

**June 2010**

**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	27	131	192	403 ?	474	570	437	753	420 ?	375	663	360	278	90	16	0	0	0	0	5188
2	0	0	0	0	0	51	170	358	539	708	782	740	825	596	655	561	482	319	99	28	0	0	0	0	6912
3	0	0	0	0	0	34	168	293	270	509	656	634	747	912	819	647	390	151	50	6	0	0	0	0	6286
4	0	0	0	0	0	31	180	159	433 ?	651	812	881	649	570	534 ?	?	?	37	36	10	0	0	0	0	4982 ?
5	0	0	0	0	0	27	175	329	487	524	602	642	479	731	516	485	448	307	112	6	0	0	0	0	5870
6	0	0	0	0	0	17	97	116	104	329	584	501	266	119	119 ?	112 ?	163	215	41	21	0	0	0	0	2805
7	0	0	0	0	0	21	103	207	441	487	686	810	728	633	606	563	441	325	100	20	0	0	0	0	6171
8	0	0	0	0	0	38	232 ?	327	546	729	849	885	982	927	855	717	482	286	117	9	0	0	0	0	7983
9	0	0	0	0	0	14	72	307	247	112 ?	158 ?	273 ?	112 ?	?	?	213	229	146	68	21	0	0	0	0	1974 ?
10	0	0	0	0	0	7	66	137	231	417	539	623	621	811	569	690	509	224	108	18	0	0	0	0	5570
11	0	0	0	0	0	29	195	302	538	694	810	880	939	892	811	665	462	248	105	2	0	0	0	0	7572
12	0	0	0	0	0	35	143	301	430	599	466 ?	135 ?	188	236	163	191	120	95	10 ?	6	0	0	0	0	3116 ?
13	0	0	0	0	0	12	60 ?	253	399 ?	437	302	181 ?	?	519 ?	673	297	418	262	88	26	0	0	0	0	3927 ?
14	0	0	0	0	0	29	72 ?	180	385	636	652	351	361	199 ?	96	236	262	193	86	12	0	0	0	0	3749
15	0	0	0	0	0	26	84	402 ?	516	648	453	909	793	929	553	152	495	124	29	2	0	0	0	0	6113
16	0	0	0	0	0	29	127	128	518	374	880	743	643	898	618	501	479	167	150	24	0	0	0	0	6280
17	0	0	0	0	0	24	102	319	566	645	823	930	716	854	680	621	486	295	118	9	0	0	0	0	7187
18	0	0	0	0	0	27	160	352 ?	549	717	793	967	807	925	639	791	162	318	125	15	0	0	0	0	7345
19	0	0	0	0	0	30	154	344	510	617	702	923	942	893	650	673	446	256	16 ?	25	0	0	0	0	7181
20	0	0	0	0	0	23	84	271	546	746	765	944	769	900	799	717	541	316	132	11	0	0	0	0	7566
21	0	0	0	0	0	37	158	353	519	688	688	716	641	754	712	524	459	236 ?	22 ?	6	0	0	0	0	6513
22	0	0	0	0	0	31	145	342	462	639	630	884	926	865	761	606	501	283	43	6	0	0	0	0	7122
23	0	0	0	0	0	21	95	208	332	472	423	330	345	914	613	136 ?	214	278	97	21	0	0	0	0	4498
24	0	0	0	0	0	31	161	333	557	600	654	642	911	898	598	324	107	62	41	14	0	0	0	0	5935
25	0	0	0	0	0	26	96	187	493	647	719	912	925	910	814	701	526	323	125	12	0	0	0	0	7416
26	0	0	0	0	0	24	150	339	532	674	802	903	967	839	825	673	489	293	121	12	0	0	0	0	7643
27	0	0	0	0	0	26	168	330	460	510	653	816	880	653	841	619	284	180	133	11	0	0	0	0	6566
28	0	0	0	0	0	15	67	176	367	499	415	783	816	681	506	302 ?	160 ?	146	64	6	0	0	0	0	5003 ?
29	0	0	0	0	0	13	45	187	428 ?	536	833	775	736	894	427	355	389	313	86	15	0	0	0	0	6032
30	0	0	0	0	0	19	65	97	217	259	357	530	438	739	768	623	532	304	84	15	0	0	0	0	5047
Avg	0	0	0	0	0	26	124	261	434	553	635	689	686	728	607	495	381	233	83	13	0	0	0	0	5852
S D	0	0	0	0	0	9	48	87	120	150	180	243	244	234	208	210	141	84	39	7	0	0	0	0	1560
S/A	0	0	0	0	0	0.35	0.39	0.33	0.28	0.27	0.28	0.35	0.36	0.32	0.34	0.42	0.37	0.36	0.48	0.54	0	0	0	0	0.27
Min	0	0	0	0	0	7	45	97	104	112	158	135	112	119	96	112	107	37	10	2	0	0	0	0	1974
Max	0	0	0	0	0	51	232	402	566	746	880	967	982	929	855	791	541	325	150	28	0	0	0	0	7983
n	0	0	0	0	0	330	343	350	339	355	341	348	339	330	338	331	338	354	335	252	0	0	0	0	5023

Daylight Data Recovery: 0.0% missing; 0.0% untested; 4.6% exceed the 15% QC threshold -- 5264 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 25821F3    Calibration Factor: 9.020 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.

**June 2010**

**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	*	
2	0	0	0	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
3	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
4	0	0	0	0	0	?	390 ?	?	?	*	*	*	*	*	*	*	388 *	?	?	?	0	0	0	0	*	
5	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
6	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	?	?	?	*	*	*	0	0	0	*	
7	0	0	0	0	0	*	*	*	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
8	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
9	0	0	0	0	0	*	*	*	*	?	?	?	?	?	?	*	*	*	*	*	0	0	0	0	*	
10	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
11	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
12	0	0	0	0	0	?	*	*	*	*	748 *?	*	?	*	*	*	?	?	498 *?	472	0	0	0	0	*	
13	0	0	0	0	0	36 ?	73 ?	202	489 ?	*	*	?	?	106 ?	*	?	?	*	?	*	0	0	0	0	906 *?	
14	0	0	0	0	0	248	?	?	?	*	*	*	*	?	?	?	?	?	?	?	0	0	0	0	?	
15	0	0	0	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
16	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
17	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	514 *?	0	0	0	0	*
18	0	0	0	0	0	?	?	?	*	*	*	*	*	*	*	*	*	*	*	314 ?	0	0	0	0	*	
19	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
20	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
21	0	0	0	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
22	0	0	0	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
23	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
24	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
25	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
26	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
27	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
28	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	500 *	161 ?	90 ?	?	?	0	0	0	0	752 *?	
29	0	0	0	0	0	?	?	?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
30	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
Avg	0	0	0	0	0	142	232	202	489	N/A	748	N/A	N/A	106	N/A	500	275	90	498	434	0	0	0	0	N/A *?	
SD	0	0	0	0	0	150	224	0	0	0	0	0	0	0	0	160	0	0	105	0	0	0	0	0	0	
S/A	0	0	0	0	0	1.06	0.97	0	0	0	0	0	0	0	0	0.58	0	0	0.24	0	0	0	0	0	0	
Min	0	0	0	0	0	36	73	202	489	N/A	748	N/A	N/A	106	N/A	500	161	90	498	314	0	0	0	0	N/A	
Max	0	0	0	0	0	248	390	202	489	N/A	748	N/A	N/A	106	N/A	500	388	90	498	514	0	0	0	0	N/A	
n	0	0	0	0	0	14	14	10	4	0	2	0	0	3	0	5	10	6	3	14	0	0	0	0	0	

Daylight Data Recovery: 84.2% missing; 0.0% untested; 14.0% exceed the 15% QC threshold -- 5264 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.

**June 2010**

**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	28	99	174	292	332	340	323	343	285	356	307	260	191 ?	84	16	0	0	0	0	3431
2	0	0	0	0	0	31	103	124	123	162	246	337	423	378	378	276	184	185	97	29	0	0	0	0	3076
3	0	0	0	0	0	36	105	178	268	306	399	325	276	233	191	181	205	120	52	6	0	0	0	0	2881
4	0	0	0	0	0	21	91	163	336 ?	239	302	323	377	436	272 ?	29 ?	31 ?	38	38	11	0	0	0	0	2707 ?
5	0	0	0	0	0	29	85	143	236	303	376	379	348	304	267	271	163	163	83	7	0	0	0	0	3158
6	0	0	0	0	0	18	102	120	111	310	408	442	278	127	119	112	165	190	43	22	0	0	0	0	2566
7	0	0	0	0	0	21	103	186	190	205	262	297	286	306	262	207	191	232	98	21	0	0	0	0	2864
8	0	0	0	0	0	41	75	66	65	87	118	129	125	144	162	159	156	140	98	10	0	0	0	0	1578
9	0	0	0	0	0	15	75	236	230	127	189	266	201	446 ?	249	222	233	153	61	22	0	0	0	0	2727
10	0	0	0	0	0	7	68	136	202	329	361	391	341	303	289	190	167	153	82	19	0	0	0	0	3036
11	0	0	0	0	0	27	73	110	101	135	223	147	132	140	135	137	123	158	73	2	0	0	0	0	1715
12	0	0	0	0	0	26	110	189	213	325	151	114	197	249	172	202	127	99	11 ?	6	0	0	0	0	2191
13	0	0	0	0	0	12	63 ?	188	256 ?	380	238	238	225	421	427	242	241	172	79	28	0	0	0	0	3211
14	0	0	0	0	0	30	68	177	248	251	348	273	242	151	102	242	263	188	87	11	0	0	0	0	2683
15	0	0	0	0	0	26	72	95	135	227	355	225	287	231	296	161	217	94	30	2	0	0	0	0	2453
16	0	0	0	0	0	26	111	133	234	282	246	344	374	301	284	161	153	134	114	25 ?	0	0	0	0	2922
17	0	0	0	0	0	24	98	122	164	237	254	225	305	261	268	299	200	179	95	10	0	0	0	0	2740
18	0	0	0	0	0	26	70	96 ?	99	127	251	261	208	255	267	261	148	151	97	15	0	0	0	0	2332
19	0	0	0	0	0	26	81	111	197	215	247	160	231	220	330	180	198	153	13 ?	26	0	0	0	0	2388
20	0	0	0	0	0	23	88	159	125	105	148	182	223	202	164	113	97	139	95	12	0	0	0	0	1874
21	0	0	0	0	0	27	68	87	102	171	262	283	275	268	300	241	185	132	17	6	0	0	0	0	2422
22	0	0	0	0	0	30	83	131	198	281	368	228	190	213	236	165	118	130	45	5	0	0	0	0	2420
23	0	0	0	0	0	24	96	178	295	361	347	256	283	284	322	113	213	219	97	22	0	0	0	0	3110
24	0	0	0	0	0	29	90	93	132	235	284	300	206	245	304	299	115	66	43	15	0	0	0	0	2455
25	0	0	0	0	0	28	90	177	214	269	230	265	250	203	157	144	125	139	92	13	0	0	0	0	2395
26	0	0	0	0	0	25	94	112	119	176	187	158	158	216	193	185	142	142	90	13	0	0	0	0	2009
27	0	0	0	0	0	27	92	128	272	268	252	254	255	267	213	208	217	175	84	12	0	0	0	0	2724
28	0	0	0	0	0	14	65	155	240	357	321	316	309	335	306	123 ?	72 ?	130	66	6	0	0	0	0	2815
29	0	0	0	0	0	13	47	154	233 ?	302	375	280	315	214	257	304	269	219	79	15	0	0	0	0	3076
30	0	0	0	0	0	19	68	101	225	271	363	428	385	337	308	254	255	172	72	15	0	0	0	0	3272
Avg	0	0	0	0	0	24	84	141	195	246	282	272	268	266	253	200	174	152	70	14	0	0	0	0	2641
S D	0	0	0	0	0	7	16	39	70	81	79	84	75	83	79	69	59	43	29	8	0	0	0	0	462
S/A	0	0	0	0	0	0.3	0.19	0.28	0.36	0.33	0.28	0.31	0.28	0.31	0.31	0.34	0.34	0.28	0.4	0.55	0.31	0.31	0.31	0.31	0.17
Min	0	0	0	0	0	7	47	66	65	87	118	114	125	127	102	29	31	38	11	2	0	0	0	0	1578
Max	0	0	0	0	0	41	111	236	336	380	408	442	423	446	427	307	269	232	114	29	0	0	0	0	3431
n	0	0	0	0	0	317	351	353	348	359	358	360	360	353	354	344	348	347	343	251	0	0	0	0	5146

Daylight Data Recovery: 0.0% missing; 0.0% untested; 2.2% exceed the 15% QC threshold -- 5264 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 17860F3    Calibration Factor: 7.010  $\mu\text{V}/\text{W}/\text{m}^2$     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.