

May 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	23	97	297	502	692	769	799	826	665	601	475	313	117	42	8	0	0	0	0	6225
2	0	0	0	0	0	19	95	224	417	478	683	535	872	648	645	378	314	132	26	2	0	0	0	0	5468
3	0	0	0	0	0	4	30	80	120	158	295	564	577	582	359	331	476	202	33	2	0	0	0	0	3814
4	0	0	0	0	0	17	132	327	524	697	839	915	973	850	818	649	475	262	58	2	0	0	0	0	7538
5	0	0	0	0	0	28	151	338	523	701	763	817	991	931	819	655	470	270	63	3	0	0	0	0	7523
6	0	0	0	0	0	22	104	299	469	636	618	781	880	780	703	637	467	267	64	3	0	0	0	0	6729
7	0	0	0	0	0	23	144	343	491	670	826	923	917	890	770	603	452	256	64	4	0	0	0	0	7378
8	0	0	0	0	0	1	12 ?	265	378	655	870	931	958	922	834	692	484	279	79	7	0	0	0	0	7367
9	0	0	0	0	0	9	51	122	225	246	326	549	697	730	727	496	417	263	61	7	0	0	0	0	4926
10	0	0	0	0	0	49	180	339	545	737	833	862	891	665	546	380	277	160	49	6	0	0	0	0	6520
11	0	0	0	0	0	5	6 ?	112 ?	213	216	237	293	486	242	396	322	186	46 ?	27 ?	8	0	0	0	0	2795 ?
12	0	0	0	0	0	16	64	273	276	569	609	345	129	181	137 ?	394	218	204	63	10	0	0	0	0	3486
13	0	0	0	0	0	18	119	303	464	460	428	732	837	710	520	561	366	205	56	6	0	0	0	0	5785
14	0	0	0	0	0	12	82	125	224	282	391	508	542	626	612	428	85 ?	49 ?	2 ?	0	0	0	0	0	3969 ?
15	0	0	0	0	0	7	24	63	144	257 ?	553 ?	723	931	820	722	590	435	229	51	4	0	0	0	0	5553
16	0	0	0	0	0	24	112	294	494 ?	636 ?	570	622	464	302	75	65 ?	74	39	15 ?	2	0	0	0	0	3790 ?
17	0	0	0	0	0	4	17 ?	40 ?	51 ?	90 ?	412	303	476	712	624	141	240	231 ?	41	5	0	0	0	0	3386 ?
18	0	0	0	0	0	20	126	195 ?	572 ?	528	425	271	252	231 ?	220 ?	485	136 ?	66 ?	12 ?	2	0	0	0	0	3541 ?
19	0	0	0	0	0	12	77	167	254	256 ?	268	131	297 ?	222 ?	132	220	119	66 ?	14 ?	5	0	0	0	0	2241 ?
20	0	0	0	0	0	13	51	270	546	737	850	948	951	929	815	678	448	222	88	9	0	0	0	0	7553
21	0	0	0	0	0	41	146	221	319	381	459	387	357	164	130	83	54	35	13 ?	6	0	0	0	0	2799
22	0	0	0	0	0	16	68	106 ?	126 ?	101 ?	?	424 ?	413	554	351	465	451	267	92	12	0	0	0	0	3447 ?
23	0	0	0	0	0	24	104 ?	371 ?	486	435	599	527	471	417	567	386	497	290	71	5	0	0	0	0	5248
24	0	0	0	0	0	15	73	152	170	210	296	361	548	425	505	472	334	192	60	14	0	0	0	0	3827
25	0	0	0	0	0	13	80	102	122	305	446	604	576	517	764	684	387	294	68	28	0	0	0	0	4989
26	0	0	0	0	0	44	177	315	452	617	831	686	714	870	790	615	362	299	110	3	0	0	0	0	6883
27	0	0	0	0	0	26	170	331	514	675	697	900	916	611	557	262 ?	?	76 ?	74	38	0	0	0	0	5844 ?
28	0	0	0	0	0	23	134	338 ?	504	676 ?	748	304	164 ?	?	75 ?	72 ?	?	56	44	8	0	0	0	0	3148 ?
29	0	0	0	0	0	39	196	340	531	705	818	926	770	533	423	388	251	219	44	5	0	0	0	0	6189
30	0	0	0	0	0	31	136	405	535	694	719	937	684	893	449	260	117	88	46	13	0	0	0	0	6006
31	0	0	0	0	0	30	186	325	549	434	331	223 ?	829	719 ?	648	539	244	152	75	16	0	0	0	0	5299
Avg	0	0	0	0	0	20	101	241	379	482	584	608	658	611	527	432	315	179	52	8	0	0	0	0	5138
S D	0	0	0	0	0	12	54	105	166	214	208	254	258	243	242	188	144	91	26	8	0	0	0	0	1636
S/A	0	0	0	0	0	0.59	0.54	0.44	0.44	0.44	0.36	0.42	0.39	0.4	0.46	0.44	0.46	0.51	0.5	0.99	0	0	0	0	0.32
Min	0	0	0	0	0	1	6	40	51	90	237	131	129	164	75	65	54	35	2	0	0	0	0	0	2241
Max	0	0	0	0	0	49	196	405	572	737	870	948	991	931	834	692	497	299	110	38	0	0	0	0	7553
n	0	0	0	0	0	276	345	342	344	332	354	358	363	339	356	349	331	340	346	145	0	0	0	0	4920

Daylight Data Recovery: 0.0% missing; 0.0% untested; 6.4% exceed the 15% QC threshold -- 5257 total daylight measurements.

Instrument: Eppley PSP Serial Number: 25821F3 Calibration Factor: 9.020 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.

May 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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	
8	0	0	0	0	0	*	*	*	*	886 ?	*	*	*	*	*	*	*	*	*	*	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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	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	?	?	?	443 ?	473 ?	*	*	*	*	*	?	?	?	?	?	0	0	0	0	?	
17	0	0	0	0	0	21 ?	?	?	?	?	?	?	*	*	*	*	66 ?	?	840 ?	767	0	0	0	0	?	
18	0	0	0	0	0	?	?	?	756 ?	?	*	*	*	?	88 ?	?	126 ?	74 ?	696 ?	?	0	0	0	0	1740 *?	
19	0	0	0	0	0	71	43 ?	?	?	?	?	?	65 ?	?	*	*	*	*	*	*	0	0	0	0	179 *?	
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	556	261 ?	513 ?	*	*	*	*	*	*	*	*	*	*	*	*	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	?	?	243 *?	*	?	*	?	*	*	?	*	?	?	?	?	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	*	*	*	*	*	*	?	?	*	*	*	*	*	*	315 *	302 *	0	0	0	0	*
Avg	0	0	0	0	0	216	152	378	599	543	N/A	164	65	N/A	88	N/A	96	74	617	535	0	0	0	0	N/A *?	
SD	0	0	0	0	0	296	154	191	221	315	0	0	0	0	0	0	43	0	271	329	0	0	0	0	0	
St/A	0	0	0	0	0	1.37	1.02	0.5	0.37	0.58	0	0	0	0	0	0.45	0	0.44	0.62	0	0	0	0	0		
Min	0	0	0	0	0	21	43	243	443	269	N/A	164	65	N/A	88	N/A	66	74	315	302	0	0	0	0	N/A	
Max	0	0	0	0	0	556	261	513	756	886	N/A	164	65	N/A	88	N/A	126	74	840	767	0	0	0	0	N/A	
n	0	0	0	0	0	20	14	5	6	10	0	3	3	0	4	0	4	5	11	6	0	0	0	0	0	

Daylight Data Recovery: 80.7% missing; 0.0% untested; 17.3% exceed the 15% QC threshold -- 5257 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

May 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	23	62	85	93	131	219	385	410	381	246	397 ?	341	126	44	8	0	0	0	0	2953
2	0	0	0	0	0	23	80	188	291	355	428	464	272	426	491	323 ?	315	142	28	2	0	0	0	0	3829
3	0	0	0	0	0	3	31	81	129	171	280	412	446	416	358	293	397 ?	140 ?	34	2	0	0	0	0	3192 ?
4	0	0	0	0	0	13	51	65	77	89	94	140	157	261	580 ?	?	?	?	68	2	0	0	0	0	1597 ?
5	0	0	0	0	0	18	43	52	59	78	105	151	168	130	112	121	342 ?	?	63	2	0	0	0	0	1442 ?
6	0	0	0	0	0	20	71	118	164	222	303	329	290	239	215	199	431 ?	?	65	3	0	0	0	0	2670 ?
7	0	0	0	0	0	16	45	68	169	203	158	119	145	115	141	295	?	?	75	5	0	0	0	0	1554 ?
8	0	0	0	0	0	0	12 ?	156	183	159	101	151	112	123	117	379 ?	?	195 ?	63 ?	6	0	0	0	0	1757 ?
9	0	0	0	0	0	8	48	106	204	232	277	404	406	356	352	409	253 ?	89 ?	54	7	0	0	0	0	3203 ?
10	0	0	0	0	0	25	63	75	94	101	177	274	322	449	478	394	294	170	52	6	0	0	0	0	2975
11	0	0	0	0	0	4	6 ?	116 ?	207	232	259	308	470	222	399	337	197	40	24	8	0	0	0	0	2831
12	0	0	0	0	0	16	67	165	253	394	506	344	139	169	113	362	215	228	70	10	0	0	0	0	3053
13	0	0	0	0	0	18	76	181	251	297	328	299	361	425	520	539 ?	328 ?	224	60	6	0	0	0	0	3912
14	0	0	0	0	0	12	86	128	225	280	345	414	412	467	548 ?	325 ?	43 ?	49	2 ?	0	0	0	0	0	3336 ?
15	0	0	0	0	0	7	25	67	153	258	382	380	304	404	608 ?	484 ?	?	246 ?	54	5	0	0	0	0	3376 ?
16	0	0	0	0	0	27	100	156	173 ?	364 ?	453	450	410	304	72	54 ?	78	41	15	2	0	0	0	0	2700
17	0	0	0	0	0	4	16	32	40	127 ?	408	314	493	591 ?	574 ?	149	212	156 ?	41	4	0	0	0	0	3159 ?
18	0	0	0	0	0	20	81	194	288 ?	418	396	278	256	276	244 ?	357 ?	115	94	15	1	0	0	0	0	3033 ?
19	0	0	0	0	0	13	81	176	265	278 ?	283	138	352	226	138	233	127	57	14	5	0	0	0	0	2387
20	0	0	0	0	0	14	53	162	120	101	128	126	291	721 ?	?	?	219 ?	158 ?	95	10	0	0	0	0	2198 ?
21	0	0	0	0	0	46	118	222	324	384	450	399	379	180	142	86	55	35	13	6	0	0	0	0	2839
22	0	0	0	0	0	19	71	88	212	102 ?	174	463 ?	422	466	274	308	177	123	50	12	0	0	0	0	2963
23	0	0	0	0	0	26	102 ?	106 ?	124	233	295	339	294	293	295	270	252	187	62	5	0	0	0	0	2884
24	0	0	0	0	0	17	75	152	178	213	312	351	454	356	361	247	160	148	63	16	0	0	0	0	3103
25	0	0	0	0	0	13	78	107	129	313	440	562	544	410	209	151	168	154	71	29	0	0	0	0	3377
26	0	0	0	0	0	27	71	144	214	269	231	273	260	187	109	122	108	154	75	4	0	0	0	0	2244
27	0	0	0	0	0	25	103	149	202	212	311	286	287	274	250	182	34 ?	57	77	38	0	0	0	0	2487
28	0	0	0	0	0	26	120	150	185	222 ?	301	271	140	48 ?	70	55 ?	?	53	46	8	0	0	0	0	1696 ?
29	0	0	0	0	0	24	68	93	128	156	169	158	241	294	248	268	208	209	47	6	0	0	0	0	2317
30	0	0	0	0	0	25	71	114	167	172	418	243	345	290	266	207	111	93	47	14	0	0	0	0	2585
31	0	0	0	0	0	24	74	109	224	345	254	229	445	539 ?	306	277	180	160	80	17	0	0	0	0	3263
Avg	0	0	0	0	0	18	66	123	178	229	290	305	323	324	295	270	206	131	51	8	0	0	0	0	2739
S D	0	0	0	0	0	9	29	47	70	97	116	117	151	166	124	109	63	23	8	0	0	0	0	0	645
S/A	0	0	0	0	0	0.52	0.43	0.38	0.39	0.42	0.4	0.38	0.36	0.47	0.56	0.46	0.53	0.48	0.46	1	0	0	0	0	0.24
Min	0	0	0	0	0	0	6	32	40	78	94	119	112	48	70	54	34	35	2	0	0	0	0	0	1442
Max	0	0	0	0	0	46	120	222	324	418	506	562	544	721	608	539	431	246	95	38	0	0	0	0	3912
n	0	0	0	0	0	257	351	362	364	350	370	364	371	346	330	293	249	282	358	144	0	0	0	0	4795

Daylight Data Recovery: 0.0% missing; 0.0% untested; 8.8% exceed the 15% QC threshold -- 5257 total daylight measurements.

Instrument: Eppley PSP Serial Number: 17860F3 Calibration Factor: 7.010 $\mu\text{V}/\text{W}/\text{m}^2$ 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.