

April 2003

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	4	74	271	491	682	822	892	901	840	712	530	318	105	12	0	0	0	0	0	6654	
2	0	0	0	0	0	3	78	279	488	672	744	744	791	800	706	518	309	111	23	0	0	0	0	0	6266	
3	0	0	0	0	0	4	52	146 ?	350	490	590	615	642	634	513	476	154	104	9	0	0	0	0	0	4779	
4	0	0	0	0	0	3	45	185	254 ?	284	480	224	348	444	410	152	221	54	1	0	0	0	0	0	3105	
5	0	0	0	0	0	3	63	113	442	690	838	843	900	840	711	532	309	84	12	0	0	0	0	0	6380	
6	0	0	0	0	0	3	45	124	65	59 ?	?	174 ?	397	74 ?	73 ?	?	?	0 ?	0	0	0	0	0	0	1014 ?	
7	0	0	0	0	0	2	38	231	236	263	352	597	874	732 ?	448 ?	306	182	48	12	0	0	0	0	0	4321	
8	0	0	0	0	0	1	32	134	278	315	673	621	446	451	314	317	243	114	11	0	0	0	0	0	3950	
9	0	0	0	0	0	0	2 ?	23 ?	43 ?	62 ?	116	181	209	250	101	232	70	23	1	0	0	0	0	0	1314 ?	
10	0	0	0	0	0	7	84	207	502	714	849	923	926	869	738	557	342	124	19	0	0	0	0	0	6863	
11	0	0	0	0	0	10	113	332	547	731	873	945	947	877	729	529	300	96	12	0	0	0	0	0	7040	
12	0	0	0	0	0	15	118	319	527	719	854	925	923	864	728	539	326	110	11	0	0	0	0	0	6979	
13	0	0	0	0	0	12	108	314	527	707	840	914	911	850	719	540	328	120	16	0	0	0	0	0	6907	
14	0	0	0	0	0	12	114	324	534	717	849	922	919	859	733	545	337	120	17	0	0	0	0	0	7003	
15	0	0	0	0	0	12	109	315	527	705	837	910	901	844	646	448	324	75	9	0	0	0	0	0	6662	
16	0	0	0	0	0	5	89	300	513	630	773	789	650	207	343	150	170	94	6	0	0	0	0	0	4718	
17	0	0	0	0	0	16	126	336	545	726	855	935	940	890	762	558	346	127	17	0	0	0	0	0	7180	
18	0	0	0	0	0	13	112	337	543	726	848 ?	931	925	856	603	428	270	104	19	0	0	0	0	0	6714	
19	0	0	0	0	0	8	63	194	236	379	459	204	176	150	139	199	198	59	7	0	0	0	0	0	2469	
20	0	0	0	0	0	6	53	193	309	520	618	726	195	133	100	86	68	38	12	0	0	0	0	0	3058	
21	0	0	0	0	0	19	131	345	566	759	899	963	962	895	763	577	363	142	22	0	0	0	0	0	7407	
22	0	0	0	0	0	19	142	349	571	759	889	945	861	732	626	463	258	113	13	0	0	0	0	0	6742	
23	0	0	0	0	0	5	45	162	461	715	859	953	952	889	673	469	332	99	17	0	0	0	0	0	6631	
24	0	0	0	0	0	1	11 ?	91	69	66 ?	95	504	765	377 ?	?	71 ?	83	83	7	0	0	0	0	0	2222 ?	
25	0	0	0	0	0	19	142	352	568	753	889	956	832	782	664	410	358	149	25	0	0	0	0	0	6898	
26	0	0	0	0	0	22	54 ?	132 ?	166	127	?	249	286 ?	393	382	329	118	77	21	0	0	0	0	0	2355 ?	
27	0	0	0	0	0	23	141	349	552	739	869	945	938	866	737	553	347	136	21	0	0	0	0	0	7216	
28	0	0	0	0	0	24	154	304	557	735	867	915	927	857	725	520	356	143	14	0	0	0	0	0	7100	
29	0	0	0	0	0	28	149	341	537	621	842	891	843	732	645	430	289	96	14	0	0	0	0	0	6459	
30	0	0	0	0	0	36	153	331	501	687	839	874	901	809	668	537	343	118	16	0	0	0	0	0	6812	
Avg	0	0	0	0	0	11	88	248	417	558	726	740	740	660	556	414	264	96	13	0	0	0	0	0	5441	
S D	0	0	0	0	0	9	45	97	169	240	227	272	266	273	225	158	94	36	7	0	0	0	0	0	2030	
S/A	0	0	0	0	0	0.83	0.51	0.39	0.41	0.43	0.31	0.37	0.36	0.41	0.41	0.38	0.36	0.38	0.49	0	0	0	0	0	0	0.37
Min	0	0	0	0	0	0	2	23	43	59	95	174	176	74	73	71	68	0	0	0	0	0	0	0	1014	
Max	0	0	0	0	0	36	154	352	571	759	899	963	962	895	763	577	363	149	25	0	0	0	0	0	7407	
n	0	0	0	0	0	179	332	339	341	340	330	353	352	342	336	342	344	352	172	0	0	0	0	0	0	4455

Daylight Data Recovery: 0.0% missing; 4.6% exceed the 15% QC threshold -- 4671 total daylight measurements.

Instrument: Eppley PSP Serial Number: 18036F3 Calibration Factor: 7.430 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.

April 2003

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	*	*	108 ?	89 ?	?	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
4	0	0	0	0	0	?	?	*	?	?	*	*	*	*	?	*	*	*	*	0	0	0	0	0	0	*
5	0	0	0	0	0	*	?	?	?	?	605	?	*	*	*	*	*	*	*	0	0	0	0	0	0	*
6	0	0	0	0	0	294 ?	455 ?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
7	0	0	0	0	0	*	*	*	*	*	*	*	678 ?	794 ?	?	?	?	?	?	0	0	0	0	0	0	*
8	0	0	0	0	0	*	*	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
9	0	0	0	0	0	?	?	*	*	?	?	75 *?	*	*	*	*	*	*	*	0	0	0	0	0	0	*
10	0	0	0	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
11	0	0	0	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
12	0	0	0	0	0	473 *	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
13	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
14	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
15	0	0	0	0	0	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
16	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
17	0	0	0	0	0	290 ?	733 ?	?	846 ?	?	912 ?	582	?	*	*	*	*	*	*	0	0	0	0	0	0	3363 *?
18	0	0	0	0	0	?	?	*	*	?	420 ?	?	*	*	*	*	*	*	*	0	0	0	0	0	0	*
19	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?
20	0	0	0	0	0	336	?	?	*	*	*	*	*	*	*	*	*	*	?	?	0	0	0	0	0	*
21	0	0	0	0	0	*	*	*	*	938 *?	*	*	*	*	*	*	*	*	*	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	372	541 ?	166 ?	?	?	?	?	?	*	*	*	*	*	*	0	0	0	0	0	0	?
27	0	0	0	0	0	*	*	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*
28	0	0	0	0	0	*	307 **	*	*	*	*	*	*	*	*	*	*	*	*	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	353	509	137	467	938	646	329	678	794	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	N/A *?
S D	0	0	0	0	0	75	178	41	535	0	249	358	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/A	0	0	0	0	0	0.21	0.35	0.3	1.14	0	0.39	1.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	290	307	108	89	938	420	75	678	794	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	N/A
Max	0	0	0	0	0	473	733	166	846	938	912	582	678	794	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	N/A
n	0	0	0	0	0	23	16	5	6	2	18	14	5	2	0	0	0	0	0	0	0	0	0	0	0	0

Daylight Data Recovery: 79.6% missing; 18.3% exceed the 15% QC threshold -- 4671 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.

Mississippi Valley State University
33.5 N Latitude 90.33 W Longitude 52 Meters AMSL Time Zone -6

April 2003

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	3	80	?	?	?	?	?	?	?	?	?	?	74 ?	9	0	0	0	0	0	166 ?
2	0	0	0	0	0	3	76	?	?	?	570 ?	589 ?	734 ?	?	?	?	?	81 ?	25 ?	0	0	0	0	0	2077 ?
3	0	0	0	0	0	3	54	154	356	514	605	629 ?	631 ?	615 ?	470 ?	310 ?	167	82 ?	9	0	0	0	0	0	4600 ?
4	0	0	0	0	0	4	47	179	265 ?	299	480	236	364	472	395	160	158 ?	57	1	0	0	0	0	0	3116
5	0	0	0	0	0	3	65	115	309 ?	?	?	667 ?	?	?	?	?	?	74	11	0	0	0	0	0	1245 ?
6	0	0	0	0	0	3	51	133	66	59 ?	?	139 ?	390	65 ?	60 ?	?	?	0 ?	0	0	0	0	0	0	966 ?
7	0	0	0	0	0	2	39	175 ?	247	276	371	612	?	519 ?	465	319	177	49	12	0	0	0	0	0	3262 ?
8	0	0	0	0	0	1	33	147	289	326	641 ?	594 ?	467	471	328	332	229 ?	84 ?	12	0	0	0	0	0	3955 ?
9	0	0	0	0	0	0	6	22	35	52	122	190	218	261	106	178	74	24	1	0	0	0	0	0	1287
10	0	0	0	0	0	7	78	193 ?	278 ?	?	?	?	?	?	?	?	?	63 ?	14	0	0	0	0	0	632 ?
11	0	0	0	0	0	8	68 ?	?	?	?	?	?	?	?	?	?	246 ?	102	10	0	0	0	0	0	434 ?
12	0	0	0	0	0	12	105	?	?	?	?	?	?	?	?	?	?	97 ?	8	0	0	0	0	0	222 ?
13	0	0	0	0	0	11	107	?	?	?	?	?	?	?	?	?	?	85 ?	12	0	0	0	0	0	214 ?
14	0	0	0	0	0	11	76	251	430 ?	?	?	?	?	?	?	?	?	85 ?	15	0	0	0	0	0	867 ?
15	0	0	0	0	0	11	60	130	343	?	?	?	?	?	473 ?	464 ?	221 ?	80	10	0	0	0	0	0	1791 ?
16	0	0	0	0	0	5	63	123	235	461	662 ?	668 ?	614 ?	219	222 ?	159	158	100	6	0	0	0	0	0	3696 ?
17	0	0	0	0	0	13	52	83	108	217	546 ?	?	?	?	?	?	?	88 ?	15	0	0	0	0	0	1122 ?
18	0	0	0	0	0	13	73	103	106	120	306 ?	?	?	?	425 ?	433 ?	250 ?	108	19	0	0	0	0	0	1955 ?
19	0	0	0	0	0	8	65	189	233	343	376	211	186	159	148	208	204	62	8	0	0	0	0	0	2400
20	0	0	0	0	0	6	56	189	305	380	446	515	207	142	106	82	67	37	13	0	0	0	0	0	2551
21	0	0	0	0	0	16	62	82	87	87	94	117	423	?	?	?	?	67 ?	19	0	0	0	0	0	1053 ?
22	0	0	0	0	0	15	56	82	97	107	120	176	396	604	578 ?	433 ?	235	116	14	0	0	0	0	0	3030 ?
23	0	0	0	0	0	5	47	170	188	282	173	119	132	317	528 ?	315 ?	311 ?	94	17	0	0	0	0	0	2696 ?
24	0	0	0	0	0	1	13	95	67	62	102	396	448	300 ?	?	69	82	88	7	0	0	0	0	0	1731 ?
25	0	0	0	0	0	17	71	102	113	106	105	119	266	223	284	342	?	71 ?	21	0	0	0	0	0	1839 ?
26	0	0	0	0	0	17	60 ?	143 ?	175	158	265	258	267	408	381	320	125	81	22	0	0	0	0	0	2679
27	0	0	0	0	0	20	72	104	113	143	164	146	141	144	130	123	121	80	18	0	0	0	0	0	1519
28	0	0	0	0	0	20	88	129	140	155	165	219	180	169	157	154	126	84	13	0	0	0	0	0	1799
29	0	0	0	0	0	26	115	177	185	320	228	279	320	338	446	325	233	84	14	0	0	0	0	0	3089
30	0	0	0	0	0	34	108	211	224	242	241	300	338	298	343	210	159	79	15	0	0	0	0	0	2801

Avg	0	0	0	0	0	10	65	139	200	224	323	342	354	318	318	260	176	76	12	0	0	0	0	0	0	1960 ?
S D	0	0	0	0	0	8	25	51	105	135	197	207	171	165	163	120	67	24	6	0	0	0	0	0	0	1176
S/A	0	0	0	0	0	0.82	0.39	0.36	0.53	0.6	0.61	0.48	0.52	0.51	0.46	0.38	0.32	0.49	0	0	0	0	0	0	0	0.6
Min	0	0	0	0	0	0	6	22	35	52	94	117	132	65	60	69	67	0	0	0	0	0	0	0	0	166
Max	0	0	0	0	0	34	115	251	430	514	662	668	734	615	578	464	311	116	25	0	0	0	0	0	0	4600
n	0	0	0	0	0	179	340	283	265	246	208	216	207	189	179	188	189	293	171	0	0	0	0	0	0	3156

Daylight Data Recovery: 0.0% missing; 32.4% exceed the 15% QC threshold -- 4671 total daylight measurements.

Instrument: Eppley PSP Serial Number: 18039F3 Calibration Factor: 7.470 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.