

**Global Solar Radiation on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Watt-Hours per Square Meter**  
**Bluefield State College - April 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	39	219	413	599	719	854	900	851	725	540	263	132	16	0	0	0	0	0	6270
2	0	0	0	0	0	0	3	34	73	112	257	253	125	72	114	81	68	14	4	0	0	0	0	0	1210
3	0	0	0	0	0	0	11	134	232	351	327	318	128	198	176	267	219	49	5	0	0	0	0	0	2415
4	0	0	0	0	0	0	6	15	25	79	191	250	255	406	550	348	232	172	25	0	0	0	0	0	2555
5	0	0	0	0	0	0	51	250	469	670	827	924	951	910	799	608	436	144	33	0	0	0	0	0	7072
6	0	0	0	0	0	0	64	133	398	598	790	873	901	859	749	585	380	171	21	0	0	0	0	0	6521
7	0	0	0	0	0	0	59	188	390	635	768	894	905	872	791	630	424	201	24	0	0	0	0	0	6780
8	0	0	0	0	0	0	26	79	55	26	66	214	178	117	158	92	92	33	7	0	0	0	0	0	1143
9	0	0	0	0	0	0	25	96	326	620	845	948	972	926	801	532	325	218	34	0	0	0	0	0	6668
10	0	0	0	0	0	0	61	253	468	660	789	911	908	914	564	359	191	114	25	0	0	0	0	0	6216
11	0	0	0	0	0	0	28	94	291	452	469	305	245	233	228	115	49	42	5	0	0	0	0	0	2556
12	0	0	0	0	0	0	3	14	29	100	120	219	294	429	651	483	271	109	20	0	0	0	0	0	2742
13	0	0	0	0	0	0	28	125	202	348	387	326	360	334	316	224	100	48	9	0	0	0	0	0	2806
14	0	0	0	0	0	0	25	50	134	137	159	214	253	149	79	107	134	78	12	0	0	0	0	0	1533
15	0	0	0	0	0	0	8	61	212	181	431	587	468	457	403	327	194	96	23	0	0	0	0	0	3448
16	0	0	0	0	0	0	15	48	89	98	302	417	619	672	505	488	415	169	29	0	0	0	0	0	3867
17	0	0	0	0	0	0	22	95	348	491	650	347	200	48	818	140	5	6	2	0	0	0	0	0	3172
18	0	0	0	0	0	0	4	15	39	74	131	181	134	117	68	54	32	19	7	0	0	0	0	0	875
19	0	0	0	0	0	1	10	29	59	116	150	253	390	591	808	648	445	241	44	0	0	0	0	0	3783
20	0	0	0	0	0	2	91	252	506	688	800	785	883	736	415	402	370	233	58	0	0	0	0	0	6222
21	0	0	0	0	0	1	61	82	207	218	331	199	191	48	56	65	56	18	11	0	0	0	0	0	1546
22	0	0	0	0	0	1	10	25	43	159	218	149	180	174	115	82	46	13	4	0	0	0	0	0	1218
23	0	0	0	0	0	2	46	163	167	247	460	917	934	918	675	467	281	153	44	0	0	0	0	0	5473
24	0	0	0	0	0	3	29	110	141	149	233	170	76	93	110	105	50	21	6	0	0	0	0	0	1296
25	0	0	0	0	0	0	8	20	50	75	123	145	131	182	144	181	88	43	10	0	0	0	0	0	1199
26	0	0	0	0	0	3	90	241	514	732	815	885	1019	893	887	622	477	260	55	0	0	0	0	0	7492
27	0	0	0	0	0	9	145	333	549	741	880	990	1027	972	715	453	273	106	33	0	0	0	0	0	7225
28	0	0	0	0	0	5	80	125	294	370	420	270	408	206	353	85	113	21	18	0	0	0	0	0	2769
29	0	0	0	0	0	5	64	211	261	385	402	621	742	624	392	402	316	209	50	1	0	0	0	0	4685
30	0	0	0	0	0	9	124	328	549	736	875	962	976	942	838	672	473	256	56	0	0	0	0	0	7796
Avg	0	0	0	0	0	1	41	127	251	362	465	513	525	498	467	339	227	113	23	0	0	0	0	0	3952
S D	0	0	0	0	0	2	36	94	173	246	275	316	348	339	284	210	150	83	17	0	0	0	0	0	2296
S/A	0	0	0	0	0	1.71	0.88	0.74	0.69	0.68	0.59	0.62	0.66	0.68	0.61	0.62	0.66	0.73	0.74	2.56	0	0	0	0	0.58
Min	0	0	0	0	0	0	3	14	25	26	66	145	76	48	56	54	5	6	2	0	0	0	0	0	875
Max	0	0	0	0	0	9	145	333	549	741	880	990	1027	972	887	672	477	260	58	1	0	0	0	0	7796

Daylight Data Recovery: 0% missing; 0% exceed the 15% QC threshold -- 4729 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 - April 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	245	690	707	753	669	786	884	869	757	640	229	131	24	0	0	0	0	0	7383
2	0	0	0	0	0	0	0	0	0	0	4	3	1	0	1	0	0	0	0	0	0	0	0	0	9
3	0	0	0	0	0	0	0	111	54	84	42	4	0	2	12	13	37	0	0	0	0	0	0	0	358
4	0	0	0	0	0	0	0	0	0	0	1	3	7	175	499	243	191	446	79	0	0	0	0	0	1645
5	0	0	0	0	0	0	258	707	860	927	963	976	990	982	945	816	820	128	38	0	0	0	0	0	9409
6	0	0	0	0	0	0	223	116	540	697	809	848	878	870	838	723	599	396	21	0	0	0	0	0	7560
7	0	0	0	0	0	0	174	222	452	662	627	761	778	831	923	900	803	611	71	0	0	0	0	0	7816
8	0	0	0	0	0	0	0	19	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	22
9	0	0	0	0	0	0	24	5	158	539	932	990	1005	997	837	417	316	599	96	0	0	0	0	0	6914
10	0	0	0	0	0	0	252	623	765	802	744	860	834	967	290	123	13	9	5	0	0	0	0	0	6286
11	0	0	0	0	0	0	1	14	112	134	123	8	2	2	3	1	0	0	0	0	0	0	0	0	400
12	0	0	0	0	0	0	0	0	0	0	0	2	6	69	296	212	54	1	0	0	0	0	0	0	641
13	0	0	0	0	0	0	0	4	4	16	9	3	4	3	3	2	0	0	0	0	0	0	0	0	47
14	0	0	0	0	0	0	0	0	0	0	1	2	3	1	0	1	0	0	0	0	0	0	0	0	10
15	0	0	0	0	0	0	0	0	0	0	11	54	7	7	4	28	3	0	0	0	0	0	0	0	114
16	0	0	0	0	0	0	0	1	1	1	16	9	155	278	198	182	487	167	4	0	0	0	0	0	1499
17	0	0	0	0	0	0	1	8	294	354	345	13	2	0	733	76	0	0	0	0	0	0	0	0	1825
18	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	5
19	0	0	0	0	0	0	0	0	0	1	2	3	7	232	869	827	713	589	126	0	0	0	0	0	3368
20	0	0	0	0	0	0	175	461	782	843	690	429	634	437	58	263	387	501	98	0	0	0	0	0	5758
21	0	0	0	0	0	0	44	8	32	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	90
22	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	5
23	0	0	0	0	0	0	0	5	1	16	173	629	793	792	556	254	63	93	61	0	0	0	0	0	3437
24	0	0	0	0	0	3	6	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	13
25	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	4
26	0	0	0	0	0	0	104	222	759	832	697	660	911	752	904	740	814	675	169	0	0	0	0	0	8237
27	0	0	0	0	0	47	494	742	854	905	890	929	950	910	636	352	186	2	0	0	0	0	0	0	7896
28	0	0	0	0	0	0	27	2	42	56	25	1	11	1	5	0	0	0	0	0	0	0	0	0	171
29	0	0	0	0	0	5	2	75	23	29	20	110	244	228	33	284	287	178	40	0	0	0	0	0	1559
30	0	0	0	0	0	39	399	667	827	874	899	916	884	901	883	837	764	605	172	0	0	0	0	0	9666
Avg	0	0	0	0	0	3	81	157	242	284	290	300	333	344	343	264	226	171	33	0	0	0	0	0	3072
S D	0	0	0	0	0	11	132	256	331	365	367	392	414	400	377	312	295	240	51	0	0	0	0	0	3450
S/A	0	0	0	0	0	3.4	1.63	1.63	1.37	1.28	1.27	1.31	1.24	1.16	1.1	1.18	1.31	1.4	1.53	5.39	0	0	0	0	1.12
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	4
Max	0	0	0	0	0	47	494	742	860	927	963	990	1005	997	945	900	820	675	172	0	0	0	0	0	9666

Daylight Data Recovery: 0% missing; 0% exceed the 15% QC threshold -- 4729 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)**  
**Hourly Integrated and Daily Totals**  
**Watt-Hours per Square Meter**  
**Bluefield State College - April 2000**

Field: DHI

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	19	53	110	137	215	207	167	156	171	153	145	102	13	0	0	0	0	0	1649
2	0	0	0	0	0	0	3	30	67	101	226	227	114	65	104	73	61	13	3	0	0	0	0	0	1087
3	0	0	0	0	0	0	10	92	191	271	272	281	116	179	159	239	193	44	4	0	0	0	0	0	2051
4	0	0	0	0	0	0	5	13	22	70	168	221	229	245	184	201	150	65	16	0	0	0	0	0	1589
5	0	0	0	0	0	0	26	63	79	92	102	109	108	106	106	111	88	99	25	0	0	0	0	0	1114
6	0	0	0	0	0	0	42	104	132	142	148	137	140	148	144	156	124	72	17	0	0	0	0	0	1507
7	0	0	0	0	0	0	42	119	157	185	238	208	210	176	114	91	79	54	16	0	0	0	0	0	1689
8	0	0	0	0	0	0	23	69	48	23	58	186	158	103	137	80	80	29	7	0	0	0	0	0	1001
9	0	0	0	0	0	0	21	87	238	261	109	97	103	107	149	240	182	68	24	0	0	0	0	0	1686
10	0	0	0	0	0	0	34	77	102	130	184	161	166	116	316	264	168	104	23	0	0	0	0	0	1845
11	0	0	0	0	0	0	24	80	222	336	360	268	216	206	200	102	43	37	5	0	0	0	0	0	2097
12	0	0	0	0	0	0	3	12	25	88	105	193	261	342	410	337	251	95	17	0	0	0	0	0	2139
13	0	0	0	0	0	0	24	109	178	313	329	285	314	295	277	193	87	42	8	0	0	0	0	0	2454
14	0	0	0	0	0	0	22	45	122	123	142	187	222	131	69	92	115	68	10	0	0	0	0	0	1349
15	0	0	0	0	0	0	7	54	189	162	384	516	414	408	353	295	170	85	20	0	0	0	0	0	3058
16	0	0	0	0	0	0	13	42	77	86	274	371	459	422	317	359	196	117	25	0	0	0	0	0	2758
17	0	0	0	0	0	0	19	83	180	257	367	314	175	42	264	82	5	6	1	0	0	0	0	0	1795
18	0	0	0	0	0	0	3	13	34	64	114	159	117	103	59	47	28	17	6	0	0	0	0	0	764
19	0	0	0	0	0	0	8	25	51	102	133	222	345	366	137	119	108	77	25	0	0	0	0	0	1719
20	0	0	0	0	0	2	64	88	103	115	234	382	292	351	359	234	187	94	43	0	0	0	0	0	2546
21	0	0	0	0	0	1	50	74	185	194	291	172	168	42	49	57	49	17	10	0	0	0	0	0	1359
22	0	0	0	0	0	0	10	21	38	139	192	131	158	153	100	71	39	12	4	0	0	0	0	0	1068
23	0	0	0	0	0	2	40	140	146	219	309	349	204	217	222	289	258	125	34	0	0	0	0	0	2552
24	0	0	0	0	0	3	26	96	124	132	205	151	67	82	98	91	44	18	5	0	0	0	0	0	1141
25	0	0	0	0	0	0	7	17	45	66	108	126	115	161	126	159	77	37	8	0	0	0	0	0	1053
26	0	0	0	0	0	2	64	167	131	155	247	297	191	215	196	140	87	67	28	0	0	0	0	0	1989
27	0	0	0	0	0	5	54	72	89	104	140	154	161	166	201	218	165	94	29	0	0	0	0	0	1652
28	0	0	0	0	0	5	69	110	255	321	384	241	359	181	310	74	100	19	17	0	0	0	0	0	2446
29	0	0	0	0	0	5	56	183	245	364	370	525	512	409	362	214	176	153	42	1	0	0	0	0	3617
30	0	0	0	0	0	7	61	90	96	113	125	134	159	137	123	110	94	75	30	0	0	0	0	0	1354
Avg	0	0	0	0	0	1	28	74	123	162	218	234	214	194	194	163	118	64	17	0	0	0	0	0	1804
S D	0	0	0	0	0	2	21	43	68	89	96	107	109	110	100	87	65	38	11	0	0	0	0	0	661
S/A	0	0	0	0	0	1.69	0.73	0.58	0.55	0.55	0.44	0.46	0.51	0.57	0.52	0.53	0.55	0.6	0.66	3.07	0	0	0	0	0.37
Min	0	0	0	0	0	0	3	12	22	23	58	97	67	42	49	47	5	6	1	0	0	0	0	0	764
Max	0	0	0	0	0	7	69	183	255	364	384	525	512	422	410	359	258	153	43	1	0	0	0	0	3617

Daylight Data Recovery: 0% missing; 0% exceed the 15% QC threshold -- 4729 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