

**Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - March 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	0	28	82	34	118	315	648	415	193	232	252	67	2	0	0	0	0	0	2385
2	0	0	0	0	0	0	0	41	115	314	628	753	786	754	655	500	303	99	1	0	0	0	0	0	4949
3	0	0	0	0	0	0	0	40	151	383	511	524	461	501	652	383	69	44	2	0	0	0	0	0	3721
4	0	0	0	0	0	0	1	27	77	135	253	171	457	614	568	462	234	48	3	0	0	0	0	0	3050
5	0	0	0	0	0	0	1	91	279	467	632	714	770	739	641	486	297	103	3	0	0	0	0	0	5225
6	0	0	0	0	0	0	1	83	273	468	628	737	776	745	650	501	306	105	2	0	0	0	0	0	5275
7	0	0	0	0	0	0	1	90	284	479	640	745	780	749	654	500	315	103	4	0	0	0	0	0	5343
8	0	0	0	0	0	0	1	93	280	470	627	729	757	723	636	464	276	88	1	0	0	0	0	0	5146
9	0	0	0	0	0	0	2	65	134	139	47	288	659	597	489	431	246	89	7	0	0	0	0	0	3192
10	0	0	0	0	0	0	2	108	307	501	653	755	794	776	339	253	108	28	1	0	0	0	0	0	4625
11	0	0	0	0	0	0	1	42	106	100	141	132	234	145	193	192	79	19	1	0	0	0	0	0	1386
12	0	0	0	0	0	0	0	6	58	123	156	245	252	223	123	98	112	71	6	0	0	0	0	0	1474
13	0	0	0	0	0	0	7	94	395 ?	474 ?	654 ?	724	700	786	504	260	161	79	5	0	0	0	0	0	4842
14	0	0	0	0	0	0	9	128 ?	430 ?	531	678	729	835	669	600	503	265	133	5	0	0	0	0	0	5514
15	0	0	0	0	0	0	7	87	347	261	412	751	768	724	628	470	225	69	6	0	0	0	0	0	4756
16	0	0	0	0	0	0	3	46	84	168	160	158	178	178	222	151	38	29	2	0	0	0	0	0	1416
17	0	0	0	0	0	0	1	9	29	89	148	144	276	477	759	608	337	53	6	0	0	0	0	0	2936
18	0	0	0	0	0	0	11	161	374	565	718	800	843	581	579	553	274	127	7	0	0	0	0	0	5593
19	0	0	0	0	0	0	12	166	273	486	549	672	427	298	250	248	188	84	4	0	0	0	0	0	3655
20	0	0	0	0	0	0	8	50	96	118	222	441	424	201	219	343	161	47	4	0	0	0	0	0	2334
21	0	0	0	0	0	0	5	98	165	149	137	168	199	206	102	94	95	26	3	0	0	0	0	0	1447
22	0	0	0	0	0	0	2	39	80	162	163	324	422	744	693	409	122	95	17	0	0	0	0	0	3272
23	0	0	0	0	0	0	7	103	201	489	718	832	858	782	728	567	368	157	11	0	0	0	0	0	5822
24	0	0	0	0	0	0	25	205	328	551	722	763	799	832	730	562	377	148	7	0	0	0	0	0	6051
25	0	0	0	0	0	0	8	60	131	209	540	754	621	410	357	438	109	142	9	0	0	0	0	0	3789
26	0	0	0	0	0	0	24	191	408	609	769	871	903	864	754	600	397	172	12	0	0	0	0	0	6572
27	0	0	0	0	0	0	8	75	126	99	39	145	181	236	252	84	118	101	4	0	0	0	0	0	1469
28	0	0	0	0	0	0	4	37	85	198	235	296	588	554	579	493	228	51	6	0	0	0	0	0	3354
29	0	0	0	0	0	0	17	190	360	527	797	891	838	668	693	547	343	83	10	0	0	0	0	0	5964
30	0	0	0	0	0	0	9	63	160	256	301	612	886	883	763	603	379	206	17	0	0	0	0	0	5138
31	0	0	0	0	0	0	40 ?	378 ?	447	638	798	907	916	893	787	621	397	206	25	0	0	0	0	0	6970
Avg	0	0	0	0	0	0	7	93	215	329	445	551	614	580	516	408	231	91	6	0	0	0	0	0	4086
S D	0	0	0	0	0	0	9	74	126	187	255	267	240	233	216	164	105	46	5	0	0	0	0	0	1642
S/A	0	0	0	0	0	0	1.24	0.79	0.58	0.57	0.57	0.48	0.39	0.4	0.42	0.4	0.46	0.51	0.89	0	0	0	0	0	0.4
Min	0	0	0	0	0	0	0	6	29	34	39	132	178	145	102	84	38	19	1	0	0	0	0	0	1386
Max	0	0	0	0	0	0	40	378	447	638	798	907	916	893	787	621	397	206	25	0	0	0	0	0	6970

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4440 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 - March 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	0	2	0	5	55	550	191	6	189	246	141	0	0	0	0	0	0	1386
2	0	0	0	0	0	0	0	6	2	199	757	961	992	994	967	918	801	469	1	0	0	0	0	0	7066
3	0	0	0	0	0	0	0	0	30	275	444	235	11	84	658	184	0	37	0	0	0	0	0	0	1958
4	0	0	0	0	0	0	0	0	0	1	2	1	22	581	445	723	299	18	20	0	0	0	0	0	2110
5	0	0	0	0	0	0	0	172	627	798	878	902	928	926	891	816	703	437	12	0	0	0	0	0	8090
6	0	0	0	0	0	0	0	334	662	813	893	932	942	933	928	880	763	490	13	0	0	0	0	0	8584
7	0	0	0	0	0	0	0	424	743	882	938	968	967	954	921	865	752	365	2	0	0	0	0	0	8783
8	0	0	0	0	0	0	0	385	683	802	871	896	883	866	853	725	536	258	0	0	0	0	0	0	7759
9	0	0	0	0	0	0	0	21	3	1	0	30	359	361	261	348	231	62	2	0	0	0	0	0	1678
10	0	0	0	0	0	0	0	464	754	854	893	914	917	775	159	91	15	0	0	0	0	0	0	0	5835
11	0	0	0	0	0	0	0	1	2	2	1	8	37	0	3	8	0	0	0	0	0	0	0	0	62
12	0	0	0	0	0	0	0	0	1	1	1	2	1	1	0	1	0	1	47	0	0	0	0	0	57
13	0	0	0	0	0	0	6	62	757 ?	912 ?	780 ?	649	405	798	200	45	5	10	0	0	0	0	0	0	4627
14	0	0	0	0	0	0	23	523	784	872	894	732	897	640	654	671	509	468	18	0	0	0	0	0	7685
15	0	0	0	0	0	0	23	193	727	18	86	652	681	654	521	429	86	0	0	0	0	0	0	0	4071
16	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	6
17	0	0	0	0	0	0	0	0	0	0	1	2	21	268	626	661	390	52	0	0	0	0	0	0	2021
18	0	0	0	0	0	0	75	692	872	939	919	903	846	240	399	718	378	225	3	0	0	0	0	0	7207
19	0	0	0	0	0	0	5	335	289	392	417	365	77	16	2	22	49	2	0	0	0	0	0	0	1972
20	0	0	0	0	0	0	0	0	0	0	21	74	93	0	0	50	3	0	0	0	0	0	0	0	242
21	0	0	0	0	0	0	0	71	2	1	1	1	2	3	0	0	0	0	0	0	0	0	0	0	81
22	0	0	0	0	0	0	0	0	0	1	1	6	42	610	642	279	2	125	58	0	0	0	0	0	1765
23	0	0	0	0	0	0	0	4	3	479	902	962	962	884	911	862	776	578	54	0	0	0	0	0	7378
24	0	0	0	0	0	0	136	608	486	788	927	816	831	956	934	833	728	461	10	0	0	0	0	0	8513
25	0	0	0	0	0	0	3	1	11	6	325	558	344	156	219	482	0	195	11	0	0	0	0	0	2311
26	0	0	0	0	0	0	171	665	829	919	955	989	994	980	937	890	779	551	23	0	0	0	0	0	9682
27	0	0	0	0	0	0	1	4	2	1	0	0	0	1	2	0	0	27	0	0	0	0	0	0	38
28	0	0	0	0	0	0	9	1	1	15	6	67	245	388	534	524	175	0	0	0	0	0	0	0	1962
29	0	0	0	0	0	0	24	326	367	496	914	974	739	420	630	627	524	2	0	0	0	0	0	0	6043
30	0	0	0	0	0	0	0	0	2	3	3	228	901	972	958	910	451	555	72	0	0	0	0	0	5055
31	0	0	0	0	0	0	262	722 ?	905	963	998	1030	972	1007 ?	998	950	551	303	85	0	0	0	0	0	9746
Avg	0	0	0	0	0	0	24	194	308	369	446	481	505	505	492	474	315	190	12	0	0	0	0	0	4315
S/D	0	0	0	0	0	0	58	246	356	395	423	415	404	382	373	352	302	208	23	0	0	0	0	0	3328
S/A	0	0	0	0	0	0	2.46	1.27	1.15	1.07	0.95	0.86	0.8	0.76	0.76	0.74	0.96	1.1	1.83	0	0	0	0	0	0.77
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	0	262	722	905	963	998	1030	994	1007	998	950	801	578	85	0	0	0	0	0	9746

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4440 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 - March 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	0	26	76	30	109	273	252	273	179	147	167	47	1	0	0	0	0	0	1581
2	0	0	0	0	0	0	0	37	104	218	178	116	98	88	80	69	53	29	0	0	0	0	0	0	1072
3	0	0	0	0	0	0	0	36	132	228	226	340	422	416	255	277	63	37	1	0	0	0	0	0	2435
4	0	0	0	0	0	0	1	24	69	124	233	156	424	192	276	104	112	42	2	0	0	0	0	0	1758
5	0	0	0	0	0	0	1	61	85	95	110	99	108	102	97	91	70	37	2	0	0	0	0	0	957
6	0	0	0	0	0	0	1	35	70	87	93	99	99	98	79	69	52	29	1	0	0	0	0	0	812
7	0	0	0	0	0	0	1	29	52	61	71	77	80	81	78	70	61	39	4	0	0	0	0	0	704
8	0	0	0	0	0	0	1	34	63	85	94	106	116	115	104	98	100	43	1	0	0	0	0	0	961
9	0	0	0	0	0	0	1	61	120	126	43	256	383	333	310	251	157	78	6	0	0	0	0	0	2127
10	0	0	0	0	0	0	2	35	58	79	96	104	114	222	228	199	98	26	1	0	0	0	0	0	1262
11	0	0	0	0	0	0	1	39	96	91	128	114	185	134	174	173	72	17	1	0	0	0	0	0	1224
12	0	0	0	0	0	0	0	6	52	111	143	223	231	204	112	89	102	61	6	0	0	0	0	0	1339
13	0	0	0	0	0	0	5	71	98 ?	97 ?	116 ?	233	378	189	358	224	145	72	4	0	0	0	0	0	1991
14	0	0	0	0	0	0	5	55	86	86	103	191	148	192	173	157	75	50	4	0	0	0	0	0	1325
15	0	0	0	0	0	0	6	47	99	240	325	246	223	217	257	222	183	61	5	0	0	0	0	0	2131
16	0	0	0	0	0	0	3	41	76	153	146	141	160	159	198	133	35	26	2	0	0	0	0	0	1272
17	0	0	0	0	0	0	0	9	25	80	131	128	250	217	305	263	174	44	5	0	0	0	0	0	1632
18	0	0	0	0	0	0	6	35	54	69	112	116	186	389	293	172	115	90	7	0	0	0	0	0	1643
19	0	0	0	0	0	0	11	96	165	260	265	377	358	273	222	222	160	76	4	0	0	0	0	0	2488
20	0	0	0	0	0	0	7	45	88	109	191	343	318	184	201	306	144	42	3	0	0	0	0	0	1981
21	0	0	0	0	0	0	4	77	146	134	122	154	181	185	92	85	85	23	3	0	0	0	0	0	1291
22	0	0	0	0	0	0	2	34	72	146	149	291	369	265	239	248	108	74	12	0	0	0	0	0	2010
23	0	0	0	0	0	0	7	89	177	220	113	93	95	101	104	87	63	37	6	0	0	0	0	0	1192
24	0	0	0	0	0	0	17	77	127	101	83	125	125	101	91	95	86	43	6	0	0	0	0	0	1077
25	0	0	0	0	0	0	8	54	117	194	291	318	348	279	205	162	98	107	8	0	0	0	0	0	2190
26	0	0	0	0	0	0	11	47	71	87	102	102	105	104	101	98	82	52	9	0	0	0	0	0	971
27	0	0	0	0	0	0	7	68	114	88	35	132	163	213	226	76	107	89	4	0	0	0	0	0	1322
28	0	0	0	0	0	0	3	33	75	180	207	240	379	247	208	187	143	46	6	0	0	0	0	0	1953
29	0	0	0	0	0	0	15	109	195	221	138	114	220	323	241	185	118	74	9	0	0	0	0	0	1961
30	0	0	0	0	0	0	8	55	141	226	270	396	135	111	83	74	169	80	10	0	0	0	0	0	1757
31	0	0	0	0	0	0	20	52 ?	59	69	74	79	106	90	77	69	111	95	16	0	0	0	0	0	917
Avg	0	0	0	0	0	0	5	49	96	132	145	187	218	197	182	152	107	54	5	0	0	0	0	0	1527
S/D	0	0	0	0	0	0	5	23	39	63	72	95	112	90	82	72	40	23	3	0	0	0	0	0	492
S/A	0	0	0	0	0	0	1.04	0.48	0.41	0.47	0.5	0.51	0.51	0.46	0.45	0.47	0.38	0.44	0.73	0	0	0	0	0	0.32
Min	0	0	0	0	0	0	0	6	25	30	35	77	80	81	77	69	35	17	0	0	0	0	0	0	704
Max	0	0	0	0	0	0	20	109	195	260	325	396	424	416	358	306	183	107	16	0	0	0	0	0	2488

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4440 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