

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - August 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	5	74	193	430	515	763	939	719	508	553	472	260	179	62	12	0	0	0	0	5685
2	0	0	0	0	0	7	132	329	540	734	857	969	1026	911	874	684	457	308	104	4	0	0	0	0	7936
3	0	0	0	0	0	9	135	337	543	740	889	981	1012	979	882	722	537	227	95	0	0	0	0	0	8087
4	0	0	0	0	0	7	132	334	542	727	874	967	990	955	864	716	520	315	95	2	0	0	0	0	8041
5	0	0	0	0	0	7	121	314	517	698	848	809	727	647	905	775	528	291	98	5	0	0	0	0	7290
6	0	0	0	0	0	5	103	285	490	673	822	841	597	790	675	626	337	194	66	3	0	0	0	0	6507
7	0	0	0	0	0	7	124	287	502	709	830	948	968	921	563	432	372	223	56	3	0	0	0	0	6946
8	0	0	0	0	0	0	14	28	28	155	456	464	901	698	84	49	140	74	49	14	0	0	0	0	3156
9	0	0	0	0	0	5	115	155	211	371	374	566	630	611	468	520	244	84	18	0	0	0	0	0	4373
10	0	0	0	0	0	0	4	12	120	185	204	585	667	334	567	397	221	259	82	3	0	0	0	0	3641
11	0	0	0	0	0	1	33	90	202	499	667	721	802	592	702	616	229	258	68	0	0	0	0	0	5480
12	0	0	0	0	0	4	48	207	451	615	736	823	829	858	754	607	431	254	60	1	0	0	0	0	6678
13	0	0	0	0	0	1	53	201	423	678	756	892	866	892	513	236	285	195	39	1	0	0	0	0	6030
14	0	0	0	0	0	3	98	159	117	162	148	337	262	451	311	63	66	20	13	1	0	0	0	0	2212
15	0	0	0	0	0	4	57	75	92	114	197	126	89	72	83	190	125	63	20	0	0	0	0	0	1307
16	0	0	0	0	0	1	21	86	246	260	201	324	318	77	129	579	297	208	21	1	0	0	0	0	2768
17	0	0	0	0	0	2	16	81	129	432	328	369	718	766	645	606	380	178	42	1	0	0	0	0	4694
18	0	0	0	0	0	2	49	115	207	336	623	726	836	686	710	591	395	187	62	0	0	0	0	0	5523
19	0	0	0	0	0	1	38	149	444	575	698	821	960	923	830	674	474	266	55	0	0	0	0	0	6908
20	0	0	0	0	0	2	88	276	489	683	833	922	953	917	815	650	447	263	49	0	0	0	0	0	7387
21	0	0	0	0	0	2	86	258	467	692	835	916	937	882	769	601	441	241	50	0	0	0	0	0	7175
22	0	0	0	0	0	2	77	240	455	651	798	885	907	870	754	594	430	237	46	0	0	0	0	0	6947
23	0	0	0	0	0	1	77	212	475	649	797	887	908	868	750	591	430	231	43	0	0	0	0	0	6919
24	0	0	0	0	0	1	70	222	434	633	682	865	884	806	757	573	394	199	41	0	0	0	0	0	6561
25	0	0	0	0	0	1	65	215	391	627	783	892	894	864	766	613	416	208	39	0	0	0	0	0	6771
26	0	0	0	0	0	1	72	262	441	622	773	865	877	629	364	375	151	91	45	0	0	0	0	0	5570
27	0	0	0	0	0	0	40	175	421	459	269	397	714	604	703	561	280	115	31	0	0	0	0	0	4769
28	0	0	0	0	0	1	65	204	497	650	739	890	927	879	773	613	416	205	30	0	0	0	0	0	6888
29	0	0	0	0	0	1	72	245	267	322	149	303	712	501	608	518	316	101	23	0	0	0	0	0	4138
30	0	0	0	0	0	1	33	93	242	525	684	686	744	743	740	534	307	168	30	0	0	0	0	0	5530
31	0	0	0	0	0	0	54	176	413	612	653	621	810	544	710	543	388	192	22	0	0	0	0	0	5739
Avg	0	0	0	0	0	3	70	194	362	526	621	720	780	703	633	526	346	195	50	2	0	0	0	0	5731
S D	0	0	0	0	0	2	36	89	154	191	247	239	216	233	224	176	121	74	25	3	0	0	0	0	1720
S/A	0	0	0	0	0	0.92	0.52	0.46	0.42	0.36	0.4	0.33	0.28	0.33	0.35	0.33	0.35	0.38	0.49	1.87	0	0	0	0	0.3
Min	0	0	0	0	0	0	4	12	28	114	148	126	89	72	83	49	66	20	13	0	0	0	0	0	1307
Max	0	0	0	0	0	9	135	337	543	740	889	981	1026	979	905	775	537	315	104	14	0	0	0	0	8087

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 5059 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 - August 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	10	83	205	251	468	632	342	99	304	227	33	44	5	0	0	0	0	0	2701
2	0	0	0	0	0	34	490	684	808	886	872	876	930	809	808	682	508	467	201	0	0	0	0	0	9055
3	0	0	0	0	0	58	557	775	870	920	964	979	985	977	937	833	697	435	213	0	0	0	0	0	10200
4	0	0	0	0	0	54	578	778	875	921	948	958	951	937	898	799	827	728	321	0	0	0	0	0	10573
5	0	0	0	0	0	33	479	685	783	838	846	644	492	383	802	764	606	492	185	0	0	0	0	0	8032
6	0	0	0	0	0	16	291	500	636	704	756	656	307	516	414	512	271	202	105	0	0	0	0	0	5887
7	0	0	0	0	0	32	385	501	719	839	843	917	905	861	392	226	339	317	44	0	0	0	0	0	7319
8	0	0	0	0	0	0	0	0	0	1	95	55	509	357	0	0	2	1	6	0	0	0	0	0	1028
9	0	0	0	0	0	0	77	4	1	27	7	75	114	206	137	208	55	1	0	0	0	0	0	0	912
10	0	0	0	0	0	0	0	0	0	2	1	153	238	54	189	195	51	315	132	0	0	0	0	0	1331
11	0	0	0	0	0	0	0	1	14	112	229	254	358	247	388	390	44	343	141	0	0	0	0	0	2522
12	0	0	0	0	0	0	0	48	494	615	546	561	551	602	589	533	500	337	64	0	0	0	0	0	5439
13	0	0	0	0	0	0	6	184	375	442	415	537	524	566	184	16	94	69	6	0	0	0	0	0	3419
14	0	0	0	0	0	2	58	32	0	2	1	4	2	5	5	0	1	0	0	0	0	0	0	0	113
15	0	0	0	0	0	0	0	0	1	0	2	1	1	0	0	1	0	0	0	0	0	0	0	0	7
16	0	0	0	0	0	0	0	0	0	1	2	0	1	2	0	6	333	162	174	10	0	0	0	0	692
17	0	0	0	0	0	0	0	2	1	154	39	34	377	453	478	392	287	149	25	0	0	0	0	0	2392
18	0	0	0	0	0	0	1	1	6	73	261	346	404	323	426	390	246	82	22	0	0	0	0	0	2582
19	0	0	0	0	0	0	0	29	508	421	558	680	898	927	919	886	821	700	203	0	0	0	0	0	7552
20	0	0	0	0	0	4	288	567	707	796	833	848	879	883	878	805	701	648	155	0	0	0	0	0	8993
21	0	0	0	0	0	1	260	628	785	877	904	908	904	888	874	831	761	584	141	0	0	0	0	0	9348
22	0	0	0	0	0	1	260	571	717	795	835	847	840	841	814	782	716	589	144	0	0	0	0	0	8752
23	0	0	0	0	0	0	268	555	738	794	829	850	841	852	813	770	722	564	118	0	0	0	0	0	8716
24	0	0	0	0	0	0	147	336	505	611	469	638	649	583	701	582	479	334	65	0	0	0	0	0	6099
25	0	0	0	0	0	0	179	471	581	643	699	729	740	771	784	764	628	454	86	0	0	0	0	0	7528
26	0	0	0	0	0	0	169	443	598	703	741	738	675	327	94	107	5	4	0	0	0	0	0	0	4604
27	0	0	0	0	0	0	7	84	414	185	10	19	331	295	512	478	112	38	5	0	0	0	0	0	2491
28	0	0	0	0	0	0	126	446	726	764	685	857	919	898	852	811	723	550	95	0	0	0	0	0	8452
29	0	0	0	0	0	0	281	503	34	16	0	8	255	91	356	470	247	35	0	0	0	0	0	0	2297
30	0	0	0	0	0	0	0	0	10	292	425	438	498	560	659	535	300	270	43	0	0	0	0	0	4029
31	0	0	0	0	0	0	52	311	609	694	494	320	554	334	630	572	587	475	59	0	0	0	0	0	5693
Avg	0	0	0	0	0	8	160	298	410	464	477	502	548	505	511	480	372	303	84	0	0	0	0	0	5121
S D	0	0	0	0	0	16	182	277	330	345	347	345	304	322	314	284	288	234	82	0	0	0	0	0	3280
S/A	0	0	0	0	0	2.11	1.14	0.93	0.8	0.74	0.73	0.69	0.56	0.64	0.61	0.59	0.77	0.77	0.98	3.61	0	0	0	0	0.64
Min	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	7
Max	0	0	0	0	0	58	578	778	875	921	964	979	985	977	937	886	827	728	321	0	0	0	0	0	10573

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 5059 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 - August 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	5	66	167	319	329	369	365	385	395	297	290	234	153	56	11	0	0	0	0	3441
2	0	0	0	0	0	7	57	86	96	102	120	158	148	163	192	169	127	83	45	3	0	0	0	0	1558
3	0	0	0	0	0	8	51	64	68	76	79	79	78	76	72	72	67	50 ?	30	0	0	0	0	0	870
4	0	0	0	0	0	6	45	61	66	73	80	87	91	88	83	80	70	59	34	2	0	0	0	0	924
5	0	0	0	0	0	6	52	77	96	110	146	217	264	283	246	251	211	122	63	5	0	0	0	0	2148
6	0	0	0	0	0	5	62	116	154	185	199	248	301	318	338	279	199	130	48	3	0	0	0	0	2584
7	0	0	0	0	0	7	69	109	114	120	123	111	120	136	218	264	182	121	49	3	0	0	0	0	1746
8	0	0	0	0	0	0	12	25	24	136	358	405	409	361	74	43	121	65	40	4	0	0	0	0	2076
9	0	0	0	0	0	4	95	134	184	330	328	451	483	393	324	353	193	76	15	0	0	0	0	0	3363
10	0	0	0	0	0	0	4	10	105	162	179	423	440	273	395	248	185	144	59	3	0	0	0	0	2631
11	0	0	0	0	0	1	29	78	181	423	466	488	465	363	380	350	204	153	45	0	0	0	0	0	3627
12	0	0	0	0	0	3	41	178	185 ?	208	293	318	322	324	284	254	181	148	50	1	0	0	0	0	2790
13	0	0	0	0	0	1	46	137	230	381	419	411	385	392	355	205	236	175	34	1	0	0	0	0	3407
14	0	0	0	0	0	3	91	144	102	142	131	297	231	394	273	55	57	17	11	1	0	0	0	0	1950
15	0	0	0	0	0	4	50	65	80	102	168	112	78	62	72	168	110	54	18	0	0	0	0	0	1142
16	0	0	0	0	0	1	20	75	215	226	175	282	280	66	113	335	201	143	18	1	0	0	0	0	2150
17	0	0	0	0	0	2	15	73	112	304	276	308	369	376	263	349	242	130	37	0	0	0	0	0	2858
18	0	0	0	0	0	2	43	100	179	279	421	433	479	409	377	337	278	161	45	0	0	0	0	0	3541
19	0	0	0	0	0	1	33	132	191	284	261	218	146	115	100	88	70	56	23	0	0	0	0	0	1719
20	0	0	0	0	0	2	53	96	129	145	164	175	156	144	119	118	98	69	25	0	0	0	0	0	1492
21	0	0	0	0	0	2	45	82	90	99	112	122	125	122	111	99	84	65	27	0	0	0	0	0	1186
22	0	0	0	0	0	2	45	84	99	116	131	145	156	153	145	123	95	66	24	0	0	0	0	0	1385
23	0	0	0	0	0	1	42	79	94	116	137	146	158	144	143	125	95	69	24	0	0	0	0	0	1373
24	0	0	0	0	0	1	49	130	177	227	309	314	306	317	243	214	174	107	32	0	0	0	0	0	2601
25	0	0	0	0	0	1	45	101	149 ?	200	233	265	235	204	162	135	125	84	25	0	0	0	0	0	1962
26	0	0	0	0	0	1	45	106	140	162	189	227	279	345	289	301	134	81	39	0	0	0	0	0	2336
27	0	0	0	0	0	0	35	141	214	327	235	357	416	350	315	264	209	100	26	0	0	0	0	0	2989
28	0	0	0	0	0	1	44	88 ?	112 ?	145	193	149	117	118	124	104	86	60	17	0	0	0	0	0	1357
29	0	0	0	0	0	1	40	104	237	281	131	267	482	406	350	228	201	89	21	0	0	0	0	0	2837
30	0	0	0	0	0	1	29	81	212	301	342	310	304	272	245	205	180	103	24	0	0	0	0	0	2606
31	0	0	0	0	0	0	43	108 ?	139 ?	165	271	349	327	266	240	190	127	71	15	0	0	0	0	0	2310
Avg	0	0	0	0	0	2	45	98	145	202	227	266	275	253	224	203	154	97	33	1	0	0	0	0	2225
S D	0	0	0	0	0	2	19	36	62	95	106	116	131	119	103	95	60	39	14	2	0	0	0	0	798
S/A	0	0	0	0	0	0.94	0.43	0.37	0.43	0.47	0.47	0.44	0.48	0.47	0.46	0.47	0.39	0.41	0.42	1.77	0	0	0	0	0.36
Min	0	0	0	0	0	0	4	10	24	73	79	79	78	62	72	43	57	17	11	0	0	0	0	0	870
Max	0	0	0	0	0	8	95	178	319	423	466	488	483	409	395	353	278	175	63	11	0	0	0	0	3627

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 5059 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