

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

**July 2005**

**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	1	31	158	357	72 ?	438	347	621	390	824	746	541	360	150	35	3	0	0	0	0	5073
2	0	0	0	0	1	41	198	375	552	642	886	935	929	879	795	631	335	131	30	2	0	0	0	0	7362
3	0	0	0	0	2	47	185	339	482	755	734	798	886	578	595	287	306	259	75	9	0	0	0	0	6336
4	0	0	0	0	0	41	193	381	584	754	829	847	908	865	788	632	437	228	60	2	0	0	0	0	7552
5	0	0	0	0	0	44	195	368	572	629	202 ?	144 ?	75 ?	182	555	480	337	109	45	7	0	0	0	0	3944 ?
6	0	0	0	0	0	6	97	278	613	497	867	922	790	487	746	391	252	239	47	3	0	0	0	0	6233
7	0	0	0	0	1	23	70	230	218	506	618	111 ?	297 ?	490	596	433	374	93	34	2	0	0	0	0	4096
8	0	0	0	0	0	37	63	182	220	222	633	665	931	894	628	562	306	72	34	4	0	0	0	0	5455
9	0	0	0	0	0	21	120	375	538	681	729	641	709	658	119	570	380	188	28	1	0	0	0	0	5758
10	0	0	0	0	0	9	49	155	438	537	396	347	348	406	288	241	171	70	22	0	0	0	0	0	3479
11	0	0	0	0	0	13	63	123	161	123	151	148	207	167	329	309	372	219	55	4	0	0	0	0	2443
12	0	0	0	0	0	37	92	263	391	578	813	899	793	707	709	549	386	201	100	?	0	0	0	0	6518
13	0	0	0	0	0	10	151	345	526	677	742	839	833	782	675	519	407	176	34	3	0	0	0	0	6717
14	0	0	0	0	0	30	132	332	538	690	788	902	833	818	641	543	256 ?	?	0 ?	0	0	0	0	0	6504 ?
15	0	0	0	0	0	40	96	124	122	120	320	846	891	696	608	384	212	68 ?	8 ?	2	0	0	0	0	4536
16	0	0	0	0	0	35	144 ?	330	425	697	615	762	515	717	726	532	238	70	19	7	0	0	0	0	5832
17	0	0	0	0	0	22	182	340	563	650	487	802	674	640	714	604	247	92	21	0	0	0	0	0	6037
18	0	0	0	0	0	24	105	223	419	440	793	755	799	874	591	422	324	120	30	2	0	0	0	0	5923
19	0	0	0	0	0	18	159	367	567	730	867	1008	772	883	749	615	325	164	26	0	0	0	0	0	7251
20	0	0	0	0	0	33	174	308	482	612	725	695	588	734	667	597	303	123	33	2	0	0	0	0	6076
21	0	0	0	0	0	18	83	177	253	307	390	834	510	324	606	614	135 ?	26 ?	7	0	0	0	0	0	4284
22	0	0	0	0	0	9	58	154	264	343	539	653	428	349	412	282	236	133	32	0	0	0	0	0	3892
23	0	0	0	0	0	21	159	322	501	701	759	865	882	834	689	602	394	188	38	0	0	0	0	0	6955
24	0	0	0	0	0	30	154	334	537	603	527	623	799	795	741	544	385	188	38	0	0	0	0	0	6299
25	0	0	0	0	0	27	147	328	524	694	812	896	878	797	657	569	375	185	39	0	0	0	0	0	6928
26	0	0	0	0	0	25	134	311	498	668	783	685	726	667	621	555	354	165	25	0	0	0	0	0	6216
27	0	0	0	0	0	15	138	324	362	664	799	883	894	821	688	550	370	175	20	0	0	0	0	0	6704
28	0	0	0	0	0	8	66	142	148	97	290	544	409	496	666	449	163	47	13	0	0	0	0	0	3539
29	0	0	0	0	0	1	22 ?	49	174	133	276	397	484	899	756	347	157	92	41	0	0	0	0	0	3828
30	0	0	0	0	0	13	74	245	452	596	533	709	860	797	733	436	337	155	23	0	0	0	0	0	5965
31	0	0	0	0	0	23	138	323	517	610	797	891	798	839	729	557	392	166	34	0	0	0	0	0	6814
Avg	0	0	0	0	0	24	123	274	410	529	614	699	672	674	631	495	311	143	34	2	0	0	0	0	5631
S/D	0	0	0	0	0	12	49	93	162	206	220	241	239	212	153	113	82	60	20	2	0	0	0	0	1345
S/A	0	0	0	0	2.33	0.51	0.4	0.34	0.4	0.39	0.36	0.34	0.36	0.32	0.24	0.23	0.27	0.42	0.58	1.32	0	0	0	0	0.24
Min	0	0	0	0	0	1	22	49	72	97	151	111	75	167	119	241	135	26	0	0	0	0	0	0	2443
Max	0	0	0	0	2	47	198	381	613	755	886	1008	931	899	795	632	437	259	100	9	0	0	0	0	7552
n	0	0	0	0	8	350	363	369	364	370	369	358	358	369	370	372	361	345	366	37	0	0	0	0	5129

Daylight Data Recovery: 0.0% missing; 2.0% exceed the 15% QC threshold -- 5233 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.

July 2005

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	*	
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
7	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
8	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
9	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
10	0	0	0	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*	*	*	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	271 ?	*	*	*	*	*	*	*	*	*	*	*	*	*	*	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	*	?	?	?	?	?	?	?	?	?	?	?	?	?	?	319	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	0	?	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*	
20	0	0	0	0	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	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	409 ?	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
Avg	0	0	0	0	0	340	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	0	0	0	N/A	*	
S D	0	0	0	0	0	97	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	0	0	0	0	
S/A	0	0	0	0	0	0.29	0	0	0	0	0	0	0	0	0	0	0	0	0	2.83	0	0	0	0	0	
Min	0	0	0	0	0	271	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	N/A	0	
Max	0	0	0	0	0	409	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	319	0	0	0	0	N/A	0
n	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	

Daylight Data Recovery: 93.3% missing; 6.3% exceed the 15% QC threshold -- 5233 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**

**July 2005**

**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	1	33	152	266 ?	58 ?	357	352	500	380	430	323	359	267	128	36	3	0	0	0	0	3647
2	0	0	0	0	1	45	154 ?	421 ?	?	446 ?	627 ?	294	209	190	137	144	150	132	31	2	0	0	0	0	2984 ?
3	0	0	0	0	?	50	166 ?	307 ?	504 ?	569 ?	589 ?	465	377	426	389	288	242	129	55	11	0	0	0	0	4568 ?
4	0	0	0	0	0	46	156 ?	?	?	?	519 ?	304	202	234	155	118	98	70	36	2	0	0	0	0	1941 ?
5	0	0	0	0	0	39	181 ?	303 ?	?	455 ?	200 ?	127 ?	61 ?	183	343	351	263	107	42	8	0	0	0	0	2663 ?
6	0	0	0	0	0	6	100	235	406 ?	437	505	379	358	279	311	275	213	153	43	3	0	0	0	0	3703
7	0	0	0	0	?	24	71	237	226	456	434	89	314	435	430	359	239	79	34	1	0	0	0	0	3429
8	0	0	0	0	0	38	65	187	230	233	450	505	455	369	384	242	128	72	34	5	0	0	0	0	3397
9	0	0	0	0	0	23	124	290 ?	387 ?	558	385	446	462	358	118	255	238	130	28	2	0	0	0	0	3802
10	0	0	0	0	0	10	51	159	389	468	397	357	359	416	297	246	176	72	23	0	0	0	0	0	3421
11	0	0	0	0	0	13	65	127	166	128	156	153	214	174	336	317	241	89	39	5	0	0	0	0	2223
12	0	0	0	0	0	42	97	204	368	332	336	332	343	311	279	227	207	136	114 ?	?	0	0	0	0	3328
13	0	0	0	0	0	11	142	277	313	348	421	401	400	379	321	225	147	83	32	3	0	0	0	0	3502
14	0	0	0	0	0	31	117	231	259	263	290	312	375	320	341	295	203 ?	?	0 ?	0	0	0	0	0	3038 ?
15	0	0	0	0	0	46	98	128	126	125	321	462	232	315	316	265	206	52	10	2	0	0	0	0	2704
16	0	0	0	0	0	35	144 ?	277	294	393	463	372	457	370	305	283	197	73	20	7	0	0	0	0	3688
17	0	0	0	0	0	21	92	155	177	308	331	381	393	309	155	132	142	97	22	0	0	0	0	0	2714
18	0	0	0	0	0	23	106	221	386	385	300	393	251	124	221	214	185	121	31	2	0	0	0	0	2963
19	0	0	0	0	0	18	74	109	150	138	198	250	245	199	144	135	107	92	26	0	0	0	0	0	1885
20	0	0	0	0	0	34	123	201	281	388	341	293	330	263	199	150	114	86	35	3	0	0	0	0	2839
21	0	0	0	0	0	20	86	185	261	313	375	423	352	274	284	157	98	22 ?	7	0	0	0	0	0	2857
22	0	0	0	0	0	10	60	157	271	342	457	478	419	357	387	276	236	129	31	1	0	0	0	0	3612
23	0	0	0	0	0	21	86	130	164	171	208	234	216	187	214	191	114	73	27	0	0	0	0	0	2035
24	0	0	0	0	0	26	79	120	201	236	238	242	232	221	186	138	109	71	27	0	0	0	0	0	2125
25	0	0	0	0	0	24	87	143	180	212	241	226	242	289	262	208	150	97	31	0	0	0	0	0	2393
26	0	0	0	0	0	23	99	176	244	284	303	353	366	364	336	289	195	111	25	0	0	0	0	0	3169
27	0	0	0	0	0	15	94	161	267	256	262	258	265	269	257	214	160	105	20	0	0	0	0	0	2603
28	0	0	0	0	0	9	68	148	154	91	304	534	391	475	540	334	157	48	13	0	0	0	0	0	3264
29	0	0	0	0	0	1	20	52	180	138	284	408	418	335	262	310	163	95	37	0	0	0	0	0	2702
30	0	0	0	0	0	15	77	221	273	315	474	479	317	342	291	289	205	115	24	0	0	0	0	0	3437
31	0	0	0	0	0	25	96	162	220	266	337	301	312	267	289	237	231	114	30	0	0	0	0	0	2885
Avg	0	0	0	0	0	25	101	200	255	314	358	347	321	305	284	243	180	96	31	2	0	0	0	0	3017
S D	0	0	0	0	0	13	37	76	100	128	116	114	93	89	94	71	52	30	19	3	0	0	0	0	623
S/A	0	0	0	0	3.56	0.52	0.37	0.38	0.39	0.41	0.32	0.33	0.29	0.29	0.33	0.29	0.29	0.31	0.61	1.35	0	0	0	0	0.21
Min	0	0	0	0	0	1	20	52	58	91	156	89	61	124	118	118	98	22	0	0	0	0	0	0	1885
Max	0	0	0	0	1	50	181	421	504	569	627	534	462	475	540	359	267	153	114	11	0	0	0	0	4568
n	0	0	0	0	6	340	336	318	310	332	353	364	364	372	372	372	365	353	361	37	0	0	0	0	4958

Daylight Data Recovery: 0.0% missing; 5.3% exceed the 15% QC threshold -- 5233 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 18039F3    Calibration Factor: 7.470  $\mu\text{V}/\text{W}/\text{m}^2$     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.