

**Global Solar Radiation on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Watt-Hours per Square Meter**  
**Mississippi Valley State Unive - July 1999**

Field: GHI

Hour 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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	0	0	0	0	37	151	397	589	762	878	888	409	660	828	641	379	216	59	0	0	0	0	0	6893
7	0	0	0	0	0	45	207	329	534	620	763	934	826	579	787	547	165	16	12	0	0	0	0	0	6365
8	0	0	0	0	1	64	193	346	527	571	720	924	855	463	611	597	363	283	51	1	0	0	0	0	6570
9	0	0	0	0	0	38	82	183	447	475	653	714	849	755	693	596	350	218	58	1	0	0	0	0	6112
10	0	0	0	0	0	42	215	397	454	738	847	941	962	894	763	650	430	224	48	1	0	0	0	0	7604
11	0	0	0	0	0	19	97	252	412	414	583	925	559	115	390	386	89	59	19	1	0	0	0	0	4320
12	0	0	0	0	0	25	175	392	597	658	618	664	613	686	513	397	444	216	58	0	0	0	0	0	6056
13	0	0	0	0	0	33	224	327	566	779	914	850	750	640	731	379	345	206	49	0	0	0	0	0	6791
14	0	0	0	0	0	34	165	233	493	720	880	955	960	910	767	617	429	223	52	0	0	0	0	0	7437
15	0	0	0	0	0	35	176	370	560	756	877	846	901	866	761	592	392	195	50	0	0	0	0	0	7376
16	0	0	0	0	0	33	169	356	553	720	851	933	908	803	500	509	346	194	58	2	0	0	0	0	6936
17	0	0	0	0	0	35	175	371	565	529	524	400	912	772	784	614	419	213	51	0	0	0	0	0	6364
18	0	0	0	0	0	35	184	379	576	742	870	945	960	907	782	597	496	215	66	2	0	0	0	0	7756
19	0	0	0	0	0	32	175	364	565	739	576	662	659	824	575	103	377	208	50	0	0	0	0	0	5910
20	0	0	0	0	0	28	164	365	566	739	862	820	848	821	784	591	410	216	71	1	0	0	0	0	7288
21	0	0	0	0	0	32	183	387	570	681	911	953	813	818	704	618	427	213	51	0	0	0	0	0	7360
22	0	0	0	0	0	31	181	376	579	749	883	912	946	926	786	623	413	209	47	0	0	0	0	0	7659
23	0	0	0	0	0	28	165	361	555	734	860	839	756	748	783	598	402	206	54	0	0	0	0	0	7089
24	0	0	0	0	0	28	160	352	545	724	733	785	941	875	757	593	403	200	44	0	0	0	0	0	7141
25	0	0	0	0	0	19	150	323	509	666	840	865	889	765	833	481	114	104	58	0	0	0	0	0	6616
26	0	0	0	0	0	26	159	349	541	716	705	898	968	881	584	80	15	26	22	0	0	0	0	0	5969
27	0	0	0	0	0	18	153	355	520	694	853	821	892	896	671	612	274	41	15	0	0	0	0	0	6816
28	0	0	0	0	0	20	87	286	485	648	785	821	830	877	743	388	398	204	50	1	0	0	0	0	6624
29	0	0	0	0	0	23	145	343	543	712	790	898	911	829	737	581	375	184	46	0	0	0	0	0	7118
30	0	0	0	0	0	24	153	343	538	715	845	907	865	864	737	589	382	177	36	0	0	0	0	0	7176
31	0	0	0	0	0	22	146	338	541	707	816	872	788	841	769	591	395	190	40	0	0	0	0	0	7057
Avg	0	0	0	0	0	31	163	341	536	681	786	845	830	770	707	522	347	179	47	0	0	0	0	0	6785
S D	0	0	0	0	0	10	33	50	45	89	111	120	135	171	109	148	116	67	15	1	0	0	0	0	715
S/A	0	0	0	0	3	0.31	0.2	0.15	0.08	0.13	0.14	0.14	0.16	0.22	0.15	0.28	0.34	0.38	0.31	1.47	0	0	0	0	0.11
Min	0	0	0	0	0	18	82	183	412	414	524	400	409	115	390	80	15	16	12	0	0	0	0	0	4320
Max	0	0	0	0	1	64	224	397	597	779	914	955	968	926	833	650	496	283	71	2	0	0	0	0	7756

Daylight Data Recovery: 16% missing; 0% exceed the 15% QC threshold -- 5264 total daylight 5-minute measurements.

Note: Fractional values that do not appear in the hour columns are included in the calculation for daily values.

Data and Flag	Hour Column	Day Column
<value>*	20% < Missing < 100%	10% < Missing < 100%
<value>?	20% < Fail QC < 100%	10% < Fail QC < 100%
<blank>*	100% Missing	100% Missing
<blank>?	100% Fail QC	100% Fail QC

Station: MV  
Latitude: 33.50° N  
Longitude: 90.33° W  
Elevation: 52 Meters AMSL  
Time Zone: -6

Instrument: PSP  
Calibration Constant: 7.43 uV/Wm-2  
Serial Number: 18036F3  
Calibration Date: 5/15/98

**Direct Normal Solar Radiation  
Hourly Integrated and Daily Totals  
Watt-Hours per Square Meter  
Mississippi Valley State Unive - July 1999**

Field: DNI

Hour 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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
8	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	428	*	*	*	*	*	428
10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0
12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16	0	0	0	0	0	58	256	393	491	534	559	551	533	466	229	362	312	241	62	0	0	0	0	0	2098	
17	0	0	0	0	0	73	322	484	540	216	167	83	585	449	665	651	580	442	172	0	0	0	0	0	5047	
18	0	0	0	0	0	93	392	576	664	693	721	757	761	749	704	612	565	264	127	0	0	0	0	0	5429	
19	0	0	0	0	0	63	242	481	604	664	279	327	354	432	250	12	433	394	178	0	0	0	0	0	7677	
20	0	0	0	0	0	47	259	472	581	631	652	461	498	532	639	546	523	394	167	0	0	0	0	0	4714	
21	0	0	0	0	0	105	420	618	535	487	714	766	571	625	623	688	697	531	244	0	0	0	0	0	6402	
22	0	0	0	0	0	121	455	598	722	786	823	759	753	788	772	736	618	495	223	0	0	0	0	0	7622	
23	0	0	0	0	0	71	351	558	660	729	758	608	496	556	709	667	575	416	163	0	0	0	0	0	8649	
24	0	0	0	0	0	52	300	517	618	686	535	532	717	695	670	669	576	358	120	0	0	0	0	0	7316	
25	0	0	0	0	0	15	145	219	369	445	618	607	561	456	662	396	6	15	53	0	0	0	0	0	7046	
26	0	0	0	0	0	57	293	466	544	608	426	524	661	660	295	0	0	0	0	0	0	0	0	0	4567	
27	0	0	0	0	0	10	194	368	359	462	600	459	522	604	403	527	112	0	2	0	0	0	0	0	4534	
28	0	0	0	0	0	5	21	206	320	381	450	402	427	543	470	167	267	138	42	0	0	0	0	0	4621	
29	0	0	0	0	0	30	238	485	603	643	608	679	696	621	631	597	499	345	117	0	0	0	0	0	3838	
30	0	0	0	0	0	71	334	522	615	692	736	747	659	682	579	611	537	328	86	0	0	0	0	0	6792	
31	0	0	0	0	0	52	280	492	614	655	636	627	462	582	642	611	554	411	153	0	0	0	0	0	7198	
31	0	0	0	0	0	52	280	492	614	655	636	627	462	582	642	611	554	411	153	0	0	0	0	0	6770	
Avg	0	0	0	0	0	58	281	466	552	582	580	556	578	590	563	495	430	299	120	24	0	0	0	0	5303	
S D	0	0	0	0	0	31	103	115	112	145	171	178	116	105	164	224	208	163	69	98	0	0	0	0	2349	
S/A	0	0	0	0	0	0.54	0.37	0.25	0.2	0.25	0.29	0.32	0.2	0.18	0.29	0.45	0.48	0.55	0.57	4.12	0	0	0	0	0.44	
Min	0	0	0	0	0	5	21	206	320	216	167	83	354	432	229	0	0	0	0	0	0	0	0	0	0	
Max	0	0	0	0	0	121	455	618	722	786	823	766	761	788	772	736	697	531	244	428	0	0	0	0	8649	

Daylight Data Recovery: 48% missing; 0% exceed the 15% QC threshold -- 5264 total daylight 5-minute measurements.

Note: Fractional values that do not appear in the hour columns are included in the calculation for daily values.

Data and Flag	Hour Column	Day Column
<value>	20% < Missing < 100%	10% < Missing < 100%
<value>?	20% < Fail QC < 100%	10% < Fail QC < 100%
<blank>	100% Missing	100% Missing
<blank>?	100% Fail QC	100% Fail QC

Station: MV  
Latitude: 33.50° N  
Longitude: 90.33° W  
Elevation: 52 Meters AMSL  
Time Zone: -6

Instrument: NIP  
Calibration Constant: 8.67 uV/Wm-2  
Serial Number: 25796E6  
Calibration Date: 5/15/98

**Diffuse Solar Radiation on a Horizontal Surface (Shadow Band PSP)**  
**Hourly Integrated and Daily Totals**  
**Watt-Hours per Square Meter**  
**Mississippi Valley State Unive - July 1999**

Field: DHI

Hour 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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	0	0	0	0	35	88 ?	351 ?	?	?	?	632 ?	363	530 ?	?	544 ?	310 ?	200 ?	58	0	0	0	0	0	3111 ?
7	0	0	0	0	0	42	167 ?	326	502 ?	437 ?	623 ?	?	486 ?	407 ?	597 ?	448 ?	120	14	11	0	0	0	0	0	4181 ?
8	0	0	0	0	0	65	182	340	466 ?	468 ?	494	455	431	319	265	264	212	159 ?	46	1	0	0	0	0	4167
9	0	0	0	0	0	34	74	162	353	399	490	434	389	322	272	191	169	98	40	1	0	0	0	0	3428
10	0	0	0	0	0	27	92	188	236	144	195	198	221	201	201	235	121	89	40	1	0	0	0	0	2189
11	0	0	0	0	0	17	86	209	377	366	387	412	341	103	353	321	81	53	18	1	0	0	0	0	3124
12	0	0	0	0	0	23	106	147	185	311	366	394	404	371	350	312	169	97	39	0	0	0	0	0	3274
13	0	0	0	0	0	29	142 ?	232	263	173	185	290	332	333	319	248	187	108	38	0	0	0	0	0	2881
14	0	0	0	0	0	30	132	211	334	351	273	244	229	204	205	180	136	94	35	0	0	0	0	0	2658
15	0	0	0	0	0	29	99	152	214	349	290	419	390	279	226	204	169	111	41	0	0	0	0	0	2971
16	0	0	0	0	0	29	109	183	237	288	333	388	373	363	303	265	205	136	53	0	0	0	0	0	3266
17	0	0	0	0	0	29	97	149	209	348	347	298	316	340	215	163	131	90	37	0	0	0	0	0	2767
18	0	0	0	0	0	27	85	115	137	168	182	170	177	178	178	223	145	54	0	0	0	0	0	0	2016
19	0	0	0	0	0	28	117	147	170	189	315	327	296	382	340	87	175	104	37	0	0	0	0	0	2714
20	0	0	0	0	0	25	103	153	187	220	246	352	344	313	244	217	155	111	58	0	0	0	0	0	2727
21	0	0	0	0	0	26	93	129	238	284	234	209	255	246	191	164	92	69	31	0	0	0	0	0	2260
22	0	0	0	0	0	23	80	125	134	135	141	180	215	205	155	139	121	80	31	0	0	0	0	0	1763
23	0	0	0	0	0	23	86	125	147	163	178	255	274	231	205	156	129	95	41	0	0	0	0	0	2107
24	0	0	0	0	0	27	95	138	169	192	252	269	245	237	211	152	133	105	36	0	0	0	0	0	2259
25	0	0	0	0	0	18	124	231	287	313	290	287	352	349	304	273	103	90	52	0	0	0	0	0	3073
26	0	0	0	0	0	23	97	158	213	250	318	401	330	277	330	73	14	22	19	0	0	0	0	0	2524
27	0	0	0	0	0	16	114	212	312	343	323	387	398	354	349	276	215	37	13	0	0	0	0	0	3349
28	0	0	0	0	0	17	77	202	290	352	376	423	410	378	362	278	278	177	46	0	0	0	0	0	3667
29	0	0	0	0	0	21	95	144	176	213	244	250	242	257	228	196	148	97	38	0	0	0	0	0	2349
30	0	0	0	0	0	20	83	130	164	176	182	191	226	241	274	196	138	94	30	0	0	0	0	0	2145
31	0	0	0	0	0	19	88	137	168	202	250	274	347	310	257	198	144	91	29	0	0	0	0	0	2515
Avg	0	0	0	0	0	27	104	184	247	273	300	326	323	297	277	229	157	99	37	0	0	0	0	0	2826
S D	0	0	0	0	0	10	26	65	96	95	111	107	77	87	89	99	60	41	12	0	0	0	0	0	618
S/A	0	0	0	0	3.54	0.36	0.25	0.35	0.39	0.35	0.37	0.33	0.24	0.29	0.32	0.43	0.38	0.42	0.33	1.58	0	0	0	0	0.22
Min	0	0	0	0	0	16	74	115	134	135	141	170	177	103	155	73	14	14	11	0	0	0	0	0	1763
Max	0	0	0	0	0	65	182	351	502	468	623	632	486	530	597	544	310	200	58	1	0	0	0	0	4181

Daylight Data Recovery: 16% missing; 4% exceed the 15% QC threshold -- 5264 total daylight 5-minute measurements.

Note: Fractional values that do not appear in the hour columns are included in the calculation for daily values.

Data and Flag	Hour Column	Day Column
<value>*	20% < Missing < 100%	10% < Missing < 100%
<value>?	20% < Fail QC < 100%	10% < Fail QC < 100%
<blank>*	100% Missing	100% Missing
<blank>?	100% Fail QC	100% Fail QC

Station: MV  
Latitude: 33.50° N  
Longitude: 90.33° W  
Elevation: 52 Meters AMSL  
Time Zone: -6

Instrument: PSP  
Calibration Constant: 7.47 uV/Wm-2  
Serial Number: 18039F3  
Calibration Date: 5/15/98