

December 2003

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	3	71	234	369	475	530	520	448	329	170	40	0	0	0	0	0	0	0	3190
2	0	0	0	0	0	0	3	75	228	361	438	457	459	408	294	158	37	0	0	0	0	0	0	0	2919
3	0	0	0	0	0	0	3	53	90	162	133	90	52 ?	?	?	19 ?	6	0	0	0	0	0	0	0	611 ?
4	0	0	0	0	0	0	1	22	95	111	204	341	212	117	84	36	10	0	0	0	0	0	0	0	1234
5	0	0	0	0	0	0	0	13	36 ?	235 ?	347	485	488	175	132	66	23	0	0	0	0	0	0	0	2001
6	0	0	0	0	0	0	0	18	99	278	309	346	335	395	305	159	36	0	0	0	0	0	0	0	2280
7	0	0	0	0	0	0	1	86	197	372	478	527	522	448	327	168	37	0	0	0	0	0	0	0	3163
8	0	0	0	0	0	0	2	51	92	175	194	253	309	295	233	105	20	0	0	0	0	0	0	0	1729
9	0	0	0	0	0	0	2	28	151	222	308	325	314	385	233	111	23	0	0	0	0	0	0	0	2102
10	0	0	0	0	0	0	0	7	22 ?	40	58	64	116	128	103	114	34	0	0	0	0	0	0	0	685
11	0	0	0	0	0	0	0	47	208	371	481	539	514	406	239	156	40	0	0	0	0	0	0	0	3001
12	0	0	0	0	0	0	0	28	104	168	263	185	278	176	122	49	11	0	0	0	0	0	0	0	1382
13	0	0	0	0	0	0	0	2	34 ?	80	94	55 ?	?	37 ?	36	28	6	0	0	0	0	0	0	0	372 ?
14	0	0	0	0	0	0	0	6	42	108	196	224	302	476	322	162	35	0	0	0	0	0	0	0	1873
15	0	0	0	0	0	0	0	45	197	358	472	532	525	421	342	162	44	0	0	0	0	0	0	0	3097
16	0	0	0	0	0	0	0	3	51	121	123	127	223	99	38	33	3	0	0	0	0	0	0	0	821
17	0	0	0	0	0	0	0	40	197	342	446	513	523	453	339	178	50	0	0	0	0	0	0	0	3081
18	0	0	0	0	0	0	0	42	190	337	443	509	519	453	337	177	44	0	0	0	0	0	0	0	3049
19	0	0	0	0	0	0	0	39	194	342	451	520	529	461	345	181	44	0	0	0	0	0	0	0	3106
20	0	0	0	0	0	0	0	37	188	332	436	501	503	445	334	173	36	0	0	0	0	0	0	0	2985
21	0	0	0	0	0	0	0	37	189	331	442	513	525	455	342	182	40	0	0	0	0	0	0	0	3056
22	0	0	0	0	0	0	0	27	105	188	341	497	488	444	285	122	17	0	0	0	0	0	0	0	2514
23	0	0	0	0	0	0	0	6	34 ?	61	71 ?	78 ?	80 ?	47 ?	50 ?	38	7	0	0	0	0	0	0	0	473 ?
24	0	0	0	0	0	0	0	38	190	296	255	237	239	302	251	183	45	0	0	0	0	0	0	0	2036
25	0	0	0	0	0	0	0	42	203	181	352	545	465	417	236	126	21	0	0	0	0	0	0	0	2589
26	0	0	0	0	0	0	0	27	157	328	439	508	512	442	334	176	38	0	0	0	0	0	0	0	2961
27	0	0	0	0	0	0	0	35	175	331	446	513	515	448	339	183	45	0	0	0	0	0	0	0	3030
28	0	0	0	0	0	0	0	17	117	237	340	314	334	259	188	105	42	0	0	0	0	0	0	0	1953
29	0	0	0	0	0	0	0	0	?	?	44 ?	65	?	91	106	127	49	0	0	0	0	0	0	0	483 ?
30	0	0	0	0	0	0	0	41	187	341	459	529	536	466	353	192	42	0	0	0	0	0	0	0	3146
31	0	0	0	0	0	0	0	35	181	346	462	525	526	437	335	182	46	0	0	0	0	0	0	0	3075
Avg	0	0	0	0	0	0	0	33	140	251	323	369	395	335	244	130	31	0	0	0	0	0	0	0	2193
S D	0	0	0	0	0	0	1	21	67	107	147	179	153	149	108	56	15	0	0	0	0	0	0	0	979
S/A	0	0	0	0	0	0	2.05	0.65	0.48	0.43	0.45	0.49	0.39	0.45	0.44	0.44	0.47	0	0	0	0	0	0	0	0.45
Min	0	0	0	0	0	0	0	0	22	40	44	55	52	37	36	19	3	0	0	0	0	0	0	0	372
Max	0	0	0	0	0	0	3	86	234	372	481	545	536	476	353	192	50	0	0	0	0	0	0	0	3190
n	0	0	0	0	0	0	25	365	333	357	359	362	338	344	353	359	325	0	0	0	0	0	0	0	3523

Daylight Data Recovery: 0.0% missing; 4.6% exceed the 15% QC threshold -- 3692 total daylight measurements.

Instrument: Eppley PSP Serial Number: 18036F3 Calibration Factor: 7.430 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 2003

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	777 ?	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
2	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
3	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
4	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	*	
6	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
7	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
8	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
9	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	829 ?	0	0	0	0	0	0	0	*	
10	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
11	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
12	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
13	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	?	0	0	0	0	0	0	0	*	
14	0	0	0	0	0	0	*	*	*	*	*	*	*	72 ?	?	?	?	0	0	0	0	0	0	0	*	
15	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
16	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
17	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
18	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
19	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
20	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
21	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
22	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
23	0	0	0	0	0	0	0	*	?	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
24	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
25	0	0	0	0	0	0	0	?	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
26	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
27	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
28	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
29	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
30	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
31	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	0	*	
Avg	0	0	0	0	0	0	46	N/A	N/A	N/A	N/A	N/A	N/A	72	N/A	N/A	829	0	0	0	0	0	0	0	N/A	*
SD	0	0	0	0	0	0	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/A	0	0	0	0	0	0	4.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	72	N/A	N/A	829	0	0	0	0	0	0	0	N/A	
Max	0	0	0	0	0	0	777	N/A	N/A	N/A	N/A	N/A	N/A	72	N/A	N/A	829	0	0	0	0	0	0	0	N/A	
n	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0

Daylight Data Recovery: 95.8% missing; 3.8% exceed the 15% QC threshold -- 3692 total daylight measurements.

Instrument: Eppley NIP Serial Number: 25796E6 Calibration Factor: 8.670 $\mu\text{V}/\text{W}/\text{m}^2$ 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 2003

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	3	68	201 ?	?	?	?	?	?	153 ?	43	0	0	0	0	0	0	0	0	468 ?
2	0	0	0	0	0	0	3	79	173 ?	363 ?	430 ?	466	462 ?	408 ?	297 ?	162	38	0	0	0	0	0	0	0	2881 ?
3	0	0	0	0	0	0	3	52	88	156	129	86	42	29	19 ?	15 ?	6	0	0	0	0	0	0	0	624
4	0	0	0	0	0	0	1	21	91	106	199	327	211	112	80	34	9	0	0	0	0	0	0	0	1193
5	0	0	0	0	0	0	0	11	37	191	324	303 ?	320 ?	168	126	63	22	0	0	0	0	0	0	0	1566 ?
6	0	0	0	0	0	0	0	17	94	282	295	302	293	345 ?	256 ?	142 ?	38	0	0	0	0	0	0	0	2062 ?
7	0	0	0	0	0	0	1	18 ?	178 ?	?	?	?	?	?	?	150 ?	40	0	0	0	0	0	0	0	387 ?
8	0	0	0	0	0	0	1	53	82	167	186	242	303	290	224 ?	110	20	0	0	0	0	0	0	0	1676
9	0	0	0	0	0	0	2	26	146	177 ?	281	291	296	365 ?	214	108	21	0	0	0	0	0	0	0	1928 ?
10	0	0	0	0	0	0	0	6	17	38	55	60	111	122	98	111	33	0	0	0	0	0	0	0	652
11	0	0	0	0	0	0	0	53	170 ?	?	?	?	453 ?	370 ?	246	149	42	0	0	0	0	0	0	0	1483 ?
12	0	0	0	0	0	0	0	26	98	160	259	173	265	168	116	46	10	0	0	0	0	0	0	0	1321
13	0	0	0	0	0	0	0	2	22	76	89	45	30 ?	33	33	25	6	0	0	0	0	0	0	0	361
14	0	0	0	0	0	0	0	6	40	102	186	213	271	?	?	162	38	0	0	0	0	0	0	0	1018 ?
15	0	0	0	0	0	0	0	47	177 ?	?	?	?	?	323 ?	?	167	46	0	0	0	0	0	0	0	761 ?
16	0	0	0	0	0	0	0	3	45	115	117	121	217	94	36	31	3	0	0	0	0	0	0	0	783
17	0	0	0	0	0	0	0	45	163 ?	?	?	?	?	?	?	145 ?	47	0	0	0	0	0	0	0	399 ?
18	0	0	0	0	0	0	0	46	162 ?	?	?	?	?	?	?	153 ?	48	0	0	0	0	0	0	0	410 ?
19	0	0	0	0	0	0	0	42	161 ?	?	?	?	?	?	?	149 ?	50	0	0	0	0	0	0	0	402 ?
20	0	0	0	0	0	0	0	40	169 ?	?	?	?	?	?	?	157 ?	40	0	0	0	0	0	0	0	407 ?
21	0	0	0	0	0	0	0	40	162 ?	?	?	?	?	?	?	152 ?	44	0	0	0	0	0	0	0	398 ?
22	0	0	0	0	0	0	0	29	102	183	287 ?	?	440 ?	385 ?	234 ?	76 ?	17	0	0	0	0	0	0	0	1752 ?
23	0	0	0	0	0	0	0	6	29	58	61	70 ?	71 ?	34	36	33	6	0	0	0	0	0	0	0	404
24	0	0	0	0	0	0	0	39	172	252 ?	246	225	226	253	238	141 ?	50	0	0	0	0	0	0	0	1841 ?
25	0	0	0	0	0	0	0	37	183 ?	182	216 ?	?	429 ?	358 ?	244	125	22	0	0	0	0	0	0	0	1797 ?
26	0	0	0	0	0	0	0	28	150	?	?	?	?	?	?	162 ?	43	0	0	0	0	0	0	0	382 ?
27	0	0	0	0	0	0	0	38	166	?	?	?	?	?	?	161 ?	49	0	0	0	0	0	0	0	414 ?
28	0	0	0	0	0	0	0	17	117	219	311	240 ?	334	262	157	102	42	0	0	0	0	0	0	0	1800
29	0	0	0	0	0	0	0	0	11 ?	21 ?	39 ?	59	33	83	101	113	44	0	0	0	0	0	0	0	503 ?
30	0	0	0	0	0	0	0	49	135 ?	?	?	?	?	?	?	156 ?	49	0	0	0	0	0	0	0	389 ?
31	0	0	0	0	0	0	0	40	166 ?	?	?	?	?	391 ?	320 ?	171	49	0	0	0	0	0	0	0	1137 ?
Avg	0	0	0	0	0	0	0	32	120	158	206	202	253	230	162	117	33	0	0	0	0	0	0	0	1019 ?
S D	0	0	0	0	0	0	1	20	59	87	108	121	143	136	97	50	16	0	0	0	0	0	0	0	687
S/A	0	0	0	0	0	0	2.06	0.63	0.5	0.55	0.53	0.6	0.56	0.59	0.6	0.43	0.49	0	0	0	0	0	0	0	0.67
Min	0	0	0	0	0	0	0	0	11	21	39	45	30	29	19	15	3	0	0	0	0	0	0	0	361
Max	0	0	0	0	0	0	3	79	201	363	430	466	462	408	320	171	50	0	0	0	0	0	0	0	2881
n	0	0	0	0	0	0	25	356	290	192	185	172	174	175	187	296	322	0	0	0	0	0	0	0	2378

Daylight Data Recovery: 0.0% missing; 35.6% exceed the 15% QC threshold -- 3692 total daylight measurements.

Instrument: Eppley PSP Serial Number: 18039F3 Calibration Factor: 7.470 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.