

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - February 1997

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	5	142	325	480	585	620	577	497	365	172	31	0	0	0	0	0	0	3797	
2	0	0	0	0	0	0	0	9	46	116	174	263	217	234	222	109	61	14	0	0	0	0	0	0	1464	
3	0	0	0	0	0	0	0	4	16	42	69	139	269	240	164	102	57	11	0	0	0	0	0	0	1112	
4	0	0	0	0	0	0	0	1	15	44	120	85	108	40	57	58	94	16	0	0	0	0	0	0	637	
5	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0
6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	602	418	222	161	19	0	0	0	0	0	1423
7	0	0	0	0	0	0	0	2	13	36	74	124	130	150	169	82	49	13	0	0	0	0	0	0	842	
8	0	0	0	0	0	0	0	2	9	12	16	27	57	53	34	26	11	1	0	0	0	0	0	0	249	
9	0	0	0	0	0	0	0	1	17	46	77	86	84	75	58	58	29	5	0	0	0	0	0	0	537	
10	0	0	0	0	0	0	0	2	17	33	54	77	69	74	138	124	59	10	0	0	0	0	0	0	657	
11	0	0	0	0	0	0	0	3	35	166	173	232	193	137	140	97	54	13	0	0	0	0	0	0	1243	
12	0	0	0	0	0	0	0	12	71	168	357	342	291	354	398	139	42	10	0	0	0	0	0	0	2184	
13	0	0	0	0	0	0	0	15	91	156	211	258	211	122	64	37	40	10	0	0	0	0	0	0	1216	
14	0	0	0	0	0	0	0	13	34	106	132	141	115	94	95	87	45	13	0	0	0	0	0	0	875	
15	0	0	0	0	0	0	0	3	94	270	368	350	483	274	538	456	223	53	0	0	0	0	0	0	3113	
16	0	0	0	0	0	0	0	29	244	310	467	670	637	558	163	366	122	12	0	0	0	0	0	0	3578	
17	0	0	0	0	0	0	0	27	200	397	558	670	715	690	595	443	253	67	0	0	0	0	0	0	4615	
18	0	0	0	0	0	0	0	43	211	401	567	673	726	646	564	449	233	65	0	0	0	0	0	0	4578	
19	0	0	0	0	0	0	0	25	139	271	400	490	448	299	324	365	189	42	0	0	0	0	0	0	2992	
20	0	0	0	0	0	0	0	20	115	309	419	483	549	631	481	307	165	49	1	0	0	0	0	0	3528	
21	0	0	0	0	0	0	0	17	70	217	286	202	391	300	123	38	39	10	0	0	0	0	0	0	1694	
22	0	0	0	0	0	0	0	3	17	18	28	74	112	153	61	117	72	20	0	0	0	0	0	0	673	
23	0	0	0	0	0	0	0	38	222	440	608	718	762	733	639	483	289	87	0	0	0	0	0	0	5019	
24	0	0	0	0	0	0	0	35	200	413	550	571	612	749	584	469	266	69	1	0	0	0	0	0	4521	
25	0	0	0	0	0	0	0	56	242	444	606	715	760	732	636	461	286	86	0	0	0	0	0	0	5025	
26	0	0	0	0	0	0	0	30	88	87	112	196	122	91	140	274	156	67	3	0	0	0	0	0	1366	
27	0	0	0	0	0	0	0	62	176	74	157	58	126	542	615	422	219	61	1	0	0	0	0	0	2512	
28	0	0	0	0	0	0	0	7	21	65	66	61	207	340	302	258	134	47	2	0	0	0	0	0	1511	
Avg	0	0	0	0	0	0	0	18	98	191	274	319	347	351	305	238	130	33	0	0	0	0	0	0	2177	
S/D	0	0	0	0	0	0	0	17	80	146	200	238	244	244	213	163	87	27	1	0	0	0	0	0	1563	
S/A	0	0	0	0	0	0	0	0.97	0.82	0.76	0.73	0.75	0.7	0.69	0.7	0.69	0.67	0.8	1.9	0	0	0	0	0	0.72	
Min	0	0	0	0	0	0	0	1	9	12	16	27	57	40	34	26	11	1	0	0	0	0	0	0	0	
Max	0	0	0	0	0	0	0	62	244	444	608	718	762	749	639	483	289	87	3	0	0	0	0	0	5025	

Daylight Data Recovery: 3% missing; 0% exceed the 15% QC threshold -- 7311 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 - February 1997**

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	5	623	863	944	982	993	905	863	894	637	283	0	0	0	0	0	0	7993	
2	0	0	0	0	0	0	0	0	0	1	1	8	2	1	5	0	0	2	0	0	0	0	0	0	21	
3	0	0	0	0	0	0	0	0	0	0	0	2	8	3	1	0	0	0	0	0	0	0	0	0	14	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	16	0	0	0	0	0	0	59	
5	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0
6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	753	443	143	350	0	0	0	0	0	0	1688	
7	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	4	
8	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	
9	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	
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	0	0	5	4	2	0	0	0	0	0	0	0	0	0	0	0	0	11	
12	0	0	0	0	0	0	0	0	0	0	69	23	5	17	253	1	0	0	0	0	0	0	0	0	367	
13	0	0	0	0	0	0	0	0	0	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	10	
14	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
15	0	0	0	0	0	0	0	0	22	202	211	90	236	51	634	766	592	289	0	0	0	0	0	0	3093	
16	0	0	0	0	0	0	0	47	432	264	373	785	442	382	3	407	93	0	0	0	0	0	0	0	3228	
17	0	0	0	0	0	0	0	106	660	849	943	1005	1018	1012	983	920	788	439	0	0	0	0	0	0	8723	
18	0	0	0	0	0	0	0	187	663	808	908	931	931	710	727	840	501	158	0	0	0	0	0	0	7365	
19	0	0	0	0	0	0	0	21	116	126	196	244	143	35	92	404	262	47	0	0	0	0	0	0	1687	
20	0	0	0	0	0	0	0	0	25	234	330	254	303	569	417	237	65	25	0	0	0	0	0	0	2459	
21	0	0	0	0	0	0	0	0	0	15	2	14	18	3	0	0	0	0	0	0	0	0	0	0	51	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	
23	0	0	0	0	0	0	0	126	532	833	980	1016	1031	1023	1006	957	853	547	0	0	0	0	0	0	8905	
24	0	0	0	0	0	0	0	64	429	662	656	532	504	722	685	711	589	291	0	0	0	0	0	0	5844	
25	0	0	0	0	0	0	0	282	740	891	961	991	1004	995	966	860	788	458	0	0	0	0	0	0	8936	
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	57	2	68	0	0	0	0	0	0	128	
27	0	0	0	0	0	0	0	135	205	6	1	0	1	430	800	555	234	42	0	0	0	0	0	0	2408	
28	0	0	0	0	0	0	0	0	0	0	0	0	1	17	36	56	23	2	0	0	0	0	0	0	135	
Avg	0	0	0	0	0	0	0	38	171	222	253	265	256	283	293	289	216	99	0	0	0	0	0	0	2255	
S D	0	0	0	0	0	0	0	71	260	337	371	395	386	384	376	363	294	163	0	0	0	0	0	0	3178	
S/A	0	0	0	0	0	0	0	1.88	1.52	1.52	1.47	1.49	1.51	1.36	1.28	1.26	1.36	1.65	2.51	0	0	0	0	0	1.41	
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	282	740	891	980	1016	1031	1023	1006	957	853	547	0	0	0	0	0	0	8936	

Daylight Data Recovery: 3% missing; 0% exceed the 15% QC threshold -- 7311 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 - February 1997

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	4	36	44	50	57	54	76	84	41	32	12	0	0	0	0	0	0	490	
2	0	0	0	0	0	0	0	9	44	110	163	246	204	226	209	103	58	13	0	0	0	0	0	0	1384	
3	0	0	0	0	0	0	0	4	15	40	66	131	251	227	156	97	54	10	0	0	0	0	0	0	1051	
4	0	0	0	0	0	0	0	1	14	41	112	80	102	37	53	55	84	14	0	0	0	0	0	0	593	
5	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0
6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	176	181	155	75	18	0	0	0	0	0	604	
7	0	0	0	0	0	0	0	1	12	34	70	118	123	142	160	77	46	12	0	0	0	0	0	0	796	
8	0	0	0	0	0	0	0	2	8	11	15	26	53	48	29	21	9	1	0	0	0	0	0	0	222	
9	0	0	0	0	0	0	0	1	15	41	70	78	76	68	52	51	25	4	0	0	0	0	0	0	480	
10	0	0	0	0	0	0	0	1	13	26	48	73	68	70	132	119	55	9	0	0	0	0	0	0	615	
11	0	0	0	0	0	0	0	3	33	156	164	218	185	130	134	92	51	12	0	0	0	0	0	0	1180	
12	0	0	0	0	0	0	0	12	67	158	315	322	271	331	247	130	39	9	0	0	0	0	0	0	1900	
13	0	0	0	0	0	0	0	14	85	147	197	244	199	116	60	34	37	9	0	0	0	0	0	0	1142	
14	0	0	0	0	0	0	0	12	32	99	125	133	109	89	90	82	42	12	0	0	0	0	0	0	826	
15	0	0	0	0	0	0	0	3	83	183	249	291	330	237	198	132	79	23	0	0	0	0	0	0	1807	
16	0	0	0	0	0	0	0	22	117	194	256	184	329	296	154	191	89	11	0	0	0	0	0	0	1842	
17	0	0	0	0	0	0	0	16	50	63	67	61	63	61	58	50	40	19	0	0	0	0	0	0	547	
18	0	0	0	0	0	0	0	24	56	74	81	91	110	174	143	76	80	42	0	0	0	0	0	0	952	
19	0	0	0	0	0	0	0	23	104	209	271	314	345	273	261	179	99	37	0	0	0	0	0	0	2116	
20	0	0	0	0	0	0	0	20	101	206	270	304	332	254	221	184	139	45	0	0	0	0	0	0	2076	
21	0	0	0	0	0	0	0	15	65	199	261	183	360	274	116	35	36	9	0	0	0	0	0	0	1553	
22	0	0	0	0	0	0	0	2	16	16	25	68	103	144	57	108	65	18	0	0	0	0	0	0	623	
23	0	0	0	0	0	0	0	21	85	85	73	73	72	70	64	54	42	21	0	0	0	0	0	0	660	
24	0	0	0	0	0	0	0	29	82	128	176	206	256	272	181	142	86	30	1	0	0	0	0	0	1587	
25	0	0	0	0	0	0	0	24	50	64	71	76	79	77	74	66	49	25	0	0	0	0	0	0	655	
26	0	0	0	0	0	0	0	27	81	81	106	183	115	85	127	241	142	59	3	0	0	0	0	0	1249	
27	0	0	0	0	0	0	0	47	115	68	146	54	118	238	125	135	145	54	1	0	0	0	0	0	1244	
28	0	0	0	0	0	0	0	7	20	61	61	57	194	315	270	223	117	43	2	0	0	0	0	0	1368	
Avg	0	0	0	0	0	0	0	13	54	98	135	149	173	167	135	106	67	21	0	0	0	0	0	0	1056	
S/D	0	0	0	0	0	0	0	11	35	63	87	92	102	92	68	59	36	15	1	0	0	0	0	0	562	
S/A	0	0	0	0	0	0	0	0.87	0.64	0.65	0.64	0.62	0.59	0.55	0.51	0.55	0.53	0.72	2.11	0	0	0	0	0	0.53	
Min	0	0	0	0	0	0	0	1	8	11	15	26	53	37	29	21	9	1	0	0	0	0	0	0	0	
Max	0	0	0	0	0	0	0	47	117	209	315	322	360	331	270	241	145	59	3	0	0	0	0	0	2116	

Daylight Data Recovery: 3% missing; 0% exceed the 15% QC threshold -- 7311 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