

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - October 1998

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	13	152	235	226	150	65	95	292	424	410	269	68	0	0	0	0	0	0	2399
2	0	0	0	0	0	0	14	108 ?	? 544	711	783	794	737	616	426	207	29	0	0	0	0	0	0	0	4970
3	0	0	0	0	0	0	22	149	319	378	249	347	57	123	204	112	50	12	0	0	0	0	0	0	2022
4	0	0	0	0	0	0	10	88	196	265	453	458	501	359	403	294	163	49	0	0	0	0	0	0	3238
5	0	0	0	0	0	0	14	149	345	523	657	742	642	695	442	221	175	41	0	0	0	0	0	0	4646
6	0	0	0	0	0	0	9	114	217	390	250	313	484	625	494	247	136	34	0	0	0	0	0	0	3313
7	0	0	0	0	0	0	8	77	195	235	292	329	229	228	131	98	50	9	0	0	0	0	0	0	1878
8	0	0	0	0	0	0	1	24	94	112	145	170	111	103	111	78	32	11	0	0	0	0	0	0	992
9	0	0	0	0	0	0	5	54 ?	257	251	276	294	208	171	151	170	121	17	0	0	0	0	0	0	1976
10	0	0	0	0	0	0	2	48	126	159	289	452	587	593	402	376	194	37	0	0	0	0	0	0	3264
11	0	0	0	0	0	0	7	84	243	444 ?	648 ?	742	757	694	579	407	206	34	0	0	0	0	0	0	4845
12	0	0	0	0	0	0	5	143	326	497	648	720	657	639	558	368	189	29	0 ?	0	0	0	0	0	4780
13	0	0	0	0	0	0	5	51	130	350 ?	531	469	573	486	447	356	183	25	0	0	0	0	0	0	3606
14	0	0	0	0	0	0	9	154	339	512	652	727	731	634	527	386	194	29	0	0	0	0	0	0	4895
15	0	0	0	0	0	0	9	117	? 549 ?	635	712	720	659	540	364	176	22	0	0	0	0	0	0	0	4502
16	0	0	0	0	0	0	8	136	314	465	605	676	685	606	526	345	155	14	0	0	0	0	0	0	4534
17	0	0	0	0	0	0	7	134	316	485	623	694	692	639	531	310	170	29	0	0	0	0	0	0	4630
18	0	0	0	0	0	0	5	114	312	459	606	703	565	611	512	286	117	24	0	0	0	0	0	0	4316
19	0	0	0	0	0	0	1	31	70	65	59	117	78	73	100	44	17	4	0	0	0	0	0	0	659
20	0	0	0	0	0	0	3	129	246	389	511	665	701	646	521	358	171	18	0	0	0	0	0	0	4360
21	0	0	0	0	0	0	2	44	130	199	303	469	502	481	418	213	13	0	0	0	0	0	0	0	2775
22	0	0	0	0	0	0	3	25	73	235	377	348	519	364	280	131	97	8	0	0	0	0	0	0	2460
23	0	0	0	0	0	0	3	84 ?	426 ?	477	606	680	689	631	510	342	148	12	0	0	0	0	0	0	4607
24	0	0	0	0	0	0	3	105 ?	339 ?	475	607	680	688	631	508	341	146	15 ?	0 ?	0	0	0	0	0	4538
25	0	0	0	0	0	0	2	106	273	447	387	662	504	523	356	286	135	6	0 ?	0 ?	0	0	0	0	3686
26	0	0	0	0	0	0	2	105	291	463	572	607	616	490	368	302	129	10 ?	0 ?	0	0	0	0	0	3953
27	0	0	0	0	0	0	3	100	278	443	565	644	640	552	306	272	70	10	0	0	0	0	0	0	3883
28	0	0	0	0	0	0	2	99	167	249	190	206	133	110	117	102	37	1	0	0	0	0	0	0	1414
29	0	0	0	0	0	0	1	39	138	237	260	390	563	592	462	301	122	6	0	0	0	0	0	0	3112
30	0	0	0	0	0	0	2	51	110	48	92	117	90	67	43	35	37	5	0	0	0	0	0	0	697
31	0	0	0	0	0	0	1	36	98	123	151	237	306	252	172	75	25	2	0	0	0	0	0	0	1476
Avg	0	0	0	0	0	0	6	92	228	345	423	491	488	461	379	260	127	20	0	0	0	0	0	0	3304
S D	0	0	0	0	0	0	5	41	96	150	201	221	236	215	167	119	66	15	0	0	0	0	0	0	1345
S/A	0	0	0	0	0	0	0.83	0.45	0.42	0.43	0.48	0.45	0.48	0.47	0.44	0.46	0.52	0.78	5.48	0	0	0	0	0	0.41
Min	0	0	0	0	0	0	1	24	70	48	59	65	57	67	43	35	13	0	0	0	0	0	0	0	659
Max	0	0	0	0	0	0	22	154	426	549	711	783	794	737	616	426	269	68	0	0	0	0	0	0	4970

Daylight Data Recovery: 0% missing; 2% exceed the 15% QC threshold -- 4195 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/W/m-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 - October 1998

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	14	327	198	91	1	0	1	99	359	699	739	354	0	0	0	0	0	0	2881
2	0	0	0	0	0	0	13	245	?	?	920	981	992	986	968	935	756	498	67	0	0	0	0	0	7360
3	0	0	0	0	0	0	44	265	412	260	2	13	0	1	3	0	0	0	0	0	0	0	0	0	1001
4	0	0	0	0	0	0	0	13	57	31	108	214	230	86	380	305	214	115	0	0	0	0	0	0	1753
5	0	0	0	0	0	0	27	401	634	726	778	804	487	732	458	153	242	72	0	0	0	0	0	0	5512
6	0	0	0	0	0	0	0	226	126	162	43	21	82	353	347	115	62	12	0	0	0	0	0	0	1548
7	0	0	0	0	0	0	0	1	21	15	48	31	10	17	2	0	0	0	0	0	0	0	0	0	145
8	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
9	0	0	0	0	0	0	0	103	?	385	131	118	29	1	0	120	70	0	0	0	0	0	0	0	959
10	0	0	0	0	0	0	0	0	2	2	8	56	341	485	295	502	548	213	0	0	0	0	0	0	2452
11	0	0	0	0	0	0	0	1	27	779	975	?	999	997	975	948	880	718	272	0	0	0	0	0	7570
12	0	0	0	0	0	0	3	544	813	896	922	919	787	816	832	768	663	217	0	0	0	0	0	0	8179
13	0	0	0	0	0	0	2	1	3	132	?	466	279	494	405	432	454	379	85	0	0	0	0	0	3132
14	0	0	0	0	0	0	39	581	794	904	955	980	971	818	813	841	700	214	0	0	0	0	0	0	8609
15	0	0	0	0	0	0	17	465	?	913	?	933	959	961	930	889	803	619	155	0	0	0	0	0	7644
16	0	0	0	0	0	0	21	431	676	798	855	880	882	786	827	735	520	78	0	0	0	0	0	0	7488
17	0	0	0	0	0	0	19	505	779	890	946	957	887	900	872	605	477	143	0	0	0	0	0	0	7980
18	0	0	0	0	0	0	3	370	770	736	844	919	424	650	652	349	89	38	0	0	0	0	0	0	5844
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	2
20	0	0	0	0	0	0	0	232	296	427	563	872	940	958	904	845	649	160	0	0	0	0	0	0	6845
21	0	0	0	0	0	0	0	0	4	5	7	203	124	281	409	188	0	0	0	0	0	0	0	0	1221
22	0	0	0	0	0	0	0	0	0	220	327	79	436	216	143	23	34	2	0	0	0	0	0	0	1480
23	0	0	0	0	0	0	1	529	837	?	916	958	984	988	976	935	852	670	149	0	0	0	0	0	8792
24	0	0	0	0	0	0	0	576	852	940	988	1004	1003	989	944	870	696	151	0	0	0	0	0	0	9011
25	0	0	0	0	0	0	0	452	667	630	175	582	219	357	211	314	479	28	0	0	0	0	0	0	4114
26	0	0	0	0	0	0	0	539	813	900	827	631	736	494	339	658	597	106	0	0	0	0	0	0	6641
27	0	0	0	0	0	0	0	434	768	848	743	841	881	715	51	395	85	35	0	0	0	0	0	0	5795
28	0	0	0	0	0	0	0	303	120	50	2	4	0	0	0	1	0	0	0	0	0	0	0	0	481
29	0	0	0	0	0	0	0	11	39	190	100	163	505	846	810	732	526	74	0	0	0	0	0	0	3995
30	0	0	0	0	0	0	0	12	27	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	47
31	0	0	0	0	0	0	0	0	1	3	2	23	129	122	58	0	0	0	0	0	0	0	0	0	338
Avg	0	0	0	0	0	0	7	244	349	436	441	466	468	483	447	418	331	88	0	0	0	0	0	0	4156
S/D	0	0	0	0	0	0	12	219	343	384	413	423	393	375	362	333	284	93	0	0	0	0	0	0	3169
S/A	0	0	0	0	0	0	1.8	0.9	0.98	0.88	0.94	0.91	0.84	0.78	0.81	0.8	0.86	1.05	0	0	0	0	0	0	0.76
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	2
Max	0	0	0	0	0	0	44	581	852	940	988	1004	1003	989	948	880	739	354	0	0	0	0	0	0	9011

Daylight Data Recovery: 0% missing; 2% exceed the 15% QC threshold -- 4195 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 - October 1998

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	12	84	158	174	134	59	85	215	195	79	50	19	0	0	0	0	0	0	1263
2	0	0	0	0	0	0	10	45 ?	54	52	61	60	63	64	61	76	51	16	0	0	0	0	0	0	614
3	0	0	0	0	0	0	18	97	152	232	228	319	52	112	184	102	45	11	0	0	0	0	0	0	1552
4	0	0	0	0	0	0	9	84	167	227	353	293	321	283	178	154	99	34	0	0	0	0	0	0	2201
5	0	0	0	0	0	0	11	64	97	130	145	161	282	189	166	142	110	34	0	0	0	0	0	0	1529
6	0	0	0	0	0	0	9	65	159	291	208	283	407	374	284	185	117	32	0	0	0	0	0	0	2412
7	0	0	0	0	0	0	7	69	174	212	249	296	205	204	119	88	45	8	0	0	0	0	0	0	1677
8	0	0	0	0	0	0	1	21	85	103	131	155	101	94	101	70	29	10	0	0	0	0	0	0	901
9	0	0	0	0	0	0	5	42 ?	108	180	187	257	190	156	137	118	97	16	0	0	0	0	0	0	1492
10	0	0	0	0	0	0	2	43	114	146	261	393	308	251	219	156	56	16	0	0	0	0	0	0	1965
11	0	0	0	0	0	0	7	74	226	110	57	59	64	61	55	46	33	8	0	0	0	0	0	0	801
12	0	0	0	0	0	0	4	35	46	54	72	86	97	104	96	58	32	8	0	0	0	0	0	0	692
13	0	0	0	0	0	0	5	46	120	268 ?	228	275	232	222	212	171	97	16	0	0	0	0	0	0	1891
14	0	0	0	0	0	0	5	34	51	60	65	65	67	97	84	51	35	9	0	0	0	0	0	0	624
15	0	0	0	0	0	0	5	32	48	52	63	64	64	70	64	53	38	8	0	0	0	0	0	0	562
16	0	0	0	0	0	0	5	44	65	75	84	85	87	103	78	61	41	7	0	0	0	0	0	0	735
17	0	0	0	0	0	0	4	36	50	54	57	61	93	78	76	75	67	18	0	0	0	0	0	0	671
18	0	0	0	0	0	0	5	50	52	97	95	96	262	194	162	144	97	20	0	0	0	0	0	0	1272
19	0	0	0	0	0	0	1	29	64	60	55	109	72	67	92	40	16	3	0	0	0	0	0	0	608
20	0	0	0	0	0	0	3	71	144	153	170	93	83	67	60	47	47	6	0	0	0	0	0	0	944
21	0	0	0	0	0	0	2	40	122	182	278	310	398	271	184	127	12	0	0	0	0	0	0	0	1926
22	0	0	0	0	0	0	2	23	66	122	181	282	222	213	199	121	89	7	0	0	0	0	0	0	1529
23	0	0	0	0	0	0	2	38	54 ?	50	54	55	55	51	46	39	25	4	0	0	0	0	0	0	473
24	0	0	0	0	0	0	2	29	39	43	46	48	48	48	44	36	22	3	0	0	0	0	0	0	409
25	0	0	0	0	0	0	2	32	63	145	275	280	346	291	236	173	44	3	0	0	0	0	0	0	1891
26	0	0	0	0	0	0	2	25	41	53	98	193	135	188	190	73	26	3 ?	0 ?	0	0	0	0	0	1026
27	0	0	0	0	0	0	3	32	42	58	123	107	81	114	259	123	54	8	0	0	0	0	0	0	1003
28	0	0	0	0	0	0	2	54	128	219	177	189	124	103	108	94	34	1	0	0	0	0	0	0	1235
29	0	0	0	0	0	0	1	35	122	140	195	277	238	111	80	57	34	3	0	0	0	0	0	0	1293
30	0	0	0	0	0	0	2	47	101	44	86	109	85	63	40	32	34	5	0	0	0	0	0	0	647
31	0	0	0	0	0	0	1	33	91	114	141	216	217	181	136	69	23	1	0	0	0	0	0	0	1223
Avg	0	0	0	0	0	0	5	47	97	126	147	172	164	150	134	92	52	11	0	0	0	0	0	0	1196
S D	0	0	0	0	0	0	4	19	48	72	82	103	109	84	68	45	29	9	0	0	0	0	0	0	546
S/A	0	0	0	0	0	0	0.83	0.42	0.5	0.57	0.56	0.6	0.66	0.56	0.51	0.49	0.57	0.84	5.48	0	0	0	0	0	0.46
Min	0	0	0	0	0	0	1	21	39	43	46	48	48	48	40	32	12	0	0	0	0	0	0	0	409
Max	0	0	0	0	0	0	18	97	226	291	353	393	407	374	284	185	117	34	0	0	0	0	0	0	2412

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4195 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