

**May 2011**

**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	7	29	59 ?	79 ?	98	169	498	550	657	705	444	359	159	59	2	0	0	0	0	3873 ?	
2	0	0	0	0	0	10	90	272	493	528	593	780	603	647	396	471	398	232	29	0	0	0	0	0	5543	
3	0	0	0	0	0	7	113	245	333	410	665	763	818	660	521	133	74 ?	?	11	5	0	0	0	0	4758	
4	0	0	0	0	0	10	65	160	293	580	453	483	410	220	305	122 ?	89 ?	43 ?	10	1	0	0	0	0	3247 ?	
5	0	0	0	0	0	12	92	292	568	733	873	947	971	924	820	666	472	265	59	1	0	0	0	0	7696	
6	0	0	0	0	0	22	137	237	353	329	309	517	146	517	553	429	312	201	57	6	0	0	0	0	4127	
7	0	0	0	0	0	19	120	304	510	706	804	840	691	600	494	204	65	56	25	0	0	0	0	0	5437	
8	0	0	0	0	0	2	29	83	145	177	455	601	601	818	788	699	499	294	72	5	0	0	0	0	5268	
9	0	0	0	0	0	26	141	292	529	702	846	893	808	901	799	644	453	256	64	5	0	0	0	0	7358	
10	0	0	0	0	0	14	49	225	428	598	741	709	759	671	354	193	170	44 ?	0 ?	0	0	0	0	0	4956	
11	0	0	0	0	0	10	65	193	232	526	420	688	500	561	491	458	377	232	67	5	0	0	0	0	4824	
12	0	0	0	0	0	14	97	161	345	491	649	727	914	681	797	623	422	247	76	8	0	0	0	0	6251	
13	0	0	0	0	0	15	97	225	213	604	810	737	459	739	555	328	179	?	17	6	0	0	0	0	4983	
14	0	0	0	0	0	5	67	83	66	136	320	152	307	353	684	501	127	46	10 ?	6	0	0	0	0	2864	
15	0	0	0	0	0	2	19 ?	55	165	306	381	452	728	581	291	294	124	101	28	12	0	0	0	0	3539	
16	0	0	0	0	0	10	53	109	197	292	238	309	543	443	356	268	182	67 ?	11 ?	5	0	0	0	0	3083	
17	0	0	0	0	0	3	22	42	56	80	157	170	114	112 ?	134	99	91 ?	38	8 ?	3	0	0	0	0	1128	
18	0	0	0	0	0	16	79	149	161	223	228	320	398	213	245 ?	275	210	166	28	2	0	0	0	0	2713	
19	0	0	0	0	0	5	35	59	152	98	94	133	184	200	160	113	205	74	29	8	0	0	0	0	1548	
20	0	0	0	0	0	15	64	176	197	335	582	631	803	491	274	198	221	213	82	3	0	0	0	0	4283	
21	0	0	0	0	0	20	162	343	536	700	846	963	965	905	766	620	394	213	70	7	0	0	0	0	7510	
22	0	0	0	0	0	19	107	327	529	675	532	635	781	761	760	658	300	73	8 ?	0	0	0	0	0	6166	
23	0	0	0	0	0	28	165	169	188	225	447	849	773	798	578	510	431	299	91	7	0	0	0	0	5557	
24	0	0	0	0	0	34	143	253	210 ?	?	79 ?	354	967	774	760	247	40 ?	83	45	13	0	0	0	0	4002 ?	
25	0	0	0	0	0	27	99	197	386	438	706	705	950	897	794	662	327	276	85	22	0	0	0	0	6571	
26	0	0	0	0	0	16	98	283	378	724	754	780	793	713	327	227	294	112	35 ?	3	0	0	0	0	5536	
27	0	0	0	0	0	13	57	76	87	157	290	237	601	279	291	117 ?	183	95	49	13	0	0	0	0	2544	
28	0	0	0	0	0	23	137	227	518	663	792	861	970	810	706	647	434	205	82	5	0	0	0	0	7080	
29	0	0	0	0	0	18	96	340	521	678	829	911	935	893	802	649	477	277	86	7	0	0	0	0	7519	
30	0	0	0	0	0	31	131	311	514	699	832	917	911	810	791	643	468	278	92	9	0	0	0	0	7437	
31	0	0	0	0	0	33	149	342	584	708	814	907	941	919	803	654	467	272	91	7	0	0	0	0	7693	
Avg	0	0	0	0	0	16	91	203	321	454	539	628	674	631	552	413	285	170	48	6	0	0	0	0	5003	
S D	0	0	0	0	0	9	43	97	174	229	258	256	259	239	227	213	148	93	31	5	0	0	0	0	1869	
S/A	0	0	0	0	0	0.58	0.47	0.48	0.54	0.5	0.48	0.41	0.38	0.38	0.41	0.51	0.52	0.55	0.64	0.83	0	0	0	0	0	0.37
Min	0	0	0	0	0	2	19	42	56	80	79	133	114	112	134	99	40	38	0	0	0	0	0	0	1128	
Max	0	0	0	0	0	34	165	343	584	733	873	963	971	924	820	699	499	299	92	22	0	0	0	0	7696	
n	0	0	0	0	0	276	363	363	360	356	363	371	370	368	366	359	347	321	340	144	0	0	0	0	0	5068

Daylight Data Recovery: 0.0% missing; 0.0% untested; 3.6% exceed the 15% QC threshold -- 5256 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 2011

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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	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	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	N/A	N/A	N/A	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	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	0	0
Min	0	0	0	0	0	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	N/A	N/A	N/A	0	0	0	0	N/A	N/A
Max	0	0	0	0	0	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	N/A	N/A	N/A	0	0	0	0	N/A	N/A
n	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	0	0

Daylight Data Recovery: 100.0% missing; 0.0% untested; 0.0% exceed the 15% QC threshold -- 5256 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 2011**

**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	7	30	50 ?	68 ?	96	181	481	578	588 ?	335 ?	400 ?	345 ?	174	64	2	0	0	0	0	3399 ?
2	0	0	0	0	0	10	68	136	231	456 ?	583 ?	616 ?	576 ?	484 ?	439	472 ?	392 ?	158 ?	31	0	0	0	0	0	4651 ?
3	0	0	0	0	0	7	95	200	319	385	607 ?	615 ?	667 ?	610 ?	476 ?	142	75 ?	16 ?	11	5	0	0	0	0	4231 ?
4	0	0	0	0	0	12	67	161	289	423 ?	397 ?	519	408	236	309	77	77	33 ?	9	0	0	0	0	0	3018 ?
5	0	0	0	0	0	11	90	221	?	?	?	?	?	?	?	?	?	?	69	1	0	0	0	0	392 ?
6	0	0	0	0	0	25	123	240	364	353	338	449 ?	142	478	447 ?	252 ?	260 ?	192 ?	63	5	0	0	0	0	3731 ?
7	0	0	0	0	0	20	104	311 ?	?	?	?	?	612 ?	617	542	222	71	60	26	0	0	0	0	0	2586 ?
8	0	0	0	0	0	2	29	89	156	190	442	431 ?	396 ?	475 ?	564 ?	?	?	?	72	5	0	0	0	0	2850 ?
9	0	0	0	0	0	34	135	?	?	?	?	?	608 ?	?	?	?	?	214 ?	73	4	0	0	0	0	1068 ?
10	0	0	0	0	0	17	52	199 ?	399 ?	473 ?	?	585 ?	655 ?	596 ?	329	211	184	34 ?	0 ?	0	0	0	0	0	3733 ?
11	0	0	0	0	0	10	69	207	226	472 ?	451	612 ?	546	544 ?	473 ?	381 ?	374 ?	249	74	5	0	0	0	0	4694 ?
12	0	0	0	0	0	14	104	172	375	405 ?	372 ?	374 ?	761 ?	569 ?	?	?	391 ?	228 ?	85	8	0	0	0	0	3858 ?
13	0	0	0	0	0	15	106	170 ?	198	189 ?	?	487 ?	431	641 ?	535 ?	357	184	?	17	6	0	0	0	0	3336 ?
14	0	0	0	0	0	5	72	90	70	145	342	157	314	318	606 ?	430 ?	119	50	10 ?	3 ?	0	0	0	0	2731
15	0	0	0	0	0	2	18	58	176	330	367	486	429 ?	514 ?	310	272	135	107	28	12	0	0	0	0	3245
16	0	0	0	0	0	10	56	117	210	314	251	329	544	482	388	291	195	60 ?	11	4	0	0	0	0	3263
17	0	0	0	0	0	2	23	43	60	86	169	183	123	106	143	106	73	40	10	3	0	0	0	0	1171
18	0	0	0	0	0	16	84	158	172	238	247	349	432	230	207	296	173	162	29	1	0	0	0	0	2793
19	0	0	0	0	0	6	38	63	164	96	94	136	199	205	165	123	225	79	30	8	0	0	0	0	1631
20	0	0	0	0	0	17	68	188	208	325	481 ?	464 ?	415 ?	415	295	209	243	197	89	3	0	0	0	0	3617 ?
21	0	0	0	0	0	24	121	?	?	?	?	?	?	?	?	?	429 ?	223	78	7	0	0	0	0	881 ?
22	0	0	0	0	0	23	118	321 ?	?	?	499 ?	589 ?	358 ?	574 ?	?	?	245 ?	78	8 ?	0	0	0	0	0	2813 ?
23	0	0	0	0	0	35	156 ?	185	202	246	495	677 ?	683 ?	670 ?	519 ?	507 ?	449 ?	?	95	8	0	0	0	0	4925 ?
24	0	0	0	0	0	40	157	277	230 ?	35 ?	68 ?	281	?	606 ?	?	232	33 ?	91	49	14	0	0	0	0	2113 ?
25	0	0	0	0	0	30	109	210	340 ?	407	545 ?	450 ?	?	?	?	?	328	291 ?	81	24	0	0	0	0	2814 ?
26	0	0	0	0	0	18	107	213 ?	397	?	701 ?	754 ?	774 ?	698 ?	361	252	329	112	34 ?	3	0	0	0	0	4754 ?
27	0	0	0	0	0	13	61	83	93	169	315	252	581 ?	295	309	91	160	102	51	14	0	0	0	0	2589
28	0	0	0	0	0	27	104 ?	224	?	395 ?	581 ?	513 ?	?	583 ?	417 ?	?	385 ?	232	79	4	0	0	0	0	3545 ?
29	0	0	0	0	0	18	107	?	?	?	?	?	?	?	?	?	?	268 ?	98	7	0	0	0	0	498 ?
30	0	0	0	0	0	38	91 ?	330 ?	?	?	?	?	?	?	?	?	?	266 ?	104	9	0	0	0	0	838 ?
31	0	0	0	0	0	42	105 ?	333 ?	?	?	?	?	?	?	?	?	?	289 ?	104	7	0	0	0	0	879 ?
Avg	0	0	0	0	0	18	86	180	225	283	388	450	488	481	389	266	235	148	51	6	0	0	0	0	2795 ?
S D	0	0	0	0	0	12	37	86	106	139	171	165	182	164	130	127	127	89	33	5	0	0	0	0	1323
S/A	0	0	0	0	0	0.65	0.43	0.48	0.47	0.49	0.44	0.37	0.37	0.34	0.34	0.48	0.54	0.6	0.65	0.92	0	0	0	0	0.47
Min	0	0	0	0	0	2	18	43	60	35	68	136	123	106	143	77	33	16	0	0	0	0	0	0	392
Max	0	0	0	0	0	42	157	333	399	473	701	754	774	698	606	507	449	291	104	24	0	0	0	0	4925
n	0	0	0	0	0	263	343	283	239	202	197	183	176	183	195	207	235	249	352	143	0	0	0	0	3465

Daylight Data Recovery: 0.0% missing; 0.0% untested; 34.1% exceed the 15% QC threshold -- 5256 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.