

July 2010

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	25	175	382	506	729	871	934	913	958	863	722	543	345	138	5	0	0	0	0	8109	
2	0	0	0	0	0	26	175	363	560	738	859	941	964	949	856	708	536	344	138	8	0	0	0	0	8164	
3	0	0	0	0	0	30	160	345	539	705	851	903	973	765	833	570	426	183	73	14	0	0	0	0	7370	
4	0	0	0	0	0	31	151	329	516	696	653	892	706	818	760	616	484	323	124	13	0	0	0	0	7111	
5	0	0	0	0	0	29	168	326	520	695	628	752	945	927	837	688	508	312	120	9	0	0	0	0	7466	
6	0	0	0	0	0	33	150	345	527	699	825	914	945	917	818	678	504	314	121	9	0	0	0	0	7798	
7	0	0	0	0	0	26	141	315	502	670	795	638	819	789	670	330	465	283	105	14	0	0	0	0	6563	
8	0	0	0	0	0	19	115	288	472	649	799	765	897	634	791	679	475	276	108	17	0	0	0	0	6984	
9	0	0	0	0	0	22	117	288	435	589	510	168	552	518	345	349	239	221 ?	26 ?	0	0	0	0	0	4378	
10	0	0	0	0	0	6	31 ?	63	123	331 ?	493	908	814	769	753	484	467	328	129	9	0	0	0	0	5706	
11	0	0	0	0	0	44	165	316	524	701	843	691	927	863	842	701	518	313	131	7	0	0	0	0	7587	
12	0	0	0	0	0	7	16 ?	?	80	66 ?	74 ?	173	246	423	192	333	304	124	103	19	0	0	0	0	2161 ?	
13	0	0	0	0	0	26	98	220	236	292	455	379	492	461	485	303	120	76	51	24	0	0	0	0	3719	
14	0	0	0	0	0	5	27	71	168 ?	418	608	714	681	650	603	497	119	292	128	13	0	0	0	0	4994	
15	0	0	0	0	0	17	97	310	503	604	393	967	684	935	686	339	514	340	117	11	0	0	0	0	6518	
16	0	0	0	0	0	23	112	243	474	566	716	730	778	744	766	667	417	197	87	15	0	0	0	0	6535	
17	0	0	0	0	0	30	90	257	340	101 ?	?	128 ?	461	772	738	614	353	273	28	1	0	0	0	0	4188 ?	
18	0	0	0	0	0	25	100	241	166	485	564	626	851	805	651	589	350	121	21 ?	2	0	0	0	0	5597	
19	0	0	0	0	0	20	38	62	150	297	264	468	713	671	801	617	493	316	111	11	0	0	0	0	5032	
20	0	0	0	0	0	14	120	342	484	554	621	279	456	96	576	625	375	239	73	10	0	0	0	0	4865	
21	0	0	0	0	0	3	6 ?	69	244	292	373	598	581	804	679	557	310	212	82	27	0	0	0	0	4837	
22	0	0	0	0	0	7	37	97	224	335	651	737	696	662	535	607	499	299	103	13	0	0	0	0	5500	
23	0	0	0	0	0	18	103	269	401	364	587	795	783	777	740	346	501	291	108	21	0	0	0	0	6103	
24	0	0	0	0	0	15	160	284	493	639	725	790	921	863	821	666	493	301	104	12	0	0	0	0	7287	
25	0	0	0	0	0	21	115	293	481	650	781	838	804	630	808	662	489	282	69	17	0	0	0	0	6941	
26	0	0	0	0	0	5	49	76	283	416	623	643	888	896	834	685	391	296	94	11	0	0	0	0	6190	
27	0	0	0	0	0	12	49	162 ?	113 ?	265	220	154	243	646	628	509	458	233	58	10	0	0	0	0	3762	
28	0	0	0	0	0	11	60	192	249	387	327	585	531	746	575	349	268	239	70	6	0	0	0	0	4597	
29	0	0	0	0	0	4	26	58	85	129	203	479	775	812	668	415	147	192	47	10	0	0	0	0	4049	
30	0	0	0	0	0	15	59	228	543	701	708	806	868	848	745	546	353	249	87	6	0	0	0	0	6762	
31	0	0	0	0	0	2	22	75	216	267	140	242	365	248	179	89	80	50	15	5	0	0	0	0	1995	
Avg	0	0	0	0	0	18	94	230	360	485	572	633	718	723	680	533	394	254	89	11	0	0	0	0	5770	
S D	0	0	0	0	0	11	54	109	166	207	232	264	211	201	179	160	135	78	36	6	0	0	0	0	1646	
S/A	0	0	0	0	0	0.57	0.57	0.47	0.46	0.43	0.41	0.42	0.29	0.28	0.26	0.3	0.34	0.31	0.4	0.55	0.28	0	0	0	0	0.29
Min	0	0	0	0	0	2	6	58	80	66	74	128	243	96	179	89	80	50	15	0	0	0	0	0	1995	
Max	0	0	0	0	0	44	175	382	560	738	871	967	973	958	863	722	543	345	138	27	0	0	0	0	8164	
n	0	0	0	0	0	268	353	352	362	352	355	363	367	372	371	372	372	366	352	245	0	0	0	0	0	5222

Daylight Data Recovery: 0.0% missing; 0.0% untested; 2.4% exceed the 15% QC threshold -- 5349 total daylight measurements.

Instrument: Eppley PSP Serial Number: 25821F3 Calibration Factor: 9.020 $\mu\text{V}/\text{W}/\text{m}^2$ 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.

July 2010

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	0	*	
3	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
4	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
5	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
6	0	0	0	0	0	*	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
7	0	0	0	0	0	272 ?	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
8	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	?	0	0	0	0	*	
9	0	0	0	0	0	*	*	*	*	*	*	*	*	*	?	?	?	?	?	*	0	0	0	0	*	
10	0	0	0	0	0	?	?	?	111 ?	?	*	*	*	*	*	*	*	*	*	*	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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
14	0	0	0	0	0	824 ?	839 ?	?	?	?	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
15	0	0	0	0	0	*	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
16	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
17	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
18	0	0	0	0	0	*	?	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
19	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
20	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
21	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
22	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
23	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
24	0	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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
Avg	0	0	0	0	0	548	839	N/A	111	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	*
SD	0	0	0	0	0	391	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	0.71	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	272	839	N/A	111	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	
Max	0	0	0	0	0	824	839	N/A	111	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	
n	0	0	0	0	0	8	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Daylight Data Recovery: 94.5% missing; 0.0% untested; 5.1% exceed the 15% QC threshold -- 5349 total daylight measurements.

Instrument: Eppley NIP Serial Number: 17664E6 Calibration Factor: 8.480 $\mu\text{V}/\text{W}/\text{m}^2$ 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.

Bluefield State College
37.27 N Latitude 81.24 W Longitude 803 Meters AMSL Time Zone -5

July 2010

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	24	70	70	80	115	91	136	116	77	72	67	65	71	66	6	0	0	0	0	1125	
2	0	0	0	0	0	23	52	63	75	82	98	127	117	88	78	74	67	66	62	8	0	0	0	0	1081	
3	0	0	0	0	0	21	55	72	81	92	116	135	193	293	334	254	151	128	58	14	0	0	0	0	1997	
4	0	0	0	0	0	23	71	151	140	148	219	282	305	312	276	223	175	122	73	14	0	0	0	0	2535	
5	0	0	0	0	0	25	71	96	111	141	261	232	191	212	162	132	113	89	61	10	0	0	0	0	1906	
6	0	0	0	0	0	24	54	66	79	91	111	124	116	109	111	107	98	76	51	10	0	0	0	0	1228	
7	0	0	0	0	0	24	74	106	136	162	201	258	259	277	305	213	190	142	76	14	0	0	0	0	2437	
8	0	0	0	0	0	20	86	150	205	241	266	311	376	348	344	343	230	167	87	18	0	0	0	0	3192	
9	0	0	0	0	0	22	81	159	203	385	452	176	437	412	320	325	239	146	36 ?	0	0	0	0	0	3393	
10	0	0	0	0	0	6	28	59	130	211	316	272	258	219	189	222	150	99	53	10	0	0	0	0	2224	
11	0	0	0	0	0	23	60	70	72	91	105	198	158	119	104	99	94	108	51	7	0	0	0	0	1360	
12	0	0	0	0	0	8	15	28 ?	80	62 ?	66	184	261	447	200	290	255	127	105	20	0	0	0	0	2149	
13	0	0	0	0	0	30	94	182	240	293	463	404	500	475	451	238	128	81	54	26	0	0	0	0	3660	
14	0	0	0	0	0	5	28	79	171	375	413	360	355	275	270	203	118	163	86	14	0	0	0	0	2914	
15	0	0	0	0	0	20	99	127	125	190	258	297	359	359	308	216	204	124	54	12	0	0	0	0	2752	
16	0	0	0	0	0	23	88	176	172	289	265	310	289	305	210	200	194	135	82	16	0	0	0	0	2755	
17	0	0	0	0	0	31	76	160	245	98	?	100 ?	390	420	407	292	233	143	30	2	0	0	0	0	2627 ?	
18	0	0	0	0	0	24	79	169	175	329	374	336	393	333	290	289	225	113	17	2	0	0	0	0	3145	
19	0	0	0	0	0	23	40	65	159	308	283	438	416	322	234	192	125	113	59	12	0	0	0	0	2790	
20	0	0	0	0	0	12	57	96	161	271	308	231	320	104	326	225	257	153	71	10	0	0	0	0	2604	
21	0	0	0	0	0	3	8 ?	68	250	292	322	441	441	372	409	331	253	194	85	28	0	0	0	0	3495	
22	0	0	0	0	0	8	39	102	228	294	319	318	345	277	214	222	135	112	65	13	0	0	0	0	2692	
23	0	0	0	0	0	19	82	177	327	337	354	300	263	210	156	242	134	88	59	22	0	0	0	0	2770	
24	0	0	0	0	0	15	66	181	415	493	330	256	213	192	141	107	92	80	55	12	0	0	0	0	2649	
25	0	0	0	0	0	22	76	243	423 ?	636 ?	454	284	305	282	182	142	129	111	46	17	0	0	0	0	3352 ?	
26	0	0	0	0	0	5	52	79	278	382	491 ?	321	273	235	211	235	224	137	54	11	0	0	0	0	2987	
27	0	0	0	0	0	13	51	153	106 ?	277	234	165	255	533	359	311	149	97	58	9	0	0	0	0	2769	
28	0	0	0	0	0	13	63	194	240	350	308	481	361	408	300	314	247	126	50	6	0	0	0	0	3462	
29	0	0	0	0	0	4	26	61	90	136	215	386	378	297	304	287	125	165	45	11	0	0	0	0	2531	
30	0	0	0	0	0	18	62	158 ?	?	?	391 ?	679	277	175	258	315	271	79	50	6	0	0	0	0	2738 ?	
31	0	0	0	0	0	1	23	80	227	283	145	259	384	265	193	95	85	47	15	4	0	0	0	0	2106	
Avg	0	0	0	0	0	17	59	117	181	248	274	284	300	282	249	220	166	116	59	12	0	0	0	0	2562	
S D	0	0	0	0	0	8	24	53	94	134	121	124	100	117	99	82	63	34	19	7	0	0	0	0	689	
S/A	0	0	0	0	0	0.5	0.4	0.46	0.52	0.54	0.44	0.44	0.33	0.41	0.4	0.37	0.38	0.3	0.33	0.56	0	0	0	0	0.27	
Min	0	0	0	0	0	1	8	28	72	62	66	100	116	77	72	67	65	47	15	0	0	0	0	0	1081	
Max	0	0	0	0	0	31	99	243	423	636	491	679	500	533	451	343	271	194	105	28	0	0	0	0	3660	
n	0	0	0	0	0	250	361	356	345	339	347	362	370	372	372	372	372	372	371	369	245	0	0	0	0	5204

Daylight Data Recovery: 0.0% missing; 0.0% untested; 2.7% exceed the 15% QC threshold -- 5349 total daylight measurements.

Instrument: Eppley PSP Serial Number: 17860F3 Calibration Factor: 7.010 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.