

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - December 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	0	22	153 ?	357 ?	543 ?	507	533	366	314	78	25	0	0	0	0	0	0	0	2898	
2	0	0	0	0	0	0	0	8	70	159	132	100	152	112	60	30	7	0	0	0	0	0	0	0	829	
3	0	0	0	0	0	0	0	5	61	131	368	256	511	388	349	203	56	0	0	0	0	0	0	0	2328	
4	0	0	0	0	0	0	0	8		?	528 ?	483	531	477	367	222	63	0	0	0	0	0	0	0	2680 ?	
5	0	0	0	0	0	0	0	3	13	37	122	119	83	66	67	95	36	1	0	0	0	0	0	0	642	
6	0	0	0	0	0	0	0	6	59	161	322	318	258	203	191	109	24	0	0	0	0	0	0	0	1652	
7	0	0	0	0	0	0	0	2	18	74	165	372	502	377	336	201	63	0	0	0	0	0	0	0	2112	
8	0	0	0	0	0	0	0	4	113	245	378	444	465	370	170	93	17	0	0	0	0	0	0	0	2299	
9	0	0	0	0	0	0	0	13	151 ?	131 ?	475	437	349	454	355	220	54	0	0	0	0	0	0	0	2639	
10	0	0	0	0	0	0	0	2	18	31	67	48	44	44	28	14	6	0	0	0	0	0	0	0	302	
11	0	0	0	0	0	0	0	5	41	95	239	391	349	327	159	65	19	0	0	0	0	0	0	0	1690	
12	0	0	0	0	0	0	0	4	34	94	120	120	172	162	109	60	20	0	0	0	0	0	0	0	894	
13	0	0	0	0	0	0	0	10	102	221	299	264	289	162	160	39	7	0	0	0	0	0	0	0	1554	
14	0	0	0	0	0	0	0	1	14	21	31	98	98	51	23	13	4	0	0	0	0	0	0	0	354	
15	0	0	0	0	0	0	0	9	116 ?	283	391	433	455	425	236	205	47	0	0	0	0	0	0	0	2601	
16	0	0	0	0	0	0	0	2	12	31	132	163	251	366	354	148	10	0	0	0	0	0	0	0	1469	
17	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0 *
18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
24	*	*	0 *	0	0	0	0	3	49	68	143	219	456	461	364	222	70	1	0	0	0	0	0	0	2056 *	
25	0	0	0	0	0	0	0	3	76	298	412	415	319	395	375	229	73	0	0	0	0	0	0	0	2596	
26	0	0	0	0	0	0	0	4	108 ?	347 ?	390	373	416	377	225	110	38	1	0	0	0	0	0	0	2389	
27	0	0	0	0	0	0	0	1	18	52	95	119	100	77	52	32	10	0	0	0	0	0	0	0	557	
28	0	0	0	0	0	0	0	0	18	89	263	288	294	348	244	136	47	1	0	0	0	0	0	0	1728	
29	0	0	0	0	0	0	0	6	46	205	199	132	123	168	149	122	56	1	0	0	0	0	0	0	1207	
30	0	0	0	0	0	0	0	2	31	137	368	282	284	268	207	143	61	2	0	0	0	0	0	0	1784	
Avg	0	0	0	0	0	0	0	5	60	149	269	277	306	280	213	121	35	0	0	0	0	0	0	0	1636	
S/D	0	0	0	0	0	0	0	5	44	102	149	140	155	142	118	72	23	0	0	0	0	0	0	0	845	
S/A	0	0	0	0	0	0	0	0.88	0.74	0.69	0.56	0.51	0.51	0.51	0.56	0.6	0.65	1.17	0	0	0	0	0	0	0.52	
Min	0	0	0	0	0	0	0	0	12	21	31	48	44	44	23	13	4	0	0	0	0	0	0	0	0	
Max	0	0	0	0	0	0	0	22	153	357	543	507	533	477	375	229	73	2	0	0	0	0	0	0	2898	

Daylight Data Recovery: 23% missing; 2% exceed the 15% QC threshold -- 3481 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 - December 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	25	550	806 ?	869 ?	892	761	546	483	4	0	0	0	0	0	0	0	0	4935	
2	0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	
3	0	0	0	0	0	0	0	0	5	6	373	186	806	611	828	751	490	5	0	0	0	0	0	0	4060	
4	0	0	0	0	0	0	0	51	724	895	987 ?	763	994	1000	912	834	544	9	0	0	0	0	0	0	7715	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0	0	0	0	0	0	0	0	47	
6	0	0	0	0	0	0	0	0	0	28	152	71	13	6	17	6	0	0	0	0	0	0	0	0	293	
7	0	0	0	0	0	0	0	0	0	0	1	465	935	434	680	736	422	6	0	0	0	0	0	0	3679	
8	0	0	0	0	0	0	0	0	400	553	729	773	779	514	2	7	0	0	0	0	0	0	0	0	3758	
9	0	0	0	0	0	0	0	7	519	375 ?	927	794	283	913	573	627	436	5	0	0	0	0	0	0	5459	
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	0	
11	0	0	0	0	0	0	0	0	0	1	64	168	125	105	23	0	0	0	0	0	0	0	0	0	487	
12	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3	
13	0	0	0	0	0	0	0	0	122	208	151	30	52	1	8	3	0	0	0	0	0	0	0	0	574	
14	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	
15	0	0	0	0	0	0	0	0	221 ?	450	641	539	623	707	251	698	305	7	0	0	0	0	0	0	4443	
16	0	0	0	0	0	0	0	0	0	0	3	1	8	399	800	306	0	0	0	0	0	0	0	0	1517	
17	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0
18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
24	*	*	0 *	0	0	0	0	0	17	0	0	2	706	928	874	773	495	20	0	0	0	0	0	0	3815 *	
25	0	0	0	0	0	0	0	0	149	807	929	841	626	820	927	826	526	6	0	0	0	0	0	0	6455	
26	0	0	0	0	0	0	0	0	396 ?	810 ?	734	380	407	393	76	4	0	0	0	0	0	0	0	0	3199	
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	1	
28	0	0	0	0	0	0	0	0	0	4	198	231	218	258	186	32	1	0	0	0	0	0	0	0	1128	
29	0	0	0	0	0	0	0	0	0	110	2	0	0	1	9	4	20	0	0	0	0	0	0	0	147	
30	0	0	0	0	0	0	0	0	0	92	421	73	36	6	29	38	32	0	0	0	0	0	0	0	727	
Avg	0	0	0	0	0	0	0	4	135	224	312	270	321	332	290	248	142	3	0	0	0	0	0	0	2186	
S D	0	0	0	0	0	0	0	11	216	318	367	324	357	352	359	339	214	5	0	0	0	0	0	0	2364	
S/A	0	0	0	0	0	0	0	3.14	1.6	1.42	1.18	1.2	1.11	1.06	1.24	1.37	1.51	1.85	0	0	0	0	0	0	1.08	
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	51	724	895	987	892	994	1000	927	834	544	20	0	0	0	0	0	0	7715	

Daylight Data Recovery: 23% missing; 1% exceed the 15% QC threshold -- 3481 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 - December 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	0	9	46	64 ?	108 ?	71	148	97	120	73	23	0	0	0	0	0	0	0	759	
2	0	0	0	0	0	0	0	7	64	151	127	95	147	108	58	28	7	0	0	0	0	0	0	0	791	
3	0	0	0	0	0	0	0	5	58	124	203	160	124	112	58	37	13	0	0	0	0	0	0	0	894	
4	0	0	0	0	0	0	0	7	41	52	60 ?	113	61	42	43	37	16	0	0	0	0	0	0	0	472	
5	0	0	0	0	0	0	0	2	13	35	116	114	79	62	64	81	34	1	0	0	0	0	0	0	602	
6	0	0	0	0	0	0	0	6	56	146	248	277	251	190	183	104	23	0	0	0	0	0	0	0	1483	
7	0	0	0	0	0	0	0	2	18	71	157	141	60	168	87	37	26	0	0	0	0	0	0	0	767	
8	0	0	0	0	0	0	0	3	43	80	82	86	94	137	163	88	16	0	0	0	0	0	0	0	791	
9	0	0	0	0	0	0	0	11	68	60 ?	71	70	196	61	141	84	15	0	0	0	0	0	0	0	776	
10	0	0	0	0	0	0	0	2	17	30	65	46	42	42	26	14	5	0	0	0	0	0	0	0	290	
11	0	0	0	0	0	0	0	4	40	93	204	302	285	281	146	62	18	0	0	0	0	0	0	0	1434	
12	0	0	0	0	0	0	0	4	32	88	114	114	165	155	104	57	19	0	0	0	0	0	0	0	853	
13	0	0	0	0	0	0	0	10	81	159	234	247	261	157	152	36	7	0	0	0	0	0	0	0	1344	
14	0	0	0	0	0	0	0	1	13	20	29	95	94	50	22	13	3	0	0	0	0	0	0	0	340	
15	0	0	0	0	0	0	0	9	61 ?	108	125	167	144	108	132	51	15	0	0	0	0	0	0	0	919	
16	0	0	0	0	0	0	0	2	12	29	124	157	239	194	69	64	10	0	0	0	0	0	0	0	901	
17	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0
18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
24	*	*	0 *	0	0	0	0	3	46	65	138	211	124	62	54	41	20	0	0	0	0	0	0	0	764 *	
25	0	0	0	0	0	0	0	3	42	55	57	47	34	45	46	35	18	0	0	0	0	0	0	0	382	
26	0	0	0	0	0	0	0	4	33 ?	54 ?	82	189	202	181	184	105	37	1	0	0	0	0	0	0	1071	
27	0	0	0	0	0	0	0	1	17	50	92	115	97	75	50	31	9	0	0	0	0	0	0	0	538	
28	0	0	0	0	0	0	0	0	17	84	172	164	173	225	161	122	45	1	0	0	0	0	0	0	1165	
29	0	0	0	0	0	0	0	6	44	172	190	128	119	163	142	116	53	1	0	0	0	0	0	0	1133	
30	0	0	0	0	0	0	0	1	27	96	200	236	254	256	193	127	55	2	0	0	0	0	0	0	1447	
Avg	0	0	0	0	0	0	0	4	39	82	130	145	148	129	104	63	21	0	0	0	0	0	0	0	830	
S/D	0	0	0	0	0	0	0	3	20	43	60	70	73	69	54	34	14	0	0	0	0	0	0	0	378	
S/A	0	0	0	0	0	0	0	0.7	0.51	0.52	0.46	0.48	0.49	0.54	0.52	0.54	0.67	1.5	0	0	0	0	0	0	0.46	
Min	0	0	0	0	0	0	0	0	12	20	29	46	34	42	22	13	3	0	0	0	0	0	0	0	0	
Max	0	0	0	0	0	0	0	11	81	172	248	302	285	281	193	127	55	2	0	0	0	0	0	0	1483	

Daylight Data Recovery: 23% missing; 1% exceed the 15% QC threshold -- 3481 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