

March 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	1	32	159	289	488	493	467	524	307	315	180	51	5	0	0	0	0	0	3311
2	0	0	0	0	0	0	0	23	42 ?	122	225	126	186	112	131	259	249	59	7	0	0	0	0	0	1541
3	0	0	0	0	0	0	2	30	177 ?	342 ?	569	689	627	549	270	216	74	16	3	0	0	0	0	0	3564
4	0	0	0	0	0	0	1	5 ?	36 ?	92	118	348	367	134	301	221	139	40	5	0	0	0	0	0	1807
5	0	0	0	0	0	0	0	14	104	348	343	274	276	298	174	69	60 ?	16 ?	3	0	0	0	0	0	1978
6	0	0	0	0	0	0	2	11	39	91	202	187	328	467	302	167	175	81	9	0	0	0	0	0	2062
7	0	0	0	0	0	0	3	86	306	479	648	747	783	749	445	267	123 ?	2 ?	1	0	0	0	0	0	4640
8	0	0	0	0	0	0	4	62	130	152	164	379	393	224	184	151	127	37	2	0	0	0	0	0	2009
9	0	0	0	0	0	0	10	37	138	145	242	232	168	137	59	78	77	21	3	0	0	0	0	0	1349
10	0	0	0	0	0	0	2	15	51	123	280	508	585	539	475	359	338	126	8	0	0	0	0	0	3409
11	0	0	0	0	0	0	9	106 ?	?	493	541	683	615	500	467	380	84	48	4	0	0	0	0	0	3930 ?
12	0	0	0	0	0	0	9	118	325	520	676	781	821	787	688	532	344	136	14	0	0	0	0	0	5751
13	0	0	0	0	0	0	9	123	333	478	681	797	799	711	622	531	339	106	10	0	0	0	0	0	5538
14	0	0	0	0	0	0	7	46	140	218	304	420	457	594	287	86	48	39	3	0	0	0	0	0	2650
15	0	0	0	0	0	0	3	29	79	251	607	618	633	480	396	272	163	52	7	0	0	0	0	0	3591
16	0	0	0	0	0	0	2	16 ?	35 ?	70	225	197	87 ?	209	343	51 ?	206	81	22	0	0	0	0	0	1544 ?
17	0	0	0	0	0	0	1	2 ?	?	74 ?	89	92	88	81	153	98	82	80	11	0	0	0	0	0	853 ?
18	0	0	0	0	0	0	9	64	160	515	671	641	159	133	415	138	118	15 ?	9	0	0	0	0	0	3045
19	0	0	0	0	0	0	16	96	208	402	428	734	783	801	703	545	354	145	15	0	0	0	0	0	5231
20	0	0	0	0	0	0	20	147	348	536	516	251	555	304	583	481	330	78	9	0	0	0	0	0	4159
21	0	0	0	0	0	0	8	61	46 ?	65	150	204	142	274	223	170	187	78	13	0	0	0	0	0	1620
22	0	0	0	0	0	0	16	96	142	229	357	511	556	620	514	437	312	192	25	0	0	0	0	0	4007
23	0	0	0	0	0	0	45	175 ?	?	631	750	844	870	832	728	570	394	166	34	0	0	0	0	0	6039 ?
24	0	0	0	0	0	0	13	40	132	127	152	135	150	204	294	244 ?	208 ?	73 ?	25	0	0	0	0	0	1799 ?
25	0	0	0	0	0	0	21	87 ?	?	?	?	?	?	?	607 ?	496	338	163	23	0	0	0	0	0	1734 ?
26	0	0	0	0	0	0	24	84	354	558	709	803	837	788	666	320	318	136	19	0	0	0	0	0	5617
27	0	0	0	0	0	0	7	48	128	199	196	236	162	161	101	109 ?	82	55	16	0	0	0	0	0	1500
28	0	0	0	0	0	0	23	129	362	542	590	675	670	835	552	438	293	131	29	0	0	0	0	0	5270
29	0	0	0	0	0	0	41	152	390	530	698	777	825	774	691	533	329	162	18	0	0	0	0	0	5922
30	0	0	0	0	0	0	3	27	46 ?	61 ?	67	145 ?	158	102 ?	232	149 ?	219	94	35	0	0	0	0	0	1337 ?
31	0	0	0	0	0	0	1	22 ?	74	102	167	130	265	200	106	132	57	26	6	0	0	0	0	0	1286
Avg	0	0	0	0	0	0	10	64	166	293	395	455	460	437	388	284	205	81	13	0	0	0	0	0	3164
S D	0	0	0	0	0	0	11	48	118	191	225	257	267	265	205	168	111	53	10	0	0	0	0	0	1670
S/A	0	0	0	0	0	0	1.12	0.76	0.71	0.65	0.57	0.57	0.58	0.61	0.53	0.59	0.54	0.65	0.75	0	0	0	0	0	0.53
Min	0	0	0	0	0	0	0	2	35	61	67	92	87	81	59	51	48	2	1	0	0	0	0	0	853
Max	0	0	0	0	0	0	45	175	390	631	750	844	870	835	728	570	394	192	35	0	0	0	0	0	6039
n	0	0	0	0	0	0	170	321	300	348	355	354	354	354	359	349	351	350	182	0	0	0	0	0	4147

Daylight Data Recovery: 0.0% missing; 6.7% exceed the 15% QC threshold -- 4444 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.

March 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	1	84	133	387	207	162	328	63	189	133	1	0	0	0	0	0	0	1687
2	0	0	0	0	0	0	0	0	0	1	10	0	1	0	0	24	248	19	6	0	0	0	0	0	310
3	0	0	0	0	0	0	0	0	336 ?	666 ?	871	888	576	331	22	11	0	0	0	0	0	0	0	0	3701
4	0	0	0	0	0	0	0	0	0	1	1	91	115	6	35	54	11	0	2	0	0	0	0	0	316
5	0	0	0	0	0	0	0	0	3	249	138	55	16	41	6	0	1	0	0	0	0	0	0	0	510
6	0	0	0	0	0	0	0	0	1	1	14	20	154	393	159	19	170	136	0	0	0	0	0	0	1066
7	0	0	0	0	0	0	0	354	754	784	966	998	990	959	441	186	41	0	0	0	0	0	0	0	6474
8	0	0	0	0	0	0	0	47	12	8	15	105	101	4	1	0	17	0	0	0	0	0	0	0	311
9	0	0	0	0	0	0	0	16	45	1	32	14	2	0	0	0	0	0	0	0	0	0	0	0	111
10	0	0	0	0	0	0	0	0	0	76	194 ?	294	429	393	461	516	821	591	71	0	0	0	0	0	3846
11	0	0	0	0	0	0	0	579	785 ?	684	388	661	404	249	198	214	1	3	0	0	0	0	0	0	4168
12	0	0	0	0	0	0	10	583	838	935	981	1012	1023 ?	1018	994	949	855	623	89	0	0	0	0	0	9909
13	0	0	0	0	0	0	23	524	787	704	816	949	914	813	777	924	821	355	1	0	0	0	0	0	8408
14	0	0	0	0	0	0	0	0	4	9	10	64	104	239	56	0	0	0	0	0	0	0	0	0	487
15	0	0	0	0	0	0	0	0	0	4	541	530	419	121	79	30	9	0	0	0	0	0	0	0	1732
16	0	0	0	0	0	0	0	0	0	1	2	1	0	25	143	0	190	80	20	0	0	0	0	0	463
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	23
18	0	0	0	0	0	0	4	5	8	636	306	255	0	1	184	5	2	0	0	0	0	0	0	0	1407
19	0	0	0	0	0	0	0	116	132	319	228	679	777	953	940	905	818	593	92	0	0	0	0	0	6551
20	0	0	0	0	0	0	125	589	791	870	373	9	375	72	525	551	564	97	0	0	0	0	0	0	4941
21	0	0	0	0	0	0	0	19	0	0	0	1	0	6	2	9	122	29	0	0	0	0	0	0	188
22	0	0	0	0	0	0	0	29	9	7	64	231	229	347	343	308	444	501	103	0	0	0	0	0	2614
23	0	0	0	0	0	0	166	688	890 ?	974	1008	1015 ?	1006	991	965	906	802	609	94	0	0	0	0	0	10114 ?
24	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2	3 ?	2 ?	1 ?	0	0	0	0	0	0	11 ?
25	0	0	0	0	0	0	1	4 ?	?	?	?	?	?	?	732 ?	632	547	451	68	0	0	0	0	0	2433 ?
26	0	0	0	0	0	0	1	71	668	863	911	940	941	885	817	307	518	208	1	0	0	0	0	0	7132
27	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7
28	0	0	0	0	0	0	10	143	548	627	377	541	501	763	467	483	306	167	16	0	0	0	0	0	4951
29	0	0	0	0	0	0	70	201	530	520	725	608	748	728	722	653	460	367	0	0	0	0	0	0	6332
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	114	7	33	0	0	0	0	0	154
31	0	0	0	0	0	0	0	0	1	1	1	1	3	1	0	1	0	0	0	0	0	0	0	0	8
Avg	0	0	0	0	0	0	13	128	241	302	312	339	333	322	295	254	259	157	19	0	0	0	0	0	2915
S D	0	0	0	0	0	0	38	221	340	365	365	385	370	375	346	333	310	225	35	0	0	0	0	0	3168
S/A	0	0	0	0	0	0	2.86	1.73	1.41	1.21	1.17	1.13	1.11	1.16	1.17	1.31	1.2	1.44	1.79	0	0	0	0	0	1.09
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	7
Max	0	0	0	0	0	0	166	688	890	974	1008	1015	1023	1018	994	949	855	623	103	0	0	0	0	0	10114
n	0	0	0	0	0	0	170	364	349	353	354	346	353	360	362	366	365	368	182	0	0	0	0	0	4292

Daylight Data Recovery: 0.0% missing; 3.4% exceed the 15% QC threshold -- 4444 total daylight measurements.

Instrument: Eppley NIP Serial Number: 17664E6 Calibration Factor: 8.480 $\mu\text{V}/\text{W}/\text{m}^2$ 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.

March 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	1	34	132	236	260	356	362	308	269	221	135	53	5	0	0	0	0	0	2372
2	0	0	0	0	0	0	0	25	38	131	236	138	203	122	144	254	160	58	7	0	0	0	0	0	1515
3	0	0	0	0	0	0	1	32	96 ?	112 ?	78	111	223	327	274	225	79	16	3	0	0	0	0	0	1577
4	0	0	0	0	0	0	0	5	30	102	121	300	285	133	292	204	141	43	6	0	0	0	0	0	1662
5	0	0	0	0	0	0	0	15	108	221	263	254	277	277	180	66	53	15	3	0	0	0	0	0	1732
6	0	0	0	0	0	0	2 ?	11	41	98	202	181	222	188	206	162	134	55	9	0	0	0	0	0	1511
7	0	0	0	0	0	0	3	33	58	114	80	77	89	98	172	193	91 ?	1 ?	1	0	0	0	0	0	1009
8	0	0	0	0	0	0	3	55	133	156	163	302	331	235	197	160	124	39	2	0	0	0	0	0	1899
9	0	0	0	0	0	0	10	39	129	156	218	213	174	141	63	83	72	22	3	0	0	0	0	0	1323
10	0	0	0	0	0	0	1	15	53	107	132 ?	251	274	268	189	108	66	33	6	0	0	0	0	0	1504
11	0	0	0	0	0	0	9 ?	38	75 ?	128	293	209	288	318	336	279	89	49	4	0	0	0	0	0	2117
12	0	0	0	0	0	0	8	30	52	67	77	79	80	77	72	62	53	33	10	0	0	0	0	0	700
13	0	0	0	0	0	0	7	40	71	123	169	131	125	126	129	71	57	42	11	0	0	0	0	0	1102
14	0	0	0	0	0	0	7	49	147	224	314	380	376	415	256	92	52	41	3	0	0	0	0	0	2357
15	0	0	0	0	0	0	3	31	85	261	249	216	305	388	348	265	167	55	7	0	0	0	0	0	2381
16	0	0	0	0	0	0	1	15	34	75	242	199	83	199	220	45	129	64	20	0	0	0	0	0	1328
17	0	0	0	0	0	0	0	2 ?	19 ?	61	95	99	94	86	151	100	89	77	12	0	0	0	0	0	885
18	0	0	0	0	0	0	10	66	163	172	447	434	171	142	295	142	125	14	10	0	0	0	0	0	2191
19	0	0	0	0	0	0	16	78	161	229	275	232	191	106	96	73	56	35	10	0	0	0	0	0	1558
20	0	0	0	0	0	0	13	39	59	78	279	260	278	264	249	186	118	59	10	0	0	0	0	0	1890
21	0	0	0	0	0	0	8	59	35	69	162	220	151	284	236	173	141	75	13	0	0	0	0	0	1627
22	0	0	0	0	0	0	17	93	148	244	328	343	381	359	284	274	147	92	16	0	0	0	0	0	2726
23	0	0	0	0	0	0	17	55	75	76	84	87	95	95	90	84	93	45	27	0	0	0	0	0	923
24	0	0	0	0	0	0	15	42	142	138	166	147	164	222	317	236 ?	215 ?	62 ?	25	0	0	0	0	0	1892 ?
25	0	0	0	0	0	0	20	63 ?	?	?	?	?	?	?	145 ?	144	122	70	17	0	0	0	0	0	581 ?
26	0	0	0	0	0	0	28	62	82	83	93	97	104	116	109	133	115	91	20	0	0	0	0	0	1133
27	0	0	0	0	0	0	8	51	136	210	213	254	152	166	108	98	85	59	17	0	0	0	0	0	1556
28	0	0	0	0	0	0	24	97	118	180	306	265	267	255	233	185	168	99	28	0	0	0	0	0	2225
29	0	0	0	0	0	0	35	106	174	224	189	298	220	210	196	170	144	84	19	0	0	0	0	0	2069
30	0	0	0	0	0	0	2	26	43	60	70	132	167	97	241	131	189	96	30	0	0	0	0	0	1284
31	0	0	0	0	0	0	1	20 ?	73	106	178	140	282	213	113	123	57	26	6	0	0	0	0	0	1337
Avg	0	0	0	0	0	0	9	43	90	141	199	214	214	208	200	153	112	52	12	0	0	0	0	0	1612
S D	0	0	0	0	0	0	9	26	47	64	93	96	92	97	81	69	44	26	8	0	0	0	0	0	533
S/A	0	0	0	0	0	0	1.03	0.62	0.52	0.45	0.46	0.45	0.43	0.47	0.4	0.45	0.39	0.5	0.72	0	0	0	0	0	0.33
Min	0	0	0	0	0	0	0	2	19	60	70	77	80	77	63	45	52	1	1	0	0	0	0	0	581
Max	0	0	0	0	0	0	35	106	174	261	447	434	381	415	348	279	215	99	30	0	0	0	0	0	2726
n	0	0	0	0	0	0	160	349	343	353	356	358	360	358	362	364	358	362	182	0	0	0	0	0	4265

Daylight Data Recovery: 0.0% missing; 4.0% exceed the 15% QC threshold -- 4444 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.