

**September 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	6	61	170	420	634	570	737	870	768	692	461	193	99	10	0	0	0	0	0	5690
2	0	0	0	0	0	15	93	281	444	603	809	812	773	381	594	318	257	91	7	0	0	0	0	0	5478
3	0	0	0	0	0	3	58	156	238	226	261	225	321	289	339	308	117	26	4	0	0	0	0	0	2569
4	0	0	0	0	0	4	42	150	298	353	586	219	115 ?	167	280	212	222	73	13	0	0	0	0	0	2735
5	0	0	0	0	0	10	117	247	464	641	684	813	828	708	526	450	228	81	4	0	0	0	0	0	5801
6	0	0	0	0	0	10	90	269	470	641	772	859	823	765	642	419	256	78	6	0	0	0	0	0	6098
7	0	0	0	0	0	4	43	243	475	658	780	840	836	765	637	447	249	74	5	0	0	0	0	0	6057
8	0	0	0	0	0	9	91	284	487	656	782	833	818	755	628	453	258	74	4	0	0	0	0	0	6132
9	0	0	0	0	0	8	87	274	483	656	780	627	830	737	640	485	240	62	3	0	0	0	0	0	5913
10	0	0	0	0	0	7	84	268	470	645	711	686	611	640	532	362	230	38	4	0	0	0	0	0	5290
11	0	0	0	0	0	4	49	201	244	459	764	537	619	492	524	270	163	53	2	0	0	0	0	0	4380
12	0	0	0	0	0	5	83	265	419	523	765 ?	542	350	682	644	493	245	43	0	0	0	0	0	0	5061
13	0	0	0	0	0	5	89	258	463	635	613	547	476	532	440	333	88	59	3	0	0	0	0	0	4540
14	0	0	0	0	0	5	34	140	252	246	288	365	392	571	610	406	234	59	1	0	0	0	0	0	3603
15	0	0	0	0	0	3	33	215	456	632	680	814	779	562	537	434	245	60	9	0	0	0	0	0	5460
16	0	0	0	0	0	1	22	126	318	334	527	547 ?	549	495	329	441	308	91	0	0	0	0	0	0	4087
17	0	0	0	0	0	5	75	260	466	639	759	815	813	742	611	431	223	47	0	0	0	0	0	0	5886
18	0	0	0	0	0	6	83	268	480	648	768	832	813	738	581	416	219	46	0	0	0	0	0	0	5898
19	0	0	0	0	0	4	82	275	491	659	773	831	819	744	610	424	216	47	0	0	0	0	0	0	5977
20	0	0	0	0	0	4	79	268	475	646	764	821	816	747	613	428	217	47	0	0	0	0	0	0	5926
21	0	0	0	0	0	5	75	261	472	641	756	811	665	434	375	284	99	43	0	0	0	0	0	0	4920
22	0	0	0	0	0	6	72	254	459	629	701	627	468	540	403	281	174	23	0	0	0	0	0	0	4638
23	0	0	0	0	0	8	54	99	126 ?	440	651	579	651	311	440	181	101	25	0	0	0	0	0	0	3665
24	0	0	0	0	0	2	19	125	273	240	363	297	267	388	291	155	116	25	0	0	0	0	0	0	2560
25	0	0	0	0	0	4	15	66	185	445	337	414	309	329	316	197	66	13	0	0	0	0	0	0	2696
26	0	0	0	0	0	9 ?	93	261	448	587	709	765	753	638	473	366	158	31	0	0	0	0	0	0	5292
27	0	0	0	0	0	0	63	245	447	610	734	791	784	699	552	353	168	31	0	0	0	0	0	0	5477
28	0	0	0	0	0	10	72	161	320	562	699	786	632	415	323	144	116	36	0	0	0	0	0	0	4277
29	0	0	0	0	0	2	57	227	426	586	700	753	739	662	519	342	151	27	0	0	0	0	0	0	5191
30	0	0	0	0	0	1	60	241	441	603	718	777	767	688	548	359	156	23	0	0	0	0	0	0	5383
Avg	0	0	0	0	0	6	66	219	397	549	660	663	643	580	508	355	190	51	2	0	0	0	0	0	4889
S D	0	0	0	0	0	3	25	62	105	139	155	195	210	173	125	101	62	23	3	0	0	0	0	0	1141
S/A	0	0	0	0	0	0.59	0.38	0.29	0.26	0.25	0.24	0.29	0.33	0.3	0.24	0.28	0.33	0.46	1.41	0	0	0	0	0	0.23
Min	0	0	0	0	0	0	15	66	126	226	261	219	115	167	280	144	66	13	0	0	0	0	0	0	2560
Max	0	0	0	0	0	15	117	284	491	659	809	859	870	768	692	493	308	99	13	0	0	0	0	0	6132
n	0	0	0	0	0	94	360	358	349	360	357	357	355	359	359	360	360	337	38	0	0	0	0	0	4403

Daylight Data Recovery: 0.0% missing; 0.6% exceed the 15% QC threshold -- 4430 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.

September 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	*
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	*	*	*	*	*	*	*	*	*	*	?	?	?	?	0	0	0	0	0	*
5	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
6	0	0	0	0	0	*	*	*	*	*	*	?	?	*	*	*	*	*	*	0	0	0	0	0	*
7	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
8	0	0	0	0	0	*	*	*	*	454 ?	*	*	*	*	*	?	?	*	*	0	0	0	0	0	*
9	0	0	0	0	0	*	*	*	*	*	*	609 **?	478 ?	*	*	*	*	*	427 ?	0	0	0	0	0	*
10	0	0	0	0	0	*	*	?	?	818 ?	348 **?	*	*	*	*	*	*	*	?	0	0	0	0	0	*
11	0	0	0	0	0	?	?	?	?	?	?	*	*	*	*	*	*	*	*	0	0	0	0	0	*
12	0	0	0	0	0	*	?	?	?	?	621 ?	*	*	*	*	*	*	*	?	0	0	0	0	0	*
13	0	0	0	0	0	*	*	*	*	*	169 ?	*	*	*	*	*	*	*	*	0	0	0	0	0	*
14	0	0	0	0	0	*	*	*	?	?	*	?	?	?	577 ?	*	*	*	*	0	0	0	0	0	*
15	0	0	0	0	0	*	*	?	?	?	496 ?	*	*	*	*	*	*	464 **?	475	0	0	0	0	0	*
16	0	0	0	0	0	*	*	*	*	?	?	?	?	*	*	*	*	*	0	0	0	0	0	0	*
17	0	0	0	0	0	*	*	*	?	?	472 **?	*	*	*	*	*	*	*	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	*	404 **?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
27	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
28	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
29	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
30	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*

Avg	0	0	0	0	0	N/A	404	N/A	N/A	636	421	609	478	N/A	577	N/A	N/A	312	53	0	0	0	0	0	N/A	**?
SD	0	0	0	0	0	0	0	0	0	257	171	0	0	0	0	0	0	216	150	0	0	0	0	0	0	0
S/A	0	0	0	0	0	0	0	0	0	0.4	0.41	0	0	0	0	0	0	0.69	2.83	0	0	0	0	0	0	0
Min	0	0	0	0	0	N/A	404	N/A	N/A	454	169	609	478	N/A	577	N/A	N/A	159	0	0	0	0	0	0	N/A	0
Max	0	0	0	0	0	N/A	404	N/A	N/A	818	621	609	478	N/A	577	N/A	N/A	464	475	0	0	0	0	0	N/A	0
n	0	0	0	0	0	0	2	0	0	10	15	3	2	0	4	0	0	4	2	0	0	0	0	0	0	0

Daylight Data Recovery: 84.8% missing; 14.0% exceed the 15% QC threshold -- 4430 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.

**September 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	6	63	176	424	453 ?	495 ?	338 ?	?	670 ?	?	366 ?	123 ?	88	10	0	0	0	0	0	3212 ?
2	0	0	0	0	0	14	96	?	429 ?	408 ?	?	?	491 ?	374	458 ?	302 ?	242 ?	70 ?	8	0	0	0	0	0	2894 ?
3	0	0	0	0	0	3	60	162	248	236	272	235	335	303	357	321	122	27	3	0	0	0	0	0	2685
4	0	0	0	0	0	4	43	154	306	367	450 ?	225	100	171	288	221	217 ?	76	10	0	0	0	0	0	2634
5	0	0	0	0	0	11	94	?	?	?	407 ?	590 ?	?	483 ?	400 ?	373 ?	186 ?	70	5	0	0	0	0	0	2619 ?
6	0	0	0	0	0	9	98	?	?	?	?	?	?	?	?	291 ?	218 ?	87	5	0	0	0	0	0	709 ?
7	0	0	0	0	0	4	45	241 ?	?	?	?	?	?	?	?	?	230 ?	82	5	0	0	0	0	0	608 ?
8	0	0	0	0	0	8	91	?	?	?	?	?	?	?	?	?	?	82	4	0	0	0	0	0	186 ?
9	0	0	0	0	0	8	94	?	?	?	?	305 ?	?	?	?	?	?	177 ?	70	4	0	0	0	0	656 ?
10	0	0	0	0	0	7	91	?	?	?	230 ?	315 ?	388 ?	479 ?	351 ?	298 ?	108 ?	38	4	0	0	0	0	0	2308 ?
11	0	0	0	0	0	4	50	190	252	371 ?	?	470 ?	445 ?	383 ?	326 ?	227	154 ?	58	2	0	0	0	0	0	2933 ?
12	0	0	0	0	0	4	84	?	442 ?	420 ?	530 ?	318 ?	256	478 ?	?	?	?	48	0	0	0	0	0	0	2581 ?
13	0	0	0	0	0	4	52 ?	?	?	?	472 ?	367 ?	404 ?	358 ?	317 ?	266 ?	92	61	3	0	0	0	0	0	2397 ?
14	0	0	0	0	0	5	35	144	257	256	299	377	408	504 ?	?	358 ?	?	49	0	0	0	0	0	0	2691 ?
15	0	0	0	0	0	3	36	182 ?	390 ?	?	607 ?	?	?	533 ?	497 ?	?	164 ?	62	?	0	0	0	0	0	2475 ?
16	0	0	0	0	0	1	23	130	285 ?	347	562	472 ?	582	497	347	370 ?	?	40 ?	0	0	0	0	0	0	3655 ?
17	0	0	0	0	0	5	81	?	?	?	?	?	?	?	?	?	?	56	0	0	0	0	0	0	142 ?
18	0	0	0	0	0	6 ?	82 ?	?	?	?	?	?	?	?	?	?	?	55	0	0	0	0	0	0	143 ?
19	0	0	0	0	0	3	67 ?	?	?	?	?	?	?	?	?	?	?	55	0	0	0	0	0	0	125 ?
20	0	0	0	0	0	3	71	?	?	?	?	?	?	?	?	?	?	57	0	0	0	0	0	0	131 ?
21	0	0	0	0	0	4	67	?	?	?	?	?	519 ?	377 ?	290 ?	191 ?	78	33	0	0	0	0	0	0	1560 ?
22	0	0	0	0	0	8 ?	71	?	?	?	563 ?	544 ?	483	383 ?	368 ?	155 ?	79 ?	25	0	0	0	0	0	0	2679 ?
23	0	0	0	0	0	11 ?	54	102	127	413	467 ?	486 ?	438 ?	322	378 ?	187	103	26	0	0	0	0	0	0	3114 ?
24	0	0	0	0	0	2	19	129	269	247	347	307	275	402	300	161	120	25	0	0	0	0	0	0	2602
25	0	0	0	0	0	5 ?	15	68	196	418 ?	345	423	317	338	327	201	68	13	0	0	0	0	0	0	2734
26	0	0	0	0	0	?	36 ?	?	?	?	?	?	?	510 ?	453 ?	?	169	37	0	0	0	0	0	0	1204 ?
27	0	0	0	0	0	0	68	?	?	?	?	?	?	?	?	?	131 ?	37	0	0	0	0	0	0	237 ?
28	0	0	0	0	0	?	58	158	273	284 ?	?	?	434 ?	414	239 ?	148	116	39	0	0	0	0	0	0	2162 ?
29	0	0	0	0	0	2	60	161 ?	?	?	?	?	?	?	?	339 ?	138 ?	32	0	0	0	0	0	0	731 ?
30	0	0	0	0	0	1	58	?	?	?	?	?	?	?	?	?	121 ?	31	0	0	0	0	0	0	210 ?
Avg	0	0	0	0	0	5	62	153	300	352	432	385	392	420	356	265	143	51	2	0	0	0	0	0	1767 ?
S D	0	0	0	0	0	3	24	43	96	77	118	109	121	108	69	80	51	21	3	0	0	0	0	0	1186
S/A	0	0	0	0	0	0.65	0.38	0.28	0.32	0.22	0.27	0.28	0.31	0.26	0.19	0.3	0.36	0.41	1.43	0	0	0	0	0	0.67
Min	0	0	0	0	0	0	15	68	127	236	230	225	100	171	239	148	68	13	0	0	0	0	0	0	125
Max	0	0	0	0	0	14	98	241	442	453	607	590	582	670	497	373	242	88	10	0	0	0	0	0	3655
n	0	0	0	0	0	87	330	137	121	100	96	116	128	145	129	139	167	318	37	0	0	0	0	0	2063

Daylight Data Recovery: 0.0% missing; 53.4% exceed the 15% QC threshold -- 4430 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.