

**Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - September 2000**

Field: GHI

Hour 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	12	100	246	202	486	588	831	493	114	154	142	125	15	0	0	0	0	0	3508	
2	0	0	0	0	0	0	26	40	162	121	216	383	641	174	31	46	88	104	19	0	0	0	0	0	2050	
3	0	0	0	0	0	0	42	228	207	211	434	397	632	651	426	175	158	107	7	0	0	0	0	0	3675	
4	0	0	0	0	0	0	9	31	61	194	287	396	498	502	284	227	174	62	12	0	0	0	0	0	2735	
5	0	0	0	0	0	0	4	27	56	51	107	151	230	219	258	125	57	20	3	0	0	0	0	0	1307	
6	0	0	0	0	0	0	23	119	301	505	724	765	825	835	747	572	405	159	23	0	0	0	0	0	6003	
7	0	0	0	0	0	0	19	91	276	481	678	656	787	842	514	432	289	161	19	0	0	0	0	0	5247	
8	0	0	0	0	0	0	52	113	262	288	369	568	888	663	661	204	250	46	2	0	0	0	0	0	4367	
9	0	0	0	0	0	0	33	99	275	383	514	411	290	398	351	423	116	93	7	0	0	0	0	0	3394	
10	0	0	0	0	0	0	42	217	409	590	726	813	863	814	680	334	171	67	12	0	0	0	0	0	5736	
11	0	0	0	0	0	0	29	198	318	364	479	673	692	357	218	168	80	39	3	0	0	0	0	0	3617	
12	0	0	0	0	0	0	23	188	405	538	650	589	583	665	482	426	234	68	13	0	0	0	0	0	4863	
13	0	0	0	0	0	0	16	75	205	442	544	556	821	678	611	539	282	81	7	0	0	0	0	0	4858	
14	0	0	0	0	0	0	27	121	330	283	378	397	691	507	394	372	254	87	3	0	0	0	0	0	3846	
15	0	0	0	0	0	0	16	175	340	421	501	689	529	735	460	343	101	62	7	0	0	0	0	0	4379	
16	0	0	0	0	0	0	39	147	?	427	?	605	601	346	430	455	355	268	245	47	3	0	0	0	0	3970
17	0	0	0	0	0	0	41	237	?	424	614	761	845	865	824	603	363	266	78	4	0	0	0	0	0	5925
18	0	0	0	0	0	0	26	133	196	342	420	812	682	422	377	217	130	47	4	0	0	0	0	0	0	3809
19	0	0	0	0	0	0	9	93	372	?	440	674	827	834	776	648	506	314	111	2	0	0	0	0	0	5606
20	0	0	0	0	0	0	29	199	398	582	716	808	796	774	661	350	287	81	4	0	0	0	0	0	0	5686
21	0	0	0	0	0	0	18	69	194	?	569	705	797	839	793	676	515	276	93	4	0	0	0	0	0	5546
22	0	0	0	0	0	0	34	173	373	487	449	447	519	283	283	236	182	70	3	0	0	0	0	0	0	3540
23	0	0	0	0	0	0	13	203	297	564	625	528	533	733	659	465	207	54	2	0	0	0	0	0	0	4884
24	0	0	0	0	0	0	5	88	288	173	460	231	412	316	271	268	145	28	0	0	0	0	0	0	0	2687
25	0	0	0	0	0	0	8	13	43	102	154	180	288	277	35	40	35	4	2	0	0	0	0	0	0	1183
26	0	0	0	0	0	0	1	13	43	66	82	85	63	63	50	42	31	11	0	0	0	0	0	0	0	552
27	0	0	0	0	0	0	7	65	198	325	819	780	815	759	648	478	281	85	1	0	0	0	0	0	0	5259
28	0	0	0	0	0	0	14	139	256	?	640	?	737	771	675	450	441	238	32	0	0	0	0	0	0	5013
29	0	0	0	0	0	0	8	49	327	499	621	778	745	644	499	336	190	67	0	0	0	0	0	0	0	4764
30	0	0	0	0	0	0	19	168	373	552	689	769	796	748	628	461	248	54	0	0	0	0	0	0	0	5505
Avg	0	0	0	0	0	0	21	120	269	388	516	567	640	569	436	318	196	71	6	0	0	0	0	0	0	4117
S D	0	0	0	0	0	0	13	66	113	178	196	223	215	221	209	152	90	37	6	0	0	0	0	0	0	1449
S/A	0	0	0	0	0	3.62	0.6	0.55	0.42	0.46	0.38	0.39	0.34	0.39	0.48	0.48	0.46	0.52	1.04	0	0	0	0	0	0	0.35
Min	0	0	0	0	0	0	1	13	43	51	82	85	63	63	31	40	31	4	0	0	0	0	0	0	0	552
Max	0	0	0	0	0	0	52	237	427	640	819	845	888	842	747	572	405	161	23	0	0	0	0	0	0	6003

Daylight Data Recovery: 4% missing; 1% exceed the 15% QC threshold -- 9546 total daylight 5-minute measurements.

Note: Fractional values that do not appear in the hour columns are included in the calculation for daily values.

Data and Flag	Hour Column	Day Column
<value>*	20% < Missing < 100%	10% < Missing < 100%
<value>?	20% < Fail QC < 100%	10% < Fail QC < 100%
<blank>*	100% Missing	100% Missing
<blank>?	100% Fail QC	100% Fail QC

Station:	BS
Latitude:	37.27° N
Longitude:	81.24° W
Elevation:	803 Meters AMSL
Time Zone:	-5

Instrument:	PSP
Calibration Constant:	9.02 uV/Wm-2
Serial Number:	25821F3
Calibration Date:	5/21/1998

**Direct Normal Solar Radiation
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - September 2000**

Field: DNI

Hour 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	1	28	5	96	203	563	337	1	1	48	85	0	0	0	0	0	0	1368
2	0	0	0	0	0	0	5	0	1	1	3	10	197	22	0	0	2	0	0	0	0	0	0	0	241
3	0	0	0	0	0	0	1	191	8	2	13	23	269	323	136	15	2	2	0	0	0	0	0	0	985
4	0	0	0	0	0	0	0	0	1	5	16	42	128	125	54	24	34	0	0	0	0	0	0	0	429
5	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0	0	0	0	0	0	0	0	0	6
6	0	0	0	0	0	0	1	12	182	358	557	494	644	775	782	737	662	258	9	0	0	0	0	0	5472
7	0	0	0	0	0	0	0	2	115	295	521	123	300	787	173	240	239	359	39	0	0	0	0	0	3193
8	0	0	0	0	0	0	64	20	31	4	22	128	772	446	514	13	123	0	0	0	0	0	0	0	2137
9	0	0	0	0	0	0	8	1	29	47	104	100	3	11	80	307	50	135	0	0	0	0	0	0	875
10	0	0	0	0	0	0	130	578	726	811	827	864	861	786	707	271	17	5	0	0	0	0	0	0	6583
11	0	0	0	0	0	0	0	44	85	70	123	317	237	13	15	1	0	0	0	0	0	0	0	0	904
12	0	0	0	0	0	0	2	299	513	442	388	242	264	436	232	321	306	17	3	0	0	0	0	0	3463
13	0	0	0	0	0	0	0	1	71	309	412	290	638	550	560	683	411	102	0	0	0	0	0	0	4026
14	0	0	0	0	0	0	1	92	352	64	128	76	365	215	114	283	298	54	0	0	0	0	0	0	2041
15	0	0	0	0	0	0	1	412	520	369	362	545	341	645	347	329	34	58	0	0	0	0	0	0	3965
16	0	0	0	0	0	0	92	501 ?	757	785	468	65	88	188	155	110	325	115	0	0	0	0	0	0	3649
17	0	0	0	0	0	0	120	700 ?	883	947	975	988	986	965	615	184	226	12	0	0	0	0	0	0	7600
18	0	0	0	0	0	0	17	117	20	58	67	582	263	42	30	6	1	0	0	0	0	0	0	0	1204
19	0	0	0	0	0	0	0	3	401 ?	164	665	933	945	914	809	811	718	452	0	0	0	0	0	0	6817
20	0	0	0	0	0	0	191	609	760	839	862	876	794	849	805	238	539	179	0	0	0	0	0	0	7541
21	0	0	0	0	0	0	2	7	218 ?	792	748	624	853	957	944	895	558	221	0	0	0	0	0	0	6820
22	0	0	0	0	0	0	62	361	551	487	247	75	97	3	16	18	28	10	0	0	0	0	0	0	1956
23	0	0	0	0	0	0	0	303	383	872	699	341	360	673	729	649	302	63	0	0	0	0	0	0	5374
24	0	0	0	0	0	0	0	15	155	17	196	79	144	17	12	56	30	0	0	0	0	0	0	0	720
25	0	0	0	0	0	0	0	0	0	1	1	1	5	28	0	0	0	0	0	0	0	0	0	0	37
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
27	0	0	0	0	0	0	0	0	3	5	751	927	996	985	958	900	776	442	0	0	0	0	0	0	6743
28	0	0	0	0	0	0	0	64	487 ?	875 ?	662 ?	856	877	691	401	621	470	0	0	0	0	0	0	0	6005
29	0	0	0	0	0	0	0	15	425	590	627	738	594	433	415	318	344	279	0	0	0	0	0	0	4780
30	0	0	0	0	0	0	89	560	758	858	896	903	919	882	843	751	633	224	0	0	0	0	0	0	8315
Avg	0	0	0	0	0	0	26	164	282	336	381	382	450	437	348	293	239	102	2	0	0	0	0	0	3442
S D	0	0	0	0	0	0	49	224	287	349	322	350	337	356	336	306	249	135	7	0	0	0	0	0	2674
S/A	0	0	0	0	0	0	1.86	1.37	1.02	1.04	0.85	0.92	0.75	0.82	0.96	1.04	1.04	1.32	4.09	0	0	0	0	0	0.78
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	1
Max	0	0	0	0	0	0	191	700	883	947	975	988	996	985	958	900	776	452	39	0	0	0	0	0	8315

Daylight Data Recovery: 4% missing; 1% exceed the 15% QC threshold -- 9546 total daylight 5-minute measurements.

Note: Fractional values that do not appear in the hour columns are included in the calculation for daily values.

Data and Flag	Hour Column	Day Column
<value>*	20% < Missing < 100%	10% < Missing < 100%
<value>?	20% < Fail QC < 100%	10% < Fail QC < 100%
<blank>*	100% Missing	100% Missing
<blank>?	100% Fail QC	100% Fail QC

Station: BS
Latitude: 37.27° N
Longitude: 81.24° W
Elevation: 803 Meters AMSL
Time Zone: -5

Instrument: NIP
Calibration Constant: 8.48 uV/Wm-2
Serial Number: 17664E6
Calibration Date: 5/21/1998

Diffuse Solar Radiation on a Horizontal Surface (Shadow Band PSP)

Bluefield State College - September 2000

Hour 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	11	90	216	178	393	401	351	205	101	140	115	95	14	0	0	0	0	0	2308
2	0	0	0	0	0	0	24	34	144	107	190	341	445	143	27	40	78	90	17	0	0	0	0	0	1679
3	0	0	0	0	0	0	36	171	188	189	393	352	390	366	320	152	141	95	6	0	0	0	0	0	2799
4	0	0	0	0	0	0	8	27	54	173	254	352	386	397	234	194	149	56	11	0	0	0	0	0	2295
5	0	0	0	0	0	0	3	23	49	45	96	134	205	195	231	111	50	17	2	0	0	0	0	0	1162
6	0	0	0	0	0	0	20	106	200	259	287	331	261	196	180	136	124	97	23	0	0	0	0	0	2220
7	0	0	0	0	0	0	17	81	205	269	269	537	501	191	364	286	181	85	13	0	0	0	0	0	2998
8	0	0	0	0	0	0	44	98	238	256	326	425	208	291	289	179	188	41	2	0	0	0	0	0	2585
9	0	0	0	0	0	0	28	88	245	329	409	310	259	349	276	243	87	60	6	0	0	0	0	0	2688
10	0	0	0	0	0	0	23	63	80	91	112	110	148	186	178	162	152	62	10	0	0	0	0	0	1378
11	0	0	0	0	0	0	26	176	269	307	364	395	477	329	193	153	72	34	3	0	0	0	0	0	2799
12	0	0	0	0	0	0	20	108	185	258	363	376	352	314	310	251	103	63	12	0	0	0	0	0	2716
13	0	0	0	0	0	0	14	66	163	250	242	323	300	245	220	163	116	56	6	0	0	0	0	0	2164
14	0	0	0	0	0	0	23	91	177	235	268	334	395	332	311	219	134	73	3	0	0	0	0	0	2595
15	0	0	0	0	0	0	14	56	125	197	237	251	247	233	213	148	81	47	6	0	0	0	0	0	1855
16	0	0	0	0	0	0	19	57 ?	74	133	256	276	340	303	235	198	108	31	3	0	0	0	0	0	2033
17	0	0	0	0	0	0	16	43 ?	51	53	60	66	71	87	166	259	178	70	4	0	0	0	0	0	1124
18	0	0	0	0	0	0	24	103	179	301	362	343	453	363	354	193	116	42	4	0	0	0	0	0	2837
19	0	0	0	0	0	0	8	86	169 ?	316	176	92	83	87	114	85	61	33	2	0	0	0	0	0	1311
20	0	0	0	0	0	0	16	52	76	95	114	135	169	144	137	220	101	56	3	0	0	0	0	0	1318
21	0	0	0	0	0	0	16	62	115 ?	114	175	302	159	84	66	61	74	62	3	0	0	0	0	0	1291
22	0	0	0	0	0	0	30	83	146	197	266	386	436	254	255	217	159	65	2	0	0	0	0	0	2496
23	0	0	0	0	0	0	12	131	114	65	138	258	238	234	192	142	103	43	2	0	0	0	0	0	1672
24	0	0	0	0	0	0	4	79	223	154	320	169	284	289	250	238	129	25	0	0	0	0	0	0	2163
25	0	0	0	0	0	0	8	12	39	91	139	159	256	238	32	37	32	4	1	0	0	0	0	0	1048
26	0	0	0	0	0	0	1	11	38	60	75	77	57	57	45	38	28	9	0	0	0	0	0	0	496
27	0	0	0	0	0	0	6	59	179	289	295	112	63	58	55	47	39	21	0	0	0	0	0	0	1224
28	0	0	0	0	0	0	13	104	77 ?	84 ?	137 ?	104	114	185	205	139	93	30	0	0	0	0	0	0	1285
29	0	0	0	0	0	0	7	44	144	171	199	236	303	332	240	177	93	31	0	0	0	0	0	0	1976
30	0	0	0	0	0	0	10	51	75	87	98	113	119	139	127	119	64	26	0	0	0	0	0	0	1029
Avg	0	0	0	0	0	0	17	75	141	178	234	260	269	228	197	158	105	51	5	0	0	0	0	0	1918
SD	0	0	0	0	0	0	10	40	67	88	103	124	130	97	94	68	43	26	6	0	0	0	0	0	677
S/A	0	0	0	0	0	4.51	0.58	0.53	0.47	0.49	0.44	0.48	0.48	0.43	0.48	0.43	0.41	0.51	1.05	0	0	0	0	0	0.35
Min	0	0	0	0	0	0	1	11	38	45	60	66	57	57	27	37	28	4	0	0	0	0	0	0	496
Max	0	0	0	0	0	0	44	176	269	329	409	537	501	397	364	286	188	97	23	0	0	0	0	0	2998

Daylight Data Recovery: 4% missing; 1% exceed the 15% QC threshold -- 9546 total daylight 5-minute measurements.

Note: Fractional values that do not appear in the hour columns are included in the calculation for daily values.

Data and Flag	Hour Column	Day Column
<value>*	20% < Missing < 100%	10% < Missing < 100%
<value>?	20% < Fail QC < 100%	10% < Fail QC < 100%
<blank>*	100% Missing	100% Missing
<blank>?	100% Fail QC	100% Fail QC

Station: BS
Latitude: 37.27° N
Longitude: 81.24° W
Elevation: 803 Meters AMSL
Time Zone: -5

Instrument: PSP
Calibration Constant: 7.01 uV/Wm-2
Serial Number: 17860F3
Calibration Date: 5/21/1998