

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

June 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	16	153	323	556	758	833	942	891	885	580	590	311	147	53	0	0	0	0	0	7039
2	0	0	0	0	1	38	99	331	525	733	713	715	797	759	579	232	47 ?	?	1	0	0	0	0	0	5569 ?
3	0	0	0	0	1	12	54	73	102	493	646	593	655	924	799	619	411	219	46	2	0	0	0	0	5647
4	0	0	0	0	1	48	211	408	610	559	589	874	979	905	758	552	321	218	41	2	0	0	0	0	7074
5	0	0	0	0	0	33	202	298	529	751	884	953	958	906	754	525	328	110	26	0	0	0	0	0	7255
6	0	0	0	0	0	7	51	125	149	?	?	490 ?	166 ?	317 ?	390 ?	460 ?	263	160	19	5	0	0	0	0	2602 ?
7	0	0	0	0	1	25	119	254	329	491	801	861	921	725	709	588	407	212	48	1	0	0	0	0	6491
8	0	0	0	0	2	47	186	407	614	735	817	978	660	566	480	583	223	187	28	3	0	0	0	0	6515
9	0	0	0	0	2	60	227	413	610	769	897	814	929	802	691	595	415	212	48	0	0	0	0	0	7484
10	0	0	0	0	3	63	188	354	510	708	801	812	786	777	579	496	341	160	46	3	0	0	0	0	6626
11	0	0	0	0	1	36	175	333	270	268 ?	?	416	551	750	480	315	230	182	42	0	0	0	0	0	4049
12	0	0	0	0	0	9	29 ?	81	123	112	186	162	149	264	362	276	168	56	36	2	0	0	0	0	2016
13	0	0	0	0	1	28	208	418	607	743	869	929	834	778	652	221	57 ?	50 ?	10	0	0	0	0	0	6406
14	0	0	0	0	1	23	99	122	276	422	358	549	648	447	352	217	163	128	43	5	0	0	0	0	3854
15	0	0	0	0	3	33	75	216	447	518	753	836 ?	827	797	458	329	297	155	6	0	0	0	0	0	5750
16	0	0	0	0	0	20	71	148	382 ?	362	438	878	640	537	505	574	311	196	38	1	0	0	0	0	5099
17	0	0	0	0	0	19	106	100	357	430	701	769	459	96 ?	212	115	162	91	44	6	0	0	0	0	3668
18	0	0	0	0	0	23	144	231	323	245	274	680	950	903	701	660	456	173	17	0	0	0	0	0	5781
19	0	0	0	0	0	20	207	386	438	712	873	776	746	896	800	609	375	176	62	3	0	0	0	0	7079
20	0	0	0	0	1	45	197	385	578	745	864	817	651	528	285	317	351	198	57	5	0	0	0	0	6025
21	0	0	0	0	1	44	195	390	587	753	875	941	946	895	783	616	425	221	59	2	0	0	0	0	7732
22	0	0	0	0	1	44	198	393	586	755	880	948	951	896	777	614	424	223	62	5	0	0	0	0	7756
23	0	0	0	0	1	45	192	386	578	743	872	932	998	894	772	615	420	218	56	1	0	0	0	0	7723
24	0	0	0	0	3	38	175	399	589	753	823	920	738	682	679	573	334	204	51	0	0	0	0	0	6960
25	0	0	0	0	1	45	204	400	569	763	839	877	973	777	780	613	456	212	57	3	0	0	0	0	7571
26	0	0	0	0	0	33	136	189	307	617	441	650	476	383	301	240	187	99	45	4	0	0	0	0	4107
27	0	0	0	0	0	32	144	325	373	391	386	680	681	568	538	308	251	222	58	6	0	0	0	0	4964
28	0	0	0	0	2	43	170	312	547	595	922	809	650	831	729	573	321	250	60	3	0	0	0	0	6817
29	0	0	0	0	3	54	181	369	577	726	790	1009	831	791	766	593	359	117	49	17	0	0	0	0	7231
30	0	0	0	0	0	1	31 ?	64	147	450	619	770	592	777	587	390	410	117	36	8	0	0	0	0	5000
Avg	0	0	0	0	1	33	148	288	440	590	705	779	734	702	594	467	307	169	41	3	0	0	0	0	5930
S D	0	0	0	0	1	16	60	121	166	189	212	189	221	219	176	163	112	54	17	3	0	0	0	0	1563
S/A	0	0	0	0	0.89	0.48	0.4	0.42	0.38	0.32	0.3	0.24	0.3	0.31	0.3	0.35	0.36	0.32	0.41	1.21	0	0	0	0	0.26
Min	0	0	0	0	0	1	29	64	102	112	186	162	149	96	212	115	47	50	1	0	0	0	0	0	2016
Max	0	0	0	0	3	63	227	418	614	769	922	1009	998	924	800	660	456	250	62	17	0	0	0	0	7756
n	0	0	0	0	57	354	346	359	353	345	336	348	353	351	355	357	348	343	357	48	0	0	0	0	5011

Daylight Data Recovery: 0.0% missing; 2.6% exceed the 15% QC threshold -- 5145 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.

June 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	*
2	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
3	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
4	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
5	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
6	0	0	0	0	*	*	*	*	*	?	?	?	?	?	115 ?	?	?	142 ?	111 ?	230	*	0	0	0	0	?
7	0	0	0	0	?	*	*	?	?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
8	0	0	0	0	?	?	71 ?	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
9	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
10	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
11	0	0	0	0	?	?	?	*	*	?	*	*	?	*	*	*	*	*	*	*	*	0	0	0	0	*
12	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	?	?	*	*	*	*	0	0	0	0	*
13	0	0	0	0	*	*	*	?	478 ?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
14	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
15	0	0	0	0	*	*	*	*	*	*	?	222 ?	*	*	*	*	*	*	*	*	*	0	0	0	0	*
16	0	0	0	0	*	*	?	?	62 ?	70 ?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
17	0	0	0	0	*	*	*	?	?	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
18	0	0	0	0	*	*	*	*	*	*	?	?	*	*	*	*	*	*	*	*	*	0	0	0	0	*
19	0	0	0	0	*	*	*	*	*	651 ?	?	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
20	0	0	0	0	?	?	?	407 ?	?	?	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
21	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
22	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
23	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
24	0	0	0	0	?	151 *	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
25	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
26	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
27	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
28	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
29	0	0	0	0	?	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
30	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*
Avg	0	0	0	0	N/A	151	71	407	270	361	N/A	222	N/A	N/A	115	N/A	N/A	142	111	115	0	0	0	0	N/A	*?
SD	0	0	0	0	0	0	0	0	294	411	0	0	0	0	0	0	0	0	0	162	0	0	0	0	0	0
S/A	0	0	0	0	0	0	0	0	1.09	1.14	0	0	0	0	0	0	0	0	0	1.41	0	0	0	0	0	0
Min	0	0	0	0	N/A	151	71	407	62	70	N/A	222	N/A	N/A	115	N/A	N/A	142	111	0	0	0	0	0	N/A	
Max	0	0	0	0	N/A	151	71	407	478	651	N/A	222	N/A	N/A	115	N/A	N/A	142	111	230	0	0	0	0	N/A	
n	0	0	0	0	0	3	5	7	9	7	0	2	0	0	2	0	0	2	3	1	0	0	0	0	0	0

Daylight Data Recovery: 88.0% missing; 11.1% exceed the 15% QC threshold -- 5145 total daylight measurements.

Instrument: Eppley NIP Serial Number: 25796E6 Calibration Factor: 8.670 $\mu\text{V}/\text{W}/\text{m}^2$ 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 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	17	159	282 ?	446	300	328	287	248	198	369	198	159	127	55	0	0	0	0	0	3172
2	0	0	0	0	1	39	104	347	507	433	436	368	405	446	351	221	45 ?	?	0	0	0	0	0	0	3704 ?
3	0	0	0	0	1 ?	12	57	73	108	378	451	491	422	162	111	112	104	80	30	3	0	0	0	0	2594
4	0	0	0	0	1	52	169 ?	394 ?	?	533	554	373	242	210	221	197	179	131	35	2	0	0	0	0	3293 ?
5	0	0	0	0	0	34	136 ?	255 ?	401 ?	602 ?	290	198	219	198	217	237	211	112	27	0	0	0	0	0	3139 ?
6	0	0	0	0	0	8	54	130	155	284	241	336	201	279	264	286	252	133	20	5	0	0	0	0	2650
7	0	0	0	0	1	26	124	263	335	428	487	378	425	382	354	285	253	129	39	2	0	0	0	0	3912
8	0	0	0	0	2	49	213 ?	?	?	550 ?	501	271	318	338	343	211	179	103	23	5	0	0	0	0	3106 ?
9	0	0	0	0	1	56	157 ?	?	?	?	574 ?	374	201	332	369	141	100	71	29	0	0	0	0	0	2406 ?
10	0	0	0	0	2	58	201 ?	370 ?	511 ?	?	603 ?	381	328	285	295	265	213	129	47	3	0	0	0	0	3692 ?
11	0	0	0	0	1	38	130 ?	321 ?	264	281 ?	71 ?	369	357	333	339	292	194	128	38	0	0	0	0	0	3156 ?
12	0	0	0	0	0	10	28 ?	85	128	117	195	170	154	273	358	283	175	58	38	3	0	0	0	0	2075
13	0	0	0	0	1	29	148 ?	?	548 ?	618 ?	643 ?	432	424	308	272	228	54 ?	41	11	0	0	0	0	0	3758 ?
14	0	0	0	0	2	25	105	128	287	438	376	538	530	456	358	228	170	130	45	5	0	0	0	0	3818
15	0	0	0	0	3	30	72	226	358 ?	462 ?	631 ?	484 ?	377	371	372	308	238	134	6	0	0	0	0	0	4073
16	0	0	0	0	0	21	73	154	284	341	393	553	405	288	244	151	135	117	37	1	0	0	0	0	3197
17	0	0	0	0	0	19	112	105	348	440	606 ?	601	367	89	217	119	166	96	43	7	0	0	0	0	3336
18	0	0	0	0	0	24	152	241	314	257	291	616	411	248	209	198	141	94	18	0	0	0	0	0	3213
19	0	0	0	0	0	23	210 ?	403 ?	392 ?	?	?	532 ?	387	272	236	195	135	88	44	5	0	0	0	0	2922 ?
20	0	0	0	0	1	49	205 ?	?	?	?	?	649	419	386	272	259	214	125	47	7	0	0	0	0	2633 ?
21	0	0	0	0	2	48	200 ?	?	?	?	?	583 ?	257	185	146	118	98	73	36	4	0	0	0	0	1750 ?
22	0	0	0	0	1	48	172 ?	?	?	?	?	540 ?	207	166	154	133	114	85	42	7	0	0	0	0	1668 ?
23	0	0	0	0	1	48	198 ?	?	?	?	?	577 ?	304	293	204	155	127	87	38	3	0	0	0	0	2036 ?
24	0	0	0	0	5 ?	41	198	?	?	?	711 ?	546 ?	278	263	236	229	172	115	41	0	0	0	0	0	2835 ?
25	0	0	0	0	1	50	173 ?	?	?	?	?	565	274	302	297	235	205	111	44	4	0	0	0	0	2260 ?
26	0	0	0	0	0	35	143	198	250	539 ?	454	516	414	323	298	247	191	103	47	4	0	0	0	0	3763
27	0	0	0	0	2 ?	35	152	318	387	409	399	612	546	537	465	313	254	137	46	8	0	0	0	0	4621
28	0	0	0	0	2	46	183	310	470 ?	469 ?	?	496	288	236	166	149	139	116	42	5	0	0	0	0	3117 ?
29	0	0	0	0	3	58	190	383 ?	?	?	604 ?	549	339	323	246	215	158	104	51	12 ?	0	0	0	0	3236 ?
30	0	0	0	0	0	2	24	66	153	389	487 ?	575	485	426	449	328	263	112	38	8	0	0	0	0	3805

Avg	0	0	0	0	1	34	141	241	332	413	449	465	341	297	281	218	168	106	35	3	0	0	0	0	0	3098 ?
S/D	0	0	0	0	1	16	56	112	131	126	161	129	101	97	88	62	57	25	13	3	0	0	0	0	0	712
S/A	0	0	0	0	0.95	0.47	0.39	0.47	0.39	0.3	0.36	0.28	0.3	0.33	0.31	0.29	0.34	0.23	0.38	0.91	0	0	0	0	0	0.23
Min	0	0	0	0	0	2	24	66	108	117	71	170	154	89	111	112	45	41	0	0	0	0	0	0	0	1668
Max	0	0	0	0	5	58	213	403	548	618	711	649	546	537	465	328	263	137	55	12	0	0	0	0	0	4621
n	0	0	0	0	54	358	288	206	194	190	209	320	359	360	358	358	351	347	358	47	0	0	0	0	0	4364

Daylight Data Recovery: 0.0% missing; 15.2% exceed the 15% QC threshold -- 5145 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.