

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

July 2001

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	16	107	205	228	256	283	500	505	858	548	538	457	165	51	24	0	0	0	0	4741
2	0	0	0	0	0	3	54	102	170	368	622	607	717	813	849	693	555	347	120	18	0	0	0	0	6038
3	0	0	0	0	0	23	154	231	307	363	611	340	954	604	629	688	369	76	52	12	0	0	0	0	5411
4	0	0	0	0	0	21	102	72	92	48	119	413	348	443	232	344	207	48	56	14	0	0	0	0	2559
5	0	0	0	0	0	10	53	76	157	266	576	255	594	530	566	315	199	283	58	29	0	0	0	0	3967
6	0	0	0	0	0	22	104	214 ?	413	764	789	905	1018	973	884	746	562	354	141	7	0	0	0	0	7898
7	0	0	0	0	0	39	154	382 ?	531	734	899	972	917	703	388	480	464	300	86	13	0	0	0	0	7061
8	0	0	0	0	0	1	1	1	3	3	7	15	144	458	381	113	103	62	83	16	0	0	0	0	1391
9	0	0	0	0	0	11	46	120	193	220	265	260	455	790	714	447	480	305	135	12	0	0	0	0	4453
10	0	0	0	0	0	14	70	182	377	660	824	880	994	936	844	670	547	330	126	15	0	0	0	0	7468
11	0	0	0	0	0	20	77	160	311	635	807	722	870	808	753	676	409	291	146	14	0	0	0	0	6701
12	0	0	0	0	0	27	162 ?	399	568	734	865	892	828	747	572	526	290	188	76	32	0	0	0	0	6908
13	0	0	0	0	0	23	67 ?	?	552	705	784	735	670	619	805	664	404	344	130	9	0	0	0	0	6511
14	0	0	0	0	0	38	108 ?	361 ?	558	623	883	897	630	725	643	747	403	262	154	13	0	0	0	0	7045
15	0	0	0	0	0	34	101 ?	397 ?	598 ?	752	882	1002	871	1013	879	556	470	194	80	10	0	0	0	0	7838 ?
16	0	0	0	0	0	27	99 ?	374 ?	427	718	681	841	762	904	637	700	527	283	149	12	0	0	0	0	7142
17	0	0	0	0	0	15	81	228	494	638	747	831	925	737	655	323	309	88	56	10	0	0	0	0	6136
18	0	0	0	0	0	10	50	116	229	491	143	278	157	53	88	163	178	110	52	12	0	0	0	0	2129
19	0	0	0	0	0	34	134	294	494	366	425	665	606	890	788	459	158	66	17	4	0	0	0	0	5401
20	0	0	0	0	0	23	40	176	289	489	600	474	318	301	547	395	300	130	75	19	0	0	0	0	4178
21	0	0	0	0	0	19	121	305	471	626	828	792	534	688	553	495	489	298	108	14	0	0	0	0	6340
22	0	0	0	0	0	23	102	214	483	627	692	672	521	896	623	562	324	253	82	11	0	0	0	0	6086
23	0	0	0	0	0	22	139	337	535	717	862	953	986	950	855	705	524	332	117	8	0	0	0	0	8042
24	0	0	0	0	0	12	63	243	532	697	635	490	500	203	202	454	346	128	60	14	0	0	0	0	4578
25	0	0	0	0	0	17	57	196	381	379	458	527	649	503	519	585	286	280	43	1	0	0	0	0	4882
26	0	0	0	0	0	14	72	107	136	29	73	58	110	202	175	153	146	33	29	4	0	0	0	0	1339
27	0	0	0	0	0	3	14	29	76	159	198	326	524	759	730	406	188	86	21	4	0	0	0	0	3524
28	0	0	0	0	0	2	19	21	39	79	102	77	256	413	280	131	47	46	39	8	0	0	0	0	1559
29	0	0	0	0	0	2	19	48	24	92	94	83	64	124	70	144	189	108	64	19	0	0	0	0	1142
30	0	0	0	0	0	7	26	121	146	354	672	686	696	911	742	597	435	314	105	11	0	0	0	0	5823
31	0	0	0	0	0	15	115	300	492	681	711	870	859	737	620	285	335	253	135	0	0	0	0	0	6408
Avg	0	0	0	0	0	18	81	200	333	460	553	581	612	655	573	476	345	205	85	13	0	0	0	0	5184
S D	0	0	0	0	0	10	44	120	189	254	294	304	282	268	239	198	147	110	41	7	0	0	0	0	2104
S/A	0	0	0	0	0	0.59	0.54	0.6	0.57	0.55	0.53	0.52	0.46	0.41	0.42	0.43	0.54	0.48	0.57	0	0	0	0	0	0.41
Min	0	0	0	0	0	1	1	1	3	3	7	15	64	53	70	113	47	33	17	0	0	0	0	0	1142
Max	0	0	0	0	0	39	162	399	598	764	899	1002	1018	1013	884	747	562	354	154	32	0	0	0	0	8042
n	0	0	0	0	0	268	341	320	363	372	372	372	372	372	372	372	371	372	372	244	0	0	0	0	5256

Daylight Data Recovery: 0.0% missing; 1.7% exceed the 15% QC threshold -- 5348 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.

July 2001

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	9	26	21	8	5	36	67	452	233	270	359	67	15	0	0	0	0	0	1570
2	0	0	0	0	0	0	1	1	2	26	102	89	261	520	697	614	711	671	300	0	0	0	0	0	3994
3	0	0	0	0	0	56	350	107	34	67	268	99	604	269	367	541	247	14	0	0	0	0	0	0	3024
4	0	0	0	0	0	23	72	0	1	0	2	61	78	90	0	48	4	0	1	0	0	0	0	0	381
5	0	0	0	0	0	0	0	0	1	15	214	26	172	149	192	226	88	388	7	0	0	0	0	0	1478
6	0	0	0	0	0	14	65	97 ?	421	817	682	752	861	879	905	895	838	749	476	0	0	0	0	0	8451
7	0	0	0	0	0	180	510	657 ?	707	816	904	876	645	180	5	136	240	226	16	0	0	0	0	0	6097
8	0	0	0	0	0	0	0	0	0	0	0	0	1	37	40	0	0	0	4	0	0	0	0	0	84
9	0	0	0	0	0	0	0	0	1	2	6	3	59	408	424	189	563	516	389	0	0	0	0	0	2561
10	0	0	0	0	0	0	3	2	241	503	634	676	815	792	827	686	711	589	300	0	0	0	0	0	6777
11	0	0	0	0	0	1	7	9	80	444	601	410	598	597	628	654	417	412	357	0	0	0	0	0	5214
12	0	0	0	0	0	49	302 ?	784	875	858	767	602	346	262	107	165	27	33	0	0	0	0	0	0	5177
13	0	0	0	0	0	21	25 ?	?	810	780	616	494	345	383	650	611	498	696	389	0	0	0	0	0	6318
14	0	0	0	0	0	175	401 ?	722 ?	869	685	763	672	388	490	480	716	410	405	322	0	0	0	0	0	7498
15	0	0	0	0	0	96	386 ?	780 ?	848	899	901	889	607	806	782	487	558	234	98	0	0	0	0	0	8368 ?
16	0	0	0	0	0	107	341 ?	?	470	803	576	608	448	686	477	703	648	250	207	0	0	0	0	0	6324 ?
17	0	0	0	0	0	8	5	123	438	410	359	509	488	214	258	42	71	0	11	0	0	0	0	0	2936
18	0	0	0	0	0	0	0	1	13	114	2	8	1	0	0	1	7	2	0	0	0	0	0	0	149
19	0	0	0	0	0	32	223	374	448	96	144	288	310	628	567	221	0	0	0	0	0	0	0	0	3330
20	0	0	0	0	0	0	0	16	60	101	89	16	2	2	70	45	23	0	11	0	0	0	0	0	436
21	0	0	0	0	0	35	195	395	357	349	519	283	92	184	241	294	505	429	203	0	0	0	0	0	4080
22	0	0	0	0	0	23	86	46	425	345	282	374	167	524	334	389	197	213	67	0	0	0	0	0	3471
23	0	0	0	0	0	112	463	711	826	886	918	936	948	937	911	860	792	663	363	0	0	0	0	0	10326
24	0	0	0	0	0	22	65	202	753	784	470	184	182	2	2	172	161	0	0	0	0	0	0	0	2999
25	0	0	0	0	0	28	6	14	127	51	23	52	268	38	120	380	22	197	0	0	0	0	0	0	1325
26	0	0	0	0	0	0	5	2	1	0	0	0	0	1	1	1	13	0	0	0	0	0	0	0	25
27	0	0	0	0	0	0	0	0	0	1	1	10	54	277	389	57	1	1	0	0	0	0	0	0	792
28	0	0	0	0	0	0	0	0	0	0	1	0	2	40	2	0	0	0	0	0	0	0	0	0	46
29	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	6
30	0	0	0	0	0	0	0	1	1	34	290	359	376	540	436	448	383	259	87	0	0	0	0	0	3214
31	0	0	0	0	0	18	292	526	625	665	496	660	646	461	367	134	191	269	90	0	0	0	0	0	5439
Avg	0	0	0	0	0	32	123	193	305	341	343	322	317	350	339	322	280	235	120	0	0	0	0	0	3609
S D	0	0	0	0	0	50	167	284	334	353	322	318	285	290	295	283	277	252	157	0	0	0	0	0	2909
S/A	0	0	0	0	0	1.55	1.36	1.47	1.09	1.04	0.94	0.99	0.9	0.83	0.87	0.88	0.99	1.07	1.31	3.01	0	0	0	0	0.81
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Max	0	0	0	0	0	180	510	784	875	899	918	936	948	937	911	895	838	749	476	0	0	0	0	0	10326
n	0	0	0	0	0	268	336	317	365	372	372	372	372	372	372	372	371	372	372	244	0	0	0	0	5250

Daylight Data Recovery: 0.0% missing; 1.8% exceed the 15% QC threshold -- 5348 total daylight measurements.

Instrument: Eppley NIP Serial Number: 17664E6 Calibration Factor: 8.480 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.

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

July 2001

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	14	95	189	204	232	253	453	446	432	339	350	263	129	46	21	0	0	0	0	3467
2	0	0	0	0	0	3	47	90	149	329	517	518	467	328	247	240	159	90	57	16	0	0	0	0	3257
3	0	0	0	0	0	19	85	184	271	307	383	232	379	354	312	301	227	66	46	11	0	0	0	0	3179
4	0	0	0	0	0	20	84 ?	63	81	42	105	335	268	333	206	298	183	42	48	13	0	0	0	0	2122
5	0	0	0	0	0	9	47	67	137	245	395	218	426	384	404	152	143	126	54	25	0	0	0	0	2831
6	0	0	0	0	0	19	89	189 ?	168	167	200	193	185	151	109	94	88	69	46	7	0	0	0	0	1774
7	0	0	0	0	0	25	70	108 ?	129	131	125	152	283	535	340	371	342	200	74	12	0	0	0	0	2898
8	0	0	0	0	0	1	1	1 ?	3	3	6	13	129	409	333	101	91	55	72	15	0	0	0	0	1233
9	0	0	0	0	0	10	41	106	170	194	239	227	389	403	338	304	171	117	58	10	0	0	0	0	2777
10	0	0	0	0	0	12	61	160	263	294	283	254	219	202	143	168	149	110	68	13	0	0	0	0	2398
11	0	0	0	0	0	17	68	143	262	301	299	340	296	259	216	207	168	140	78	13	0	0	0	0	2808
12	0	0	0	0	0	23	78	73	66	108	209	323	493	501	490	411	260	165	67	27	0	0	0	0	3295
13	0	0	0	0	0	20	57 ?	?	97	143	279	277	344	269	259	227	136	86	54	8	0	0	0	0	2257
14	0	0	0	0	0	25	61 ?	75 ?	75	139	234	278	261	273	241	238	174	124	90	12	0	0	0	0	2300
15	0	0	0	0	0	21	57 ?	74 ?	73	102	122	185	290	275	225	197	162	103	61	8	0	0	0	0	1955
16	0	0	0	0	0	22	56 ?	?	163	140	197	283	340	282	233	200	168	202	109	11	0	0	0	0	2405 ?
17	0	0	0	0	0	13	70	189	236	346	449	373	465	529	436	285	250	77	49	9	0	0	0	0	3774
18	0	0	0	0	0	9	44	103	207	415	124	250	138	47	78	143	160	95	45	10	0	0	0	0	1866
19	0	0	0	0	0	31	90	162	238	292	291	393	305	309	313	291	143	59	15	4	0	0	0	0	2936
20	0	0	0	0	0	20	35	160	242	411	517	424	281	266	478	345	261	115	66	17	0	0	0	0	3638
21	0	0	0	0	0	18	90	164	280	366	396	533	409	515	355	288	217	148	71	13	0	0	0	0	3863
22	0	0	0	0	0	21	90	187	252	389	455	327	350	428	336	275	221	176	69	10	0	0	0	0	3587
23	0	0	0	0	0	18	60	78	82	89	96	97	92	90	90	90	88	91	49	7	0	0	0	0	1117
24	0	0	0	0	0	10	53	147	121	140	247	301	314	180	182	325	225	113	54	12	0	0	0	0	2425
25	0	0	0	0	0	16	50	172	291	317	408	452	385	429	401	296	256	191	38	1	0	0	0	0	3703
26	0	0	0	0	0	12	62	93	121	25	65	51	98	178	158	135	86	29	25	4	0	0	0	0	1142
27	0	0	0	0	0	3	12	25	67	142	175	289	445	504	391	352	168	76	20	4	0	0	0	0	2673
28	0	0	0	0	0	3	17	18	35	71	93	68	227	348	246	115	41	41	34	7	0	0	0	0	1364
29	0	0	0	0	0	1	17	42	21	81	83	75	57	110	63	128	167	94	56	16	0	0	0	0	1012
30	0	0	0	0	0	6	23	106	128	309	414	357	342	420	367	278	236	229	87	11	0	0	0	0	3312
31	0	0	0	0	0	13	71	120	157	213	299	273	265	326	318	177	234	170	122	0	0	0	0	0	2758
Avg	0	0	0	0	0	15	57	113	154	209	257	276	303	325	279	238	182	114	59	11	0	0	0	0	2585
S D	0	0	0	0	0	8	25	56	84	120	141	132	118	133	115	91	66	52	23	6	0	0	0	0	847
S/A	0	0	0	0	0	0.53	0.44	0.5	0.54	0.58	0.55	0.48	0.39	0.41	0.41	0.38	0.36	0.46	0.4	0.55	0	0	0	0	0.33
Min	0	0	0	0	0	1	1	1	3	3	6	13	57	47	63	90	41	29	15	0	0	0	0	0	1012
Max	0	0	0	0	0	31	95	189	291	415	517	533	493	535	490	411	342	229	122	27	0	0	0	0	3863
n	0	0	0	0	0	268	338	321	365	372	372	372	372	372	372	372	370	372	372	244	0	0	0	0	5255

Daylight Data Recovery: 0.0% missing; 1.7% exceed the 15% QC threshold -- 5348 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.