

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - November 2000

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	78	261	430	559	626	626	561	451	288	98	4	0	0	0	0	0	0	3983	
2	0	0	0	0	0	0	1	68	237	397	520	581	590	493	303	254	55	1	0	0	0	0	0	0	3502	
3	0	0	0	0	0	0	1	57	92	204	238	334	283	394	214	204	89	2	0	0	0	0	0	0	2110	
4	0	0	0	0	0	0	0	10	66	148	159	111	160	270	191	82	45	1	0	0	0	0	0	0	1244	
5	0	0	0	0	0	0	0	45	?	288	?	534	?	608	614	554	436	272	98	2	0	0	0	0	0	3451
6	0	0	0	0	0	0	0	62	236	404	534	607	563	467	431	195	21	1	0	0	0	0	0	0	3521	
7	0	0	0	0	0	0	1	4	23	118	218	349	250	175	91	49	58	2	0	0	0	0	0	0	1337	
8	0	0	0	0	0	0	0	13	52	80	302	307	270	324	299	133	66	2	0	0	0	0	0	0	1848	
9	0	0	0	0	0	0	0	12	37	98	176	139	143	123	40	43	34	2	0	0	0	0	0	0	848	
10	0	0	0	0	0	0	0	8	33	62	102	139	119	115	70	57	23	1	0	0	0	0	0	0	730	
11	0	0	0	0	0	0	0	11	46	160	390	563	584	528	417	258	85	1	0	0	0	0	0	0	3044	
12	0	0	0	0	0	0	0	66	260	382	491	493	536	396	345	230	70	0	0	0	0	0	0	0	3269	
13	0	0	0	0	0	0	0	39	80	117	235	130	111	108	104	156	58	1	0	0	0	0	0	0	1139	
14	0	0	0	0	0	0	0	19	130	209	301	464	488	338	426	260	77	1	0	0	0	0	0	0	2714	
15	0	0	0	0	0	0	0	8	35	97	217	363	549	501	355	157	63	0	0	0	0	0	0	0	2346	
16	0	0	0	0	0	0	0	38	90	110	207	162	174	130	113	32	20	0	0	0	0	0	0	0	1076	
17	0	0	0	0	0	0	0	8	124	156	273	515	522	461	393	246	75	0	0	0	0	0	0	0	2774	
18	0	0	0	0	0	0	0	9	60	150	324	372	334	206	129	57	21	0	0	0	0	0	0	0	1661	
19	0	0	0	0	0	0	0	7	27	55	86	89	91	106	266	233	72	1	0	0	0	0	0	0	1032	
20	0	0	0	0	0	0	0	15	133	143	358	350	170	405	408	218	31	1	0	0	0	0	0	0	2232	
21	0	0	0	0	0	0	0	13	63	231	301	274	186	173	175	211	30	0	0	0	0	0	0	0	1657	
22	0	0	0	0	0	0	0	28	185	351	372	527	482	275	204	172	63	0	0	0	0	0	0	0	2659	
23	0	0	0	0	0	0	0	21	86	238	357	554	577	494	329	213	66	0	0	0	0	0	0	0	2934	
24	0	0	0	0	0	0	0	10	54	168	264	282	333	313	306	159	40	0	0	0	0	0	0	0	1929	
25	0	0	0	0	0	0	0	9	48	117	83	162	234	159	163	90	33	2	0	0	0	0	0	0	1100	
26	0	0	0	0	0	0	0	8	56	216	182	227	176	178	31	18	16	0	0	0	0	0	0	0	1109	
27	0	0	0	0	0	0	0	11	147	296	425	330	408	371	321	177	43	0	0	0	0	0	0	0	2530	
28	0	0	0	0	0	0	0	15	145	302	442	515	527	477	362	216	59	0	0	0	0	0	0	0	3061	
29	0	0	0	0	0	0	0	7	84	74	89	50	107	126	178	184	7	0	0	0	0	0	0	0	906	
30	0	0	0	0	0	0	0	2	14	39	58	88	121	99	75	45	12	0	0	0	0	0	0	0	554	
Avg	0	0	0	0	0	0	0	23	100	195	293	344	344	311	254	164	51	1	0	0	0	0	0	0	2077	
S D	0	0	0	0	0	0	0	22	72	112	145	181	187	157	132	82	26	1	0	0	0	0	0	0	979	
S/A	0	0	0	0	0	0	1.98	0.93	0.72	0.58	0.5	0.53	0.54	0.5	0.52	0.5	0.51	0.94	0	0	0	0	0	0	0.47	
Min	0	0	0	0	0	0	0	2	14	39	58	50	91	99	31	18	7	0	0	0	0	0	0	0	554	
Max	0	0	0	0	0	0	1	78	261	430	559	626	626	561	451	288	98	4	0	0	0	0	0	0	3983	

Daylight Data Recovery: 2% missing; 1% exceed the 15% QC threshold -- 17419 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/W/m-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 - November 2000**

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	417	818	933	981	997	981	933	895	790	394	18	0	0	0	0	0	0	8157
2	0	0	0	0	0	0	0	299	667	763	832	852	821	595	175	388	30	0	0	0	0	0	0	0	5422
3	0	0	0	0	0	0	0	16	7	27	16	69	15	151	77	142	63	1	0	0	0	0	0	0	583
4	0	0	0	0	0	0	0	0	0	1	1	0	1	10	7	0	0	0	0	0	0	0	0	0	20
5	0	0	0	0	0	0	0	168	?	591	?	890	?	950	967	947	893	779	525	35	0	0	0	0	6746
6	0	0	0	0	0	0	0	324	769	894	948	965	825	598	862	436	0	0	0	0	0	0	0	0	6621
7	0	0	0	0	0	0	0	0	0	1	20	132	3	9	0	0	89	2	0	0	0	0	0	0	257
8	0	0	0	0	0	0	0	0	0	1	96	35	30	106	272	32	43	2	0	0	0	0	0	0	617
9	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
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	2
11	0	0	0	0	0	0	0	0	0	7	276	755	930	970	924	830	574	40	0	0	0	0	0	0	5306
12	0	0	0	0	0	0	0	273	802	895	825	511	557	311	464	484	221	0	0	0	0	0	0	0	5344
13	0	0	0	0	0	0	0	99	1	5	55	1	1	0	13	134	110	0	0	0	0	0	0	0	419
14	0	0	0	0	0	0	0	0	61	114	304	522	581	428	901	788	405	14	0	0	0	0	0	0	4119
15	0	0	0	0	0	0	0	0	0	0	16	147	837	833	622	156	191	0	0	0	0	0	0	0	2802
16	0	0	0	0	0	0	0	0	3	1	3	0	1	1	0	0	0	0	0	0	0	0	0	0	10
17	0	0	0	0	0	0	0	0	0	126	54	194	564	707	698	867	796	480	8	0	0	0	0	0	4494
18	0	0	0	0	0	0	0	0	0	17	125	149	105	7	0	0	0	0	0	0	0	0	0	0	403
19	0	0	0	0	0	0	0	0	0	0	1	0	0	0	408	756	484	16	0	0	0	0	0	0	1666
20	0	0	0	0	0	0	0	1	122	27	261	185	60	339	502	381	90	6	0	0	0	0	0	0	1973
21	0	0	0	0	0	0	0	0	0	168	193	109	8	18	101	415	9	0	0	0	0	0	0	0	1023
22	0	0	0	0	0	0	0	159	746	874	158	451	572	71	5	308	337	1	0	0	0	0	0	0	3680
23	0	0	0	0	0	0	0	17	158	376	552	922	868	885	484	648	417	3	0	0	0	0	0	0	5329
24	0	0	0	0	0	0	0	0	0	20	58	38	88	104	275	135	3	0	0	0	0	0	0	0	721
25	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	5
26	0	0	0	0	0	0	0	0	21	90	1	1	0	1	0	0	0	0	0	0	0	0	0	0	114
27	0	0	0	0	0	0	0	0	537	645	772	224	251	230	333	255	53	0	0	0	0	0	0	0	3302
28	0	0	0	0	0	0	0	73	589	751	918	952	960	953	881	806	490	3	0	0	0	0	0	0	7376
29	0	0	0	0	0	0	0	0	144	1	1	0	0	1	61	309	0	0	0	0	0	0	0	0	517
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
Avg	0	0	0	0	0	0	0	62	192	242	283	318	339	307	334	326	167	5	0	0	0	0	0	0	2568
S D	0	0	0	0	0	0	0	115	297	346	353	368	392	364	354	309	200	10	0	0	0	0	0	0	2621
S/A	0	0	0	0	0	0	4	1.87	1.54	1.43	1.24	1.16	1.16	1.19	1.06	0.95	1.2	1.98	0	0	0	0	0	0	1.02
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	417	818	933	981	997	981	970	924	830	574	40	0	0	0	0	0	0	8157

Daylight Data Recovery: 2% missing; 1% exceed the 15% QC threshold -- 17419 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/W/m-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 - November 2000

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	23	38	44	49	49	53	61	54	44	36	3	0	0	0	0	0	0	455
2	0	0	0	0	0	0	0	29	57	79	86	89	112	156	224	129	50	1	0	0	0	0	0	0	1013
3	0	0	0	0	0	0	1	54	87	191	220	293	265	314	177	164	78	2	0	0	0	0	0	0	1844
4	0	0	0	0	0	0	0	9	62	139	150	106	152	254	183	77	42	1	0	0	0	0	0	0	1176
5	0	0	0	0	0	0	0	25	65 ?	91 ?	78 ?	70	64	58	53	43	24	1	0	0	0	0	0	0	574
6	0	0	0	0	0	0	0	20	39	48	56	68	91	144	65	52	20	1	0	0	0	0	0	0	604
7	0	0	0	0	0	0	0	4	21	110	197	267	234	160	85	46	47	2	0	0	0	0	0	0	1174
8	0	0	0	0	0	0	0	12	50	75	233	287	250	264	173	121	58	2	0	0	0	0	0	0	1525
9	0	0	0	0	0	0	0	12	36	91	166	129	136	117	38	41	32	1	0	0	0	0	0	0	800
10	0	0	0	0	0	0	0	7	31	58	96	132	112	109	66	53	21	1	0	0	0	0	0	0	686
11	0	0	0	0	0	0	0	10	43	149	234	139	76	54	45	33	16	0	0	0	0	0	0	0	799
12	0	0	0	0	0	0	0	17	37	48	94	196	213	224	148	97	39	0	0	0	0	0	0	0	1113
13	0	0	0	0	0	0	0	29	75	109	195	123	106	104	96	118	38	1	0	0	0	0	0	0	993
14	0	0	0	0	0	0	0	18	100	171	144	177	169	118	70	53	24	1	0	0	0	0	0	0	1044
15	0	0	0	0	0	0	0	7	32	92	203	270	100	89	91	106	38	0	0	0	0	0	0	0	1030
16	0	0	0	0	0	0	0	40	86	105	198	157	167	125	109	31	19	0	0	0	0	0	0	0	1036
17	0	0	0	0	0	0	0	7	93	131	175	226	146	117	58	43	22	0	0	0	0	0	0	0	1018
18	0	0	0	0	0	0	0	9	56	136	251	287	275	193	123	54	20	0	0	0	0	0	0	0	1404
19	0	0	0	0	0	0	0	7	25	52	83	85	87	102	114	44	22	0	0	0	0	0	0	0	622
20	0	0	0	0	0	0	0	16	102	128	230	249	128	223	207	109	24	1	0	0	0	0	0	0	1417
21	0	0	0	0	0	0	0	12	59	166	214	212	176	160	135	96	28	0	0	0	0	0	0	0	1256
22	0	0	0	0	0	0	0	12	36	54	274	259	167	220	191	97	26	0	0	0	0	0	0	0	1336
23	0	0	0	0	0	0	0	18	48	103	88	98	138	82	139	56	22	0	0	0	0	0	0	0	792
24	0	0	0	0	0	0	0	9	51	160	237	266	288	261	195	114	38	0	0	0	0	0	0	0	1620
25	0	0	0	0	0	0	0	8	46	112	80	158	226	155	158	86	32	1	0	0	0	0	0	0	1062
26	0	0	0	0	0	0	0	8	48	179	174	215	169	171	30	17	15	0	0	0	0	0	0	0	1025
27	0	0	0	0	0	0	0	10	42	78	86	199	267	254	189	120	35	0	0	0	0	0	0	0	1280
28	0	0	0	0	0	0	0	8	36	51	50	55	56	51	42	30	13	0	0	0	0	0	0	0	393
29	0	0	0	0	0	0	0	7	51	70	85	47	103	122	150	102	6	0	0	0	0	0	0	0	742
30	0	0	0	0	0	0	0	2	14	37	55	85	117	94	71	42	12	0	0	0	0	0	0	0	528
Avg	0	0	0	0	0	0	0	15	52	102	149	166	155	152	116	74	30	1	0	0	0	0	0	0	1012
S D	0	0	0	0	0	0	0	11	23	44	70	80	68	71	58	37	15	1	0	0	0	0	0	0	351
S/A	0	0	0	0	0	0	2.37	0.74	0.43	0.43	0.47	0.48	0.44	0.46	0.5	0.5	0.5	0.96	0	0	0	0	0	0	0.35
Min	0	0	0	0	0	0	0	2	14	37	49	47	53	51	30	17	6	0	0	0	0	0	0	0	393
Max	0	0	0	0	0	0	1	54	102	191	274	293	288	314	224	164	78	3	0	0	0	0	0	0	1844

Daylight Data Recovery: 2% missing; 1% exceed the 15% QC threshold -- 17419 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