

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - January 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	0	1	51 ?	?	?	?	515 ?	562 ?	446	260	84	3	0	0	0	0	0	0	1921 ?
2	0	0	0	0	0	0	0	5	137	253	413	499	528	488	393	244	80	0	0	0	0	0	0	0	3039
3	0	0	0	0	0	0	0	3	51	211	302	316	627	485	387	243	88	1	0	0	0	0	0	0	2714
4	0	0	0	0	0	0	0	3	92	236	392	438	477	437	340	236	73	0	0	0	0	0	0	0	2726
5	0	0	0	0	0	0	0	4	44	192	397	373	290	194	238	75	36	1	0	0	0	0	0	0	1845
6	0	0	0	0	0	0	0	0	20	51	168	136	140	166	122	44	27	0	0	0	0	0	0	0	874
7	0	0	0	0	0	0	0	1	26	61	57	59	70	64	46	60	18	1	0	0	0	0	0	0	463
8	0	0	0	0	0	0	0	0	13	43	115	112	140	174	230	221	62	4	0	0	0	0	0	0	1115
9	0	0	0	0	0	0	0	1	29	61	249	144	188	227	251	121	35	5	0	0	0	0	0	0	1311
10	0	0	0	0	0	0	0	2	89	258	402	505	539	504	413	266	101	2	0	0	0	0	0	0	3083
11	0	0	0	0	0	0	0	2	23	78	312	209	161	234	218	134	39	2	0	0	0	0	0	0	1414
12	0	0	0	0	0	0	0	1	6	58	40	39	62	111	136	64	31	3	0	0	0	0	0	0	552
13	0	0	0	0	0	0	0	0	7	63	75	76	35	58	41	19	11	1	0	0	0	0	0	0	385
14	0	0	0	0	0	0	0	2	64	216	324	464	620	425	230	180	67	7	0	0	0	0	0	0	2599
15	0	0	0	0	0	0	0	0	4	12	25	76	100	60	61	34	18	3	0	0	0	0	0	0	394
16	0	0	0	0	0	0	0	2	41	68	81	120	104	56	40	20	9	1	0	0	0	0	0	0	540
17	0	0	0	0	0	0	0	1	29	68	64	38	47	177	62	33	14	2	0	0	0	0	0	0	537
18	0	0	0	0	0	0	0	1	10	67	170	458	541	505	344	215	102	8	0	0	0	0	0	0	2420
19	0	0	0	0	0	0	0	1	15	43	44	118	98	151	65	31	13	3	0	0	0	0	0	0	582
20	0	0	0	0	0	0	0	4	35	211	373	552	525	542	457	301	72	6	0	0	0	0	0	0	3078
21	0	0	0	0	0	0	0	3	56	174	336	468	491	319	349	264	86	12	0	0	0	0	0	0	2558
22	0	0	0	0	0	0	0	2	25	51	73	114	118	101	62	24	4	1	0	0	0	0	0	0	576
23	0	0	0	0	0	0	0	2	28	50	121	145	114	126	69	56	22	2	0	0	0	0	0	0	735
24	0	0	0	0	0	0	0	1	16	57	54	35	41	58	26	31	11	1	0	0	0	0	0	0	331
25	0	0	0	0	0	0	0	1	29	102	167	212	195	244	222	181 ?	69 ?	9	0	0	0	0	0	0	1431
26	0	0	0	0	0	0	0	4	57	156 ?	291 ?	364 ?	360	379	277	275	126	14	0	0	0	0	0	0	2302
27	0	0	0	0	0	0	0	1	6	12	29	35	31	26	18	10	5	1	0	0	0	0	0	0	173
28	0	0	0	0	0	0	0	0	2	5	9	14	10	12	56 ?	67 ?	22	4	0	0	0	0	0	0	203
29	0	0	0	0	0	0	0	7	146 ?	?	?	?	?	?	?	?	101 ?	23	0	0	0	0	0	0	276 ?
30	0	0	0	0	0	0	0	2	13	40	108	129	109	98	76	85	40	5	0	0	0	0	0	0	705
31	0	0	0	0	0	0	0	2	23	117	228	333	393	295 ?	225 ?	?	103 ?	23	0	0	0	0	0	0	1741 ?
Avg	0	0	0	0	0	0	0	2	38	104	187	227	256	243	197	131	51	5	0	0	0	0	0	0	1375
S/D	0	0	0	0	0	0	0	2	35	78	135	174	206	174	141	98	36	6	0	0	0	0	0	0	986
S/A	0	0	0	0	0	0	0	0.82	0.92	0.75	0.72	0.76	0.81	0.72	0.72	0.75	0.71	1.24	0	0	0	0	0	0	0.72
Min	0	0	0	0	0	0	0	0	2	5	9	14	10	12	18	10	4	0	0	0	0	0	0	0	173
Max	0	0	0	0	0	0	0	7	146	258	413	552	627	562	457	301	126	23	0	0	0	0	0	0	3083

Daylight Data Recovery: 0% missing; 7% exceed the 15% QC threshold -- 3684 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 - January 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	Dayly
1	0	0	0	0	0	0	0	0	476 ?	?	?	?	957 ?	957 ?	924	795	507	60	0	0	0	0	0	0	4677 ?
2	0	0	0	0	0	0	0	0	310	491	898	941	961	960	926	828	537	24	0	0	0	0	0	0	6875
3	0	0	0	0	0	0	0	0	2	223	569	307	863	944	900	801	541	16	0	0	0	0	0	0	5167
4	0	0	0	0	0	0	0	0	427	651	680	720	779	719	620	741	448	9	0	0	0	0	0	0	5794
5	0	0	0	0	0	0	0	0	30	411	494	362	89	19	91	2	0	0	0	0	0	0	0	0	1498
6	0	0	0	0	0	0	0	0	0	0	45	11	5	4	6	0	0	0	0	0	0	0	0	0	71
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	1	29	61	255	50	4	0	0	0	0	0	0	400
9	0	0	0	0	0	0	0	0	0	1	170	1	6	82	122	75	0	0	0	0	0	0	0	0	457
10	0	0	0	0	0	0	0	0	178	678	865	990	996	979	937	850	607	41	0	0	0	0	0	0	7122
11	0	0	0	0	0	0	0	0	0	1	214	1	0	2	6	31	17	0	0	0	0	0	0	0	272
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3
13	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14	0	0	0	0	0	0	0	0	58	264	329	526	727	621	222	312	14	0	0	0	0	0	0	0	3073
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	8
18	0	0	0	0	0	0	0	0	0	0	13	549	841	783	357	320	170	0	0	0	0	0	0	0	3032
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20	0	0	0	0	0	0	0	0	0	107	340	786	750	904	934	821	195	19	0	0	0	0	0	0	4855
21	0	0	0	0	0	0	0	0	3	53	270	427	295	75	434	498	1	0	0	0	0	0	0	0	2056
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	5	3	1	102	175	254 ?	486 ?	133	0	0	0	0	0	0	1159
26	0	0	0	0	0	0	0	0	2	65 ?	360 ?	176	95	172	115	515	403	35	0	0	0	0	0	0	1938
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0 ?	0 ?	0	0	0	0	0	0	0	0	4
29	0	0	0	0	0	0	0	0	0 ?	1 ?	?	?	?	?	?	?	0 ?	0	0	0	0	0	0	0	1 ?
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0 ?	0 ?	?	0 ?	0	0	0	0	0	0	0	0 ?
Avg	0	0	0	0	0	0	0	0	48	98	181	200	246	245	228	245	128	11	0	0	0	0	0	0	1564
S/D	0	0	0	0	0	0	0	0	123	195	271	314	378	377	343	323	210	27	0	0	0	0	0	0	2262
S/A	0	0	0	0	0	0	0	5.06	2.56	1.99	1.5	1.57	1.54	1.54	1.51	1.32	1.64	2.4	0	0	0	0	0	0	1.45
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	0
Max	0	0	0	0	0	0	0	0	476	678	898	990	996	979	937	850	607	133	0	0	0	0	0	0	7122

Daylight Data Recovery: 0% missing; 6% exceed the 15% QC threshold -- 3684 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 - January 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	0	1	21	41	56	68	88 ?	69 ?	69	46	25	2	0	0	0	0	0	0	485
2	0	0	0	0	0	0	0	5	86	115	52	56	60	54	45	36	17	0	0	0	0	0	0	0	526
3	0	0	0	0	0	0	0	3	49	143	64	147	194	58	45	37	24	1	0	0	0	0	0	0	765
4	0	0	0	0	0	0	0	3	33	57	116	92	92	99	92	43	17	0	0	0	0	0	0	0	643
5	0	0	0	0	0	0	0	4	39	70	200	205	238	184	200	73	35	1	0	0	0	0	0	0	1249
6	0	0	0	0	0	0	0	0	19	49	144	125	133	156	114	43	26	0	0	0	0	0	0	0	808
7	0	0	0	0	0	0	0	1	26	60	56	58	69	63	45	59	17	1	0	0	0	0	0	0	455
8	0	0	0	0	0	0	0	0	12	43	113	110	137	157	205	155	52	4	0	0	0	0	0	0	988
9	0	0	0	0	0	0	0	1	27	59	178	139	181	186	199	94	34	4	0	0	0	0	0	0	1104
10	0	0	0	0	0	0	0	1	56	67	53	44	50	48	42	34	20	1	0	0	0	0	0	0	418
11	0	0	0	0	0	0	0	2	22	75	219	202	158	226	209	123	35	2	0	0	0	0	0	0	1270
12	0	0	0	0	0	0	0	0	6	57	39	39	61	108	132	61	30	3	0	0	0	0	0	0	537
13	0	0	0	0	0	0	0	0	7	61	72	74	34	56	39	18	10	0	0	0	0	0	0	0	372
14	0	0	0	0	0	0	0	2	48	139	164	195	249	107	130	73	64	6	0	0	0	0	0	0	1180
15	0	0	0	0	0	0	0	0	4	12	24	75	97	58	59	33	17	3	0	0	0	0	0	0	382
16	0	0	0	0	0	0	0	2	40	67	80	118	102	55	38	19	8	1	0	0	0	0	0	0	530
17	0	0	0	0	0	0	0	1	28	66	62	37	46	172	61	31	14	2	0	0	0	0	0	0	520
18	0	0	0	0	0	0	0	0	9	65	159	163	98	110	182	121	70	7	0	0	0	0	0	0	984
19	0	0	0	0	0	0	0	1	15	40	42	113	94	149	62	30	13	2	0	0	0	0	0	0	561
20	0	0	0	0	0	0	0	4	33	163	204	138	127	99	63	47	30	5	0	0	0	0	0	0	912
21	0	0	0	0	0	0	0	3	53	161	205	237	317	286	160	99	80	11	0	0	0	0	0	0	1613
22	0	0	0	0	0	0	0	2	24	49	71	110	114	96	60	23	3	0	0	0	0	0	0	0	553
23	0	0	0	0	0	0	0	2	26	48	116	139	110	122	67	54	21	2	0	0	0	0	0	0	704
24	0	0	0	0	0	0	0	1	15	53	50	33	36	41	18	22	7	0	0	0	0	0	0	0	276
25	0	0	0	0	0	0	0	1	17	64	108	139	133	162	149	96 ?	28	2	0	0	0	0	0	0	899
26	0	0	0	0	0	0	0	3	45	97 ?	91 ?	258	292	277	215	108	41	12	0	0	0	0	0	0	1442
27	0	0	0	0	0	0	0	0	6	12	28	34	31	26	17	9	3	0	0	0	0	0	0	0	166
28	0	0	0	0	0	0	0	0	1	5	9	14	9	10	11 ?	8 ?	2	0	0	0	0	0	0	0	68
29	0	0	0	0	0	0	0	2	32 ?	67 ?	?	?	?	?	?	?	37 ?	12	0	0	0	0	0	0	150 ?
30	0	0	0	0	0	0	0	1	12	38	104	124	105	94	73	82	38	4	0	0	0	0	0	0	679
31	0	0	0	0	0	0	0	2	22	113	220	305	359	294 ?	190 ?	?	27 ?	9	0	0	0	0	0	0	1539 ?
Avg	0	0	0	0	0	0	0	2	27	69	103	120	127	121	100	58	27	3	0	0	0	0	0	0	735
S D	0	0	0	0	0	0	0	1	18	40	63	71	87	76	66	37	19	3	0	0	0	0	0	0	404
S/A	0	0	0	0	0	0	0	0.81	0.68	0.57	0.61	0.59	0.68	0.63	0.66	0.65	0.69	1.09	0	0	0	0	0	0	0.55
Min	0	0	0	0	0	0	0	0	1	5	9	14	9	10	11	8	2	0	0	0	0	0	0	0	68
Max	0	0	0	0	0	0	0	5	86	163	220	305	359	294	215	155	80	12	0	0	0	0	0	0	1613

Daylight Data Recovery: 0% missing; 5% exceed the 15% QC threshold -- 3684 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