

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	13	28	69	79	77 ?	110	98	175	87	12	0	0	0	0	0	0	0	749
2	0	0	0	0	0	0	0	6	60	127	261	363	207	145	171	123	20	0	0	0	0	0	0	0	1482
3	0	0	0	0	0	0	0	4	37	89	111 ?	93	130	152	183	106	33	0	0	0	0	0	0	0	937
4	0	0	0	0	0	0	0	17	140	237 ?	304	415	234	108	81	49	19	0	0	0	0	0	0	0	1605
5	0	0	0	0	0	0	0	2	29 ?	57	71	74	87	80	65	36	10	0	0	0	0	0	0	0	511
6	0	0	0	0	0	0	0	16	77	202	282	480	571	494	382	221	63	5	0	0	0	0	0	0	2792
7	0	0	0	0	0	0	0	36	179	345	477	536	546	483	369	211	43	0	0	0	0	0	0	0	3225
8	0	0	0	0	0	0	0	2	29	41	58	51	43 ?	39 ?	?	18 ?	7	0	0	0	0	0	0	0	288 ?
9	0	0	0	0	0	0	0	9	59	146	342	340	430	362	328	48	8	0	0	0	0	0	0	0	2072
10	0	0	0	0	0	0	0	31	163	322	416	502	537	464	378	220	64	5	0	0	0	0	0	0	3103
11	0	0	0	0	0	0	0	51	207	346	466	541	556	494	384	227	66	6	0	0	0	0	0	0	3344
12	0	0	0	0	0	0	0	36	205	348	464	527	556	493	383	176	40	3	0	0	0	0	0	0	3230
13	0	0	0	0	0	0	0	14	68	190	434	418	292	237	225	208	41	2	0	0	0	0	0	0	2128
14	0	0	0	0	0	0	0	10	82	307	262	280	307	?	?	161 ?	69	7	0	0	0	0	0	0	1485 ?
15	0	0	0	0	0	0	0	36	182	355	337	491	540	494	389	220	70	8	0	0	0	0	0	0	3121
16	0	0	0	0	0	0	0	38	152	283	496	499	470	497	373	147	69	2	0	0	0	0	0	0	3026
17	0	0	0	0	0	0	0	3	23 ?	59	147 ?	109	56	58 ?	40 ?	48 ?	18	1	0	0	0	0	0	0	562 ?
18	0	0	0	0	0	0	0	8	41	44	82	142	166	188	127	61	26	5	0	0	0	0	0	0	893
19	0	0	0	0	0	0	0	12	64	150	414 ?	351 ?	490	502	421	257	89	12	0	0	0	0	0	0	2763
20	0	0	0	0	0	0	0	40	190	361	489	565	575	480	359	217	81	12	0	0	0	0	0	0	3369
21	0	0	0	0	0	0	0	40	186	353	491	567	533	514	415	256	87	8	0	0	0	0	0	0	3449
22	0	0	0	0	0	0	0	32	147	209	474	535	484	486	420	240	74	5	0	0	0	0	0	0	3106
23	0	0	0	0	0	0	0	37	186	359	491	569	585	532	424	260	93	12	0	0	0	0	0	0	3548
24	0	0	0	0	0	0	0	15	68	51 ?	63 ?	54 ?	60	49 ?	?	23 ?	12 ?	3	0	0	0	0	0	0	398 ?
25	0	0	0	0	0	0	0	14	91	136	335	396	496	491	403	268	101	16	0	0	0	0	0	0	2747
26	0	0	0	0	0	0	0	38	204	225	400	476	473	372	350	280	95	18	0	0	0	0	0	0	2931
27	0	0	0	0	0	0	0	19	173	354	508	593	586	564	421	247	123	17	0	0	0	0	0	0	3604
28	0	0	0	0	0	0	0	46	210	390	523	612	629	572	461	294	110	14	0	0	0	0	0	0	3860
29	0	0	0	0	0	0	0	33	181	304	478	530	590	325	179	41	23	2	0	0	0	0	0	0	2686
30	0	0	0	0	0	0	0	13	96	229	440	515	392	489	459	294	115	22	0	0	0	0	0	0	3064
31	0	0	0	0	0	0	0	49	214	398	532	616	627	577	465	301	119	21	0	0	0	0	0	0	3920
Avg	0	0	0	0	0	0	0	23	122	228	346	397	399	361	315	172	58	7	0	0	0	0	0	0	2387
S D	0	0	0	0	0	0	0	15	68	121	161	189	199	188	132	95	37	7	0	0	0	0	0	0	1150
S/A	0	0	0	0	0	0	0	0.66	0.56	0.53	0.47	0.48	0.5	0.52	0.42	0.55	0.64	1.04	0	0	0	0	0	0	0.48
Min	0	0	0	0	0	0	0	2	23	41	58	51	43	39	40	18	7	0	0	0	0	0	0	0	288
Max	0	0	0	0	0	0	0	51	214	398	532	616	629	577	465	301	123	22	0	0	0	0	0	0	3920
n	0	0	0	0	0	0	1	351	355	361	351	358	360	340	330	340	366	81	0	0	0	0	0	0	3595

Daylight Data Recovery: 0.0% missing; 4.9% exceed the 15% QC threshold -- 3781 total daylight measurements.

Instrument: Eppley PSP Serial Number: 18036F3 Calibration Factor: 7.430 $\mu\text{V}/\text{W}/\text{m}^2$ 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.

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	0	0	0	0	0	0	*	
2	0	0	0	0	0	0	0	*	*	*	*	?	*	*	*	*	*	0	0	0	0	0	0	0	*	
3	0	0	0	0	0	0	0	?	?	?	?	?	?	163 ?	*	*	*	0	0	0	0	0	0	0	?	
4	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	*	
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	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	0	*	*	*	*	?	?	?	?	?	776 ?	429	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	*	
17	0	0	0	0	0	0	0	521 *?	?	?	?	*	*	?	*	*	*	*	0	0	0	0	0	0	*	
18	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	*	
20	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	*	
22	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	*	
24	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	*	
26	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	*	
28	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	*	
30	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	*	
Avg	0	0	0	0	0	0	0	521	N/A	N/A	N/A	N/A	N/A	163	N/A	N/A	776	86	0	0	0	0	0	0	N/A	*
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192	0	0	0	0	0	0	0	
S/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.24	0	0	0	0	0	0	0	
Min	0	0	0	0	0	0	0	521	N/A	N/A	N/A	N/A	N/A	163	N/A	N/A	776	0	0	0	0	0	0	0	N/A	
Max	0	0	0	0	0	0	0	521	N/A	N/A	N/A	N/A	N/A	163	N/A	N/A	776	429	0	0	0	0	0	0	N/A	
n	0	0	0	0	0	0	0	3	0	0	0	0	0	2	0	0	3	2	0	0	0	0	0	0	0	

Daylight Data Recovery: 90.9% missing; 8.6% exceed the 15% QC threshold -- 3781 total daylight measurements.

Instrument: Eppley NIP Serial Number: 25796E6 Calibration Factor: 8.670 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	11	26	66	75	61	105	93	167	84	10	0	0	0	0	0	0	0	698
2	0	0	0	0	0	0	0	6	57	121	263	369	200	140	168	122	19	0	0	0	0	0	0	0	1466
3	0	0	0	0	0	0	0	4	37	82	110	89	125	150	178	102	32	0	0	0	0	0	0	0	909
4	0	0	0	0	0	0	0	16	139	237	313	369 ?	233	104	78	47	19	0	0	0	0	0	0	0	1554
5	0	0	0	0	0	0	0	2	18	54	67	71	82	76	61	34	9	0	0	0	0	0	0	0	474
6	0	0	0	0	0	0	0	15	73	193	257	445 ?	?	?	?	192 ?	68	6	0	0	0	0	0	0	1248 ?
7	0	0	0	0	0	0	0	41	187	?	?	?	?	?	?	208 ?	46	1	0	0	0	0	0	0	483 ?
8	0	0	0	0	0	0	0	2	26	38	54	47	37	33	23	15 ?	7	0	0	0	0	0	0	0	283
9	0	0	0	0	0	0	0	9	56	140	318	323	397 ?	321 ?	254 ?	46	8	0	0	0	0	0	0	0	1874 ?
10	0	0	0	0	0	0	0	32	167	316 ?	354 ?	426 ?	?	478 ?	?	215 ?	69	6	0	0	0	0	0	0	2064 ?
11	0	0	0	0	0	0	0	58	?	?	?	?	?	?	?	199 ?	71	8	0	0	0	0	0	0	335 ?
12	0	0	0	0	0	0	0	37	179 ?	?	?	?	?	?	336 ?	181	38	2	0	0	0	0	0	0	773 ?
13	0	0	0	0	0	0	0	13	65	171	364 ?	394	283	228	219	186 ?	42	1	0	0	0	0	0	0	1966 ?
14	0	0	0	0	0	0	0	9	79	262	267	273	287	199	198	112	70	6	0	0	0	0	0	0	1763
15	0	0	0	0	0	0	0	36	163 ?	248 ?	306 ?	459 ?	516 ?	?	345 ?	223 ?	75	8	0	0	0	0	0	0	2379 ?
16	0	0	0	0	0	0	0	38	150	227 ?	?	343 ?	385 ?	?	335 ?	156	67	2	0	0	0	0	0	0	1705 ?
17	0	0	0	0	0	0	0	3	20	59	154	92	51	41	32	39 ?	17	0	0	0	0	0	0	0	510
18	0	0	0	0	0	0	0	9	40	43	80	138	161	180	122	59	25	5	0	0	0	0	0	0	861
19	0	0	0	0	0	0	0	11	61	144	279 ?	292	400 ?	459 ?	408 ?	218 ?	97	15	0	0	0	0	0	0	2382 ?
20	0	0	0	0	0	0	0	43	193	?	?	?	?	486 ?	385	225	82	11	0	0	0	0	0	0	1426 ?
21	0	0	0	0	0	0	0	48	198	?	?	?	528 ?	?	?	235 ?	95	10	0	0	0	0	0	0	1114 ?
22	0	0	0	0	0	0	0	33	154	221	?	?	500 ?	442 ?	?	226 ?	80	5	0	0	0	0	0	0	1661 ?
23	0	0	0	0	0	0	0	38	195	?	?	?	?	?	?	240 ?	102	14	0	0	0	0	0	0	590 ?
24	0	0	0	0	0	0	0	16	66	43	44	49	55	42	29 ?	20 ?	13	3	0	0	0	0	0	0	379 ?
25	0	0	0	0	0	0	0	15	88	132	269 ?	317 ?	409 ?	417 ?	385 ?	236 ?	113	20	0	0	0	0	0	0	2400 ?
26	0	0	0	0	0	0	0	41	191 ?	224	383 ?	465 ?	459 ?	320 ?	291 ?	242 ?	104	21	0	0	0	0	0	0	2740 ?
27	0	0	0	0	0	0	0	18	155	289 ?	469 ?	?	?	?	350 ?	227 ?	112	20	0	0	0	0	0	0	1641 ?
28	0	0	0	0	0	0	0	50	185 ?	?	?	?	?	?	?	?	124	18	0	0	0	0	0	0	377 ?
29	0	0	0	0	0	0	0	35	193	274 ?	485 ?	481 ?	?	268	178	40	22	1	0	0	0	0	0	0	1977 ?
30	0	0	0	0	0	0	0	12	92	222	330 ?	404 ?	374	405 ?	?	243 ?	128	26	0	0	0	0	0	0	2235 ?
31	0	0	0	0	0	0	0	54	199 ?	?	?	?	?	?	?	?	135	26	0	0	0	0	0	0	413 ?
Avg	0	0	0	0	0	0	0	24	115	165	250	281	279	244	216	151	61	8	0	0	0	0	0	0	1312 ?
S D	0	0	0	0	0	0	0	17	66	90	135	158	169	161	128	83	41	8	0	0	0	0	0	0	753
S/A	0	0	0	0	0	0	0	0.71	0.58	0.54	0.54	0.56	0.6	0.66	0.59	0.55	0.67	1.08	0	0	0	0	0	0	0.57
Min	0	0	0	0	0	0	0	2	18	38	44	47	37	33	23	15	7	0	0	0	0	0	0	0	283
Max	0	0	0	0	0	0	0	58	199	316	485	481	528	486	408	243	135	26	0	0	0	0	0	0	2740
n	0	0	0	0	0	0	1	350	334	248	187	190	184	173	175	256	370	80	0	0	0	0	0	0	2563

Daylight Data Recovery: 0.0% missing; 32.2% exceed the 15% QC threshold -- 3781 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.