

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

April 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	0	0	17	52	65	149 ?	84 ?	152	278	585	204 ?	90	104	101	6	0	0	0	0	0	1887 ?
2	0	0	0	0	0	4	87	295	521	714	858	936	939	869	729	544	325	106	8	0	0	0	0	0	6936
3	0	0	0	0	0	5	85	287	509	696	832	905	905	823	634	417	295	99	5	0	0	0	0	0	6496
4	0	0	0	0	0	10	104	177	417	621	734	730	740	589	517	289	149	56	8	0	0	0	0	0	5141
5	0	0	0	0	0	3	77	219	470	626	769	788	815	800	649	202	94	23	4	0	0	0	0	0	5540
6	0	0	0	0	0	0	13	72	278 ?	105 ?	191	418	573	349	190	453	162	113	15	0	0	0	0	0	2932 ?
7	0	0	0	0	0	9	70	46 ?	124	262	542	269	509	424	367	157	109	52	11	0	0	0	0	0	2952
8	0	0	0	0	0	3	35	67	222	393	404	355	321	312	343	138	99	84	7	0	0	0	0	0	2782
9	0	0	0	0	0	12	87	286	504	689	825	895	889	831	685	510	304	99	7	0	0	0	0	0	6623
10	0	0	0	0	0	8	105	291	524	693	827	895	899	687	658	518	255	97	16	0	0	0	0	0	6475
11	0	0	0	0	0	0	0 ?	?	?	69 ?	64 ?	176 ?	171	?	?	?	?	3 ?	13	0	0	0	0	0	496 ?
12	0	0	0	0	0	14	107	315	540	724	861	927	884	815	670	442	262	82	14	0	0	0	0	0	6656
13	0	0	0	0	0	12	111	302	531	711	731	381	382	121	199	211	106	16 ?	6	0	0	0	0	0	3819
14	0	0	0	0	0	4	29	196	513	477	687	913	808	768	687	529	320	117	15	0	0	0	0	0	6063
15	0	0	0	0	0	16	122	332	540	722	857	928	921	849	628	429	244	79	13	0	0	0	0	0	6681
16	0	0	0	0	0	22	135	324	507	721	852	914	911	847	711	532	323	112	11	0	0	0	0	0	6921
17	0	0	0	0	0	15	126	328	528	694	773	834	683	682	574	308	307	96	13	0	0	0	0	0	5961
18	0	0	0	0	0	28	111	242	497	705	835	889	878	766	607	493	297	94	13	0	0	0	0	0	6456
19	0	0	0	0	0	14	73	257	515	733	767	924	887	746	708	543	314	123	18	0	0	0	0	0	6622
20	0	0	0	0	0	9	67	324	525	578	847	918	896	831	468	261	211	106	12	0	0	0	0	0	6052
21	0	0	0	0	0	18	84	91	262	650	795	797	607	698	716	549	300	120	14	0	0	0	0	0	5701
22	0	0	0	0	0	10	68	274	455	595	719	775	816	537	672	552	346	118	22	0	0	0	0	0	5959
23	0	0	0	0	0	24	151	302	347	465	540	766	883	876	737	586	359	141	24	0	0	0	0	0	6201
24	0	0	0	0	0	28	166	394	610	795	928	993	986	913	778	588	345	148	22	0	0	0	0	0	7693
25	0	0	0	0	0	13	88	180	261	199	639	790	940	731	699	564	326	112	15	0	0	0	0	0	5555
26	0	0	0	0	0	8	37	87	142	244	163	307 ?	417	633	716	580	364	145	22	0	0	0	0	0	3866
27	0	0	0	0	0	29	166	364	581	768	899	967	962	891	756	574	362	142	18	0	0	0	0	0	7479
28	0	0	0	0	0	12	39	199	526	709	863	931	830	915	532	485	421	122	18	0	0	0	0	0	6601
29	0	0	0	0	0	24	116	246	310	325	336	404	495	580	406	241	184	106	15	0	0	0	0	0	3787
30	0	0	0	0	0	4	41 ?	50	119	160	255	388	293	161	339	323	333	156	26	0	0	0	0	0	2648
Avg	0	0	0	0	0	12	84	228	412	533	649	709	717	677	572	418	263	99	14	0	0	0	0	0	5299
S D	0	0	0	0	0	9	44	106	160	232	266	273	246	219	180	157	96	38	6	0	0	0	0	0	1836
S/A	0	0	0	0	0	0.71	0.52	0.47	0.39	0.44	0.41	0.39	0.34	0.32	0.31	0.38	0.37	0.38	0.43	0	0	0	0	0	0.35
Min	0	0	0	0	0	0	0	46	65	69	64	152	171	121	190	90	94	3	4	0	0	0	0	0	496
Max	0	0	0	0	0	29	166	394	610	795	928	993	986	915	778	588	421	156	26	0	0	0	0	0	7693
n	0	0	0	0	0	184	344	342	340	335	345	351	359	347	345	348	347	349	175	0	0	0	0	0	4511

Daylight Data Recovery: 0.0% missing; 3.6% exceed the 15% QC threshold -- 4679 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 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	?	?	?	?	?	750 *	*	*	*	*	*	*	*	*	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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
9	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
10	0	0	0	0	0	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
11	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
12	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
13	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
14	0	0	0	0	0	*	?	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
15	0	0	0	0	0	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
16	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
17	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
18	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
19	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
20	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
21	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
22	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
23	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
24	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
25	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
26	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
27	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
28	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
29	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
30	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	*
Avg	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	750	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	N/A *
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	750	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	N/A
Max	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	750	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	N/A
n	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Daylight Data Recovery: 97.2% missing; 2.7% exceed the 15% QC threshold -- 4679 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.

April 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	0	0	18	54	64	125 ?	73	138	286	515 ?	169	94	107	72 ?	6	0	0	0	0	0	1721
2	0	0	0	0	0	4	59 ?	?	?	?	?	?	?	?	?	?	?	70 ?	5	0	0	0	0	0	137 ?
3	0	0	0	0	0	5	68 ?	?	?	?	?	?	?	?	?	410 ?	296 ?	83 ?	4	0	0	0	0	0	866 ?
4	0	0	0	0	0	9	73 ?	182	413 ?	?	?	743 ?	711 ?	601	550	306	155	58	8	0	0	0	0	0	3810 ?
5	0	0	0	0	0	3	69	167 ?	482 ?	?	633 ?	593 ?	624 ?	?	497 ?	187	98	24	4	0	0	0	0	0	3382 ?
6	0	0	0	0	0	0	13	73	160 ?	87 ?	152	398	462 ?	240	161	233 ?	172	92 ?	16	0	0	0	0	0	2259 ?
7	0	0	0	0	0	7	71	39	112	269	414 ?	279	391 ?	395	323	162	112	52	10	0	0	0	0	0	2636
8	0	0	0	0	0	3	36	69	226	351	381	366	333	324	353	143	102	89	6	0	0	0	0	0	2783
9	0	0	0	0	0	15	90	208 ?	497 ?	?	?	?	?	?	?	?	?	111	6	0	0	0	0	0	926 ?
10	0	0	0	0	0	8	83 ?	247 ?	?	?	?	?	?	600 ?	506 ?	?	259	103	16	0	0	0	0	0	1822 ?
11	0	0	0	0	0	0	0 ?	?	?	60 ?	51 ?	170	177	?	37 ?	?	?	3 ?	14	0	0	0	0	0	512 ?
12	0	0	0	0	0	13	85	?	?	?	?	?	?	?	492 ?	446 ?	253 ?	65	13	0	0	0	0	0	1368 ?
13	0	0	0	0	0	10	94	263 ?	?	?	613 ?	395	393	125	206	217	109	15	6	0	0	0	0	0	2447 ?
14	0	0	0	0	0	4	30	155	373 ?	453	599 ?	?	?	589 ?	?	?	?	91 ?	13	0	0	0	0	0	2307 ?
15	0	0	0	0	0	12	50	90	220	498 ?	?	?	?	?	577 ?	398 ?	232 ?	83	13	0	0	0	0	0	2174 ?
16	0	0	0	0	0	18	68	136	161	337	678 ?	?	?	?	?	?	?	93 ?	9	0	0	0	0	0	1499 ?
17	0	0	0	0	0	12	59	98	149	238	570	?	687 ?	683 ?	532 ?	325	349 ?	86	13	0	0	0	0	0	3801 ?
18	0	0	0	0	0	30	89	148	182	166	258	649 ?	674 ?	518 ?	244 ?	374 ?	324 ?	79	13	0	0	0	0	0	3746 ?
19	0	0	0	0	0	14	74	146	121	126	337	435	636 ?	613 ?	?	?	244 ?	114	17	0	0	0	0	0	2878 ?
20	0	0	0	0	0	9	69	212	215	345	177	214	529 ?	693 ?	397 ?	268	194	108	13	0	0	0	0	0	3442 ?
21	0	0	0	0	0	18	85	94	263	253	204	278	423	501 ?	?	508 ?	229 ?	94	14	0	0	0	0	0	2965 ?
22	0	0	0	0	0	10	68	130	255	365	380	342	325	433	?	?	?	81 ?	21	0	0	0	0	0	2411 ?
23	0	0	0	0	0	17	60	115	224	300	331	305	323	354	501 ?	?	?	86 ?	23	0	0	0	0	0	2641 ?
24	0	0	0	0	0	18	51	67	76	83	90	96	100	110	276	513 ?	262 ?	75 ?	21	0	0	0	0	0	1838 ?
25	0	0	0	0	0	13	83	181	265	208	366	510	241	273	243	274	265 ?	79 ?	15	0	0	0	0	0	3016
26	0	0	0	0	0	8	35	89	119	251	159	215	325	268	145	131	154	97	17	0	0	0	0	0	2013
27	0	0	0	0	0	19	72	96	111	125	114	111	105	104	102	95	88	60	12	0	0	0	0	0	1216
28	0	0	0	0	0	14	38	119	217	276	176	189	324	289	311	277	221	96	17	0	0	0	0	0	2565
29	0	0	0	0	0	24	107	216	303	324	330	403	467	434	337	244	183	100	16	0	0	0	0	0	3487
30	0	0	0	0	0	4	27	49	123	165	263	391	303	168	328	269	132	69	20	0	0	0	0	0	2311
Avg	0	0	0	0	0	11	61	132	222	246	320	344	402	401	331	280	197	78	13	0	0	0	0	0	2299 ?
S D	0	0	0	0	0	7	26	63	120	120	192	176	181	189	159	126	78	27	5	0	0	0	0	0	978
S/A	0	0	0	0	0	0.68	0.43	0.47	0.54	0.49	0.6	0.51	0.45	0.47	0.48	0.45	0.39	0.34	0.42	0	0	0	0	0	0.43
Min	0	0	0	0	0	0	0	39	64	60	51	96	100	104	37	94	88	3	4	0	0	0	0	0	137
Max	0	0	0	0	0	30	107	263	497	498	678	743	711	693	577	513	349	114	23	0	0	0	0	0	3810
n	0	0	0	0	0	181	335	288	254	232	228	226	210	203	188	202	208	300	174	0	0	0	0	0	3239

Daylight Data Recovery: 0.0% missing; 30.8% exceed the 15% QC threshold -- 4679 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.