

**October 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	1	47	122	405	463	604	668	610	497	579	422	141	31	0	0	0	0	0	0	4589
2	0	0	0	0	0	1	48	212	414	582	700	758	446	588	422	223	77	21	0	0	0	0	0	0	4491
3	0	0	0	0	0	1	13	37	95	79	138	151	130	128	86 ?	35 ?	11 ?	9	0	0	0	0	0	0	912 ?
4	0	0	0	0	0	0	21	80	314	501	459	737	733	654	534	308 ?	140 ?	32	0	0	0	0	0	0	4515
5	0	0	0	0	0	0	46	213	410	581	667	744	723	648	521	341	144	30	0	0	0	0	0	0	5068
6	0	0	0	0	0	0	43	202	421 ?	563	674	739	727	648	510	285	131	21	0	0	0	0	0	0	4963
7	0	0	0	0	0	0	25	86	203	310	179	270	232	241 ?	511	352	142	17	0	0	0	0	0	0	2569
8	0	0	0	0	0	0	43	135	218	339	528	548	685	669	477	316	90	14	0	0	0	0	0	0	4062
9	0	0	0	0	0	0	8	?	?	54 ?	83	159	298	143	111	85	34	7	0	0	0	0	0	0	982 ?
10	0	0	0	0	0	0	7	51	70	167	288	153	118	229	140	226	112	33	0	0	0	0	0	0	1592
11	0	0	0	0	0	0	8	55	135	219	236	322	300	295	201	152	44	7	0	0	0	0	0	0	1974
12	0	0	0	0	0	0	35	202	396	545	681	691	538	680	441	288	124	6	0	0	0	0	0	0	4626
13	0	0	0	0	0	0	10	69	90	118	175	242	403	369	256	216	109	19	0	0	0	0	0	0	2077
14	0	0	0	0	0	0	34	204	411	489	501	358	519	318	266	138	74	19	0	0	0	0	0	0	3332
15	0	0	0	0	0	0	16	116	283	398	353	288	616	633	530	291	138	25	0	0	0	0	0	0	3687
16	0	0	0	0	0	0	38	195	393	562	683	736	718	640	497	306	110	11	0	0	0	0	0	0	4889
17	0	0	0	0	0	0	36	161	377	540	658	711	682	620	474	285	100	10	0	0	0	0	0	0	4656
18	0	0	0	0	0	0	34	184	372	522	645	684	658	586	443	278	98	6	0	0	0	0	0	0	4510
19	0	0	0	0	0	0	12	26 ?	60	113	290	216	360	177 ?	52 ?	46	16	1	0	0	0	0	0	0	1369 ?
20	0	0	0	0	0	0	2	22 ?	?	?	72	81	83 ?	70 ?	81	44	35	2	0	0	0	0	0	0	494 ?
21	0	0	0	0	0	0	11	62	144	249 ?	510	529	538	343	235	185	51	6	0	0	0	0	0	0	2864
22	0	0	0	0	0	0	34	160	328	364	465	664	654	514	324	159	50	6	0	0	0	0	0	0	3723
23	0	0	0	0	0	0	13	81	168	211	339	334	262	217	197	148	53	11	0	0	0	0	0	0	2033
24	0	0	0	0	0	0	15	85	202	195	194	183	257	175	89	37	10	1	0	0	0	0	0	0	1444
25	0	0	0	0	0	0	4	30 ?	72	115	132	202	162	110	97	39	17	1	0	0	0	0	0	0	981
26	0	0	0	0	0	0	5	25	57	136	193	171	156	146	155	95	43	9	0	0	0	0	0	0	1189
27	0	0	0	0	0	0	4	30	72	133	133	127	138	67	89	76	24	4	0	0	0	0	0	0	898
28	0	0	0	0	0	0	10	36	68	121	180	119 ?	233	177	81	24 ?	6 ?	1	0	0	0	0	0	0	1055
29	0	0	0	0	0	0	5	31	210	454	508	261	137	233	210	195	87	3	0	0	0	0	0	0	2335
30	0	0	0	0	0	0	24	136	238 ?	222	211	323	448	440	385	235	66	5	0	0	0	0	0	0	2733
31	0	0	0	0	0	0	7	51	144	226	303	306	419	416	213	84	27	4	0	0	0	0	0	0	2200
Avg	0	0	0	0	0	0	21	103	234	319	380	402	419	376	297	191	74	12	0	0	0	0	0	0	2800
S D	0	0	0	0	0	0	15	68	135	181	213	241	222	214	177	114	46	10	0	0	0	0	0	0	1516
S/A	0	0	0	0	0	3.2	0.73	0.66	0.58	0.57	0.56	0.6	0.53	0.57	0.6	0.6	0.62	0.84	0	0	0	0	0	0	0.54
Min	0	0	0	0	0	0	2	22	57	54	72	81	83	67	52	24	6	1	0	0	0	0	0	0	494
Max	0	0	0	0	0	1	48	213	421	582	700	758	733	680	579	422	144	33	0	0	0	0	0	0	5068
n	0	0	0	0	0	5	331	343	339	343	369	363	364	356	355	350	354	144	0	0	0	0	0	0	4017

Daylight Data Recovery: 0.0% missing; 4.4% exceed the 15% QC threshold -- 4201 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 18036F3    Calibration Factor: 7.430 μV/W/m<sup>2</sup>    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.

October 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	*	*	*	*	*	*	*	173 ?	?	?	*	*	?	0	0	0	0	0	0	*
2	0	0	0	0	0	*	*	*	*	*	*	?	*	*	*	*	?	?	0	0	0	0	0	0	*
3	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
4	0	0	0	0	0	?	518 **	*	*	*	*	*	*	761 *	168 **	?	245 ?	241	0	0	0	0	0	0	1933 **?
5	0	0	0	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
6	0	0	0	0	0	0	537 ?	?	732 ?	557	231 ?	?	?	*	*	*	*	*	0	0	0	0	0	0	2057 **?
7	0	0	0	0	0	0	*	*	?	*	*	?	?	?	?	*	*	*	0	0	0	0	0	0	*
8	0	0	0	0	0	0	293	?	?	?	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
9	0	0	0	0	0	0	598	403 *	*	*	*	*	*	*	*	*	*	588 *	0	0	0	0	0	0	1589 *
10	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	*
12	0	0	0	0	0	0	*	*	*	381 *	*	*	*	*	*	880 ?	419 ?	?	619 *	0	0	0	0	0	*
13	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
14	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
15	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	*
17	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	*
19	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	*
21	0	0	0	0	0	0	*	*	*	?	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
22	0	0	0	0	0	0	*	*	*	*	*	?	678 ?	?	*	*	*	?	0	0	0	0	0	0	*
23	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	*
25	0	0	0	0	0	0	104 *	*	*	*	*	*	*	*	*	?	?	*	0	0	0	0	0	0	*
26	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	*
28	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	?	0	0	0	0	0	0	*
29	0	0	0	0	0	0	518 **	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
30	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	*
Avg	0	0	0	0	0	0	428	403	732	469	231	N/A	425	761	524	419	245	482	0	0	0	0	0	0	N/A **?
SD	0	0	0	0	0	0	190	0	0	125	0	0	357	0	504	0	0	210	0	0	0	0	0	0	0
StA	0	0	0	0	0	0	0.44	0	0	0.27	0	0	0.84	0	0.96	0	0	0.43	0	0	0	0	0	0	0
Min	0	0	0	0	0	0	104	403	732	381	231	N/A	173	761	168	419	245	241	0	0	0	0	0	0	N/A
Max	0	0	0	0	0	0	598	403	732	557	231	N/A	678	761	880	419	245	619	0	0	0	0	0	0	N/A
n	0	0	0	0	0	0	32	3	9	14	8	0	7	2	6	4	4	10	0	0	0	0	0	0	0

Daylight Data Recovery: 85.3% missing; 12.0% exceed the 15% QC threshold -- 4201 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.

**October 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	1	48	126	313 ?	443 ?	529 ?	559 ?	531 ?	462 ?	?	?	115 ?	34	0	0	0	0	0	0	3161 ?
2	0	0	0	0	0	1	50	214 ?	?	?	?	?	410 ?	278 ?	408 ?	192	81	22	0	0	0	0	0	0	1655 ?
3	0	0	0	0	0	?	13	38	97	81	141	156	134	132	64	28	14 ?	9	0	0	0	0	0	0	909
4	0	0	0	0	0	0	22	83	268 ?	447 ?	431	?	?	?	?	294 ?	138 ?	35	0	0	0	0	0	0	1717 ?
5	0	0	0	0	0	0	49	191 ?	?	?	?	?	?	?	?	?	153	36	0	0	0	0	0	0	428 ?
6	0	0	0	0	0	0	45	194 ?	?	?	?	?	?	?	?	192 ?	153	24	0	0	0	0	0	0	608 ?
7	0	0	0	0	0	0	26	88	206	316	183	276	237	272 ?	432 ?	?	150	20	0	0	0	0	0	0	2206 ?
8	0	0	0	0	0	0	44	133	218	345	476 ?	571	609 ?	?	290 ?	371 ?	98	15	0	0	0	0	0	0	3170 ?
9	0	0	0	0	0	0	9	?	?	41 ?	80	162	303	146	115	88	34	7	0	0	0	0	0	0	985 ?
10	0	0	0	0	0	0	9	52	72	169	292	150	120	235	143	223	90	36 ?	0	0	0	0	0	0	1592
11	0	0	0	0	0	0	9	56	137	223	241	327	305	300	204	154	45	8	0	0	0	0	0	0	2009
12	0	0	0	0	0	0	43	167	267 ?	453 ?	?	473 ?	331 ?	?	181 ?	252 ?	138	8	0	0	0	0	0	0	2314 ?
13	0	0	0	0	0	0	10	70	91	120	178	245	413	359	258	231	120	21	0	0	0	0	0	0	2114
14	0	0	0	0	0	0	36	174 ?	?	483 ?	472 ?	363	448 ?	327	249	140	77	20	0	0	0	0	0	0	2789 ?
15	0	0	0	0	0	0	16	118	257	413	366	291	406 ?	?	?	274 ?	103 ?	30	0	0	0	0	0	0	2275 ?
16	0	0	0	0	0	0	41	170 ?	?	?	?	?	?	?	?	?	122	16	0	0	0	0	0	0	348 ?
17	0	0	0	0	0	0	40	173	320 ?	?	?	?	?	?	?	?	231 ?	116	13	0	0	0	0	0	893 ?
18	0	0	0	0	0	0	37	158 ?	?	?	?	?	?	?	410 ?	289 ?	112	6	0	0	0	0	0	0	1013 ?
19	0	0	0	0	0	0	12	21	60	113	268	218	361	161 ?	39 ?	42	16	1	0	0	0	0	0	0	1311
20	0	0	0	0	0	0	2	19	22 ?	34 ?	73	79	73	63	81	44	36	2	0	0	0	0	0	0	529 ?
21	0	0	0	0	0	0	11	62	145	243 ?	387 ?	509 ?	439 ?	304	215	173	51	7	0	0	0	0	0	0	2546 ?
22	0	0	0	0	0	0	31	180 ?	317 ?	365	379 ?	?	?	452 ?	330	137	51	6	0	0	0	0	0	0	2248 ?
23	0	0	0	0	0	0	13	81	167	210	339	333	263	217	197	150	54	11	0	0	0	0	0	0	2036
24	0	0	0	0	0	0	17	85	203	198	195	183	257	176	89	37	10	1	0	0	0	0	0	0	1451
25	0	0	0	0	0	0	4	27	67	114	133	203	163	110	97	39	17	1	0	0	0	0	0	0	974
26	0	0	0	0	0	0	5	25	57	136	192	176	155	144	153	93	41	7	0	0	0	0	0	0	1184
27	0	0	0	0	0	0	4	28	67	131	133	126	137	71	93	90	34	13	0	0	0	0	0	0	928
28	0	0	0	0	0	0	12	36	68	121	179	100	233	176	81	24	9	1	0	0	0	0	0	0	1040
29	0	0	0	0	0	0	7	30	221	408 ?	427 ?	267	138	236	215	174 ?	71 ?	4	0	0	0	0	0	0	2195 ?
30	0	0	0	0	0	0	27	109 ?	245 ?	226	210	321	436	448	364 ?	191 ?	76	7	0	0	0	0	0	0	2659 ?
31	0	0	0	0	0	0	7	51	142	225	303	274	369	322 ?	213	83	27	4	0	0	0	0	0	0	2019
Avg	0	0	0	0	0	0	22	99	168	242	275	277	303	245	205	157	76	14	0	0	0	0	0	0	1655 ?
S D	0	0	0	0	0	0	16	63	95	141	134	141	143	119	118	95	47	11	0	0	0	0	0	0	803
S/A	0	0	0	0	0	3.88	0.73	0.63	0.56	0.58	0.49	0.51	0.47	0.48	0.57	0.6	0.62	0.82	0	0	0	0	0	0	0.49
Min	0	0	0	0	0	0	2	19	22	34	73	79	73	63	39	24	9	1	0	0	0	0	0	0	348
Max	0	0	0	0	0	1	50	214	320	483	529	571	609	462	432	371	153	36	0	0	0	0	0	0	3170
n	0	0	0	0	0	4	325	320	238	247	253	251	242	228	232	245	343	142	0	0	0	0	0	0	3073

Daylight Data Recovery: 0.0% missing; 26.9% exceed the 15% QC threshold -- 4201 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 18039F3    Calibration Factor: 7.470 μV/W/m<sup>2</sup>    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.