

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - March 2001

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	83	268	420	546	657	747	682	548	462	281	87	2	0	0	0	0	0	4785	
2	0	0	0	0	0	0	0	22	46	73	65	68	86	114	78	94	141	62	2	0	0	0	0	0	851	
3	0	0	0	0	0	0	0	21	71	97	191	191	249	335	373	313	145	48	2	0	0	0	0	0	2036	
4	0	0	0	0	0	0	0	14	28	53	80	114	134	74	52	34	17	25	1	0	0	0	0	0	627	
5	0	0	0	0	0	0	0	3	33	122	230	259	417	?	341	185	126	158	46	1	0	0	0	0	1922	
6	0	0	0	0	0	0	1	31	100	166	312	318	365	369	354	241	104	42	2	0	0	0	0	0	2402	
7	0	0	0	0	0	0	1	22	67	72	104	156	145	131	121	66	60	23	1	0	0	0	0	0	969	
8	0	0	0	0	0	0	2	43	?	406	?	542	667	725	569	601	451	420	251	74	1	0	0	0	4753	
9	0	0	0	0	0	0	1	34	120	213	449	355	714	392	599	380	307	86	5	0	0	0	0	0	3656	
10	0	0	0	0	0	0	2	81	?	457	?	541	?	777	?	785	825	795	697	537	345	129	2	0	0	5974
11	0	0	0	0	0	0	2	42	296	534	669	771	809	773	675	523	332	117	5	0	0	0	0	0	5548	
12	0	0	0	0	0	0	4	110	320	528	340	462	612	654	503	133	66	24	2	0	0	0	0	0	3759	
13	0	0	0	0	0	0	4	103	62	224	530	425	669	820	651	561	253	65	4	0	0	0	0	0	4371	
14	0	0	0	0	0	0	4	131	341	541	700	809	825	671	530	334	197	84	5	0	0	0	0	0	5171	
15	0	0	0	0	0	0	0	9	37	75	50	74	77	121	157	98	57	21	3	0	0	0	0	0	778	
16	0	0	0	0	0	0	2	26	44	30	105	30	102	230	340	327	202	48	2	0	0	0	0	0	1488	
17	0	0	0	0	0	0	1	43	84	47	72	198	181	142	78	60	54	14	1	0	0	0	0	0	977	
18	0	0	0	0	0	0	2	47	167	486	745	835	868	834	736	580	382	161	9	0	0	0	0	0	5852	
19	0	0	0	0	0	0	11	162	380	581	744	846	879	835	743	562	371	163	8	0	0	0	0	0	6284	
20	0	0	0	0	0	0	1	11	45	97	142	199	429	178	325	329	105	32	4	0	0	0	0	0	1897	
21	0	0	0	0	0	0	2	8	32	95	98	107	87	128	114	94	62	10	2	0	0	0	0	0	838	
22	0	0	0	0	0	0	3	26	38	138	309	460	562	545	541	537	317	127	14	0	0	0	0	0	3616	
23	0	0	0	0	0	0	15	152	363	562	664	824	885	788	614	428	283	106	16	0	0	0	0	0	5699	
24	0	0	0	0	0	0	16	163	375	432	739	583	449	177	37	18	20	48	12	0	0	0	0	0	3069	
25	0	0	0	0	0	0	8	168	370	593	762	863	900	862	758	595	396	174	16	0	0	0	0	0	6464	
26	0	0	0	0	0	0	7	64	264	442	728	755	943	887	773	571	375	162	18	0	0	0	0	0	5990	
27	0	0	0	0	0	0	14	135	246	389	668	803	854	831	766	603	401	181	17	0	0	0	0	0	5907	
28	0	0	0	0	0	0	44	249	421	620	780	870	882	836	733	527	355	146	14	0	0	0	0	0	6478	
29	0	0	0	0	0	0	4	28	57	154	148	120	210	184	117	72	43	12	2	0	0	0	0	0	1150	
30	0	0	0	0	0	0	16	60	80	105	170	302	478	703	733	573	218	58	14	0	0	0	0	0	3510	
Avg	0	0	0	0	0	0	6	70	187	299	419	465	532	501	446	340	210	79	6	0	0	0	0	0	3561	
S D	0	0	0	0	0	0	9	62	148	211	275	297	300	292	258	206	128	54	6	0	0	0	0	0	2046	
S/A	0	0	0	0	0	0	1.56	0.88	0.79	0.71	0.66	0.64	0.57	0.58	0.58	0.61	0.61	0.68	0.92	0	0	0	0	0	0.57	
Min	0	0	0	0	0	0	0	3	28	30	50	30	77	74	37	18	17	10	1	0	0	0	0	0	627	
Max	0	0	0	0	0	0	44	249	457	620	780	870	943	887	773	603	401	181	18	0	0	0	0	0	6478	

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4290 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 - March 2001**

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	348	615	552	498	561	813	720	450	557	473	87	0	0	0	0	0	0	5675		
2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	48	6	0	0	0	0	0	0	58		
3	0	0	0	0	0	0	0	0	0	1	2	2	4	26	159	212	7	0	0	0	0	0	0	0	414		
4	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3		
5	0	0	0	0	0	0	0	0	0	3	33	11	79	?	57	7	8	68	0	0	0	0	0	0	267		
6	0	0	0	0	0	0	0	0	0	0	4	2	4	11	22	3	0	0	0	0	0	0	0	0	47		
7	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2		
8	0	0	0	0	0	0	0	466	804	?	901	902	502	62	221	123	390	395	38	0	0	0	0	0	4803		
9	0	0	0	0	0	0	0	0	48	136	220	52	390	127	399	341	389	235	10	0	0	0	0	0	2348		
10	0	0	0	0	0	0	0	422	759	907	?	1012	1022	?	1020	1004	951	865	610	18	0	0	0	0	9585		
11	0	0	0	0	0	0	0	5	532	818	903	954	970	961	929	885	782	458	25	0	0	0	0	0	8224		
12	0	0	0	0	0	0	2	450	770	859	192	183	348	463	192	6	0	0	0	0	0	0	0	0	3464		
13	0	0	0	0	0	0	9	384	1	58	483	191	690	1001	854	922	397	9	0	0	0	0	0	0	4998		
14	0	0	0	0	0	0	21	613	848	949	1001	1017	?	890	?	555	301	81	27	7	0	0	0	0	6311		
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2		
16	0	0	0	0	0	0	0	0	0	0	0	0	0	1	24	87	93	0	0	0	0	0	0	0	205		
17	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3		
18	0	0	0	0	0	0	0	5	477	976	1015	?	?	1018	?	1009	?	979	895	681	64	0	0	0	0	7119	?
19	0	0	0	0	0	0	70	689	891	980	1015	?	?	?	927	?	984	897	809	484	19	0	0	0	0	7765	?
20	0	0	0	0	0	0	0	0	0	0	1	1	30	1	42	65	0	0	0	0	0	0	0	0	0	140	
21	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	1	
22	0	0	0	0	0	0	0	0	0	2	59	172	285	334	466	769	542	281	16	0	0	0	0	0	0	2925	
23	0	0	0	0	0	0	64	445	682	789	700	761	885	749	595	439	344	201	43	0	0	0	0	0	0	6698	
24	0	0	0	0	0	0	83	517	711	232	803	197	167	1	0	0	0	0	2	0	0	0	0	0	0	2713	
25	0	0	0	0	0	0	3	429	601	855	956	979	1001	992	972	918	842	624	61	0	0	0	0	0	0	9234	
26	0	0	0	0	0	0	0	121	291	669	637	967	1001	960	801	676	477	63	0	0	0	0	0	0	0	6664	
27	0	0	0	0	0	0	0	90	75	124	488	810	876	934	978	932	839	641	59	0	0	0	0	0	0	6846	
28	0	0	0	0	0	0	193	718	877	967	1002	938	?	872	807	767	555	483	223	1	0	0	0	0	0	8401	
29	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	
30	0	0	0	0	0	0	0	0	0	0	2	7	76	434	755	739	176	0	0	0	0	0	0	0	0	2189	
Avg	0	0	0	0	0	0	15	186	278	330	397	345	373	412	400	385	305	169	13	0	0	0	0	0	0	3570	
S D	0	0	0	0	0	0	40	249	356	393	416	404	409	418	403	387	330	237	22	0	0	0	0	0	0	3360	
S/A	0	0	0	0	0	0	2.67	1.34	1.28	1.19	1.05	1.17	1.1	1.01	1.01	1.01	1.08	1.41	1.7	0	0	0	0	0	0	0.94	
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	1	
Max	0	0	0	0	0	0	193	718	891	980	1015	1017	1022	1020	1009	979	895	681	64	0	0	0	0	0	0	9585	

Daylight Data Recovery: 0% missing; 3% exceed the 15% QC threshold -- 4290 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 - March 2001

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	39	94	166	246	274	176	188	262	188	122	64	2	0	0	0	0	0	1820
2	0	0	0	0	0	0	0	20	42	66	59	62	78	105	72	86	119	59	2	0	0	0	0	0	770
3	0	0	0	0	0	0	0	19	65	89	176	175	229	305	264	194	133	43	2	0	0	0	0	0	1694
4	0	0	0	0	0	0	0	13	25	48	72	102	120	67	48	31	15	23	1	0	0	0	0	0	565
5	0	0	0	0	0	0	0	2	29	108	179	216	277	284	171	115	127	42	1	0	0	0	0	0	1553
6	0	0	0	0	0	0	1	28	92	153	281	292	332	342	317	216	95	38	2	0	0	0	0	0	2188
7	0	0	0	0	0	0	1	20	61	66	96	145	134	121	113	61	55	21	1	0	0	0	0	0	894
8	0	0	0	0	0	0	1	43	83	94	127	374	500	417	354	223	98	65	1	0	0	0	0	0	2381
9	0	0	0	0	0	0	1	31	103	131	304	306	409	288	329	217	165	54	4	0	0	0	0	0	2342
10	0	0	0	0	0	0	2	44	87	101	78	80	78	69	61	48	27	2	0	0	0	0	0	0	755
11	0	0	0	0	0	0	2	40	110	134	107	100	99	93	88	76	61	36	4	0	0	0	0	0	948
12	0	0	0	0	0	0	3	39	63	103	199	322	342	311	364	126	61	21	2	0	0	0	0	0	1957
13	0	0	0	0	0	0	4	51	57	187	225	281	157	102	95	88	97	59	4	0	0	0	0	0	1405
14	0	0	0	0	0	0	3	31	50	62	68	74	132	255	322	288	179	79	4	0	0	0	0	0	1547
15	0	0	0	0	0	0	0	8	32	67	45	67	70	111	144	89	51	18	2	0	0	0	0	0	705
16	0	0	0	0	0	0	1	23	39	27	99	27	96	211	312	274	158	43	2	0	0	0	0	0	1313
17	0	0	0	0	0	0	1	38	75	42	66	181	165	128	71	53	48	13	1	0	0	0	0	0	881
18	0	0	0	0	0	0	2	41	148	211	106	81	81	78	72	61	49	32	4	0	0	0	0	0	968
19	0	0	0	0	0	0	5	35	52	64	73	78	81	81	94	81	63	70	7	0	0	0	0	0	785
20	0	0	0	0	0	0	1	10	40	88	128	179	380	160	277	280	96	28	4	0	0	0	0	0	1672
21	0	0	0	0	0	0	2	8	29	87	90	98	80	116	103	85	55	9	1	0	0	0	0	0	762
22	0	0	0	0	0	0	2	23	34	124	262	323	334	294	222	115	94	64	13	0	0	0	0	0	1902
23	0	0	0	0	0	0	11	64	99	126	190	240	193	211	203	181	155	64	12	0	0	0	0	0	1750
24	0	0	0	0	0	0	10	57	97	311	189	421	312	161	33	16	17	43	11	0	0	0	0	0	1678
25	0	0	0	0	0	0	8	74	128	114	106	112	106	104	94	86	67	43	10	0	0	0	0	0	1052
26	0	0	0	0	0	0	6	56	212	276	248	242	169	120	110	116	98	65	12	0	0	0	0	0	1730
27	0	0	0	0	0	0	12	106	202	296	300	166	142	110	97	85	70	45	9	0	0	0	0	0	1641
28	0	0	0	0	0	0	16	54	64	74	85	110	169	193	185	194	148	91	12	0	0	0	0	0	1394
29	0	0	0	0	0	0	3	24	50	134	134	110	191	170	102	65	39	10	1	0	0	0	0	0	1033
30	0	0	0	0	0	0	14	53	71	94	153	271	389	344	188	134	123	52	12	0	0	0	0	0	1900
Avg	0	0	0	0	0	0	4	36	78	121	150	184	201	185	172	129	90	44	5	0	0	0	0	0	1399
S D	0	0	0	0	0	0	4	22	46	71	77	104	118	96	102	75	44	21	4	0	0	0	0	0	516
S/A	0	0	0	0	0	0	1.17	0.6	0.59	0.58	0.51	0.57	0.59	0.52	0.59	0.58	0.49	0.47	0.89	0	0	0	0	0	0.37
Min	0	0	0	0	0	0	0	2	25	27	45	27	70	67	33	16	15	9	1	0	0	0	0	0	565
Max	0	0	0	0	0	0	16	106	212	311	304	421	500	417	364	288	179	91	13	0	0	0	0	0	2381

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 4290 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