

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - March 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	19	50	85	117	161	344	342	438	227	201	48	1	0	0	0	0	0	2034
2	0	0	0	0	0	0	0	25	100	182	322	421	354	398	345	179	67	15	0	0	0	0	0	0	2409
3	0	0	0	0	0	0	0	14	74	41	27	60	259	241	90	150	156	21	2	0	0	0	0	0	1133
4	0	0	0	0	0	0	0	20	164	221	584	756	799	769	672	512	319	112	2	0	0	0	0	0	4931
5	0	0	0	0	0	0	1	101	282	389	592	593	422	182	83	24	16	13	1	0	0	0	0	0	2699
6	0	0	0	0	0	0	1	23	86	196	507	651	811	814	667	526	336	124	4	0	0	0	0	0	4747
7	0	0	0	0	0	0	1	94	305	508	671	781	813	756	690	526	327	86	2	0	0	0	0	0	5559
8	0	0	0	0	0	0	1	29	72	182	409	756	818	763	706	547	340	124	3	0	0	0	0	0	4751
9	0	0	0	0	0	0	2	94	294	516	689	798	520	293	371	191	265	116	4	0	0	0	0	0	4154
10	0	0	0	0	0	0	0	16	169	501	701	812	857	828	725	517	355	132	3	0	0	0	0	0	5618
11	0	0	0	0	0	0	2	112	328	531	695	801	838	802	702	542	354	134	7	0	0	0	0	0	5848
12	0	0	0	0	0	0	3	121	326	516	686	802	850	817	714	496	347	124	3	0	0	0	0	0	5804
13	0	0	0	0	0	0	5	83	182	446	566	649	618	564	223	62	46	31	2	0	0	0	0	0	3478
14	0	0	0	0	0	0	1	23	139	200	238	288	261	297	246	141	64	39	2	0	0	0	0	0	1939
15	0	0	0	0	0	0	3	102	300	478	724	839	849	681	549	372	245	137	8	0	0	0	0	0	5287
16	0	0	0	0	0	0	6	139	365	554	733	848	886	853	746	581	377	154	8	0	0	0	0	0	6249
17	0	0	0	0	0	0	7	57	132	265	490	460	311	179	208	115	79	37	3	0	0	0	0	0	2342
18	0	0	0	0	0	0	2	13	23	59	101	81	68	67	115	121	43	29	6	0	0	0	0	0	728
19	0	0	0	0	0	0	1	8	21	49	81	175	67	70	71	56	31	18	2	0	0	0	0	0	649
20	0	0	0	0	0	0	3	34	76	157	257	553	883	832	739	585	375	144	10	0	0	0	0	0	4649
21	0	0	0	0	0	0	9	171	386	551	710	829	865	829	727	569	372	157	11	0	0	0	0	0	6186
22	0	0	0	0	0	0	8	80	201	358	288	378	452	759	619	529	418	181	11	0	0	0	0	0	4281
23	0	0	0	0	0	0	9	86	393	590	762	809	851	692	659	553	402	114	13	0	0	0	0	0	5933
24	0	0	0	0	0	0	23	192	401	602	762	870	896	861	746	564	391	134	12	0	0	0	0	0	6455
25	0	0	0	0	0	0	11	138	318	468	667	793	675	663	626	394	186	102	17	0	0	0	0	0	5059
26	0	0	0	0	0	0	4	55	319	463	738	882	929	891	781	614	410	184	15	0	0	0	0	0	6285
27	0	0	0	0	0	0	30	206	422	628	788	891	924	885	776	614	413	187	13	0	0	0	0	0	6778
28	0	0	0	0	0	0	10	72	74	178	69	84	219	420	316	412	144	112	19	0	0	0	0	0	2129
29	0	0	0	0	0	0	11	172	273	474	427	668	834	837	705	594	403	184	17	0	0	0	0	0	5600
30	0	0	0	0	0	0	29	167	391	568	773	782	861	870	753	598	253	74	2	0	0	0	0	0	6121
31	0	0	0	0	0	0	12	81	275	510	705	702	416	427	539	533	353	180	17	0	0	0	0	0	4749
Avg	0	0	0	0	0	0	6	82	224	370	512	612	631	603	527	401	261	105	7	0	0	0	0	0	4341
S/D	0	0	0	0	0	0	8	58	127	187	246	266	276	269	240	200	135	56	6	0	0	0	0	0	1819
S/A	0	0	0	0	0	0	1.26	0.71	0.57	0.5	0.48	0.43	0.44	0.45	0.45	0.5	0.52	0.54	0.81	0	0	0	0	0	0.42
Min	0	0	0	0	0	0	0	8	21	41	27	60	67	67	71	24	16	13	0	0	0	0	0	0	649
Max	0	0	0	0	0	0	30	206	422	628	788	891	929	891	781	614	418	187	19	0	0	0	0	0	6778

Daylight Data Recovery: 2% missing; 0% exceed the 15% QC threshold -- 11751 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 - March 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	0	0	1	1	1	44	26	247	29	248	43	0	0	0	0	0	0	638
2	0	0	0	0	0	0	0	0	1	15	100	80	67	87	54	24	0	0	0	0	0	0	0	0	427
3	0	0	0	0	0	0	0	0	0	0	0	0	47	112	0	138	90	0	0	0	0	0	0	0	387
4	0	0	0	0	0	0	0	0	69	17	572	997	1012	1001	978	924	838	594	35	0	0	0	0	0	7037
5	0	0	0	0	0	0	0	379	627	523	769	507	115	13	2	0	0	0	0	0	0	0	0	0	2934
6	0	0	0	0	0	0	0	0	0	117	405	574	790	993	903	883	830	584	25	0	0	0	0	0	6105
7	0	0	0	0	0	0	0	472	819	932	972	993	979	842	885	900	772	288	0	0	0	0	0	0	8853
8	0	0	0	0	0	0	0	0	0	144	875	956	852	921	897	825	579	24	0	0	0	0	0	0	6074
9	0	0	0	0	0	0	0	278	628	903	966	912	178	3	143	14	295	235	8	0	0	0	0	0	4563
10	0	0	0	0	0	0	0	0	132	810	1008	?	?	1022	?	983	806	851	630	32	0	0	0	0	6275 ?
11	0	0	0	0	0	0	0	565	851	957	1005	1021	1023	1008	985	932	804	414	14	0	0	0	0	0	9579
12	0	0	0	0	0	0	2	347	630	883	970	1010	1024	?	1017	975	723	655	453	2	0	0	0	0	8691
13	0	0	0	0	0	0	1	79	35	343	415	415	241	187	8	0	0	0	0	0	0	0	0	0	1724
14	0	0	0	0	0	0	0	0	13	28	5	53	9	5	1	9	0	3	0	0	0	0	0	0	126
15	0	0	0	0	0	0	0	144	391	596	982	1018	?	859	?	416	283	197	187	404	49	0	0	0	5527
16	0	0	0	0	0	0	30	553	822	882	970	?	?	1017	?	?	1008	?	966	876	653	55	0	0	7832 ?
17	0	0	0	0	0	0	29	1	1	6	34	10	1	0	0	0	0	0	0	0	0	0	0	0	83
18	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
19	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
20	0	0	0	0	0	0	0	0	0	11	12	118	744	891	949	916	803	416	48	0	0	0	0	0	4909
21	0	0	0	0	0	0	13	471	672	745	898	959	979	973	954	903	806	586	57	0	0	0	0	0	9016
22	0	0	0	0	0	0	10	43	120	335	118	178	234	690	593	672	814	524	48	0	0	0	0	0	4377
23	0	0	0	0	0	0	0	35	783	923	981	773	?	690	568	632	739	753	209	54	0	0	0	0	7140
24	0	0	0	0	0	0	132	669	867	962	1000	?	1030	?	1015	1003	916	766	791	376	5	0	0	0	9532
25	0	0	0	0	0	0	2	171	306	257	447	481	301	393	529	222	81	87	36	0	0	0	0	0	3312
26	0	0	0	0	0	0	0	5	309	246	704	921	1025	1022	?	1001	968	889	700	90	0	0	0	0	7880
27	0	0	0	0	0	0	199	725	901	985	1012	?	1048	?	1051	1042	?	1006	?	975	907	720	90	0	10662 ?
28	0	0	0	0	0	0	0	13	0	2	0	0	1	128	52	223	19	179	56	0	0	0	0	0	672
29	0	0	0	0	0	0	0	184	323	558	179	466	658	731	730	855	818	632	80	0	0	0	0	0	6214
30	0	0	0	0	0	0	57	236	532	708	861	547	799	931	885	818	225	22	0	0	0	0	0	0	6621
31	0	0	0	0	0	0	0	12	241	504	647	500	89	83	283	529	634	594	58	0	0	0	0	0	4174
Avg	0	0	0	0	0	0	15	174	325	427	522	534	532	535	545	517	478	320	28	0	0	0	0	0	4883
S D	0	0	0	0	0	0	42	227	333	382	413	404	425	425	415	398	370	262	29	0	0	0	0	0	3351
S/A	0	0	0	0	0	0	2.75	1.31	1.02	0.89	0.79	0.76	0.8	0.8	0.76	0.77	0.77	0.82	1.04	0	0	0	0	0	0.69
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	199	725	901	985	1012	1048	1051	1042	1008	975	907	720	90	0	0	0	0	0	10662

Daylight Data Recovery: 2% missing; 1% exceed the 15% QC threshold -- 11751 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 - March 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	18	47	79	109	149	299	303	259	206	123	37	1	0	0	0	0	0	1630
2	0	0	0	0	0	0	0	23	92	164	248	353	289	318	302	161	62	14	0	0	0	0	0	0	2026
3	0	0	0	0	0	0	0	13	68	37	25	55	202	154	83	81	111	19	2	0	0	0	0	0	850
4	0	0	0	0	0	0	0	18	134	206	224	76	73	74	70	61	46	26	2	0	0	0	0	0	1011
5	0	0	0	0	0	0	1	30	73	132	123	240	321	164	74	22	14	11	1	0	0	0	0	0	1206
6	0	0	0	0	0	0	1	21	78	127	250	238	231	115	98	87	59	35	3	0	0	0	0	0	1341
7	0	0	0	0	0	0	1	29	50	62	77	88	95	149	133	75	64	31	1	0	0	0	0	0	856
8	0	0	0	0	0	0	1	27	66	168	283	129	109	150	120	94	58	32	2	0	0	0	0	0	1238
9	0	0	0	0	0	0	2	64	79	74	87	145	357	273	262	170	154	80	4	0	0	0	0	0	1751
10	0	0	0	0	0	0	0	14	108	82	73	75	82	83	97	99	59	28	2	0	0	0	0	0	804
11	0	0	0	0	0	0	2	29	47	56	64	71	72	72	67	62	68	55	6	0	0	0	0	0	671
12	0	0	0	0	0	0	3	46	75	70	71	74	76	77	81	106	116	37	3	0	0	0	0	0	836
13	0	0	0	0	0	0	5	69	153	236	274	324	415	409	203	59	44	27	2	0	0	0	0	0	2221
14	0	0	0	0	0	0	1	20	127	175	210	241	233	274	225	132	57	34	2	0	0	0	0	0	1732
15	0	0	0	0	0	0	2	67	151	150	87	90	147	331	336	262	175	67	6	0	0	0	0	0	1871
16	0	0	0	0	0	0	5	46	74	90	90	84	88	81	75	68	52	34	5	0	0	0	0	0	791
17	0	0	0	0	0	0	5	51	118	240	436	418	280	163	188	104	71	34	2	0	0	0	0	0	2110
18	0	0	0	0	0	0	1	12	20	54	91	73	62	60	104	111	39	26	6	0	0	0	0	0	659
19	0	0	0	0	0	0	0	7	18	44	73	157	60	63	63	49	27	16	2	0	0	0	0	0	581
20	0	0	0	0	0	0	3	30	68	137	233	432	282	150	95	85	67	56	6	0	0	0	0	0	1645
21	0	0	0	0	0	0	7	49	96	144	98	96	88	86	78	71	59	40	7	0	0	0	0	0	920
22	0	0	0	0	0	0	7	64	143	169	204	235	262	223	201	159	103	71	7	0	0	0	0	0	1847
23	0	0	0	0	0	0	8	71	83	78	92	122	267	204	220	137	100	64	8	0	0	0	0	0	1455
24	0	0	0	0	0	0	11	44	60	67	74	78	83	83	106	120	78	46	11	0	0	0	0	0	861
25	0	0	0	0	0	0	11	101	188	308	334	382	407	354	243	261	149	85	14	0	0	0	0	0	2835
26	0	0	0	0	0	0	4	50	182	311	227	152	96	86	80	66	54	37	7	0	0	0	0	0	1353
27	0	0	0	0	0	0	13	41	55	63	67	68	69	67	64	58	48	34	6	0	0	0	0	0	652
28	0	0	0	0	0	0	9	64	66	161	63	75	200	300	259	271	129	81	14	0	0	0	0	0	1690
29	0	0	0	0	0	0	9	128	151	137	291	292	284	254	178	103	69	46	10	0	0	0	0	0	1951
30	0	0	0	0	0	0	25	100	163	144	150	335	186	120	114	118	139	63	2	0	0	0	0	0	1659
31	0	0	0	0	0	0	11	72	179	188	203	288	323	359	321	222	84	48	13	0	0	0	0	0	2312

Avg	0	0	0	0	0	0	5	46	97	134	159	182	195	181	155	119	80	42	5	0	0	0	0	0	0	1399
S/D	0	0	0	0	0	0	5	29	47	72	99	117	111	105	85	65	39	20	4	0	0	0	0	0	0	579
S/A	0	0	0	0	0	0	1.13	0.63	0.49	0.54	0.62	0.64	0.57	0.58	0.55	0.55	0.49	0.46	0.78	0	0	0	0	0	0	0.41
Min	0	0	0	0	0	0	0	7	18	37	25	55	60	60	63	22	14	11	0	0	0	0	0	0	0	581
Max	0	0	0	0	0	0	25	128	188	311	436	432	415	409	336	271	175	85	14	0	0	0	0	0	0	2835

Daylight Data Recovery: 2% missing; 0% exceed the 15% QC threshold -- 11751 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