

January 2004

Global Solar Radiation on a Horizontal Surface
 Hourly Integrated and Daily Totals
 Instrument: Eppley PSP
 Watt-Hours per Square Meter

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	Daily
1	0	0	0	0	0	0	0	7	41	246	338	375	387	370	285	178	32	2	0	0	0	0	0	0	2261
2	0	0	0	0	0	0	0	2	14	?	37 ?	38 ?	80	253	147	71	17	2	0	0	0	0	0	0	661 ?
3	0	0	0	0	0	0	0	6	33	177	340	450	452	148	86	96	28	6	0	0	0	0	0	0	1822
4	0	0	0	0	0	0	0	7	34	90	135	171	141	70	93	58	39	8	0	0	0	0	0	0	847
5	0	0	0	0	0	0	0	2	7	37 ?	41	66	58	59	42	34 ?	8 ?	2	0	0	0	0	0	0	355 ?
6	0	0	0	0	0	0	0	7	29	65	72	182	257	119	145	107	46	13	0	0	0	0	0	0	1040
7	0	0	0	0	0	0	0	10	64	252	383 ?	?	?	?	?	250	97	7	0	0	0	0	0	0	1062 ?
8	0	0	0	0	0	0	0	12	46	132	154	120	116	128	77	36	10	1	0	0	0	0	0	0	833
9	0	0	0	0	0	0	0	2	4 ?	?	?	?	?	35 ?	40 ?	?	2 ?	1	0	0	0	0	0	0	83 ?
10	0	0	0	0	0	0	0	1	5 ?	34	52	90	107	120	110	93	59	19	0	0	0	0	0	0	690
11	0	0	0	0	0	0	0	3	19	32	49	68	98	?	?	?	74 ?	11	0	0	0	0	0	0	353 ?
12	0	0	0	0	0	0	0	8	75 ?	?	?	?	?	?	?	?	71 ?	13	0	0	0	0	0	0	166 ?
13	0	0	0	0	0	0	0	7	51 ?	?	?	?	?	?	?	?	67 ?	13	0	0	0	0	0	0	138 ?
14	0	0	0	0	0	0	0	5	70 ?	?	?	?	?	?	?	160 ?	75 ?	21	0	0	0	0	0	0	331 ?
15	0	0	0	0	0	0	0	0	13	47	149	181	265	?	?	?	79 ?	18	0	0	0	0	0	0	752 ?
16	0	0	0	0	0	0	0	8	63 ?	?	?	?	435 ?	447	272	104	11	0	0	0	0	0	0	0	1341 ?
17	0	0	0	0	0	0	0	7	50	159	237	316	244	215	188	125	42	7	0	0	0	0	0	0	1592
18	0	0	0	0	0	0	0	2	9	42	55	78	61	72	43 ?	?	10 ?	2	0	0	0	0	0	0	372 ?
19	0	0	0	0	0	0	0	3	49	130	195	269	535	325	182	106	47	11	0	0	0	0	0	0	1854
20	0	0	0	0	0	0	0	6	46	138	269	431	535	479	429	292	128	22	0	0	0	0	0	0	2773
21	0	0	0	0	0	0	0	10	29	71	244	356	321	337	254	220	133	22	0	0	0	0	0	0	1997
22	0	0	0	0	0	0	0	13	64	261	415	508	389	71	140	99	60	12	0	0	0	0	0	0	2033
23	0	0	0	0	0	0	0	10	112	287	431	525	551	522	296	139	108	18	0	0	0	0	0	0	2999
24	0	0	0	0	0	0	0	16	34	35	60	92	110	102	145	151	82	10	0	0	0	0	0	0	839
25	0	0	0	0	0	0	0	3	16	29	52	53	59	45 ?	46 ?	31 ?	29 ?	5	0	0	0	0	0	0	367 ?
26	0	0	0	0	0	0	0	5	60	167	261	245	205	153	200	100	62	22	0	0	0	0	0	0	1479
27	0	0	0	0	0	0	0	17	77	113	115	232	163	92	70	46	27	3	0	0	0	0	0	0	954
28	0	0	0	0	0	0	0	5	47	138	249	455	596	560	475	338	164	32	0	0	0	0	0	0	3059
29	0	0	0	0	0	0	0	11	127	300	448	543	581	568	466	326	120	21	0	0	0	0	0	0	3509
30	0	0	0	0	0	0	0	1	16	42	85	159	235	259	235	152	57	26	0	0	0	0	0	0	1268
31	0	0	0	0	0	0	0	12	173	343	473	575	616	588	492	354	177	34	0	0	0	0	0	0	3837
Avg	0	0	0	0	0	0	0	7	48	135	205	263	286	245	205	153	66	13	0	0	0	0	0	0	1344 ?
S D	0	0	0	0	0	0	0	4	38	97	145	177	195	187	150	100	45	9	0	0	0	0	0	0	1042
S/A	0	0	0	0	0	0	0	0.67	0.79	0.72	0.71	0.67	0.68	0.76	0.73	0.65	0.69	0.72	0	0	0	0	0	0	0.78
Min	0	0	0	0	0	0	0	0	4	29	37	38	58	35	40	31	2	1	0	0	0	0	0	0	83
Max	0	0	0	0	0	0	0	17	173	343	473	575	616	588	492	354	177	34	0	0	0	0	0	0	3837
n	0	0	0	0	0	0	0	149	348	291	301	294	295	280	286	278	330	175	0	0	0	0	0	0	3032

Daylight Data Recovery: 0.0% missing; 17.4% exceed the 15% QC threshold -- 3672 total daylight measurements.

Instrument: Eppley PSP Serial Number: 25821F3 Calibration Factor: 9.020 μV/W/m² Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (*) are not used in monthly statistics.

January 2004

Direct Normal Solar Radiation
 Hourly Integrated and Daily Totals
 Instrument: Eppley NIP
 Watt-Hours per Square Meter

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	Daily
1	0	0	0	0	0	0	0	0	29	721	605	374	442	352	300	193	0	0	0	0	0	0	0	0	3015
2	0	0	0	0	0	0	0	0	0	0	0	0	0	67	20	2	0	0	0	0	0	0	0	0	90
3	0	0	0	0	0	0	0	0	0	277	643	676	640	34	1	12	6	0	0	0	0	0	0	0	2289
4	0	0	0	0	0	0	0	0	0	27	27	2	1	0	0	1	25	0	0	0	0	0	0	0	83
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	3	125	0	5	45	34	150	0	0	0	0	0	0	361
7	0	0	0	0	0	0	0	0	61	507	671	?	?	?	?	326	333	14	0	0	0	0	0	0	1912 ?
8	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2	0	0	0	0	0	0	0	0	0	7
10	0	0	0	0	0	0	0	0	0	2	6	10	15	15	15	15	11	5	0	0	0	0	0	0	92
11	0	0	0	0	0	0	0	0	3	2	2	3	10	?	?	?	8 ?	4	0	0	0	0	0	0	32 ?
12	0	0	0	0	0	0	0	0	6 ?	?	?	?	?	?	?	?	8 ?	3	0	0	0	0	0	0	16 ?
13	0	0	0	0	0	0	0	0	3 ?	?	?	?	?	?	?	?	8 ?	3	0	0	0	0	0	0	14 ?
14	0	0	0	0	0	0	0	0	8 ?	?	?	?	?	?	?	4 ?	7 ?	3	0	0	0	0	0	0	22 ?
15	0	0	0	0	0	0	0	0	0	0	1	1	4	?	?	?	8 ?	4	0	0	0	0	0	0	17 ?
16	0	0	0	0	0	0	0	0	7 ?	?	?	?	?	140 ?	444	511	443	72	0	0	0	0	0	0	1617 ?
17	0	0	0	0	0	0	0	0	0	15	57	43	3	5	4	5	0	0	0	0	0	0	0	0	132
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	1	11	72	109	469	227	63	0	0	0	0	0	0	0	0	0	952
20	0	0	0	0	0	0	0	0	0	12	176	628	882	761	905	848	656	296	0	0	0	0	0	0	5163
21	0	0	0	0	0	0	0	0	0	1	15	192	19	29	17	260	641	253	0	0	0	0	0	0	1424
22	0	0	0	0	0	0	0	0	38	662	844	878	268	0	2	13	0	0	0	0	0	0	0	0	2705
23	0	0	0	0	0	0	0	0	548	849	936	914	790	800	149	60	200	1	0	0	0	0	0	0	5247
24	0	0	0	0	0	0	0	0	13	0	0	0	0	0	2	31	23	0	0	0	0	0	0	0	68
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	2	9	1	1	1	15	0	0	2	0	0	0	0	0	0	31
27	0	0	0	0	0	0	0	0	7	11	10	14	1	0	0	0	0	0	0	0	0	0	0	0	44
28	0	0	0	0	0	0	0	0	0	6	29	242	765	930	950	893	736	391	0	0	0	0	0	0	4942
29	0	0	0	0	0	0	0	1	578	802	899	915	899	862	847	800	379	112	0	0	0	0	0	0	7094
30	0	0	0	0	0	0	0	0	0	0	0	0	3	9	12	7	0	0	0	0	0	0	0	0	31
31	0	0	0	0	0	0	0	4	704	913	997	1031	1039	1028	1000	937	795	441	0	0	0	0	0	0	8888
Avg	0	0	0	0	0	0	0	0	65	179	222	232	245	210	190	184	139	57	0	0	0	0	0	0	1493 ?
S D	0	0	0	0	0	0	0	0	1	183	318	358	359	352	345	316	252	121	0	0	0	0	0	0	2379
S/A	0	0	0	0	0	0	0	4.28	2.83	1.78	1.61	1.54	1.46	1.67	1.81	1.72	1.81	2.14	0	0	0	0	0	0	1.59
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	4	704	913	997	1031	1039	1028	1000	937	795	441	0	0	0	0	0	0	8888
n	0	0	0	0	0	0	0	149	357	324	322	312	309	293	300	313	347	175	0	0	0	0	0	0	3203

Daylight Data Recovery: 0.0% missing; 12.8% exceed the 15% QC threshold -- 3672 total daylight measurements.

Instrument: Eppley NIP Serial Number: 17664E6 Calibration Factor: 8.480 μV/W/m² Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (*) are not used in monthly statistics.

January 2004

Diffuse Solar Radiation (Shadow Band) on a Horizontal Surface
Hourly Integrated and Daily Totals
Instrument: Eppley PSP
Watt-Hours per Square Meter

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	Daily
1	0	0	0	0	0	0	0	6	33	56	101	197	162	203	166	123	33	2	0	0	0	0	0	0	1081
2	0	0	0	0	0	0	0	1	15	16	34	38	86	228	143	73	19	5	0	0	0	0	0	0	656
3	0	0	0	0	0	0	0	7	35	93	97	144	144	133	89	95	29	6	0	0	0	0	0	0	871
4	0	0	0	0	0	0	0	7	35	80	130	181	153	73	99	61	35	8	0	0	0	0	0	0	863
5	0	0	0	0	0	0	0	1	7	26	40	62	62	62	44	26	9	1	0	0	0	0	0	0	340
6	0	0	0	0	0	0	0	6	30	67	75	189	196	126	147	100	42	11	0	0	0	0	0	0	990
7	0	0	0	0	0	0	0	9	54	78	57	?	?	?	?	111	33	6	0	0	0	0	0	0	346 ?
8	0	0	0	0	0	0	0	14 ?	48	133	159	127	122	136	81	35	10	1	0	0	0	0	0	0	865
9	0	0	0	0	0	0	0	1	5	15	20 ?	25	26	31	37	16 ?	1 ?	0	0	0	0	0	0	0	177 ?
10	0	0	0	0	0	0	0	0	6	29	46	72	73	75	68	55	33	9	0	0	0	0	0	0	466
11	0	0	0	0	0	0	0	2	15	32	50	68	90	?	?	?	22 ?	6	0	0	0	0	0	0	286 ?
12	0	0	0	0	0	0	0	8	28 ?	?	?	?	?	?	?	?	26 ?	8	0	0	0	0	0	0	71 ?
13	0	0	0	0	0	0	0	7	27 ?	?	?	?	?	?	?	?	23 ?	8	0	0	0	0	0	0	66 ?
14	0	0	0	0	0	0	0	4	24 ?	?	?	?	?	?	?	137 ?	25 ?	15	0	0	0	0	0	0	205 ?
15	0	0	0	0	0	0	0	0	13	50	155	188	256	?	?	?	25 ?	11	0	0	0	0	0	0	698 ?
16	0	0	0	0	0	0	0	8	34 ?	?	?	?	?	337 ?	247	127	44	10	0	0	0	0	0	0	808 ?
17	0	0	0	0	0	0	0	8	51	153	210	290	255	226	194	129	44	8	0	0	0	0	0	0	1569
18	0	0	0	0	0	0	0	1	9	45	58	83	60	76	33	27 ?	9	1	0	0	0	0	0	0	403
19	0	0	0	0	0	0	0	2	50	126	163	208	287	201	154	110	49	11	0	0	0	0	0	0	1360
20	0	0	0	0	0	0	0	7	48	137	190	119	93	107	63	43	28	10	0	0	0	0	0	0	844
21	0	0	0	0	0	0	0	10	29	73	231	247	318	320	242	150	35	12	0	0	0	0	0	0	1667
22	0	0	0	0	0	0	0	15	61	68	76	87	251	76	146	97	61	12	0	0	0	0	0	0	949
23	0	0	0	0	0	0	0	9	31	45	54	80	123	112	214	127	66	17	0	0	0	0	0	0	877
24	0	0	0	0	0	0	0	16	34	37	64	99	117	110	154	144	80	10	0	0	0	0	0	0	865
25	0	0	0	0	0	0	0	3	16	30	56	57	64	45	43	28	26	4	0	0	0	0	0	0	372
26	0	0	0	0	0	0	0	5	63	177	267	261	218	160	205	106	66	22	0	0	0	0	0	0	1551
27	0	0	0	0	0	0	0	21 ?	78	113	117	234	173	98	74	43	24	2	0	0	0	0	0	0	976
28	0	0	0	0	0	0	0	5	50	143	242	313	180	89	64	50	35	13	0	0	0	0	0	0	1183
29	0	0	0	0	0	0	0	12	37	58	70	85	99	127	90	61	39	16	0	0	0	0	0	0	693
30	0	0	0	0	0	0	0	0	17	44	91	171	249	270	240	156	60	27	0	0	0	0	0	0	1325
31	0	0	0	0	0	0	0	10	37	50	53	58	62	59	50	42	29	11	0	0	0	0	0	0	463
Avg	0	0	0	0	0	0	0	7	33	73	108	142	151	139	123	84	34	9	0	0	0	0	0	0	771 ?
S D	0	0	0	0	0	0	0	5	18	46	70	83	81	84	70	44	18	6	0	0	0	0	0	0	444
S/A	0	0	0	0	0	0	0	0.76	0.55	0.63	0.65	0.58	0.54	0.6	0.57	0.52	0.54	0.67	0	0	0	0	0	0	0.58
Min	0	0	0	0	0	0	0	0	5	15	20	25	26	31	33	16	1	0	0	0	0	0	0	0	66
Max	0	0	0	0	0	0	0	21	78	177	267	313	318	337	247	156	80	27	0	0	0	0	0	0	1667
n	0	0	0	0	0	0	0	137	357	321	315	312	309	293	300	294	341	175	0	0	0	0	0	0	3156

Daylight Data Recovery: 0.0% missing; 14.1% exceed the 15% QC threshold -- 3672 total daylight measurements.

Instrument: Eppley PSP Serial Number: 17860F3 Calibration Factor: 7.010 μV/W/m² Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (*) are not used in monthly statistics.