

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - November 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	0	1	43	195	350 ?	530 ?	592	626	562	442	285	110	4	0	0	0	0	0	0	3738
2	0	0	0	0	0	0	0	58	103	159	169	190	163	296	161	77	25	0	0	0	0	0	0	0	1402
3	0	0	0	0	0	0	1	16	29	42	71	225	453	310	341	114	43	3	0	0	0	0	0	0	1647
4	0	0	0	0	0	0	0	6	22	36	47	79	95	105	86	75	25	2	0	0	0	0	0	0	576
5	0	0	0	0	0	0	0	18	56	137	256	230	197	188	159	50	30	2	0	0	0	0	0	0	1322
6	0	0	0	0	0	0	0	6	21	51	101	143	174	99	86	29	17	2	0	0	0	0	0	0	730
7	0	0	0	0	0	0	0	15	41	165	217	354	589	557	439	277	96	2	0	0	0	0	0	0	2752
8	0	0	0	0	0	0	0	12	54	68	88	93	64	45	41	17	6	0	0	0	0	0	0	0	487
9	0	0	0	0	0	0	0	17	109	284	433	581	589	529	406	256	43	1	0	0	0	0	0	0	3248
10	0	0	0	0	0	0	1	44	151	306	302	424	577	353	160	69	46	2	0	0	0	0	0	0	2434
11	0	0	0	0	0	0	0	40	175	407	531	605	610	555	436	273	92	1	0	0	0	0	0	0	3726
12	0	0	0	0	0	0	0	84	?	399	511	552	528	475	306	174	46	1	0	0	0	0	0	0	3076
13	0	0	0	0	0	0	0	18	76	206	297	326	355	333	268	177	63	1	0	0	0	0	0	0	2120
14	0	0	0	0	0	0	0	3	22	70	150	299	162	104	62	23	18	1	0	0	0	0	0	0	914
15	0	0	0	0	0	0	0	12	81	190	290	550	536	420	343	234	71	0	0	0	0	0	0	0	2727
16	0	0	0	0	0	0	0	38	110 ?	?	506 ?	556	572	524	366	248	75	1	0	0	0	0	0	0	2998
17	0	0	0	0	0	0	0	9	92	177	338	416	482	455	307	179	32	1	0	0	0	0	0	0	2488
18	0	0	0	0	0	0	0	37	203	370	492	561	561	457	382	205	67	1	0	0	0	0	0	0	3337
19	0	0	0	0	0	0	0	42	170	285	261	242	115	149	153	67	26	1	0	0	0	0	0	0	1512
20	0	0	0	0	0	0	0	23	73	126	78	34	39	17	14	32	5	0	0	0	0	0	0	0	442
21	0	0	0	0	0	0	0	25	183	360	479	518	557	498	343	110	62	0	0	0	0	0	0	0	3134
22	0	0	0	0	0	0	0	18 ?	318 ?	380	505 ?	548	558	502	393	235	65	0	0	0	0	0	0	0	3522
23	0	0	0	0	0	0	0	27	175	339	461	437	292	314	176	154	42	0	0	0	0	0	0	0	2418
24	0	0	0	0	0	0	0	11	164	343	469	542	553	496	386	229	65	0	0	0	0	0	0	0	3257
25	0	0	0	0	0	0	0	22	147	313	319	384	392	344	184	72	15	0	0	0	0	0	0	0	2191
26	0	0	0	0	0	0	0	21	167	330	458	526	545	490	382	227	66	0	0	0	0	0	0	0	3213
27	0	0	0	0	0	0	0	20	164	325	448	522	533	479	372	219	59	0	0	0	0	0	0	0	3140
28	0	0	0	0	0	0	0	19	161	319	447	521	532	480	373	218	61	0	0	0	0	0	0	0	3129
29	0	0	0	0	0	0	0	19	155	314	435	505	527	479	374	158	45	0	0	0	0	0	0	0	3011
30	0	0	0	0	0	0	0	15	140	305	429	519	534	481	349	200	61	0	0	0	0	0	0	0	3033
Avg	0	0	0	0	0	0	0	25	123	247	337	402	417	370	276	156	49	1	0	0	0	0	0	0	2391
S D	0	0	0	0	0	0	0	17	68	117	157	171	190	167	131	85	26	1	0	0	0	0	0	0	1012
S/A	0	0	0	0	0	0	1.98	0.69	0.55	0.48	0.47	0.43	0.46	0.45	0.48	0.55	0.53	1.07	0	0	0	0	0	0	0.42
Min	0	0	0	0	0	0	0	3	21	36	47	34	39	17	14	17	5	0	0	0	0	0	0	0	442
Max	0	0	0	0	0	0	1	84	318	407	531	605	626	562	442	285	110	4	0	0	0	0	0	0	3738

Daylight Data Recovery: 0% missing; 2% exceed the 15% QC threshold -- 3678 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 - November 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	0	0	94	790	903 ?	926	939	908	857	747	533	67	0	0	0	0	0	0	6762
2	0	0	0	0	0	0	0	86	1	4	1	1	2	25	0	0	0	0	0	0	0	0	0	0	122
3	0	0	0	0	0	0	0	0	0	0	0	4	152	37	147	15	0	0	0	0	0	0	0	0	357
4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5	0	0	0	0	0	0	0	0	0	1	5	2	1	1	1	0	0	0	0	0	0	0	0	0	11
6	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
7	0	0	0	0	0	0	0	0	0	1	1	146	781	910	870	769	519	41	0	0	0	0	0	0	4039
8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9	0	0	0	0	0	0	0	0	3	268	570	868	928	911	791	605	1	0	0	0	0	0	0	0	4944
10	0	0	0	0	0	0	0	3	52	228	160	266	508	148	2	0	38	0	0	0	0	0	0	0	1405
11	0	0	0	0	0	0	0	48	376	911	965	993	989	978	938	849	601	46	0	0	0	0	0	0	7693
12	0	0	0	0	0	0	0	251	776 ?	875	939	864	734	579	253	117	2	0	0	0	0	0	0	0	5390
13	0	0	0	0	0	0	0	0	1	71	68	72	115	153	109	129	41	0	0	0	0	0	0	0	758
14	0	0	0	0	0	0	0	0	0	0	1	23	1	0	0	0	0	0	0	0	0	0	0	0	26
15	0	0	0	0	0	0	0	0	1	54	318	668	734	514	637	664	397	15	0	0	0	0	0	0	4001
16	0	0	0	0	0	0	0	221	633 ?	?	925 ?	933	958	921	700	738	369	7	0	0	0	0	0	0	6407
17	0	0	0	0	0	0	0	0	3	59	264	328	587	602	348	185	0	0	0	0	0	0	0	0	2376
18	0	0	0	0	0	0	0	187	699	878	943	955	923	672	744	592	258	13	0	0	0	0	0	0	6863
19	0	0	0	0	0	0	0	64	311	327	13	3	0	21	25	1	0	0	0	0	0	0	0	0	765
20	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
21	0	0	0	0	0	0	0	99	587	832	877	782	853	837	618	82	240	0	0	0	0	0	0	0	5808
22	0	0	0	0	0	0	0	156	704 ?	875	949	979	952	906	799	478	15	0	0	0	0	0	0	0	7791
23	0	0	0	0	0	0	0	141	671	825	885	443	146	207	13	153	22	0	0	0	0	0	0	0	3506
24	0	0	0	0	0	0	0	4	563	861	944	975	977	953	902	797	507	11	0	0	0	0	0	0	7492
25	0	0	0	0	0	0	0	17	261	493	153	234	237	204	53	1	0	0	0	0	0	0	0	0	1653
26	0	0	0	0	0	0	0	101	639	810	872	889	947	938	890	782	489	9	0	0	0	0	0	0	7365
27	0	0	0	0	0	0	0	110	677	839	907	938	935	916	863	754	458	7	0	0	0	0	0	0	7403
28	0	0	0	0	0	0	0	108	705	854	920	951	957	941	895	783	506	10	0	0	0	0	0	0	7630
29	0	0	0	0	0	0	0	94	670	841	901	923	944	939	878	303	55	0	0	0	0	0	0	0	6547
30	0	0	0	0	0	0	0	38	466	752	863	940	960	930	753	502	284	4	0	0	0	0	0	0	6491
Avg	0	0	0	0	0	0	0	58	296	429	478	503	543	507	440	346	193	8	0	0	0	0	0	0	3787
S D	0	0	0	0	0	0	0	73	306	388	424	418	416	408	390	341	223	16	0	0	0	0	0	0	3030
S/A	0	0	0	0	0	0	5.39	1.26	1.03	0.9	0.89	0.83	0.77	0.81	0.89	0.99	1.15	1.9	0	0	0	0	0	0	0.8
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	2
Max	0	0	0	0	0	0	0	251	776	911	965	993	989	978	938	849	601	67	0	0	0	0	0	0	7791

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 3678 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 - November 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	0	1	39	162	79	59	56	59	59	53	45	26	2	0	0	0	0	0	0	641
2	0	0	0	0	0	0	0	42	96	147	157	175	154	268	150	74	23	0	0	0	0	0	0	0	1286
3	0	0	0	0	0	0	1	15	27	39	66	210	346	273	266	104	40	3	0	0	0	0	0	0	1387
4	0	0	0	0	0	0	0	5	21	33	43	74	89	97	79	69	23	1	0	0	0	0	0	0	533
5	0	0	0	0	0	0	0	16	54	132	242	212	182	175	147	46	28	2	0	0	0	0	0	0	1235
6	0	0	0	0	0	0	0	6	20	47	93	132	163	92	79	29	16	2	0	0	0	0	0	0	680
7	0	0	0	0	0	0	0	14	39	155	200	249	121	73	59	46	23	1	0	0	0	0	0	0	981
8	0	0	0	0	0	0	0	12	49	63	82	87	60	42	38	16	5	0	0	0	0	0	0	0	454
9	0	0	0	0	0	0	0	16	103	178	139	83	59	52	60	68	41	1	0	0	0	0	0	0	800
10	0	0	0	0	0	0	0	45	131	200	208	252	273	259	150	64	40	1	0	0	0	0	0	0	1625
11	0	0	0	0	0	0	0	34	60	45	50	54	55	52	42	33	17	1	0	0	0	0	0	0	443
12	0	0	0	0	0	0	0	20	51 ?	46	48	65	96	155	179	131	45	0	0	0	0	0	0	0	837
13	0	0	0	0	0	0	0	16	72	171	261	280	278	240	212	133	54	1	0	0	0	0	0	0	1718
14	0	0	0	0	0	0	0	2	20	66	142	277	154	98	58	22	17	1	0	0	0	0	0	0	858
15	0	0	0	0	0	0	0	11	76	165	125	187	131	151	77	53	25	0	0	0	0	0	0	0	1000
16	0	0	0	0	0	0	0	16	40 ?	42	54	55	52	67	76	46	25	1	0	0	0	0	0	0	475
17	0	0	0	0	0	0	0	9	87	150	204	227	151	143	154	119	29	1	0	0	0	0	0	0	1274
18	0	0	0	0	0	0	0	17	38	43	49	55	64	116	81	47	31	1	0	0	0	0	0	0	544
19	0	0	0	0	0	0	0	37	95	157	246	229	111	132	140	64	24	1	0	0	0	0	0	0	1236
20	0	0	0	0	0	0	0	23	70	120	75	33	38	16	13	30	5	0	0	0	0	0	0	0	422
21	0	0	0	0	0	0	0	14	53	62	73	102	102	89	85	77	30	0	0	0	0	0	0	0	687
22	0	0	0	0	0	0	0	14	46 ?	57	50	45	47	47	41	33	17	0	0	0	0	0	0	0	399
23	0	0	0	0	0	0	0	14	35	48	57	207	204	200	164	115	37	0	0	0	0	0	0	0	1081
24	0	0	0	0	0	0	0	10	43	44	45	46	49	46	39	30	14	0	0	0	0	0	0	0	366
25	0	0	0	0	0	0	0	19	87	132	234	247	250	228	153	70	14	0	0	0	0	0	0	0	1434
26	0	0	0	0	0	0	0	11	39	52	68	73	61	52	45	35	18	0	0	0	0	0	0	0	454
27	0	0	0	0	0	0	0	10	33	42	48	52	58	53	45	35	13	0	0	0	0	0	0	0	388
28	0	0	0	0	0	0	0	8	28	34	42	47	48	44	37	28	14	0	0	0	0	0	0	0	331
29	0	0	0	0	0	0	0	10	30	37	44	50	53	47	43	72	35	0	0	0	0	0	0	0	421
30	0	0	0	0	0	0	0	10	52	53	53	56	54	53	60	67	34	0	0	0	0	0	0	0	493
Avg	0	0	0	0	0	0	0	17	59	88	109	131	119	114	94	60	25	1	0	0	0	0	0	0	816
S D	0	0	0	0	0	0	0	11	33	54	73	85	81	76	61	32	12	1	0	0	0	0	0	0	410
S/A	0	0	0	0	0	0	2.43	0.63	0.57	0.61	0.67	0.65	0.68	0.67	0.64	0.53	0.46	1.02	0	0	0	0	0	0	0.5
Min	0	0	0	0	0	0	0	2	20	33	42	33	38	16	13	16	5	0	0	0	0	0	0	0	331
Max	0	0	0	0	0	0	1	45	162	200	261	280	346	273	266	133	54	3	0	0	0	0	0	0	1718

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 3678 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