	47	41	52	53	87	43	15	7	2	.	.	.	.	.	.	397	
6	1	3	20	44	72	99	98	81	66	24	14	10	3	.	2	.	.	.	.	537	
7	1	3	10	26	40	60	67	93	68	50	26	10	3	.	.	.	.	.	.	457	
8	2	8	21	50	83	93	108	107	85	64	32	10	2	.	.	.	.	.	.	665	
9	2	8	17	38	71	94	93	93	66	29	14	5	2	.	.	.	.	.	.	532	
10	2	8	23	47	75	93	106	85	56	26	19	9	2	.	.	.	.	.	.	551	
11	1	7	21	42	71	96	82	82	59	40	28	11	3	.	.	.	.	.	.	543	
12	1	6	15	30	64	87	81	65	44	30	16	6	1	.	.	.	.	.	.	446	
13	1	3	10	16	17	23	52	36	38	38	19	4	1	.	.	2	.	.	.	260	
14	3	12	25	50	72	70	58	48	28	18	8	1	.	.	.	.	.	.	393	
15	1	3	11	17	24	24	40	54	41	24	15	5	1	.	.	.	.	.	.	260	
16	1	4	15	36	72	97	103	101	76	50	26	9	2	.	.	.	.	.	.	592	
17	1	4	14	37	62	72	62	64	51	17	10	4	1	.	.	.	.	.	.	399	
18	3	10	14	21	28	25	49	34	25	12	6	1	.	.	.	.	.	.	228	
19	1	4	10	22	44	30	29	26	21	34	10	2	1	.	.	.	.	.	.	234	
20	3	10	25	30	41	44	30	24	14	8	2	.	.	.	.	.	.	.	231	
21	5	19	38	32	49	76	87	53	40	24	6	1	.	.	.	.	.	.	430	
22	2	6	14	13	17	30	41	29	14	8	2	.	.	.	.	.	.	.	176	
23	3	10	24	32	41	49	39	24	13	11	4	1	.	.	.	.	.	.	251	
24	1	4	10	17	23	23	22	22	17	10	3	.	.	.	.	.	.	.	152	
25	2	7	9	14	10	8	8	6	4	2	2	.	.	.	.	.	.	.	72	
26	1	3	10	25	33	30	33	19	7	6	3	.	.	.	.	.	.	.	170	
27	1	3	6	13	15	11	11	10	4	1	2	.	.	.	.	.	.	77	
28	1	7	19	37	52	59	47	41	25	10	3	.	.	.	.	.	.	.	301	
29	2	8	20	35	50	56	53	41	25	10	3	.	.	.	.	.	.	.	303	
30	2	8	20	36	51	58	58	46	29	14	4	.	.	.	.	.	2	.	328	
MEAN	0	0	0	0	0	1	4	13	27	45	58	63	62	49	31	16	6	1	0	0	0	0	0	0	376	

A. HOURLY VALUES SEPTEMBER

SEP 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								TOTAL
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	16	5	3	3	2	2	3	3	4	5	19	28	29	30	31	31	31	31	29	26	12	3	4	4	354
2	3	9	26	19	12	10	10	10	15	23	26	27	21	14	21	26	21	13	16	13	13	20	18	16	402
3	15	20	23	20	16	18	31	31	28	31	26	19	22	26	21	16	12	10	6	5	7	12	12	8	435
4	13	10	13	18	11	12	17	14	14	12	10	12	20	32	28	23	36	38	39	33	24	21	30	29	509
5	24	18	11	15	20	22	18	21	14	17	14	15	15	21	17	14	14	14	19	15	18	10	8	8	382
6	8	14	12	11	10	8	6	20	26	27	33	30	26	24	15	14	17	15	10	13	21	31	15	11	417
7	13	8	10	12	11	10	8	11	13	13	16	17	28	24	32	28	31	38	33	29	25	26	13	20	469
8	32	31	30	29	31	31	32	32	33	34	36	33	36	37	36	34	23	24	33	34	35	35	32	23	766
9	26	29	30	31	31	30	29	20	23	34	37	33	33	29	19	19	16	21	23	17	23	32	31	30	646
10	28	30	29	30	30	30	31	36	39	41	41	39	34	23	15	19	21	20	13	12	12	10	10	10	603
11	8	7	6	7	11	22	29	32	34	28	33	23	26	24	23	33	37	34	23	24	28	27	31	31	581
12	30	28	28	27	27	26	23	18	16	35	36	32	24	19	17	17	14	12	10	10	9	8	8	10	484
13	9	9	8	7	8	8	7	10	10	8	7	10	8	10	16	17	10	8	8	7	8	8	8	11	220
14	16	14	10	8	6	7	8	12	13	15	23	26	23	25	23	23	26	22	26	28	22	13	13	12	414
15	23	31	30	33	33	25	17	17	15	14	13	12	11	13	12	12	14	16	18	24	30	24	29	26	492
16	18	15	15	16	18	20	17	15	24	30	34	33	35	36	36	36	35	34	27	27	22	9	7	8	567
17	14	25	21	13	20	21	13	13	28	25	23	14	16	17	12	12	11	10	10	10	9	10	9	8	364
18	8	8	6	6	6	7	10	9	8	8	8	8	10	10	12	11	16	21	27	27	15	14	18	23	296
19	15	18	23	28	29	26	10	5	7	8	8	7	7	6	15	8	6	9	10	5	3	3	5	15	276
20	29	33	33	31	24	12	10	7	9	7	8	5	5	3	1	.	1	1	.	.	.	1	1	.	221
21	.	.	.	1	3	3	13	31	18	8	8	13	20	13	15	29	10	8	10	8	10	16	13	22	272
22	17	8	5	4	3	.	.	.	.	.	1	3	8	8	7	6	6	7	8	9	5	9	18	14	146
23	6	7	5	13	11	13	16	22	19	18	15	15	14	13	10	10	14	14	8	7	5	3	1	.	259
24	.	.	.	3	5	4	3	4	4	1	3	5	5	7	11	14	12	8	13	10	11	9	8	20	160
25	23	28	21	27	11	8	13	9	6	3	.	-1	-1	-1	-2	-1	4	13	7	5	9	5	11	13	210
26	10	5	10	13	8	4	4	2	2	10	11	10	6	6	3	6	11	19	18	17	3	1	5	13	197
27	10	8	7	4	1	1	1	1	1	1	2	2	2	3	3	3	3	2	3	2	3	3	10	13	89
28	16	14	16	17	12	15	9	15	29	32	32	31	20	34	36	33	39	37	36	35	33	28	16	7	592
29	4	7	3	10	26	18	27	33	33	39	39	38	37	36	36	33	31	35	32	34	33	32	32	31	679
30	32	33	33	33	34	34	33	35	39	40	41	41	41	41	41	42	43	43	41	40	39	38	36	39	907
MEAN	16	16	16	16	16	15	15	16	17	19	20	19	19	19	19	19	19	19	19	18	16	15	15	16	414

A. HOURLY VALUES SEPTEMBER

SEP 1995	DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	1	26	60	60	60	60	60	50	4	.	.	.	.	.	.	441
2	27	47	58	33	4	23	30	1	.	.	.	.	.	.	.	223
3	3	30	25	57	40	1	3	22	.	.	.	.	.	.	.	.	.	.	181
4	6	.	.	.	8	54	25	2	21	1	.	.	.	.	.	.	117
5	18	.	1	.	.	6	52	13	.	.	.	.	.	.	.	.	.	90
6	5	28	43	60	39	12	11	.	.	.	.	.	.	.	.	.	.	198
7	5	7	35	22	33	40	13	58	.	.	.	.	.	.	213
8	22	48	60	45	49	58	59	60	55	17	.	.	.	.	.	.	.	473
9	13	57	60	27	38	29	33	4	20	.	.	.	.	.	.	.	281
10	26	60	60	60	60	60	21	12	.	6	2	.	.	.	.	.	.	.	367
11	13	60	55	56	60	22	23	18	33	55	60	18	.	.	.	.	.	.	473
12	17	.	12	60	60	25	.	.	.	.	.	.	.	.	.	.	.	.	174
13	8	.	.	.	.	.	.	.	.	.	.	8
14	28	42	8	.	.	.	6	.	.	.	.	.	.	.	.	84
15	2	1	.	.	.	.	.	.	.	.	.	.	3
16	3	6	52	59	52	60	55	60	58	60	11	.	.	.	.	.	.	476
17	39	23	9	.	.	.	.	.	.	.	.	.	.	.	.	.	71
18
19	4	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	18
20
21	56	49	6	.	1	22	15	42	39	.	.	.	.	.	.	.	.	230
22
23	9	7	.	.	.	.	.	2	.	.	.	.	.	.	.	.	18
24
25
26	7	2	3	1	5	.	.	.	.	.	.	.	.	.	18
27
28	7	32	54	53	56	37	57	57	34	36	.	.	.	.	.	.	.	423
29	49	60	60	60	60	60	60	58	2	4	.	.	.	.	.	.	.	473
30	47	60	60	60	60	60	60	60	60	29	.	.	.	.	.	.	.	556
MEAN	0	0	0	0	0	0	2	12	17	24	25	20	18	20	19	15	11	5	0	0	0	0	0	0	187

SEP 1995	DURATION OF SUNSHINE (MIN.)																								TOTAL*	MAX*	PCT	
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1	36	60	60	60	60	60	48	74	127	58
2	24	54	60	30	18	24	35	126	28
3	30	18	48	36	.	.	18	.	.	.	.	.	.	.	.	.	.	.	25	125	20	
4	6	.	.	.	12	54	24	18	.	.	.	.	.	.	.	.	.	19	121	16	
5	12	.	.	.	.	42	18	.	.	.	.	.	.	.	.	.	.	.	12	119	10	
6	6	18	24	60	36	12	6	.	.	.	.	.	.	.	.	.	.	.	27	118	23	
7	6	6	36	24	36	36	12	42	.	.	.	.	.	.	.	.	33	117	28	
8	12	42	60	54	48	60	54	60	42	18	.	.	.	.	.	.	.	.	75	115	65	
9	18	54	54	30	30	24	30	6	12	.	.	.	.	.	.	.	.	43	114	38	
10	30	60	60	60	60	60	18	12	.	6	.	.	.	.	.	.	.	.	61	113	54	
11	18	60	60	60	54	18	18	12	24	54	60	18	.	.	.	.	.	.	76	112	68	
12	12	.	18	54	54	12	.	.	.	.	.	.	.	.	.	.	.	.	25	110	23	
13	6	.	.	.	.	.	.	.	.	.	.	1	109	1	
14	18	24	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	108	6	
15	0	107	0	
16	6	48	54	42	60	48	54	60	54	6	.	.	.	.	.	.	.	72	106	68	
17	30	18	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9	105	9	
18	0	104	0	
19	6	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	103	3	
20	0	102	0	
21	54	42	6	.	.	24	12	42	36	.	.	.	.	.	.	.	.	36	101	36	
22	0	100	0	
23	6	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	100	2	
24	0	99	0	
25	0	98	0	
26	6	.	.	.	6	.	.	.	.	.	.	.	.	.	.	2	97	2	
27	0	96	0	
28	6	24	60	60	54	36	60	48	30	36	.	.	.	.	.	.	.	.	69	95	73	
29	48	60	60	60	60	60	60	60	54	.	.	.	.	.	.	.	.	.	77	94	82	
30	48	60	60	60	60	60	60	60	60	24	.	.	.	.	.	.	.	.	92	93	99	
MEAN	0	0	0	0	0	0	2	12	16	22	25	18	17	18	18	14	10	4	0	0	0	0	0	0	29	108	27	

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

A. HOURLY VALUES OCTOBER

OCT 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	41	41	40	39	28	23	18	18	15	15	13	13	11	10	9	7	5	2	2	3	5	5	9	12	384
2	9	6	10	5	3	1	3	8	11	7	5	7	10	6	4	5	3	1	1	2	1	2	2	2	114
3	2	2	1	2	.	1	1	1	.	.	-1	-1	-1	-1	-1	.	.	-1	-1	-1	-1	.	.	.	2
4	.	1	4	10	5	4	4	6	11	8	5	6	8	10	22	21	8	8	8	8	10	10	5	.	182
5	1	3	6	15	13	15	17	21	20	20	25	15	22	19	26	28	18	22	10	5	8	9	8	7	353
6	8	8	7	7	8	9	21	21	18	24	21	16	15	13	10	5	4	3	2	2	2	2	1	.	227
7	.	-1	.	.	.	1	1	-1	-1	.	.	.	.	2	3	10	26	14	23	25	28	16	15	30	191
8	26	28	31	25	9	8	6	3	.	1	1	.	.	1	2	4	3	5	7	20	32	32	31	26	301
9	26	26	27	28	29	30	28	28	28	29	31	33	31	30	31	10	8	6	5	3	3	5	6	6	487
10	6	4	2	4	7	9	8	7	6	8	25	32	30	20	21	10	5	3	8	11	18	23	33	20	320
11	28	24	23	12	26	24	15	15	18	12	12	13	18	18	22	19	26	29	22	15	12	10	8	6	427
12	5	3	2	-1	-1	-1	-1	-1	-1	-1	.	1	4	8	15	25	24	13	29	24	22	18	19	15	220
13	13	8	12	9	16	23	29	31	30	36	38	37	33	30	24	26	26	30	17	15	14	11	8	9	525
14	6	8	5	6	3	4	4	15	18	13	5	3	3	1	1	1	2	1	.	.	1	3	4	3	110
15	3	2	5	5	5	4	5	5	5	5	5	6	8	10	8	8	8	8	8	7	6	7	5	2	140
16	4	5	4	.	.	3	1	1	.	.	.	.	1	1	4	9	8	18	9	6	5	5	5	5	94
17	5	5	4	4	3	4	4	5	4	2	3	.	2	.	.	.	-1	.	.	3	4	14	9	74	
18	14	11	3	.	2	2	3	.	-1	-1	1	1	2	.	-1	-1	-2	-1	-1	-1	-1	.	4	32	
19	5	10	11	10	4	2	3	.	7	13	15	10	11	7	4	4	2	13	7	5	5	4	1	4	157
20	6	13	15	11	5	6	10	10	9	12	8	11	13	10	7	7	9	8	6	5	6	1	1	3	192
21	6	7	15	5	10	7	12	22	21	31	28	26	12	8	8	8	8	8	6	8	10	8	8	9	291
22	9	7	7	3	.	.	.	.	.	-1	-1	-1	-1	.	2	2	1	3	3	4	7	12	18	19	93
23	21	20	12	8	7	10	10	6	5	4	3	1	.	-1	.	.	.	.	.	-1	-1	.	1	.	105
24	4	5	5	8	5	6	8	6	13	10	21	16	24	13	9	11	14	33	25	27	21	33	36	36	389
25	36	37	31	27	16	15	6	.	.	14	26	13	10	9	8	10	9	15	15	9	15	7	8	7	343
26	8	7	6	6	4	5	4	3	.	.	.	.	.	.	.	.	.	.	.	.	.	-1	.	.	42
27	.	.	.	-1	-1	.	.	.	1	1	8	7	8	5	10	14	10	12	20	19	4	4	11	7	139
28	9	7	5	8	6	10	11	5	6	4	16	13	14	5	5	5	9	16	6	6	9	10	7	5	197
29	2	7	8	10	1	5	22	13	8	5	21	15	16	12	16	25	16	13	22	27	21	6	8	10	309
30	14	14	8	5	6	5	6	3	2	3	2	.	.	1	1	1	3	2	1	3	5	18	20	2	125
31	3	2	5	14	17	13	13	10	9	33	38	38	26	8	8	5	8	5	2	3	6	10	19	31	326
MEAN	10	10	10	9	8	8	9	8	8	10	12	11	11	8	9	9	8	9	8	8	9	9	10	9	222

A. HOURLY VALUES OCTOBER

OCT 1995	DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																									
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL	
1
2	5	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	7
3
4	1	3	6	.	.	.	.	.	.	.	.	.	10
5	3	6	13	3	9	23	34	9	.	.	.	.	.	.	.	.	.	100
6	6	44	56	14	3	.	.	.	.	.	.	.	.	.	.	.	.	.	123
7	17	1	.	.	.	.	.	.	.	.	18
8
9	20	58	60	60	60	57	43	53	.	.	.	.	.	.	.	.	.	.	411
10	1	34	38	13	13	4	1	.	.	.	.	.	.	.	.	.	.	104
11	1	.	.	.	.	.	.	.	.	.	.	.	1
12
13	29	44	54	60	60	50	23	1	.	.	.	.	.	.	.	.	.	.	321
14
15
16
17
18
19	3	2	.	1	1	.	.	.	.	.	.	.	.	.	.	.	7
20	1	13	7	8	19	17	11	5	.	.	.	.	.	.	.	.	.	81
21	39	58	54	32	3	.	.	.	.	.	.	.	.	.	.	.	.	186
22
23
24	24	5	4	.	.	.	.	.	.	.	.	.	.	.	.	33
25	8	19	.	.	.	.	.	.	.	.	.	.	.	.	.	.	27
26
27
28	27	19	16	.	1	.	.	.	.	.	.	.	.	.	.	63
29	28	.	5	.	.	.	.	.	.	.	.	.	.	.	.	33
30
31	22	60	60	60	19	.	.	.	.	.	.	.	.	.	.	.	.	221
MEAN	0	0	0	0	0	0	0	2	7	10	13	9	6	4	3	1	0	0	0	0	0	0	0	0	0	56

OCT 1995	DURATION OF SUNSHINE (MIN.)																								TOTAL*	MAX*	PCT		
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1	0	92	0
2	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	91	1
3	0	90	0
4	6	.	.	.	.	.	.	.	.	.	.	.	.	1	89	1
5	6	12	6	18	30	36	12	.	.	.	.	.	.	.	.	.	.	.	20	88	23
6	6	48	48	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	18	87	21
7	18	.	.	.	.	.	.	.	.	.	.	3	86	3
8	0	86	0
9	12	54	60	60	60	60	42	48	.	.	.	.	.	.	.	.	.	.	.	66	85	78
10	24	36	12	12	6	.	.	.	.	.	.	.	.	.	.	.	.	15	84	18
11	0	83	0
12	0	83	0
13	30	36	48	60	54	30	18	.	.	.	.	.	.	.	.	.	.	.	.	46	82	56
14	0	81	0
15	0	80	0
16	0	80	0
17	0	79	0
18	0	79	0
19	0	78	0
20	12	6	6	18	18	6	.	.	.	.	.	.	.	.	.	.	.	.	11	77	14
21	36	54	54	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	29	76	38
22	0	74	0
23	0	72	0
24	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	71	1
25	6	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	68	4
26	0	66	0
27	0	65	0
28	24	12	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	63	13
29	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	62	5
30	0	61	0
31	18	60	60	60	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	36	60	60
MEAN	0	0	0	0	0	0	0	2	6	9	11	9	5	4	3	1	0	0	0	0	0	0	0	0	0	0	8	78	11

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

A. HOURLY VALUES NOVEMBER

NOV 1995	HOURLY SUMS OF EFFECTIVE OUTGOING RADIATION (FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM))																								TOTAL
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	18	13	10	9	9	11	18	28	17	26	18	35	35	34	35	33	33	33	33	29	26	18	21	12	554
2	1	3	4	6	5	2	2	2	2	1	.	.	.	.	3	4	5	6	17	27	35	36	37	37	235
3	38	38	39	39	39	39	39	39	40	41	41	41	41	42	42	42	42	42	42	41	41	41	40	40	969
4	40	39	38	37	36	35	35	35	36	39	39	40	38	37	36	31	28	20	23	31	31	32	33	32	821
5	18	17	13	8	7	6	7	7	6	5	8	6	6	7	5	4	3	4	3	3	1	1	.	-1	144
6	-1	-1	-1	-2	-3	-2	-1	.	.	.	1	2	6	22	28	35	35	33	34	33	32	31	33	19	333
7	7	13	20	18	26	21	8	6	6	5	5	3	2	2	3	2	1	2	2	2	1	1	2	2	160
8	2	2	1	2	2	1	.	.	-1	-1	-1	-1	.	1	.	.	1	8	20	9	9	5	4	63	
9	15	25	25	8	8	6	3	5	16	4	7	5	5	3	5	2	4	11	2	6	14	17	7	5	208
10	1	3	20	23	29	32	33	33	33	36	38	37	37	38	37	36	35	34	32	32	32	33	33	32	729
11	32	30	30	31	31	30	31	32	32	34	38	39	41	39	37	36	34	33	34	33	34	34	34	34	813
12	34	34	34	34	34	33	35	35	35	39	42	43	45	40	37	36	35	35	35	35	35	35	36	35	871
13	35	35	35	34	34	33	34	34	34	38	39	41	41	36	35	32	31	29	29	29	13	1	.	702	
14	.	.	.	2	.	.	.	.	.	-2	-2	-1	.	.	2	3	3	4	9	24	19	13	19	19	112
15	20	28	30	31	30	29	29	30	28	33	37	36	40	40	39	38	38	38	39	39	39	38	38	37	824
16	36	36	36	36	36	36	36	35	35	41	42	41	41	40	39	40	40	39	38	38	39	40	41	41	922
17	40	39	39	40	41	42	42	41	43	46	46	44	44	42	41	40	38	37	37	37	35	34	19	14	921
18	9	10	5	1	10	1	2	.	2	1	.	6	9	20	21	13	12	13	18	8	7	7	11	11	197
19	16	11	12	10	9	19	28	26	13	30	38	36	37	37	36	35	33	33	33	33	31	32	32	31	651
20	23	18	6	7	23	27	6	5	5	5	5	7	7	8	7	7	8	8	7	5	9	8	8	14	233
21	13	12	7	5	4	4	5	5	4	4	4	4	4	4	5	13	10	6	6	7	10	12	10	8	166
22	7	7	5	3	5	7	6	3	3	3	3	4	3	1	1	1	2	.	3	21	18	13	9	20	148
23	14	6	5	1	1	1	.	.	.	.	.	.	-1	-1	.	3	3	3	3	5	9	9	14	12	87
24	5	2	.	-1	-1	-1	-1	.	.	.	.	.	.	.	.	.	1	.	-1	-1	.	2	2	.	6
25	.	.	.	4	1	1	1	.	.	.	.	-1	-1	.	.	.	.	.	.	.	.	1	1	.	7
26	.	.	-1	-1	-1	.	.	.	.	1	2	2	3	3	3	1	2	6	3	5	5	4	5	3	45
27	4	3	4	3	2	2	3	3	4	7	9	16	8	12	5	7	3	3	5	4	2	.	.	.	109
28	.	.	3	5	5	5	5	5	4	3	2	3	4	5	5	3	1	3	4	4	6	6	4	2	87
29	3	4	5	5	4	3	4	4	4	4	5	4	4	4	3	4	4	10	18	3	4	5	5	5	118
30	5	5	5	5	5	5	5	5	7	7	6	8	7	6	7	7	13	10	11	26	33	16	7	5	216
MEAN	15	14	14	13	14	14	14	14	14	15	16	17	17	17	17	17	17	17	18	19	19	18	17	16	382

A. HOURLY VALUES NOVEMBER

NOV 1995	DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																								TOTAL
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	10	28	35	51	60	44	.	.	.	.	.	.	.	.	.	.	228
2	234
3	40	60	60	60	60	54	.	.	.	.	.	.	.	.	.	.	334
4	36	60	60	60	60	48	.	.	.	.	.	.	.	.	.	.	324
5
6	15	.	.	.	.	.	.	.	.	.	.	15
7
8
9	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
10	18	60	60	60	60	31	.	.	.	.	.	.	.	.	.	.	289
11	3	48	60	60	60	15	.	.	.	.	.	.	.	.	.	.	246
12	13	60	60	60	60	3	.	.	.	.	.	.	.	.	.	.	256
13	12	60	60	60	59	.	.	.	.	.	.	.	.	.	.	.	251
14
15	15	60	60	50	.	.	.	.	.	.	.	.	.	.	.	185
16	8	60	60	58	47	.	.	.	.	.	.	.	.	.	.	.	233
17	6	60	60	60	46	.	.	.	.	.	.	.	.	.	.	.	232
18	3	10	.	.	.	.	.	.	.	.	.	.	.	13
19	1	50	60	60	34	.	.	.	.	.	.	.	.	.	.	.	205
20
21
22
23
24
25
26
27	5	.	.	.	.	.	.	.	.	.	.	.	.	.	5
28
29
30
MEAN	0	0	0	0	0	0	0	0	5	19	21	22	20	7	0	0	0	0	0	0	0	0	0	0	94

NOV 1995	DURATION OF SUNSHINE (MIN.)																								TOTAL*	MAX*	PCT
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	6	18	24	42	60	42	.	.	.	.	.	.	.	.	.	.	.	32	58	55
2	0	56	0
3	42	60	60	60	60	48	.	.	.	.	.	.	.	.	.	.	.	55	54	100
4	36	60	60	60	60	42	.	.	.	.	.	.	.	.	.	.	.	53	53	100
5	0	52	0
6	12	.	.	.	.	.	.	.	.	.	.	.	.	2	51	4
7	0	50	0
8	0	49	0
9	0	48	0
10	18	60	60	60	60	12	.	.	.	.	.	.	.	.	.	.	.	45	46	98
11	42	60	60	60	60	.	.	.	.	.	.	.	.	.	.	.	.	37	44	84
12	12	60	60	60	54	.	.	.	.	.	.	.	.	.	.	.	.	41	42	98
13	12	60	60	60	54	.	.	.	.	.	.	.	.	.	.	.	.	41	41	100
14	0	40	0
15	12	60	54	36	.	.	.	.	.	.	.	.	.	.	.	.	.	27	39	69
16	6	60	54	54	42	.	.	.	.	.	.	.	.	.	.	.	.	36	39	92
17	6	60	60	60	42	.	.	.	.	.	.	.	.	.	.	.	.	38	38	100
18	6	.	.	.	.	.	.	.	.	.	.	.	.	.	1	37	3
19	48	60	60	30	.	.	.	.	.	.	.	.	.	.	.	.	.	33	36	92
20	0	35	0
21	0	34	0
22	0	33	0
23	0	32	0
24	0	32	0
25	0	31	0
26	0	30	0
27	0	29	0
28	0	28	0
29	0	27	0
30	0	27	0
MEAN	0	0	0	0	0	0	0	0	5	18	21	21	19	5	0	0	0	0	0	0	0	0	0	0	15	40	33

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

A. HOURLY VALUES NOVEMBER

DEC 1995	DURATION OF SUNSHINE (MIN. NIP>120 W/SQM)																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
1	50	60	55	.	.	.	.	.	.	.	.	.	.	.	.	165
2	28	60	54	.	.	.	.	.	.	.	.	.	.	.	.	142
3
4	39	.	.	.	.	.	.	.	.	.	.	.	.	.	.	39
5	45	60	39	.	.	.	.	.	.	.	.	.	.	.	.	144
6	44	60	36	.	.	.	.	.	.	.	.	.	.	.	.	140
7	4	.	.	.	.	.	.	.	.	.	.	.	.	4
8
9
10
11	12	.	.	.	.	.	.	.	.	.	.	.	.	12
12
13	17	30	.	.	.	.	.	.	.	.	.	.	.	.	.	47
14	16	51	20	.	.	.	.	.	.	.	.	.	.	.	.	87
15	16	60	31	.	.	.	.	.	.	.	.	.	.	.	.	107
16	3	60	31	.	.	.	.	.	.	.	.	.	.	.	.	94
17	14	60	30	.	.	.	.	.	.	.	.	.	.	.	.	104
18	12	60	30	.	.	.	.	.	.	.	.	.	.	.	.	102
19
20	11	44	22	.	.	.	.	.	.	.	.	.	.	.	.	77
21
22	11	.	.	.	.	.	.	.	.	.	.	.	.	11
23	10	60	30	.	.	.	.	.	.	.	.	.	.	.	.	100
24
25
26	13	60	31	.	.	.	.	.	.	.	.	.	.	.	.	104
27	5	.	.	.	.	.	.	.	.	.	.	.	.	.	5
28	4	34	.	.	.	.	.	.	.	.	.	.	.	.	.	38
29	3	.	.	.	.	.	.	.	.	.	.	.	.	3
30
31
MEAN	0	0	0	0	0	0	0	0	0	10	25	14	0	0	0	0	0	0	0	0	0	0	0	0	49

DEC 1995	DURATION OF SUNSHINE (MIN.)																								TOTAL*	MAX*	PCT
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL*	MAX*	PCT
1	24	60	54	.	.	.	.	.	.	.	.	.	.	.	.	23	26	88
2	24	60	48	.	.	.	.	.	.	.	.	.	.	.	.	22	26	85
3	0	25	0
4	36	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	24	25
5	42	60	36	.	.	.	.	.	.	.	.	.	.	.	.	23	23	100
6	36	60	36	.	.	.	.	.	.	.	.	.	.	.	.	22	23	96
7	0	23	0
8	0	22	0
9	0	22	0
10	0	22	0
11	12	.	.	.	.	.	.	.	.	.	.	.	.	2	22	9
12	0	21	0
13	18	24	.	.	.	.	.	.	.	.	.	.	.	.	.	7	21	33
14	12	48	12	.	.	.	.	.	.	.	.	.	.	.	.	12	21	57
15	18	60	30	.	.	.	.	.	.	.	.	.	.	.	.	18	21	86
16	48	24	.	.	.	.	.	.	.	.	.	.	.	.	.	12	21	57
17	30	60	30	.	.	.	.	.	.	.	.	.	.	.	.	20	21	95
18	30	60	30	.	.	.	.	.	.	.	.	.	.	.	.	20	20	100
19	0	20	0
20	30	60	30	.	.	.	.	.	.	.	.	.	.	.	.	20	20	100
21	0	20	0
22	0	20	0
23	18	60	30	.	.	.	.	.	.	.	.	.	.	.	.	18	20	90
24	0	20	0
25	0	20	0
26	36	60	30	.	.	.	.	.	.	.	.	.	.	.	.	21	21	100
27	0	21	0
28	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	21	24
29	0	21	0
30	0	21	0
31	0	21	0
MEAN	0	0	0	0	0	0	0	0	0	11	24	13	0	0	0	0	0	0	0	0	0	0	0	0	8	22	37

* TOTALS AND MAX ARE GIVEN IN 0.1 HR

B. DAILY VALUES

1995 DAILY TOTALS OF GLOBAL RADIATION (0.01 MJ/SQM)												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	58	83	400	450	782	545	2711	1718	1384	220	363	105
2	67	210	495	390	1744	1498	621	1999	1113	333	95	99
3	88	22	-	779	630	2456	907	1307	849	79	399	94
4	29	87	695	1271	1865	2679	1304	2381	757	271	369	84
5	67	68	493	465	614	1565	1649	2048	757	448	90	97
6	10	42	761	410	584	1513	1000	739	956	459	121	83
7	9	236	319	1090	1196	1997	992	2290	897	159	80	61
8	56	155	99	1279	1162	1261	1446	2377	1372	76	38	33
9	19	236	611	1348	1290	2518	2798	855	1009	685	123	28
10	46	349	657	320	2338	1369	2747	1809	1119	455	276	10
11	16	346	466	605	1881	1817	2659	2282	1247	365	250	76
12	119	88	81	565	2087	2876	2679	2126	804	169	267	19
13	39	218	336	432	1679	2214	660	805	453	573	243	86
14	4	69	68	376	917	2015	1821	892	719	211	21	82
15	87	116	478	1276	1118	1251	1008	338	423	114	198	68
16	3	70	699	1638	1814	831	1193	471	1242	64	208	69
17	15	238	125	2088	1894	769	1186	1199	599	35	215	68
18	17	406	340	2177	1978	557	994	2012	369	136	132	88
19	57	117	272	1279	837	1919	1190	1701	411	197	192	47
20	19	124	461	829	735	521	508	1832	326	313	69	81
21	40	197	1071	1108	2350	1511	762	1814	793	413	32	51
22	87	223	110	1595	2435	2261	927	558	246	22	9	64
23	109	136	128	1567	2305	2855	1091	1040	457	67	8	71
24	61	397	385	1418	1775	2767	316	732	308	248	14	52
25	117	662	612	1898	1365	2841	1788	333	160	168	13	56
26	99	397	596	901	578	2822	2250	1113	404	20	39	71
27	131	96	825	1262	2156	2845	2393	1200	169	144	68	65
28	193	310	1163	1170	1989	2007	674	1486	1031	285	31	85
29	246		1261	1281	526	2827	951	1722	1079	287	25	61
30	220		581	2129	2107	1624	2102	1851	1096	51	55	29
31	23		253		2356		2136	1173		322		47
MEAN	69	204	495	1113	1519	1884	1467	1426	752	238	135	65

1995 DAILY TOTALS OF SKY RADIATION ON A HORIZONTAL SURFACE (0.01 MJ/SQM)												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	41	83	324	421	713	536	958	833	469	218	150	51
2	37	149	385	378	967	1183	615	887	612	327	95	50
3	63	22	-	611	604	1082	856	1082	650	79	88	90
4	29	87	369	720	824	631	1079	388	521	265	101	74
5	64	68	465	462	605	935	1292	834	603	328	90	50
6	10	42	451	404	583	986	847	711	630	351	113	42
7	9	138	299	600	793	991	839	680	618	153	80	60
8	56	130	99	696	1010	905	1005	378	553	76	38	33
9	19	174	402	426	1038	968	586	850	568	248	119	28
10	46	210	548	320	599	1104	426	620	424	324	86	10
11	16	196	424	526	788	1256	551	288	548	357	73	72
12	101	88	81	516	703	559	586	447	528	167	76	19
13	39	207	336	414	631	727	641	619	437	289	72	72
14	4	69	68	376	750	914	1309	807	635	208	21	61
15	85	111	394	850	951	835	907	336	414	114	106	37
16	3	70	345	854	1273	799	1073	470	455	64	75	38
17	15	229	125	389	925	759	910	958	516	35	62	35
18	17	238	316	461	903	553	803	430	369	136	124	57
19	56	117	267	721	768	808	945	794	401	192	83	47
20	19	124	413	726	708	520	508	437	326	238	69	76
21	40	190	607	838	893	994	712	536	509	228	32	51
22	87	206	110	760	884	947	812	531	246	22	9	58
23	106	126	128	870	806	490	874	759	435	67	8	38
24	56	283	372	853	1257	507	316	673	308	228	14	52
25	108	405	479	559	760	490	976	304	159	147	13	56
26	91	237	453	687	567	523	829	826	376	20	39	38
27	107	96	551	798	1141	442	602	769	169	144	66	64
28	166	280	483	932	889	938	646	798	369	220	31	72
29	124		382	854	477	577	843	511	224	251	25	60
30	100		573	704	862	764	643	344	152	51	55	29
31	23		252		864		670	817		147		46
MEAN	56	156	350	624	824	791	795	636	441	184	67	51

B. DAILY VALUES

1995 DAILY TOTALS OF ULTRAVIOLET RADIATION ON A HORIZONTAL SURFACE (0.001 MJ/SQM)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	44	49	187	245	395	312	1045	737	547	121	128	45
2	45	100	270	219	739	702	350	823	446	176	48	43
3	42	13	-	353	323	972	431	608	384	46	131	38
4	24	49	288	586	810	1113	614	969	361	144	127	38
5	36	42	245	283	330	667	748	869	335	221	46	39
6	10	31	301	227	335	-	476	383	408	193	61	38
7	7	111	178	482	540	-	454	916	376	82	46	34
8	26	79	66	563	568	-	675	939	533	50	23	23
9	14	104	289	566	620	-	1099	450	411	249	58	15
10	27	140	292	202	944	-	1100	756	452	206	101	7
11	10	143	212	311	797	831	958	901	465	176	93	31
12	55	45	54	327	834	1178	1072	841	362	83	93	10
13	27	138	194	235	673	931	328	377	208	212	87	32
14	4	54	49	223	409	957	782	423	302	102	13	34
15	41	69	237	546	516	597	484	194	205	67	79	32
16	4	44	323	627	765	431	575	254	460	39	74	25
17	13	119	79	801	773	412	544	547	289	23	76	31
18	15	159	174	810	839	323	484	774	183	63	48	35
19	41	77	152	584	421	863	575	707	191	91	76	26
20	17	70	228	427	384	299	308	715	165	125	39	29
21	27	110	460	501	967	692	380	723	295	148	19	30
22	49	135	78	663	997	957	443	287	129	15	9	34
23	53	75	86	652	962	1154	522	476	226	40	4	36
24	40	203	205	572	768	1162	181	340	149	108	6	28
25	51	238	289	744	577	1169	768	155	77	83	5	31
26	22	182	268	425	305	1149	919	473	177	14	18	32
27	71	65	389	528	928	1157	985	503	83	65	29	35
28	46	186	531	510	835	874	356	585	388	104	18	37
29	57	-	566	580	263	1098	472	641	378	117	15	31
30	110	-	325	843	915	670	897	679	380	31	28	14
31	21	-	150	-	983	-	880	496	-	113	-	9
MEAN	34	101	239	488	662	827	642	598	312	107	53	30

1995 DAILY DOSES OF UV-B RADIATION ON A HORIZONTAL SURFACE (0.01 MED)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-	-	-	-	-	-	-	1127	758	135	74	23
2	-	-	-	-	-	-	-	1228	560	178	38	19
3	-	-	-	-	-	-	-	952	511	46	80	18
4	-	-	-	-	-	-	-	1619	455	141	78	15
5	-	-	-	-	-	-	-	1457	397	199	30	14
6	-	-	-	-	-	-	-	592	535	176	36	14
7	-	-	-	-	-	-	-	1345	457	67	28	9
8	-	-	-	-	-	-	-	1459	665	45	15	7
9	-	-	-	-	-	-	-	716	532	248	36	5
10	-	-	-	-	-	-	-	1226	551	197	53	3
11	-	-	-	-	-	-	-	1405	543	152	51	10
12	-	-	-	-	-	-	-	1225	446	74	55	3
13	-	-	-	-	-	-	466	528	258	205	51	9
14	-	-	-	-	-	-	1241	681	393	100	6	10
15	-	-	-	-	-	-	808	316	260	65	37	11
16	-	-	-	-	-	-	933	470	592	38	33	12
17	-	-	-	-	-	-	797	898	399	24	36	13
18	-	-	-	-	-	-	656	1194	228	62	28	12
19	-	-	-	-	-	-	972	1099	234	74	39	9
20	-	-	-	-	-	-	457	1058	231	87	24	9
21	-	-	-	-	-	-	568	1209	430	116	11	11
22	-	-	-	-	-	-	581	438	176	9	6	14
23	-	-	-	-	-	-	824	744	251	32	1	14
24	-	-	-	-	-	-	266	477	152	90	4	13
25	-	-	-	-	-	-	1243	175	72	66	3	13
26	-	-	-	-	-	-	1413	630	170	8	14	15
27	-	-	-	-	-	-	1547	652	77	50	14	13
28	-	-	-	-	-	-	497	714	301	63	9	12
29	-	-	-	-	-	-	696	774	303	72	8	13
30	-	-	-	-	-	-	1435	908	326	18	13	5
31	-	-	-	-	-	-	1353	679	66	66	9	9
MEAN	-	-	-	-	-	-	882	903	376	94	30	12

B. DAILY VALUES

1995 DAILY TOTALS OF NORMAL INCIDENCE BEAM RADIATION (0.01 MJ/SQM)												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	204	.	232	40	161	7	2921	1610	1864	.	862	420
2	404	313	338	29	1281	441	3	1830	866	13	.	377
3	292	.	-	347	44	2595	92	526	369	.	1431	14
4	.	.	932	1072	1560	3370	279	3794	466	21	1273	95
5	46	.	51	.	6	999	462	1941	283	325	.	396
6	.	.	798	5	1	687	364	41	564	320	40	343
7	.	469	42	980	552	1695	448	2963	660	39	.	13
8	12	128	.	1127	226	561	557	3768	1647	.	.	.
9	.	272	516	1921	410	2522	3805	1	837	1270	11	3
10	1	686	243	.	3103	454	4113	2283	1534	308	997	.
11	.	747	106	101	2078	1284	3777	4005	1712	16	913	27
12	183	.	.	64	2861	4182	3662	3231	554	5	1068	.
13	.	41	.	64	1985	3029	26	327	28	851	972	90
14	.	2	.	.	316	1624	718	104	158	7	.	172
15	34	15	246	934	195	612	125	1	12	.	460	282
16	.	.	838	1604	992	29	153	4	1714	1	781	263
17	.	41	.	3402	1785	14	574	373	166	.	911	291
18	.	615	64	3461	2102	8	266	3107	2	.	24	282
19	11	1	1	1077	143	1791	317	1997	34	18	644	.
20	.	.	103	258	52	13	.	2665	.	232	.	145
21	.	65	1063	494	2839	685	72	2427	774	640	.	1
22	5	51	.	1558	2571	2228	176	59	1	.	.	37
23	47	43	.	1260	2317	4066	365	647	42	.	.	297
24	60	432	24	1079	965	3781	.	90	2	53	.	.
25	65	1174	332	2464	1189	4074	1510	198	5	62	.	.
26	58	712	231	433	15	3978	2413	550	49	.	.	299
27	219	.	586	623	1525	4172	3039	894	.	1	9	12
28	163	92	1328	340	1936	1644	42	1564	1703	213	.	97
29	703	.	2050	768	221	3592	145	2725	2260	108	1	10
30	789	.	10	2815	1864	1626	2509	3201	2722	.	.	.
31	.	.	.	.	2258	.	2519	1041	.	778	.	2
MEAN	106	211	338	944	1211	1859	1144	1547	701	170	347	128

1995 DAILY TOTALS OF DOWNWARD ATMOSPHERIC RADIATION (0.01 MJ/SQM)												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2155	2779	2544	2710	2775	3071	2395	3203	2935	2640	2356	2086
2	1747	2251	2314	2571	2792	2996	2994	3033	3014	3038	2657	2124
3	2419	2849	2107	2488	3020	2726	3015	3015	2981	3247	1869	2049
4	2577	2668	2094	2339	2831	2576	2869	2669	2983	3178	1951	2074
5	2481	2857	2248	2694	2983	2874	2892	2927	3074	2955	2793	1957
6	2648	2772	2409	2887	2979	2959	3049	3079	2976	3000	2641	1880
7	2802	2486	2496	2594	2873	2753	3052	2589	2965	2992	2788	2243
8	2680	2291	2680	2324	2813	3009	2914	2585	2784	2938	2964	2574
9	2723	2375	2508	2410	2511	2758	2506	3116	2814	2931	2711	2751
10	2513	2184	2341	2766	2224	2831	2630	2903	2844	2870	2173	3061
11	2489	2149	2528	2872	2220	2684	2715	2689	2883	2739	2022	2787
12	2163	2710	2807	2894	2171	2571	2802	2786	2938	2937	1922	2748
13	2834	2697	2850	2812	2314	2689	3180	3185	3125	2575	2023	2031
14	2783	2847	2733	2862	2577	2869	3157	3147	3012	3029	2753	1999
15	2555	2816	2422	2499	2698	3164	3299	3263	2926	3178	1976	1953
16	2927	2819	2291	2245	2496	3119	3261	3320	2834	3161	1781	1996
17	2887	2654	2754	1973	2393	3091	3118	3162	2968	3143	1780	2133
18	2805	2537	2663	2139	2315	3039	3149	2817	2961	3064	2539	2055
19	2512	2668	2738	2386	2626	2847	3193	2855	2939	2948	2085	2367
20	2693	2606	2520	2578	2671	3053	3370	2762	2912	2766	2544	1994
21	2595	2429	2277	2510	2303	2877	3202	2839	2983	2638	2829	2228
22	2419	2674	2861	2500	2464	2723	3053	3247	3014	2976	2848	1815
23	2386	2667	2938	2692	2603	2631	3079	2942	2879	3015	2924	1661
24	2378	2408	2759	2779	2742	2858	3243	3107	2988	2926	3074	2154
25	2425	2308	2517	2514	2898	2749	2882	3018	2882	2908	3086	1926
26	2470	2215	2424	2634	3074	2640	2786	2848	2872	3132	3034	1682
27	2312	2703	2157	2722	2793	2674	2869	2725	2876	2961	2931	2050
28	1987	2635	2192	2641	2801	2909	3241	2397	2401	2798	2884	2148
29	2050	.	2091	2402	3056	2647	3276	2362	2280	2659	2823	2474
30	2008	.	2671	2146	2804	2669	3175	2370	2043	2889	2730	2576
31	2570	.	2822	.	2859	.	3213	2766	.	2688	.	2259
MEAN	2484	2573	2508	2553	2667	2835	3019	2894	2870	2933	2516	2188

B. DAILY VALUES

1995 DAILY TOTALS OF EFFECTIVE OUTGOING RADIATION FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	579	137	279	162	259	53	822	471	354	384	554	709
2	933	470	466	236	413	151	133	533	402	114	235	696
3	309	80	661	255	103	521	119	432	435	2	969	753
4	283	225	622	400	415	775	236	792	509	182	821	719
5	357	38	563	106	124	399	250	430	382	353	144	692
6	174	96	490	73	49	226	192	201	417	227	333	733
7	70	260	382	311	205	474	233	662	469	191	160	496
8	201	345	284	517	318	382	350	683	766	301	63	270
9	119	257	449	450	639	576	834	186	646	487	208	132
10	243	426	637	57	779	356	854	519	603	320	729	-12
11	277	534	506	102	761	541	823	799	581	427	813	221
12	621	54	104	126	791	822	758	811	484	220	871	269
13	36	258	138	171	602	801	265	220	220	525	702	804
14	163	114	82	77	305	648	381	186	414	110	112	748
15	276	113	372	424	174	276	190	61	492	140	824	745
16	55	106	544	581	450	190	187	53	567	94	922	721
17	110	227	34	852	534	153	252	341	364	74	921	595
18	149	310	135	761	639	107	143	729	296	32	197	677
19	466	194	69	466	225	397	131	581	276	157	651	242
20	251	221	349	322	211	196	2	652	221	192	233	541
21	331	396	578	386	692	287	74	657	272	291	166	344
22	562	168	18	580	631	499	127	199	146	93	148	681
23	433	117	4	560	609	738	154	402	259	105	87	795
24	347	386	117	563	521	636	-29	173	160	389	6	379
25	295	454	275	723	477	718	436	264	210	343	7	599
26	240	492	346	353	245	802	658	375	197	42	45	751
27	376	79	505	215	531	874	772	488	89	139	109	473
28	584	268	524	267	619	453	359	756	592	197	87	385
29	522	745	484	288	663	213	800	679	309	118	245	245
30	685	163	812	524	524	524	389	827	907	125	216	150
31	236	111	382	382	382	381	487	326	404	404	404	404
MEAN	332	244	340	380	436	475	345	476	414	222	382	515

1995 DAILY TOTALS OF SUNSHINE DURATION (0.1 HR AND IN PCT OF MAXIMUM POSSIBLE)

DAY	JAN HR PCT	FEB HR PCT	MAR HR PCT	APR HR PCT	MAY HR PCT	JUN HR PCT	JUL HR PCT	AUG HR PCT	SEP HR PCT	OCT HR PCT	NOV HR PCT	DEC HR PCT
1	17 77	. .	12 15	2 2	8 6	. .	137 84	79 52	74 58	. .	32 55	23 88
2	21 95	15 31	16 19	3 3	66 46	19 12	. .	86 57	35 28	1 1	. .	22 85
3	21 95	. .	51 61	19 17	2 1	100 62	5 3	29 19	25 20	. .	55 100	. .
4	. .	. .	38 45	45 39	60 41	118 73	15 9	148 99	19 16	1 1	53 100	6 25
5	1 4	. .	. .	. .	. .	55 34	17 10	75 50	12 10	20 23	. .	23 100
6	. .	. .	33 38	. .	. .	22 14	18 11	1 1	27 23	18 21	2 4	22 96
7	. .	23 43	3 3	49 41	21 14	65 40	26 16	117 79	33 28	3 3	. .	. .
8	. .	5 9	. .	50 41	8 5	29 18	30 19	133 90	75 65	. .	. .	. .
9	. .	12 21	23 26	69 55	19 13	101 62	155 96	. .	43 38	66 78	. .	. .
10	. .	31 53	11 12	. .	118 79	18 11	155 96	85 58	61 54	15 18	45 98	. .
11	. .	43 72	6 7	5 4	80 53	62 38	155 97	144 99	76 68	. .	37 84	2 9
12	10 37	. .	. .	3 2	111 74	154 94	146 91	126 87	25 23	. .	41 98	. .
13	. .	1 2	. .	6 5	76 50	120 74	. .	14 10	1 1	46 56	41 100	7 33
14	. .	. .	. .	. .	20 13	62 38	35 22	5 3	7 6	. .	. .	12 57
15	1 3	1 2	13 14	42 32	9 6	27 16	7 4	. .	. .	. .	27 69	18 86
16	. .	. .	36 38	60 45	58 38	2 1	7 4	. .	72 68	. .	36 92	12 57
17	. .	2 3	. .	117 88	65 42	. .	24 15	17 12	9 9	. .	38 100	20 95
18	. .	25 35	1 1	121 90	79 51	. .	12 8	126 91	. .	. .	1 3	20 100
19	. .	. .	. .	42 31	8 5	67 41	13 8	87 63	3 3	. .	33 92	. .
20	. .	. .	4 4	17 13	2 1	. .	. .	99 72	. .	11 14	. .	20 100
21	. .	3 4	56 56	24 18	106 68	28 17	3 2	102 74	36 36	29 38	. .	. .
22	. .	3 4	. .	76 55	103 66	93 57	10 6	1 1	. .	. .	. .	. .
23	1 3	2 3	. .	70 51	100 64	158 96	17 11	30 22	2 2	. .	. .	18 90
24	4 11	23 29	2 2	62 45	44 28	148 90	. .	3 2	. .	1 1	. .	. .
25	3 8	45 57	22 21	106 76	58 37	156 95	65 42	12 9	. .	3 4	. .	. .
26	3 8	29 36	10 10	29 21	. .	160 98	111 72	26 20	2 2	. .	. .	21 100
27	3 8	. .	28 27	22 16	59 37	156 95	126 82	36 27	. .	. .	. .	. .
28	19 48	4 5	48 45	15 11	73 46	70 43	3 2	77 59	69 73	8 13	. .	5 24
29	34 83	34 83	80 75	32 22	14 9	131 80	8 5	123 95	77 82	3 5	. .	. .
30	38 90	. .	. .	130 90	69 43	74 45	105 69	120 93	92 99	. .	. .	. .
31	. .	. .	. .	. .	91 57	91 57	109 72	43 34	43 34	36 60	36 60	. .
MEAN	6 18	10 15	16 17	41 30	49 32	73 45	49 31	63 44	29 27	8 11	15 33	8 37

C. MEAN DIURNAL VARIATION

1995 MEAN DIURNAL VARIATION OF GLOBAL RADIATION (0.01 MJ/SQM)

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
JAN	3	10	17	17	13	7	2	.	.	.	.	.	.	.	.	.	69
FEB	5	17	27	37	41	31	26	15	4	.	.	.	.	.	.	.	.	204
MAR	1	8	27	44	60	76	72	65	56	45	27	11	2	.	.	.	.	.	.	495
APR	3	17	39	65	91	125	122	141	132	121	100	74	52	25	6	.	.	.	.	.	1113
MAY	.	.	.	4	21	48	82	105	138	147	166	166	161	141	108	90	68	45	23	7	.	.	.	.	1519
JUN	.	.	2	9	31	58	98	126	143	174	193	196	177	173	164	131	92	64	36	16	3	.	.	.	1884
JUL	.	.	1	5	17	35	59	83	111	137	150	160	146	146	129	107	84	54	31	10	1	.	.	.	1467
AUG	.	.	.	1	6	23	50	79	106	136	153	164	157	158	139	107	80	47	17	2	.	.	.	.	1426
SEP	3	14	38	63	90	100	101	100	89	72	46	25	8	1	.	.	.	.	.	752
OCT	1	7	20	30	41	41	37	28	21	10	2	.	.	.	.	.	.	.	238
NOV	1	6	18	28	32	29	15	6	1	.	.	.	.	.	.	.	.	135
DEC	1	9	18	18	12	7	1	.	.	.	.	.	.	.	.	.	65
MEAN	0	0	0	2	7	15	29	45	62	80	92	96	89	81	67	50	35	21	10	3	0	0	0	0	783

1995 MEAN DIURNAL VARIATION OF SKY RADIATION ON A HORIZONTAL SURFACE (0.01 MJ/SQM)

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
JAN	3	8	12	13	11	7	2	.	.	.	.	.	.	.	.	.	56
FEB	4	12	19	25	30	25	23	14	4	.	.	.	.	.	.	.	.	156
MAR	1	8	20	33	41	46	46	45	41	34	23	10	2	.	.	.	.	.	.	350
APR	3	12	25	38	52	65	68	74	77	62	56	41	30	17	4	.	.	.	.	.	624
MAY	.	.	.	4	14	26	40	56	68	76	83	80	77	80	70	56	42	29	16	5	.	.	.	.	824
JUN	.	.	2	9	19	30	42	55	64	73	82	80	70	64	60	47	35	28	18	9	3	.	.	.	791
JUL	.	.	1	5	10	21	36	49	65	70	76	79	74	73	71	58	45	31	20	8	1	.	.	.	795
AUG	.	.	.	1	5	14	27	40	56	66	69	65	67	59	53	44	34	23	11	2	.	.	.	.	636
SEP	3	13	27	40	49	48	55	59	50	40	30	18	6	1	.	.	.	.	.	441
OCT	1	7	16	22	26	29	29	24	17	9	2	.	.	.	.	.	.	.	184
NOV	1	4	8	12	13	12	10	6	1	.	.	.	.	.	.	.	.	67
DEC	1	6	11	12	12	7	1	.	.	.	.	.	.	.	.	.	51
MEAN	0	0	0	2	4	9	16	25	35	42	47	48	47	42	35	26	18	11	6	2	0	0	0	0	416

1995 MEAN DIURNAL VARIATION OF ULTRAVIOLET RADIATION ON A HORIZONTAL SURFACE (0.001 MJ/SQM)

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
JAN	2	5	7	8	6	4	1	.	.	.	.	.	.	.	.	.	34
FEB	3	8	14	17	20	16	13	8	3	.	.	.	.	.	.	.	.	101
MAR	1	5	14	22	29	36	34	32	27	20	13	5	1	.	.	.	.	.	.	239
APR	2	8	17	29	41	56	57	63	60	53	43	30	19	9	2	.	.	.	.	.	488
MAY	.	.	.	3	9	19	33	46	58	65	73	74	72	62	50	39	29	18	8	3	.	.	.	.	662
JUN	.	.	2	6	13	23	39	53	63	76	86	88	84	79	73	56	38	26	14	6	2	.	.	.	827
JUL	.	.	1	3	7	15	25	36	50	61	68	69	67	66	58	46	34	21	12	4	1	.	.	.	642
AUG	3	10	20	32	46	59	67	71	69	67	57	43	30	17	6	1	.	.	.	.	598
SEP	2	7	16	26	36	41	43	43	37	28	19	10	3	.	.	.	.	.	.	312
OCT	1	4	9	13	17	18	17	13	9	5	1	.	.	.	.	.	.	.	107
NOV	3	6	10	12	10	8	4	1	.	.	.	.	.	.	.	.	53
DEC	1	4	6	8	7	4	1	.	.	.	.	.	.	.	.	.	30
MEAN	0	0	0	1	3	7	12	19	28	35	41	42	40	36	29	21	14	8	4	1	0	0	0	0	342

C. MEAN DIURNAL VARIATION

1995 MEAN DIURNAL VARIATION OF UV-B RADIATION ON A HORIZONTAL SURFACE (0.01 MED/HR)

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
JAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FEB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
APR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JUN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JUL M	.	.	.	1	2	8	21	38	68	98	119	123	115	107	82	52	30	13	5	1	.	.	.	.	882
AUG	0	0	0	0	1	6	17	38	66	99	123	135	128	114	85	52	27	11	3	0	0	0	0	0	903
SEP	0	0	0	0	0	1	4	13	27	45	58	63	62	49	31	16	6	1	0	0	0	0	0	0	376
OCT	0	0	0	0	0	0	0	2	6	11	17	19	18	12	7	2	0	0	0	0	0	0	0	0	94
NOV	0	0	0	0	0	0	0	0	1	3	6	7	6	4	2	0	0	0	0	0	0	0	0	0	30
DEC	0	0	0	0	0	0	0	0	0	1	3	3	3	1	0	0	0	0	0	0	0	0	0	0	11
MEAN	0	0	0	0	1	3	7	15	28	43	54	58	55	48	35	20	11	4	0	0	0	0	0	0	383

1995 MEAN DIURNAL VARIATION OF NORMAL INCIDENCE BEAM RADIATION (0.01 MJ/SQM)

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
JAN	4	25	38	27	12	.	.	.	.	.	.	.	.	.	.	.	106
FEB	9	32	38	42	41	25	16	7	1	.	.	.	.	.	.	.	.	211
MAR	2	24	31	44	63	50	39	33	27	12	10	2	.	.	.	.	.	.	338
APR	2	25	45	60	74	97	80	97	82	97	82	78	71	44	11	.	.	.	.	.	944
MAY	34	73	100	90	110	100	109	110	111	85	59	63	61	53	38	15	.	.	.	.	1211
JUN	49	79	118	122	117	134	140	143	136	149	156	149	121	108	76	52	12	.	.	.	1859
JUL	27	41	53	61	70	93	96	103	94	100	88	86	85	73	51	21	2	.	.	.	1144
AUG	7	44	75	90	93	111	123	142	130	155	151	134	126	106	51	8	.	.	.	.	1547
SEP	7	41	59	88	99	84	76	79	77	51	31	9	1	.	.	.	.	.	701
OCT	3	17	31	43	32	19	12	10	3	.	.	.	.	.	.	.	.	170
NOV	14	63	81	87	77	25	.	.	.	.	.	.	.	.	.	.	347
DEC	21	67	40	.	.	.	.	.	.	.	.	.	.	.	.	128
MEAN	0	0	0	0	10	22	34	42	52	70	82	80	67	63	55	48	42	33	19	8	1	0	0	0	727

1995 MEAN DIURNAL VARIATION OF DOWNWARD ATMOSPHERIC RADIATION (0.01 MJ/SQM)

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
JAN	104	104	103	102	103	103	103	101	100	101	102	103	106	105	105	106	107	106	106	104	103	102	103	103	2484
FEB	108	107	107	106	107	106	106	106	106	106	107	107	108	109	107	107	106	107	108	108	108	109	108	109	2573
MAR	105	105	103	102	103	103	104	103	103	104	105	107	107	109	108	107	106	104	101	102	104	105	104	105	2508
APR	104	105	105	106	106	107	107	107	108	107	109	109	109	108	109	108	106	106	104	104	104	104	104	104	2553
MAY	107	107	105	106	108	108	109	111	113	114	115	115	115	116	115	115	113	112	113	111	110	110	109	108	2667
JUN	116	116	115	116	117	117	117	118	120	121	121	122	122	121	121	120	119	118	117	116	116	115	115	115	2835
JUL	123	124	124	125	126	126	126	127	127	127	128	128	129	128	127	127	126	125	124	124	124	125	124	124	3019
AUG	117	118	118	121	122	121	122	123	124	124	125	125	126	124	123	122	121	119	118	117	116	116	116	116	2894
SEP	119	118	118	117	118	119	119	119	120	121	120	122	122	122	123	122	121	119	118	119	119	120	119	118	2870
OCT	120	120	121	121	123	123	122	122	123	122	121	122	122	125	124	124	124	122	123	123	122	122	120	121	2933
NOV	105	105	105	106	105	105	106	106	107	107	107	107	107	106	105	105	105	104	103	101	101	102	103	104	2516
DEC	93	92	91	91	92	92	92	92	91	91	93	92	93	91	90	90	90	91	91	90	90	90	89	91	2188
MEAN	110	110	110	110	111	111	111	111	111	112	112	113	113	114	114	113	113	112	111	111	110	110	110	110	2671

C. MEAN DIURNAL VARIATION

1995 MEAN DIURNAL VARIATION OF EFFECTIVE OUTGOING RADIATION FROM A BLACK SURFACE AT AIR TEMPERATURE (0.01 MJ/SQM)

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL
JAN	13	13	14	15	14	14	14	16	17	16	16	16	12	12	12	11	11	11	12	13	14	15	14	14	332
FEB	9	10	11	11	10	11	11	10	12	12	12	12	11	9	11	11	11	10	9	10	9	8	8	8	244
MAR	12	12	14	15	15	15	14	15	16	16	15	14	13	12	12	14	14	16	17	16	14	13	13	12	340
APR	15	14	14	13	12	12	13	14	15	17	16	16	17	18	17	17	19	18	18	17	17	17	16	16	380
MAY	18	18	19	18	17	19	20	20	19	19	19	19	19	17	17	17	19	19	17	18	17	17	17	17	436
JUN	16	17	17	16	17	19	21	21	20	21	21	21	21	21	21	22	22	23	22	21	20	20	19	18	475
JUL	12	12	12	10	10	11	13	14	15	16	16	16	16	17	17	17	18	18	17	16	14	13	13	12	345
AUG	19	18	18	14	14	16	16	17	17	19	19	21	20	22	23	23	23	24	24	23	22	22	21	20	476
SEP	16	16	16	16	16	15	15	16	17	19	20	19	19	19	19	19	19	19	19	18	16	15	15	16	414
OCT	10	10	10	9	8	8	9	8	8	10	12	11	11	8	9	9	8	9	8	8	9	9	10	9	222
NOV	15	14	14	13	14	14	14	14	14	15	16	17	17	17	17	17	17	17	18	19	19	18	17	16	382
DEC	19	20	21	21	20	20	20	20	21	22	22	23	21	23	24	23	22	22	22	22	22	22	22	21	515
MEAN	15	15	15	14	14	15	15	15	16	17	17	17	16	16	17	17	17	17	17	17	16	16	15	15	381

1995 MEAN DIURNAL VARIATION OF SUNSHINE DURATION (MIN)

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TOTAL*	MAX*	PCT
JAN	2	8	11	9	4	.	.	.	.	.	.	.	.	.	.	.	.	6	31	18
FEB	2	8	10	11	10	8	5	4	.	.	.	.	.	.	.	.	.	10	65	15
MAR	1	7	9	14	17	13	9	9	9	3	3	1	.	.	.	.	.	.	16	95	17
APR	1	9	12	14	17	22	20	22	19	23	22	20	23	16	4	.	.	.	.	.	41	130	30
MAY	11	20	25	21	24	21	24	25	25	20	15	15	15	15	14	5	.	.	.	.	49	153	32
JUN	16	22	28	28	26	28	29	29	29	31	33	33	29	28	25	24	2	.	.	.	73	163	45
JUL	9	12	15	15	18	22	22	22	21	22	21	22	22	21	19	8	.	.	.	.	49	158	31
AUG	3	15	21	21	21	25	26	30	28	34	34	31	32	33	19	3	.	.	.	.	63	141	44
SEP	2	12	16	22	25	18	17	18	18	14	10	4	.	.	.	.	.	.	29	108	27
OCT	2	6	9	11	9	5	4	3	1	.	.	.	.	.	.	.	.	.	8	78	11
NOV	5	18	21	21	19	5	.	.	.	.	.	.	.	.	.	.	.	15	40	33
DEC	11	24	13	.	.	.	.	.	.	.	.	.	.	.	.	.	8	22	37
MEAN	0	0	0	0	3	7	9	10	13	18	20	18	15	14	13	12	11	10	7	3	0	0	0	0	31	99	28

*TOTALS AND MAX ARE GIVEN IN 0.1 H

D. MONTHLY AND ANNUAL MEANS

1995 MONTHLY AND ANNUAL MEANS OF RADIATION COMPONENTS IN BERGEN
 UNITS RADIATION VALUES: 0.01 MJM⁻² DAY⁻¹(UV:KJM⁻² DAY⁻¹, UV-B : 0.01 MED/DAY), SUNSHINE DURATION: 0.1 HR

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
GLOBAL RADIATION	69	204	495	1113	1519	1884	1467	1426	752	238	135	65	783
SKY RADIATION	56	156	350	624	824	791	795	636	441	184	67	51	416
NORMAL INCIDENCE BEAM	106	211	338	944	1211	1859	1144	1547	701	170	347	128	727
ULTRAVIOLET RADIATION	34	101	239	488	662	827	642	598	312	107	53	30	342
UV-B RADIATION	-	-	-	-	-	-	-	901	376	94	30	11	-
ATMOSPHERIC RADIATION	2484	2573	2508	2553	2667	2835	3019	2894	2870	2933	2516	2188	2671
EFFECTIVE RADIATION	332	244	340	380	436	475	345	476	414	222	382	515	381
DURATION OF SUNSHINE	6	10	16	41	49	73	49	63	29	8	15	8	31
DURATION OF SUNSHINE(PCT)	18	15	17	30	32	45	31	44	27	11	33	37	28