

**August 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	14	131	245	499	704	685	786	803	832	732	556	375	177	31	0	0	0	0	0	6570	
2	0	0	0	0	0	24	129	286	502	680	677	977	665	300	332	579	385	190	38	0	0	0	0	0	5764	
3	0	0	0	0	0	20	125	299	495	670	799	890	882	400	489	197	67	80	43	0	0	0	0	0	5456	
4	0	0	0	0	0	24	117 ?	392 ?	545	722	849	917	943	824	693	546	392	177	37	0	0	0	0	0	7177	
5	0	0	0	0	0	21	160 ?	335	540	716	842	910	940	782	686	541	376	138	41	0	0	0	0	0	7029	
6	0	0	0	0	0	20	141	332	436	709	820	886	893	832	716	551	368	138	5	0	0	0	0	0	6846	
7	0	0	0	0	0	16	118	290	504	690	822	903	911	848	702 ?	577	393	186	36	0	0	0	0	0	6995	
8	0	0	0	0	0	20	107	261	508	685	811	891	899 ?	766 ?	665 ?	536 ?	342	92 ?	32	0	0	0	0	0	6617 ?	
9	0	0	0	0	0	19	122	304	511	686	815	883	896	728	682	375	298	143	22	0	0	0	0	0	6484	
10	0	0	0	0	0	15	78	260	437	549	675	289	673	656	524	354	255	101	22	0	0	0	0	0	4887	
11	0	0	0	0	0	21	136	316	478	658	826	596	793 ?	870	628	518	207	135 ?	10	0	0	0	0	0	6190	
12	0	0	0	0	0	6	45	122	189	316	401	813	818	735	485 ?	58 ?	75 ?	87 ?	31	0	0	0	0	0	4182 ?	
13	0	0	0	0	0	20	117	333	535	640	847	878	817	723	776 ?	178 ?	?	112 ?	12	0	0	0	0	0	5989 ?	
14	0	0	0	0	0	7	121	271	297	349	576	471	776	673	635	433	384	93	28	0	0	0	0	0	5115	
15	0	0	0	0	0	2	32	101	135	211	345	527	407	415	499	133	60 ?	?	2	0	0	0	0	0	2868 ?	
16	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
17	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
18	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
19	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
20	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
21	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
22	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
23	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
24	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
25	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
26	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
27	0	0	0	0	0	12	94 ?	293 ?	495	676	768	894	892	719	585	499	259	83 ?	16	0	0	0	0	0	6286	
28	0	0	0	0	0	11	96	275	472	648	781	595	891	703	670	495	290	117	15	0	0	0	0	0	6059	
29	0	0	0	0	0	9	88	262	462	640	781	797	855	767	529	356	255	66	18	0	0	0	0	0	5883	
30	0	0	0	0	0	10	90	260	459	633	749	560	784	629	548	481	272	102	14	0	0	0	0	0	5592	
31	0	0	0	0	0	12	93	276	477	631	777	790	593	628	685	512	276	107	13	0	0	0	0	0	5869	
Avg	0	0	0	0	0	15	107	276	449	611	732	763	807	692	613	424	281	122	23	0	0	0	0	0	5893 *	
S D	0	0	0	0	0	6	31	66	112	145	142	188	134	156	110	162	111	38	12	0	0	0	0	0	1043	
S/A	0	0	0	0	0	0.42	0.29	0.24	0.25	0.24	0.19	0.25	0.17	0.23	0.18	0.38	0.39	0.31	0.53	0	0	0	0	0	0	0.18
Min	0	0	0	0	0	2	32	101	135	211	345	289	407	300	332	58	60	66	2	0	0	0	0	0	2868	
Max	0	0	0	0	0	24	160	392	545	722	849	977	943	870	776	579	393	190	43	0	0	0	0	0	7177	
n	0	0	0	0	0	155	228	231	240	240	240	239	228	229	221	221	212	194	178	0	0	0	0	0	3058	

Daylight Data Recovery: 35.1% missing; 3.2% exceed the 15% QC threshold -- 4951 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.

August 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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
2	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
3	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
4	0	0	0	0	0	187	113 ?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	301 *
5	0	0	0	0	0	?	526 ?	461 ?	*	?	875 ?	*	*	*	*	*	*	*	*	0	0	0	0	0	*
6	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
7	0	0	0	0	0	*	*	*	*	*	*	*	*	?	?	?	?	?	432 ?	0	0	0	0	0	*
8	0	0	0	0	0	*	*	*	*	*	?	?	504 ?	346 ?	419 ?	250 ?	341	?	?	0	0	0	0	0	1859 *?
9	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	?	?	0	0	0	0	0	*
10	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
11	0	0	0	0	0	*	*	*	*	*	*	?	540 ?	?	?	?	?	61 ?	?	0	0	0	0	0	?
12	0	0	0	0	0	*	*	*	*	*	*	*	*	?	593 ?	806 ?	828 ?	?	646	0	0	0	0	0	*
13	0	0	0	0	0	*	*	*	*	*	*	*	*	*	690 ?	94 ?	?	221 ?	?	0	0	0	0	0	*
14	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
15	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
16	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
17	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
18	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
19	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
20	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
21	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
22	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
23	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
24	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
25	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
26	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
27	0	0	0	0	0	*	282 ?	?	?	*	*	*	*	*	*	*	?	?	*	0	0	0	0	0	*
28	0	0	0	0	0	?	?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
29	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
30	0	0	0	0	0	*	?	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
31	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
Avg	0	0	0	0	0	187	307	461	N/A	N/A	875	N/A	522	346	567	384	584	141	539	0	0	0	0	0	N/A *?
SD	0	0	0	0	0	0	208	0	0	0	0	0	25	0	137	374	344	113	151	0	0	0	0	0	0
S/A	0	0	0	0	0	0	0.68	0	0	0	0	0	0.05	0	0.24	0.98	0.59	0.8	0.28	0	0	0	0	0	0
Min	0	0	0	0	0	187	113	461	N/A	N/A	875	N/A	504	346	419	94	341	61	432	0	0	0	0	0	N/A
Max	0	0	0	0	0	187	526	461	N/A	N/A	875	N/A	540	346	690	806	828	221	646	0	0	0	0	0	N/A
n	0	0	0	0	0	9	17	5	0	0	3	0	8	2	8	10	13	5	15	0	0	0	0	0	0

Daylight Data Recovery: 87.5% missing; 10.4% exceed the 15% QC threshold -- 4951 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.

**August 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	14	99	219	302	251	366	400	308	301	238	192	157	103	28	0	0	0	0	0	2979	
2	0	0	0	0	0	22	84	145	192	229	308	299	329	225	166	194	121	90	32	0	0	0	0	0	2435	
3	0	0	0	0	0	20	93	168	228	261	286	327	412	302	319	166	71	73	41	0	0	0	0	0	2767	
4	0	0	0	0	0	21	65 ?	109 ?	126	133	150	168	204	238	213	191	160	92	30	0	0	0	0	0	1900	
5	0	0	0	0	0	18	70 ?	102	118	130	137	176	213	180	162	147	124	96	31	0	0	0	0	0	1707	
6	0	0	0	0	0	16	65	106	189	204	222	243	250	242	242	202	177	115	6	0	0	0	0	0	2277	
7	0	0	0	0	0	16	99	183	220	243	242	214	199	192	166 ?	129	92	64	23	0	0	0	0	0	2080	
8	0	0	0	0	0	21	101	216	248	272	310	347	361 ?	348 ?	341 ?	261 ?	199	89 ?	31	0	0	0	0	0	3145 ?	
9	0	0	0	0	0	18	82	136	187	238	274	275	304	304	350	297	191	94	21	0	0	0	0	0	2770	
10	0	0	0	0	0	16	80	199	263	390	419	306	483	479	382	288	184	94	20	0	0	0	0	0	3603	
11	0	0	0	0	0	18	62	117	175	160	181	282	263 ?	154	277	319	188	123 ?	10	0	0	0	0	0	2330	
12	0	0	0	0	0	6	47	129	202	331	418	381	247	296	344	154	49	83	32	0	0	0	0	0	2719	
13	0	0	0	0	0	20	69	77	109	197	117	200	214	199	175	168 ?	69 ?	84 ?	13	0	0	0	0	0	1712 ?	
14	0	0	0	0	0	7	70	184	290	301	390	433	400	392	290	274	193	79	28	0	0	0	0	0	3332	
15	0	0	0	0	0	2	34	107	143	223	348	487	412	412	382	129	57 ?	?	3	0	0	0	0	0	2739	
16	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
17	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
18	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
19	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
20	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
21	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
22	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
23	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
24	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
25	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
26	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
27	0	0	0	0	0	11	56 ?	109 ?	222	478 ?	?	?	?	516 ?	440 ?	467 ?	245 ?	89 ?	16	0	0	0	0	0	2651 ?	
28	0	0	0	0	0	11	74	181	388	?	?	598 ?	?	576 ?	?	?	242 ?	99 ?	15	0	0	0	0	0	2184 ?	
29	0	0	0	0	0	9	81	252	419 ?	?	?	?	?	593 ?	409 ?	309 ?	285	71	18	0	0	0	0	0	2446 ?	
30	0	0	0	0	0	11	93	283	?	?	681 ?	422 ?	532 ?	516 ?	377 ?	?	256 ?	114	15	0	0	0	0	0	3301 ?	
31	0	0	0	0	0	12	98	285 ?	?	?	?	355 ?	558 ?	582 ?	?	?	179 ?	87 ?	13	0	0	0	0	0	2170 ?	
Avg	0	0	0	0	0	14	76	165	223	253	303	329	335	352	293	229	162	92	21	0	0	0	0	0	2562 *?	
S D	0	0	0	0	0	6	18	62	86	91	140	114	116	146	92	89	69	15	10	0	0	0	0	0	537	
S/A	0	0	0	0	0	0.39	0.24	0.38	0.38	0.36	0.46	0.35	0.35	0.41	0.31	0.39	0.43	0.17	0.48	0	0	0	0	0	0.21	
Min	0	0	0	0	0	2	34	77	109	130	117	168	199	154	162	129	49	64	3	0	0	0	0	0	1707	
Max	0	0	0	0	0	22	101	285	419	478	681	598	558	593	440	467	285	123	41	0	0	0	0	0	3603	
n	0	0	0	0	0	155	229	224	207	185	182	197	181	193	180	181	194	204	179	0	0	0	0	0	2700	

Daylight Data Recovery: 35.1% missing; 10.4% exceed the 15% QC threshold -- 4951 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.