

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - February 2001

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	3	28	48	103	200	185	205	255	304	174 ?	26	0	0	0	0	0	0	1531
2	0	0	0	0	0	0	0	7	158	323	434	345	240	149	249	371	158	34	0	0	0	0	0	0	2467
3	0	0	0	0	0	0	0	10	162	331	482	583	624	596	506	366	184	32	0	0	0	0	0	0	3876
4	0	0	0	0	0	0	0	7	74	307	438	584	616	581	502	366	172	24	0	0	0	0	0	0	3670
5	0	0	0	0	0	0	0	11	149	153	92	78	37	35	134	102	25	6	0	0	0	0	0	0	823
6	0	0	0	0	0	0	0	10	154	343	487	588	627	602	501	347	193	39	0	0	0	0	0	0	3890
7	0	0	0	0	0	0	0	11	90	234	289	449	508	522	409	337	153	14	0	0	0	0	0	0	3015
8	0	0	0	0	0	0	0	16	163	330	416	509	572	527	485	338	173	44	0	0	0	0	0	0	3573
9	0	0	0	0	0	0	0	9	157	250	279	334	318	240	176	214	140	34	0	0	0	0	0	0	2151
10	0	0	0	0	0	0	0	2	11	30	55	80	91	137	132	89	64	15	0	0	0	0	0	0	706
11	0	0	0	0	0	0	0	34	167 ?	412	514	621	656	643	442	306	154	34	0	0	0	0	0	0	3984
12	0	0	0	0	0	0	0	5	34	49	68	81	117	270	223	151	84	22	0	0	0	0	0	0	1105
13	0	0	0	0	0	0	0	6	32	123	151	246	278	276	285	215	107	20	0	0	0	0	0	0	1739
14	0	0	0	0	0	0	0	4	28	44	73	123	138	43	68	62	34	18	0	0	0	0	0	0	636
15	0	0	0	0	0	0	0	24	99	143	196	227	248	205	202	104	53	7	0	0	0	0	0	0	1509
16	0	0	0	0	0	0	0	16	53	60	67	62	63	83	31	22	15	3	0	0	0	0	0	0	474
17	0	0	0	0	0	0	0	4	39	247	486	626	664	633	294	375	152	43	0	0	0	0	0	0	3564
18	0	0	0	0	0	0	0	20	133	323	551	675	719	693	602	453	266	66	0	0	0	0	0	0	4502
19	0	0	0	0	0	0	0	24	138	324	526	647	696	681	586	441	257	72	0	0	0	0	0	0	4392
20	0	0	0	0	0	0	0	19	187	384	413	522	274	130	118	88	34	7	0	0	0	0	0	0	2177
21	0	0	0	0	0	0	0	20	50	116	413	461	528	656	482	411	264	75	0	0	0	0	0	0	3477
22	0	0	0	0	0	0	0	6	18	36	111	173	130	150	88	63	50	14	0	0	0	0	0	0	839
23	0	0	0	0	0	0	0	23	115	344	592	695	721	694	603	447	238	76	1	0	0	0	0	0	4549
24	0	0	0	0	0	0	0	34	167	348	563	663	731	432	583	447	162	88	2	0	0	0	0	0	4221
25	0	0	0	0	0	0	0	12	48	132	157	158	156	436	440	318	292	86	1	0	0	0	0	0	2236
26	0	0	0	0	0	0	0	52	254	447	606	712	756	727	631	480	293	94	1	0	0	0	0	0	5052
27	0	0	0	0	0	0	0	46	254	448	610	711	711	604	386	130	89	26	1	0	0	0	0	0	4015
28	0	0	0	0	0	0	0	5	21	70	136	269	446	657	603	481	295	89	1	0	0	0	0	0	3074
Avg	0	0	0	0	0	0	0	16	107	228	332	408	423	415	358	280	153	39	0	0	0	0	0	0	2759
S D	0	0	0	0	0	0	0	13	70	137	196	227	247	235	189	146	86	28	0	0	0	0	0	0	1389
S/A	0	0	0	0	0	0	0	0.81	0.66	0.6	0.59	0.56	0.58	0.57	0.53	0.52	0.57	0.72	1.67	0	0	0	0	0	0.5
Min	0	0	0	0	0	0	0	2	11	30	55	62	37	35	31	22	15	3	0	0	0	0	0	0	474
Max	0	0	0	0	0	0	0	52	254	448	610	712	756	727	631	481	295	94	2	0	0	0	0	0	5052

Daylight Data Recovery: 0% missing; 0% exceed the 15% QC threshold -- 3627 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 - February 2001**

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	0	0	0	1	1	1	102	635	437 ?	0	0	0	0	0	0	0	1178
2	0	0	0	0	0	0	0	15	570	759	718	287	15	26	192	677	441	0	0	0	0	0	0	0	3701
3	0	0	0	0	0	0	0	29	671	843	929	976	983	968	937	873	638	0	0	0	0	0	0	0	7846
4	0	0	0	0	0	0	0	0	1	460	586	881	913	877	881	710	430	0	0	0	0	0	0	0	5739
5	0	0	0	0	0	0	0	47	505	48	3	0	0	0	1	0	0	0	0	0	0	0	0	0	604
6	0	0	0	0	0	0	0	15	585	788	872	915	922	914	835	674	433	1	0	0	0	0	0	0	6952
7	0	0	0	0	0	0	0	9	91	213	57	353	443	450	428	572	149	0	0	0	0	0	0	0	2766
8	0	0	0	0	0	0	0	55	544	622	452	510	629	475	625	590	436	33	0	0	0	0	0	0	4971
9	0	0	0	0	0	0	0	1	246	147	42	73	16	6	2	58	59	0	0	0	0	0	0	0	649
10	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
11	0	0	0	0	0	0	0	106	521 ?	829	860	903	845	840	380	215	73	0	0	0	0	0	0	0	5572
12	0	0	0	0	0	0	0	0	0	0	0	0	13	6	1	0	0	0	0	0	0	0	0	0	21
13	0	0	0	0	0	0	0	0	0	1	1	4	6	11	60	81	7	0	0	0	0	0	0	0	170
14	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3
15	0	0	0	0	0	0	0	31	16	22	1	1	3	1	1	0	0	0	0	0	0	0	0	0	77
16	0	0	0	0	0	0	0	11	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	13
17	0	0	0	0	0	0	0	0	0	194	530	768	717	685	217	461	245	76	0	0	0	0	0	0	3893
18	0	0	0	0	0	0	0	0	45	401	863	997	1019	1018	1004	951	846	81	0	0	0	0	0	0	7224
19	0	0	0	0	0	0	0	68	188	488	706	828	890	941	874	842	754	291	0	0	0	0	0	0	6869
20	0	0	0	0	0	0	0	2	508	745	507	416	35	1	0	0	0	0	0	0	0	0	0	0	2214
21	0	0	0	0	0	0	0	0	0	2	183	156	343	780	341	704	769	356	0	0	0	0	0	0	3634
22	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
23	0	0	0	0	0	0	0	0	4	350	950	993	950	887	800	728	538	127	0	0	0	0	0	0	6327
24	0	0	0	0	0	0	0	3	109	466	773	802	804	216	732	609	119	80	0	0	0	0	0	0	4712
25	0	0	0	0	0	0	0	0	1	10	5	1	3	114	202	251	702	403	0	0	0	0	0	0	1693
26	0	0	0	0	0	0	0	260	801	912	981	1013	1027	1020	996	941	841	443	0	0	0	0	0	0	9234
27	0	0	0	0	0	0	0	126	798	927	987	1010	1027	1020	996	941	841	443	0	0	0	0	0	0	5251
28	0	0	0	0	0	0	0	0	0	0	1	7	109	658	781	851	758	236	0	0	0	0	0	0	3400
Avg	0	0	0	0	0	0	0	28	222	330	393	425	412	407	373	408	310	76	0	0	0	0	0	0	3383
S D	0	0	0	0	0	0	0	55	282	340	394	420	423	405	377	356	311	134	0	0	0	0	0	0	2828
S/A	0	0	0	0	0	0	0	1.99	1.27	1.03	1	0.99	1.03	1	1.01	0.87	1	1.76	5.2	0	0	0	0	0	0.84
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	1
Max	0	0	0	0	0	0	0	260	801	927	987	1013	1027	1020	1004	951	846	443	0	0	0	0	0	0	9234

Daylight Data Recovery: 0% missing; 0% exceed the 15% QC threshold -- 3627 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 - February 2001

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	3	26	45	99	190	176	197	198	82	43 ?	10	0	0	0	0	0	0	1070
2	0	0	0	0	0	0	0	5	47	76	105	188	228	129	156	127	42	12	0	0	0	0	0	0	1113
3	0	0	0	0	0	0	0	6	35	51	59	60	66	65	59	49	34	10	0	0	0	0	0	0	495
4	0	0	0	0	0	0	0	7	69	140	150	97	85	86	74	91	55	13	0	0	0	0	0	0	867
5	0	0	0	0	0	0	0	7	59	132	87	73	34	33	124	95	23	5	0	0	0	0	0	0	671
6	0	0	0	0	0	0	0	9	42	69	75	80	85	83	84	86	70	19	0	0	0	0	0	0	702
7	0	0	0	0	0	0	0	11	64	152	252	232	235	241	187	115	106	13	0	0	0	0	0	0	1609
8	0	0	0	0	0	0	0	10	58	106	181	196	175	230	156	102	66	25	0	0	0	0	0	0	1305
9	0	0	0	0	0	0	0	8	102	194	253	291	297	225	167	188	118	32	0	0	0	0	0	0	1875
10	0	0	0	0	0	0	0	1	10	27	51	75	86	130	125	84	60	13	0	0	0	0	0	0	663
11	0	0	0	0	0	0	0	16	49 ?	68	85	94	127	138	225	209	130	32	0	0	0	0	0	0	1174
12	0	0	0	0	0	0	0	4	32	46	64	77	112	251	211	141	80	21	0	0	0	0	0	0	1038
13	0	0	0	0	0	0	0	5	30	117	143	231	259	255	249	179	98	19	0	0	0	0	0	0	1585
14	0	0	0	0	0	0	0	4	27	42	69	117	132	42	65	59	32	17	0	0	0	0	0	0	605
15	0	0	0	0	0	0	0	20	92	133	188	216	233	199	193	101	51	6	0	0	0	0	0	0	1432
16	0	0	0	0	0	0	0	14	50	56	64	59	60	79	29	21	14	2	0	0	0	0	0	0	448
17	0	0	0	0	0	0	0	4	37	162	206	152	199	206	167	175	95	29	0	0	0	0	0	0	1431
18	0	0	0	0	0	0	0	18	117	151	103	77	74	71	63	54	41	19	0	0	0	0	0	0	789
19	0	0	0	0	0	0	0	16	101	112	141	133	117	95	103	78	50	24	0	0	0	0	0	0	970
20	0	0	0	0	0	0	0	18	57	82	146	266	240	122	112	83	31	6	0	0	0	0	0	0	1161
21	0	0	0	0	0	0	0	19	46	109	304	347	282	159	276	104	48	22	0	0	0	0	0	0	1718
22	0	0	0	0	0	0	0	6	17	33	108	169	120	142	83	58	46	13	0	0	0	0	0	0	795
23	0	0	0	0	0	0	0	21	108	177	83	78	92	119	142	122	69	51	0	0	0	0	0	0	1061
24	0	0	0	0	0	0	0	35	133	130	130	143	195	270	154	159	120	69	1	0	0	0	0	0	1540
25	0	0	0	0	0	0	0	11	44	119	144	143	147	353	325	190	86	28	1	0	0	0	0	0	1590
26	0	0	0	0	0	0	0	17	42	59	63	65	66	62	62	54	42	23	1	0	0	0	0	0	559
27	0	0	0	0	0	0	0	28	41	51	61	63	130	245	347	121	84	24	1	0	0	0	0	0	1196
28	0	0	0	0	0	0	0	4	19	65	127	247	364	219	145	87	64	35	1	0	0	0	0	0	1376
Avg	0	0	0	0	0	0	0	12	55	97	126	149	158	159	153	108	64	21	0	0	0	0	0	0	1101
S D	0	0	0	0	0	0	0	8	32	47	65	79	83	81	79	48	30	14	0	0	0	0	0	0	396
S/A	0	0	0	0	0	0	0	0.69	0.57	0.48	0.51	0.53	0.52	0.51	0.52	0.44	0.47	0.66	1.79	0	0	0	0	0	0.36
Min	0	0	0	0	0	0	0	1	10	27	51	59	34	33	29	21	14	2	0	0	0	0	0	0	448
Max	0	0	0	0	0	0	0	35	133	194	304	347	364	353	347	209	130	69	1	0	0	0	0	0	1875

Daylight Data Recovery: 0% missing; 0% exceed the 15% QC threshold -- 3627 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