

July 2008

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	18	77	294	459	702	829	692	763	833	602	348	270	374	144	14	0	0	0	0	6419	
2	0	0	0	0	0	30	169	314	533	728	867	953	917	758	638	660	471	293	104	12	0	0	0	0	7447	
3	0	0	0	0	0	24	140	279	502	679	717	884	793	632	600	661	465	196	80	12	0	0	0	0	6664	
4	0	0	0	0	0	20	71	152	211	101 ?	130	120	514	633	266	196	255	146	54	9	0	0	0	0	2877	
5	0	0	0	0	0	15	41 ?	106 ?	298	171 ?	71 ?	176	410	701	469	619	194	98	44	9	0	0	0	0	3423 ?	
6	0	0	0	0	0	14	72	237	331	406	650	674	843	920	122	134	201	212	119	21	0	0	0	0	4956	
7	0	0	0	0	0	21	106 ?	338 ?	481	691	632	164	715	719	767	672	458	222	121	36	0	0	0	0	6143	
8	0	0	0	0	0	4	9 ?	?	70 ?	257	420	740	832	702	514	81	155	76	59	10	0	0	0	0	3930 ?	
9	0	0	0	0	0	23	89	?	?	450 ?	576	643	519	266	284	394	428	240	53	1	0	0	0	0	3966 ?	
10	0	0	0	0	0	8	36	128	369	323	281	528 ?	415	602	731	607	540	341	135	7	0	0	0	0	5049	
11	0	0	0	0	0	28	126	314	519	699	838	925	942	897	826	684	502	316	119	8	0	0	0	0	7745	
12	0	0	0	0	0	24	117	369	492	683	776	866	758	687	593	574	138	321	113	9	0	0	0	0	6521	
13	0	0	0	0	0	35	107	168	262	474	222	375	574 ?	451	510	170	254 ?	54 ?	19 ?	7	0	0	0	0	3682 ?	
14	0	0	0	0	0	11	92	287	307	691	813	753	711	651	689	669	591	357	130	9	0	0	0	0	6762	
15	0	0	0	0	0	23	140	297	523	708	855	829	635	846	796	714	520	320	119	10	0	0	0	0	7336	
16	0	0	0	0	0	21	142	341	499	684	688	835	950	688	809	649	497	291	116	10	0	0	0	0	7221	
17	0	0	0	0	0	24	140	311	517	697	834	920	951	913	835	684	501	310	114	10	0	0	0	0	7761	
18	0	0	0	0	0	28	151	329	510	697	843	919	908	860	810	625	517	305	71	5	0	0	0	0	7578	
19	0	0	0	0	0	23	139	303	487	678	821	713	876	919	791	668	475	301	110	8	0	0	0	0	7315	
20	0	0	0	0	0	19	104	271	468	656	785	905	797	849	706	599	463	272	103	11	0	0	0	0	7006	
21	0	0	0	0	0	21	82	193	421	648	722	812	882	845	790	587	490	237	106	14	0	0	0	0	6849	
22	0	0	0	0	0	17	91	142	258	656	864	883	899	849	766	334	423	212	38	0	0	0	0	0	6431	
23	0	0	0	0	0	3	28	37	198 ?	376	539	686	413	154 ?	303	391	346	344	120	8	0	0	0	0	3945	
24	0	0	0	0	0	10	81	245	494	702	859	935	973	898	696	707	362	312	77	12	0	0	0	0	7363	
25	0	0	0	0	0	13	48	139	359	551	787	817	608	427	333	268	189	208	57	11	0	0	0	0	4814	
26	0	0	0	0	0	13	91	207	220	235	484	711	663	726	811	634	507	305	100	9	0	0	0	0	5716	
27	0	0	0	0	0	8	19 ?	148	237	313	734	775	898	883	854	635	493	264	105	5	0	0	0	0	6371	
28	0	0	0	0	0	17	137 ?	274	465	653	779	782	886	742	743	327	114	64 ?	46	40	0	0	0	0	6068	
29	0	0	0	0	0	15	108	251	509	642	670	686	753	671	672	605	498	294	96	7	0	0	0	0	6476	
30	0	0	0	0	0	20	118	295	450	554	558	703	795	614	526	170	175 ?	242	71	10	0	0	0	0	5302	
31	0	0	0	0	0	14	37	78	50 ?	88	82	216	422	377	375	240	185	109	91	10	0	0	0	0	2375	
Avg	0	0	0	0	0	18	94	236	383	535	636	697	742	700	620	494	377	246	91	11	0	0	0	0	5855	
S D	0	0	0	0	0	8	43	89	141	203	246	242	180	196	201	206	148	90	33	8	0	0	0	0	1552	
S/A	0	0	0	0	0	0.42	0.45	0.38	0.37	0.38	0.39	0.35	0.24	0.28	0.32	0.42	0.39	0.37	0.36	0.73	0	0	0	0	0	0.27
Min	0	0	0	0	0	3	9	37	50	88	71	120	410	154	122	81	114	54	19	0	0	0	0	0	2375	
Max	0	0	0	0	0	35	169	369	533	728	867	953	973	920	854	714	591	374	144	40	0	0	0	0	7761	
n	0	0	0	0	0	268	343	334	341	361	363	367	365	364	370	367	362	360	365	244	0	0	0	0	0	5174

Daylight Data Recovery: 0.0% missing; 0.0% untested; 3.3% exceed the 15% QC threshold -- 5348 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.

July 2008

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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
5	0	0	0	0	0	658	639 ?	?	?	?	?	?	*	*	*	*	*	*	*	*	0	0	0	0	*	
6	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
7	0	0	0	0	0	?	?	?	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
8	0	0	0	0	0	*	135*	*	*	*	*	?	*	*	*	*	*	*	?	?	0	0	0	0	*	
9	0	0	0	0	0	?	?	?	?	93 ?	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
10	0	0	0	0	0	*	*	*	*	?	?	77 ?	*	*	*	*	*	*	*	*	0	0	0	0	*	
11	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
12	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
13	0	0	0	0	0	*	374 **?	*	*	*	*	*	*	*	*	*	*	204 ?	*	?	?	0	0	0	0	*
14	0	0	0	0	0	?	?	?	?	*	*	*	*	*	*	*	*	*	*	*	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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
18	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	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	*	*	*	*	?	529*	*	*	*	*	*	*	*	*	*	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	*	*	*	*	*	*	*	*	*	*	*	*	*	?	?	?	0	0	0	0	*
29	0	0	0	0	0	?	?	?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
30	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	?	?	?	0	0	0	0	*
31	0	0	0	0	0	*	*	*	?	?	?	?	?	?	?	*	*	*	*	*	0	0	0	0	?	
Avg	0	0	0	0	0	658	382	N/A	N/A	93	529	77	N/A	N/A	N/A	N/A	204	N/A	N/A	N/A	0	0	0	0	N/A	**?
SD	0	0	0	0	0	0	252	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	0.66	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	658	135	N/A	N/A	93	529	77	N/A	N/A	N/A	N/A	204	N/A	N/A	N/A	0	0	0	0	N/A	0
Max	0	0	0	0	0	658	639	N/A	N/A	93	529	77	N/A	N/A	N/A	N/A	204	N/A	N/A	N/A	0	0	0	0	N/A	0
n	0	0	0	0	0	9	8	0	0	2	3	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0

Daylight Data Recovery: 87.0% missing; 0.0% untested; 12.4% exceed the 15% QC threshold -- 5348 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.

July 2008

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	19	70	142	186	196	254	283	283	293	249	222	192	119	58	15	0	0	0	0	2581
2	0	0	0	0	0	25	59	71	82	103	114	133	175	250	262	215	166	128	59	12	0	0	0	0	1853
3	0	0	0	0	0	25	105	144	175	305	341	352	313	356	328	341	224	160	80	12	0	0	0	0	3260
4	0	0	0	0	0	20	75	158	203	101	138	127	396	421	285	204	235	151	57	9	0	0	0	0	2580
5	0	0	0	0	0	15	42	100	291	170	65	188	390	585	446	390	192	101	45	9	0	0	0	0	3030
6	0	0	0	0	0	14	77	209	300	384	480	319	405	411	128	143	197	196	108	22	0	0	0	0	3393
7	0	0	0	0	0	21	110	116 ?	171	171	316	175	332	351	265	288	305	176	122	37	0	0	0	0	2957
8	0	0	0	0	0	4	11 ?	?	69	274	401	418	410	328	348	80	166	81	62	10	0	0	0	0	2662 ?
9	0	0	0	0	0	28	90	152 ?	?	414 ?	456	450	310	282	322	355	274	192	57	2	0	0	0	0	3383 ?
10	0	0	0	0	0	9	38	133	316	339	297	467	435	504	359	273	146	101	61	8	0	0	0	0	3485
11	0	0	0	0	0	30	78	108	96	101	101	110	126	147	117	105	95	75	50	9	0	0	0	0	1348
12	0	0	0	0	0	22	86	106	89	102	167	253	276	305	288	273	125	117	56	9	0	0	0	0	2274
13	0	0	0	0	0	37	92	173	274	382 ?	200	387	515	439	387	174	203	48 ?	18 ?	7	0	0	0	0	3338 ?
14	0	0	0	0	0	12	90	175 ?	289	566 ?	594 ?	418	370	301	269	175	151	95	51	11	0	0	0	0	3568 ?
15	0	0	0	0	0	27	121	253 ?	525 ?	345	216	370	285	249	192	154	119	81	51	12	0	0	0	0	2999 ?
16	0	0	0	0	0	24	119 ?	289 ?	?	440	245	253	254	218	176	135	147	99	56	11	0	0	0	0	2465 ?
17	0	0	0	0	0	28	87 ?	252 ?	?	510 ?	194	133	123	134	133	132	106	86	55	11	0	0	0	0	1984 ?
18	0	0	0	0	0	30	105	?	?	595 ?	279	135	165	223	210	185	138	123	54	5	0	0	0	0	2246 ?
19	0	0	0	0	0	24	99	308 ?	?	?	420	232	201	214	211	195	162	114	56	9	0	0	0	0	2245 ?
20	0	0	0	0	0	22	103	303	?	?	555 ?	315	352	292	314	248	214	134	71	11	0	0	0	0	2934 ?
21	0	0	0	0	0	26	82	198	334 ?	?	541 ?	317	275	240	264	198	132	118	85	15	0	0	0	0	2826 ?
22	0	0	0	0	0	21	89	149	271	460 ?	712 ?	447	509	312	242	220	203	106	40	0	0	0	0	0	3780 ?
23	0	0	0	0	0	3	29	39	214	349	387	382	344	137 ?	317	363	225	140	82	9	0	0	0	0	3019
24	0	0	0	0	0	11	81	197	120	79	119	98	105	142	196	137	144	146	52	13	0	0	0	0	1641
25	0	0	0	0	0	14	49	148	356	360	335	345	316	445	346	281	195	166	61	12	0	0	0	0	3429
26	0	0	0	0	0	14	91	199	234	250	351	376	353	343	321	233	154	108	52	10	0	0	0	0	3088
27	0	0	0	0	0	9	19	156	249	322	350	379	267	244	271	173	145	112	55	6	0	0	0	0	2754
28	0	0	0	0	0	19	101	278 ?	?	355	215	270	194	321	296	274	110	58	46	43 ?	0	0	0	0	2580 ?
29	0	0	0	0	0	18	104	265 ?	?	487 ?	347	313	270	305	283	231	107	84	44	7	0	0	0	0	2865 ?
30	0	0	0	0	0	23	114	?	383 ?	525 ?	413	446	492	392	407	158	103	202	48	9	0	0	0	0	3714 ?
31	0	0	0	0	0	15	39	83	36 ?	86	87	231	431	343	343	251	182	113	75	10	0	0	0	0	2327
Avg	0	0	0	0	0	20	79	175	229	313	313	294	312	307	277	219	170	120	60	12	0	0	0	0	2794
S D	0	0	0	0	0	8	30	73	118	157	161	114	111	107	80	77	51	39	20	9	0	0	0	0	609
S/A	0	0	0	0	0	0.4	0.38	0.42	0.51	0.5	0.52	0.39	0.36	0.35	0.29	0.35	0.3	0.32	0.33	0.73	0	0	0	0	0.22
Min	0	0	0	0	0	3	11	39	36	79	65	98	105	134	117	80	95	48	18	0	0	0	0	0	1348
Max	0	0	0	0	0	37	121	308	525	595	712	467	515	585	446	390	305	202	122	43	0	0	0	0	3780
n	0	0	0	0	0	250	353	285	240	278	343	367	370	367	370	372	370	365	367	240	0	0	0	0	4939

Daylight Data Recovery: 0.0% missing; 0.0% untested; 7.6% exceed the 15% QC threshold -- 5348 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.