

December 2002

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	17	74	271	295	512	521	466	364	210	59	2	0	0	0	0	0	0	2793
2	0	0	0	0	0	0	0	15	46	167	280	308	374	328	156	27 ?	6	1	0	0	0	0	0	0	1708
3	0	0	0	0	0	0	0	9	46	76	77	86	73	81	93	129	38	0	0	0	0	0	0	0	708
4	0	0	0	0	0	0	0	7	45	47	75	76	75	78	63	30	7	1	0	0	0	0	0	0	504
5	0	0	0	0	0	0	0	5	41	95	78	50	46	65	31	23	9	2	0	0	0	0	0	0	445
6	0	0	0	0	0	0	0	3	31	81	135	213	272	436	243 ?	?	20	0	0	0	0	0	0	0	1434 ?
7	0	0	0	0	0	0	0	12	95 ?	?	220 ?	?	508 ?	468	387 ?	206	55	0	0	0	0	0	0	0	1951 ?
8	0	0	0	0	0	0	0	6	32	106	148	148	149	196	115	45	15	1	0	0	0	0	0	0	962
9	0	0	0	0	0	0	0	13	98 ?	361 ?	391	424	421	386	271	138	37	0	0	0	0	0	0	0	2540 ?
10	0	0	0	0	0	0	0	9	65	156	236	419	482	458	283	135	22	1	0	0	0	0	0	0	2268
11	0	0	0	0	0	0	0	7	47	95	118	115	73	58	34 ?	?	4	1	0	0	0	0	0	0	552 ?
12	0	0	0	0	0	0	0	4	18	41	78	93	90	78	72	35	11	1	0	0	0	0	0	0	522
13	0	0	0	0	0	0	0	0	2 ?	?	?	127	240	241	195	99	21	3	0	0	0	0	0	0	927 ?
14	0	0	0	0	0	0	0	3	12	34	44	47 ?	47 ?	97	41	22 ?	4	1	0	0	0	0	0	0	354 ?
15	0	0	0	0	0	0	0	9	48	109	386	467	486	459	290	242	63	7	0	0	0	0	0	0	2566
16	0	0	0	0	0	0	0	1	8 ?	23	58	101	71	82	73	43	23	3	0	0	0	0	0	0	488
17	0	0	0	0	0	0	0	2	16	51	138	99	50	61	50	34	16	2	0	0	0	0	0	0	519
18	0	0	0	0	0	0	0	20	62	239	281	402	264	311	129	52	25	6	0	0	0	0	0	0	1791
19	0	0	0	0	0	0	0	13	58	162	278	276	238	179	168	103	26	1	0	0	0	0	0	0	1503
20	0	0	0	0	0	0	0	11	9	51	107	315	606	392	390	195	59	5	0	0	0	0	0	0	2139
21	0	0	0	0	0	0	0	9	107	267	402	479	499	453	361	215	65	4	0	0	0	0	0	0	2860
22	0	0	0	0	0	0	0	16	56	182	402	373	244	337	128	191	65	6	0	0	0	0	0	0	2001
23	0	0	0	0	0	0	0	10	105	256	351	452	519	437	320	182	34	3	0	0	0	0	0	0	2670
24	0	0	0	0	0	0	0	1	6 ?	?	41 ?	64	81	57	?	15 ?	7	2	0	0	0	0	0	0	274 ?
25	0	0	0	0	0	0	0	4	21	83	166	151	107	123	69	57	11	1	0	0	0	0	0	0	796
26	0	0	0	0	0	0	0	1	11	36	53	124	101	120	120	136	42	6	0	0	0	0	0	0	751
27	0	0	0	0	0	0	0	7	114	334	463	524	537	470	346	195	76	8	0	0	0	0	0	0	3076
28	0	0	0	0	0	0	0	8	59	81	183	471	415	438	261	139	42	8	0	0	0	0	0	0	2103
29	0	0	0	0	0	0	0	7	90	244	374	454	483	398	314	206	73	1	0	0	0	0	0	0	2644
30	0	0	0	0	0	0	0	10	57	196	350	360	392	350	242	116	32	4	0	0	0	0	0	0	2109
31	0	0	0	0	0	0	0	6	45	236	270	439	475	280	301	170	33	0	0	0	0	0	0	0	2256
Avg	0	0	0	0	0	0	0	8	49	146	216	272	288	271	197	117	32	3	0	0	0	0	0	0	1555
S D	0	0	0	0	0	0	0	5	33	98	132	169	191	161	120	74	22	2	0	0	0	0	0	0	908
S/A	0	0	0	0	0	0	0	0.63	0.66	0.67	0.61	0.62	0.66	0.59	0.61	0.63	0.69	0.92	0	0	0	0	0	0	0.58
Min	0	0	0	0	0	0	0	0	2	23	41	47	46	57	31	15	4	0	0	0	0	0	0	0	274
Max	0	0	0	0	0	0	0	20	114	361	463	524	606	470	390	242	76	8	0	0	0	0	0	0	3076
n	0	0	0	0	0	0	0	183	346	320	341	356	356	370	342	329	368	41	0	0	0	0	0	0	3352

Daylight Data Recovery: 0.0% missing; 6.2% exceed the 15% QC threshold -- 3573 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.

December 2002

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	1	356	400	925	946	929	881	759	462	75	0	0	0	0	0	0	5734
2	0	0	0	0	0	0	0	0	0	130	123	55	188	298	0	0	0	0	0	0	0	0	0	0	794
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87	43	0	0	0	0	0	0	0	130
4	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
5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6	0	0	0	0	0	0	0	0	0	0	35	33	120	590	494 ?	?	440	56	0	0	0	0	0	0	1770 ?
7	0	0	0	0	0	0	0	44	609 ?	?	?	?	997 ?	981	943 ?	836	549	61	0	0	0	0	0	0	5020 ?
8	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
9	0	0	0	0	0	0	0	4	201 ?	493 ?	685	612	463	414	246	65	1	0	0	0	0	0	0	0	3183 ?
10	0	0	0	0	0	0	0	0	0	16	162	600	906	707	342	231	0	0	0	0	0	0	0	0	2963
11	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
13	0	0	0	0	0	0	0	0	0	0	0	1	7	13	9	0	0	0	0	0	0	0	0	0	30
14	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
15	0	0	0	0	0	0	0	0	0	1	590	880	907	824	357	629	334	39	0	0	0	0	0	0	4560
16	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18	0	0	0	0	0	0	0	0	98	572	307	452	70	307	3	0	1	35	0	0	0	0	0	0	1845
19	0	0	0	0	0	0	0	0	27	84	144	182	44	3	8	8	0	0	0	0	0	0	0	0	499
20	0	0	0	0	0	0	0	0	0	0	22	191	773	546	728	623	367	109	0	0	0	0	0	0	3359
21	0	0	0	0	0	0	0	0	581	867	957	990	994	968	930	824	530	197	0	0	0	0	0	0	7839
22	0	0	0	0	0	0	0	0	94	285	620	478	135	394	84	637	470	153	0	0	0	0	0	0	3350
23	0	0	0	0	0	0	0	0	527	790	655	721	766	795	487	376	54	0	0	0	0	0	0	0	5172
24	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
25	0	0	0	0	0	0	0	0	0	1	3	6	0	0	0	0	0	0	0	0	0	0	0	0	10
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	109	4	0	0	0	0	0	0	0	115
27	0	0	0	0	0	0	0	0	259	826	949	998	1005	986	636	406	399	154	0	0	0	0	0	0	6619
28	0	0	0	0	0	0	0	0	67	0	3	689	440	704	269	79	35	64	0	0	0	0	0	0	2351
29	0	0	0	0	0	0	0	0	461	794	884	930	931	706	573	540	427	89	0	0	0	0	0	0	6336
30	0	0	0	0	0	0	0	0	5	188	474	290	349	355	80	19	0	0	0	0	0	0	0	0	1760
31	0	0	0	0	0	0	0	1	70	649	411	817	886	195	483	142	0	0	0	0	0	0	0	0	3654
Avg	0	0	0	0	0	0	0	2	97	202	247	328	353	346	244	212	133	33	0	0	0	0	0	0	2165
S D	0	0	0	0	0	0	0	8	187	307	327	381	413	372	319	293	205	55	0	0	0	0	0	0	2426
S/A	0	0	0	0	0	0	0	4.93	1.93	1.52	1.32	1.16	1.17	1.08	1.31	1.38	1.54	1.65	0	0	0	0	0	0	1.12
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	44	609	867	957	998	1005	986	943	836	549	197	0	0	0	0	0	0	7839
n	0	0	0	0	0	0	0	184	362	351	358	359	363	371	359	359	371	41	0	0	0	0	0	0	3478

Daylight Data Recovery: 0.0% missing; 2.7% exceed the 15% QC threshold -- 3573 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.

December 2002

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	19	74	145	109	77	70	61	53	39	18	2	0	0	0	0	0	0	668
2	0	0	0	0	0	0	0	17	43	109	216	279	271	187	164	25	7	0	0	0	0	0	0	0	1317
3	0	0	0	0	0	0	0	10	49	80	81	90	76	85	97	112	29	0	0	0	0	0	0	0	710
4	0	0	0	0	0	0	0	7	47	49	79	80	79	80	64	30	7	0	0	0	0	0	0	0	523
5	0	0	0	0	0	0	0	5	43	101	84	53	49	68	32	23	9	1	0	0	0	0	0	0	470
6	0	0	0	0	0	0	0	3	32	81	127	204	227	209	71	37	11	0	0	0	0	0	0	0	1001
7	0	0	0	0	0	0	0	6	27	42	48	42	41	38	35	25	7	0	0	0	0	0	0	0	311
8	0	0	0	0	0	0	0	6	32	110	154	155	155	200	121	48	15	0	0	0	0	0	0	0	997
9	0	0	0	0	0	0	0	9	42 ?	116 ?	92	133	185	192	171	118	36	0	0	0	0	0	0	0	1094 ?
10	0	0	0	0	0	0	0	9	67	151	156	138	70	151	153	79	22	1	0	0	0	0	0	0	997
11	0	0	0	0	0	0	0	7	48	100	124	121	76	61	28	12	3	0	0	0	0	0	0	0	579
12	0	0	0	0	0	0	0	3	19	38	82	97	94	82	75	36	10	0	0	0	0	0	0	0	536
13	0	0	0	0	0	0	0	0	1 ?	?	24 ?	132	244	230	197	103	21	2	0	0	0	0	0	0	952 ?
14	0	0	0	0	0	0	0	3	12	35	46	45	40	101	42	19	4	0	0	0	0	0	0	0	346
15	0	0	0	0	0	0	0	10	50	112	147	77	73	109	167	101	32	5	0	0	0	0	0	0	883
16	0	0	0	0	0	0	0	1	9	23	61	104	74	86	76	45	24	3	0	0	0	0	0	0	506
17	0	0	0	0	0	0	0	2	16	52	144	105	50	64	52	35	16	1	0	0	0	0	0	0	538
18	0	0	0	0	0	0	0	19	42	75	171	193	232	168	133	54	25	5	0	0	0	0	0	0	1116
19	0	0	0	0	0	0	0	15	51	136	214	179	217	182	168	104	26	0	0	0	0	0	0	0	1293
20	0	0	0	0	0	0	0	11	9	53	83	222	263	154	144	64	22	4	0	0	0	0	0	0	1030
21	0	0	0	0	0	0	0	9	25	38	46	50	55	49	43	33	17	4	0	0	0	0	0	0	371
22	0	0	0	0	0	0	0	18	46	99	167	162	182	168	99	51	22	5	0	0	0	0	0	0	1018
23	0	0	0	0	0	0	0	10	32	50	99	131	170	93	133	83	23	2	0	0	0	0	0	0	826
24	0	0	0	0	0	0	0	0	6 ?	14	34	67	85	53	18 ?	15 ?	7	1	0	0	0	0	0	0	299 ?
25	0	0	0	0	0	0	0	4	21	85	171	154	112	129	72	60	10	0	0	0	0	0	0	0	818
26	0	0	0	0	0	0	0	1	11	33	56	130	106	126	125	119	40	5	0	0	0	0	0	0	751
27	0	0	0	0	0	0	0	7	48	55	58	55	54	46	97	96	27	4	0	0	0	0	0	0	546
28	0	0	0	0	0	0	0	8	43	80	184	164	203	131	146	115	36	7	0	0	0	0	0	0	1119
29	0	0	0	0	0	0	0	7	27	39	47	52	63	83	98	72	29	1	0	0	0	0	0	0	518
30	0	0	0	0	0	0	0	9	56	134	159	213	219	183	206	111	33	4	0	0	0	0	0	0	1326
31	0	0	0	0	0	0	0	6	32	59	123	76	71	184	116	128	34	0	0	0	0	0	0	0	827
Avg	0	0	0	0	0	0	0	8	34	77	109	122	126	121	103	64	20	2	0	0	0	0	0	0	783
S D	0	0	0	0	0	0	0	5	18	39	55	60	76	57	53	37	11	2	0	0	0	0	0	0	307
S/A	0	0	0	0	0	0	0	0.69	0.54	0.5	0.5	0.49	0.6	0.47	0.52	0.58	0.53	1.11	0	0	0	0	0	0	0.39
Min	0	0	0	0	0	0	0	0	1	14	24	42	40	38	18	12	3	0	0	0	0	0	0	0	299
Max	0	0	0	0	0	0	0	19	74	151	216	279	271	230	206	128	40	7	0	0	0	0	0	0	1326
n	0	0	0	0	0	0	0	169	358	349	360	371	371	370	363	366	371	41	0	0	0	0	0	0	3490

Daylight Data Recovery: 0.0% missing; 2.3% exceed the 15% QC threshold -- 3573 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.