

**Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - September 1998**

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	1	63	182	287	583	484	715	934	867	758	591	392	185	22	0	0	0	0	0	6066
2	0	0	0	0	0	0	60	231	432	622	768	859	891	872	731	514	292	161	27	0	0	0	0	0	6463
3	0	0	0	0	0	0	38	125	235	341	369	463	498	382	346	253	224	98	10	0	0	0	0	0	3381
4	0	0	0	0	0	0	44	132	382	575	714	732	591	425	451	499	303	150	15	0	0	0	0	0	5014
5	0	0	0	0	0	0	53	145	401	610	761	847	873	852	734	577	381	180	15	0	0	0	0	0	6428
6	0	0	0	0	0	0	54	155	373	578	727	730	773	652	597	520	193	75	26	0	0	0	0	0	5452
7	0	0	0	0	0	0	45	208	401	580	656	640	661	709	569	529	260	121	16	0	0	0	0	0	5395
8	0	0	0	0	0	0	24	152	376	607	732	601	681	668	430	355	180	112	11	0	0	0	0	0	4930
9	0	0	0	0	0	0	22	136	422	380	451	679	725	322	347	335	430	193	10	0	0	0	0	0	4451
10	0	0	0	0	0	0	45	200	463	621	783	873	894	846	735	566	375	163	8	0	0	0	0	0	6572
11	0	0	0	0	0	0	56	203	430	612	760	847	867	818	701	541	341	138	10	0	0	0	0	0	6321
12	0	0	0	0	0	0	43	205	410	589	734	819	846	800	697	536	340	140	7	0	0	0	0	0	6166
13	0	0	0	0	0	0	46	210	406	591	732	818	833	792	683	520	329	132	6	0	0	0	0	0	6099
14	0	0	0	0	0	0	33	152	402	590	748	816	839	799	685	469	317	121	4	0	0	0	0	0	5975
15	0	0	0	0	0	0	20	199	406	581	722	784	811	765	565	454	320	64	4	0	0	0	0	0	5695
16	0	0	0	0	0	0	28	196	374	560	681	787	411	636	676	467	213	60	4	0	0	0	0	0	5095
17	0	0	0	0	0	0	38	192	318	479	461	783	653	637	622	231	133	65	3	0	0	0	0	0	4616
18	0	0	0	0	0	0	18	114	253	502	661	701	424	315	362	263	57	23	2	0	0	0	0	0	3695
19	0	0	0	0	0	0	19	109	197	466	643	571	699	677	507	312	162	30	2	0	0	0	0	0	4393
20	0	0	0	0	0	0	27	165	360	517	663	764	738	608	519	423	142	53	3	0	0	0	0	0	4982
21	0	0	0	0	0	0	38	99	89	215	173	195	272	173	47	74	69	25	5	0	0	0	0	0	1474
22	0	0	0	0	0	0	8	40	106	249	508	497	151	225	138	173	129	71	2	0	0	0	0	0	2296
23	0	0	0	0	0	0	40	158	436	586	741	824	836	797	630	505	306	101	0	0	0	0	0	0	5960
24	0	0	0	0	0	0	20	193	400	590	729	806	742	674	450	451	262	82	1	0	0	0	0	0	5402
25	0	0	0	0	0	0	22	141	328	414	374	452	307	347	457	243	209	102	1	0	0	0	0	0	3396
26	0	0	0	0	0	0	23	148	305	504	647	773	768	639	245	390	166	70	0	0	0	0	0	0	4679
27	0	0	0	0	0	0	27	201	337	433	587	634	661	664	442	394	237	71	1	0	0	0	0	0	4688
28	0	0	0	0	0	0	22	153	305	352	563	570	682	714	505	338	185	45	0	0	0	0	0	0	4434
29	0	0	0	0	0	0	17	134	244	428	577	585	711	622	537	250	64	1	0	0	0	0	0	0	4169
30	0	0	0	0	0	0	20	116	203	548	492	553	566	408	435	270	230	57	1	0	0	0	0	0	3899
Avg	0	0	0	0	0	0	34	160	336	510	621	691	678	624	520	401	241	96	7	0	0	0	0	0	4920
S D	0	0	0	0	0	0	14	41	95	110	146	153	196	200	176	134	100	51	8	0	0	0	0	0	1220
S/A	0	0	0	0	0	2.83	0.43	0.26	0.28	0.22	0.23	0.22	0.29	0.32	0.34	0.33	0.41	0.53	1.06	0	0	0	0	0	0.25
Min	0	0	0	0	0	0	8	40	89	215	173	195	151	173	47	74	57	1	0	0	0	0	0	0	1474
Max	0	0	0	0	0	1	63	231	463	622	783	873	934	872	758	591	430	193	27	0	0	0	0	0	6572

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4487 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: 8.99 uV/Wm-2
Serial Number: 25765F3
Calibration Date: 9/13/96

**Direct Normal Solar Radiation
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - September 1998**

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	83	248	268	604	332	612	920	886	864	779	682	484	54	0	0	0	0	0	6816
2	0	0	0	0	0	0	210	521	656	668	684	742	749	802	718	470	301	210	17	0	0	0	0	0	6747
3	0	0	0	0	0	0	3	4	26	32	23	38	46	17	13	6	33	5	0	0	0	0	0	0	246
4	0	0	0	0	0	0	59	91	458	632	648	541	180	76	146	418	286	200	0	0	0	0	0	0	3734
5	0	0	0	0	0	0	158	438	667	754	799	831	847	850	822	789	704	541	49	0	0	0	0	0	8250
6	0	0	0	0	0	0	107	117	454	578	651	529	508	437	491	554	176	1	1	0	0	0	0	0	4603
7	0	0	0	0	0	0	123	397	515	565	468	411	315	247	302	556	168	146	11	0	0	0	0	0	4223
8	0	0	0	0	0	0	0	87	537	764	730	362	471	520	296	300	93	114	3	0	0	0	0	0	4279
9	0	0	0	0	0	0	1	45	519	260	245	483	477	34	96	147	661	555	32	0	0	0	0	0	3554
10	0	0	0	0	0	0	183	698	879	911	954	968	965	953	928	868	784	587	27	0	0	0	0	0	9705
11	0	0	0	0	0	0	256	633	785	846	883	900	902	875	820	747	586	344	8	0	0	0	0	0	8586
12	0	0	0	0	0	0	136	477	649	741	806	842	857	848	826	772	651	426	7	0	0	0	0	0	8039
13	0	0	0	0	0	0	177	539	710	791	835	854	853	845	811	749	632	391	3	0	0	0	0	0	8192
14	0	0	0	0	0	0	97	321	697	765	811	857	878	859	803	605	583	366	2	0	0	0	0	0	7643
15	0	0	0	0	0	0	26	420	696	761	804	783	786	779	534	463	518	46	0	0	0	0	0	0	6617
16	0	0	0	0	0	0	56	381	550	657	656	561	64	340	506	311	96	6	0	0	0	0	0	0	4184
17	0	0	0	0	0	0	45	196	170	319	139	667	349	382	483	41	19	12	0	0	0	0	0	0	2823
18	0	0	0	0	0	0	0	5	52	416	475	376	128	3	55	57	2	0	0	0	0	0	0	0	1569
19	0	0	0	0	0	0	8	59	14	193	302	92	301	366	236	107	47	0	0	0	0	0	0	0	1725
20	0	0	0	0	0	0	41	246	393	468	530	521	462	306	329	341	62	10	0	0	0	0	0	0	3710
21	0	0	0	0	0	0	46	11	1	2	1	1	1	0	0	0	1	0	0	0	0	0	0	0	66
22	0	0	0	0	0	0	0	0	1	3	152	136	1	6	1	14	32	43	0	0	0	0	0	0	389
23	0	0	0	0	0	0	114	217	778	847	952	972	968	940	822	885	781	469	0	0	0	0	0	0	8744
24	0	0	0	0	0	0	42	526	744	868	907	819	661	603	319	623	483	230	0	0	0	0	0	0	6827
25	0	0	0	0	0	0	16	148	315	208	67	102	88	55	150	65	133	125	0	0	0	0	0	0	1471
26	0	0	0	0	0	0	22	280	497	598	632	675	639	535	94	480	260	202	0	0	0	0	0	0	4913
27	0	0	0	0	0	0	72	427	336	341	505	446	537	512	305	433	377	156	0	0	0	0	0	0	4447
28	0	0	0	0	0	0	32	276	305	148	306	255	424	637	476	236	129	9	0	0	0	0	0	0	3233
29	0	0	0	0	0	0	11	124	165	268	317	351	495	410	386	91	0	0	0	0	0	0	0	0	2616
30	0	0	0	0	0	0	49	282	492	790	436	425	432	234	348	193	414	91	0	0	0	0	0	0	4184
Avg	0	0	0	0	0	0	72	274	444	527	535	538	510	479	433	403	323	192	7	0	0	0	0	0	4738
S D	0	0	0	0	0	0	68	198	259	278	287	283	310	325	296	286	269	195	14	0	0	0	0	0	2716
S/A	0	0	0	0	0	3.03	0.95	0.72	0.58	0.53	0.54	0.53	0.61	0.68	0.68	0.71	0.83	1.01	1.99	0	0	0	0	0	0.57
Min	0	0	0	0	0	0	0	0	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	66
Max	0	0	0	0	0	0	256	698	879	911	954	972	968	953	928	885	784	587	54	0	0	0	0	0	9705

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4487 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: 8.52 uV/Wm-2
Serial Number: 19791E6
Calibration Date: 9/13/96

Diffuse Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - September 1998

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	1	53	117	157	182	221	181	135	127	113	116	90	61	15	0	0	0	0	0	1569
2	0	0	0	0	0	0	36	86	121	190	243	227	245	210	197	223	162	107	25	0	0	0	0	0	2072
3	0	0	0	0	0	0	32	108	217	312	346	425	468	349	314	218	194	85	9	0	0	0	0	0	3079
4	0	0	0	0	0	0	37	104	152	167	212	264	421	334	334	242	177	99	14	0	0	0	0	0	2555
5	0	0	0	0	0	0	35	73 ?	116	137	155	156	149	157	136	110	88	55	9	0	0	0	0	0	1375
6	0	0	0	0	0	0	41	127	177	212	236	289	342	297	237	199	106	66	23	0	0	0	0	0	2353
7	0	0	0	0	0	0	32	99	165	228	301	302	391	483	354	208	188	92	14	0	0	0	0	0	2856
8	0	0	0	0	0	0	22	117	141	128	184	297	279	243	220	185	134	80	9	0	0	0	0	0	2040
9	0	0	0	0	0	0	19	116	181	216	261	279	325	282	268	240	169	76	7	0	0	0	0	0	2438
10	0	0	0	0	0	0	21	54 ?	61 ?	68	75	83	87	87	79	72	60	37	5	0	0	0	0	0	790
11	0	0	0	0	0	0	24	59 ?	74 ?	92	106	115	117	121	121	115	101	60	9	0	0	0	0	0	1114
12	0	0	0	0	0	0	28	79	118	134	139	136	137	130	121	102	79	47	6	0	0	0	0	0	1254
13	0	0	0	0	0	0	27	67	89	109	120	129	133	129	121	103	79	49	4	0	0	0	0	0	1159
14	0	0	0	0	0	0	23	54	90	124	154	127	121	130	134	137	91	47	4	0	0	0	0	0	1235
15	0	0	0	0	0	0	16	82	98	120	139	157	169	156	179	195	117	50	4	0	0	0	0	0	1482
16	0	0	0	0	0	0	19	88	134	166	204	338	335	366	328	297	165	53	4	0	0	0	0	0	2498
17	0	0	0	0	0	0	33	134	241	283	368	258	361	343	293	202	116	59	3	0	0	0	0	0	2693
18	0	0	0	0	0	0	16	107	217	252	326	403	307	283	313	229	51	21	1	0	0	0	0	0	2527
19	0	0	0	0	0	0	17	96	190	345	430	482	458	399	347	256	141	26	1	0	0	0	0	0	3190
20	0	0	0	0	0	0	23	105	192	242	286	356	368	366	298	241	109	48	2	0	0	0	0	0	2636
21	0	0	0	0	0	0	33	89	79	191	155	178	244	155	42	67	63	22	4	0	0	0	0	0	1322
22	0	0	0	0	0	0	7	36	95	220	394	378	137	206	124	155	112	62	2	0	0	0	0	0	1927
23	0	0	0	0	0	0	26	102	104	88	73	75	77	102	94	58	40	22	0	0	0	0	0	0	861
24	0	0	0	0	0	0	15	66	87	90	100	179	226	224	243	139	96	45	1	0	0	0	0	0	1512
25	0	0	0	0	0	0	22	106	194	303	316	375	223	300	339	206	161	84	1	0	0	0	0	0	2631
26	0	0	0	0	0	0	17	81	134	176	205	261	273	246	181	158	91	38	0	0	0	0	0	0	1864
27	0	0	0	0	0	0	15	89	200	222	245	288	249	293	236	184	115	47	1	0	0	0	0	0	2184
28	0	0	0	0	0	0	19	84	177	254	340	359	349	248	192	211	137	42	0	0	0	0	0	0	2412
29	0	0	0	0	0	0	15	104	172	266	352	304	328	322	289	200	57	2	0	0	0	0	0	0	2412
30	0	0	0	0	0	0	15	69	89 ?	102	194	227	226	235	217	172	100	43	0	0	0	0	0	0	1689
Avg	0	0	0	0	0	0	25	90	142	187	229	254	256	244	216	175	113	54	6	0	0	0	0	0	1991
S D	0	0	0	0	0	0	10	23	49	73	97	106	111	99	91	60	41	24	6	0	0	0	0	0	663
S/A	0	0	0	0	0	3.17	0.39	0.26	0.34	0.39	0.42	0.42	0.43	0.41	0.42	0.34	0.37	0.45	1.08	0	0	0	0	0	0.33
Min	0	0	0	0	0	0	7	36	61	68	73	75	77	87	42	58	40	2	0	0	0	0	0	0	790
Max	0	0	0	0	0	1	53	134	241	345	430	482	468	483	354	297	194	107	25	0	0	0	0	0	3190

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4487 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: 8.27 uV/Wm-2
Serial Number: 17880F3
Calibration Date: 9/13/96