

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - August 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	4	50	201 ?	470 ?	546	691	525	526	627	517	315	62	102	45	1	0	0	0	0	4681	
2	0	0	0	0	0	6	57	124	240	397	330	188	347	365	729	703	217	69	16	0	0	0	0	0	3787	
3	0	0	0	0	0	2	14	48	134	199	235	680	707	839	158	125	188	45	22	1	0	0	0	0	3397	
4	0	0	0 *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	0 *
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0 *
6	0	0	0	0	0	7	99	159	349	641	813	752	454	496	412	437	419	268	89	8	0	0	0	0	5403	
7	0	0	0	0	0	4	61	148	356	618	652	329	925	750	549	567	414	250	36	1	0	0	0	0	5661	
8	0	0	0	0	0	3	92	261	488 ?	658	538	304	739	214	69	234	311	47	3	0	0	0	0	0	3963	
9	0	0	0	0	0	6	76	175	380	437	522	730	611	577	681	466	429	248	72	1	0	0	0	0	5410	
10	0	0	0	0	0	5	71	145	178	429	482	634	714	739	639	696	486	278	77	2	0	0	0	0	5576	
11	0	0	0	0	0	2	46	146	176	349	460	624	809	381	696	280	482	188	56	2	0	0	0	0	4698	
12	0	0	0	0	0	3	48	121	173	537	600	643	899	552	676	513	487	270	58	1	0	0	0	0	5582	
13	0	0	0	0	0	1	52	203	425	380	236	413	638	638	620	429	310	302	78	0	0	0	0	0	4726	
14	0	0	0	0	0	3	78	197 ?	496 ?	637	520	622	832	736	707	522	436	167	61	1	0	0	0	0	6017	
15	0	0	0	0	0	4	76	142 ?	449	653	846	804	843	810	689	644	456	238	65	1	0	0	0	0	6719	
16	0	0	0	0	0	1	60	174	274	225	303	408	607	655	597	589	444	223	62	0	0	0	0	0	4622	
17	0	0	0	0	0	2	72	188 ?	475 ?	604	805	798	731	646	267	335	354	243	34	0	0	0	0	0	5553	
18	0	0	0	0	0	0	20	103	151	368	241	234	138	70	132	392	348	86	11	1	0	0	0	0	2294	
19	0	0	0	0	0	1	71	265	462	635	698	735	901	786	688	577	331	266	40	0	0	0	0	0	6456	
20	0	0	0	0	0	1	34	129	183	287	376	454	587	479	435	322	376	201	50	0	0	0	0	0	3915	
21	0	0	0	0	0	1	68	238	442	632	782	873	989	867	697	490	209	191	47	0	0	0	0	0	6525	
22	0	0	0	0	0	1	49	168	331	570	440	482	654	422	539	311	416	192	37	0	0	0	0	0	4612	
23	0	0	0	0	0	2	62	157	393	457	196	380	152	88	96	121	74	94	54	0	0	0	0	0	2324	
24	0	0	0	0	0	0	2	33	84	310	338	188	679	753	107	78	197	128	14	0	0	0	0	0	2911	
25	0	0	0	0	0	1	53	182	340	263	565	423	729	691	764	474	364	171	36	0	0	0	0	0	5055	
26	0	0	0	0	0	1	40	138	340	631	769	740	910	680	483	561	381	172	28	0	0	0	0	0	5873	
27	0	0	0	0	0	1	63	201	53	86	174	223	490	617	755	562	315	103	14	0	0	0	0	0	3657	
28	0	0	0	0	0	0	18	74	150	256	497	742	503	829	724	570	388	194	36	0	0	0	0	0	4983	
29	0	0	0	0	0	0	48	229	433	630	797	899	661	713	538	529	309	156	38	0	0	0	0	0	5982	
30	0	0	0	0	0	0	29	116	267	352	601	399	488	445	605	326	96	139	23	0	0	0	0	0	3886	
31	0	0	0	0	0	0	27	97	180	227	200	385	341	451	483	134	80	79	29	0	0	0	0	0	2712	
Avg	0	0	0	0	0	2	53	157	306	449	507	538	642	583	519	424	323	176	43	1	0	0	0	0	4419	
S/D	0	0	0	0	0	2	23	56	134	168	211	212	215	210	217	173	128	74	22	1	0	0	0	0	1660	
S/A	0	0	0	0	0	0.88	0.43	0.35	0.44	0.37	0.42	0.39	0.33	0.36	0.42	0.41	0.4	0.42	0.51	2.12	0	0	0	0	0.38	
Min	0	0	0	0	0	0	2	33	53	86	174	188	138	70	69	78	62	45	3	0	0	0	0	0	0	
Max	0	0	0	0	0	7	99	265	496	658	846	899	989	867	764	703	487	302	89	8	0	0	0	0	6719	

Daylight Data Recovery: 7% missing; 1% exceed the 15% QC threshold -- 5059 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**

Bluefield State College - August 2000

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	46	293 ?	475 ?	321	310	86	145	222	214	142	0	2	0	0	0	0	0	0	2254
2	0	0	0	0	0	0	0	1	14	30	14	1	2	26	244	522	36	0	0	0	0	0	0	0	890
3	0	0	0	0	0	0	0	0	1	2	3	263	317	428	1	17	74	0	0	0	0	0	0	0	1106
4	0	0	0 *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	* *	0 *
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0 *
6	0	0	0	0	0	0	75	30	143	539	622	384	51	47	62	53	320	298	47	0	0	0	0	0	2670
7	0	0	0	0	0	2	18	37	160	381	332	52	668	409	222	404	288	223	0	0	0	0	0	0	3196
8	0	0	0	0	0	3	205	465	683 ?	715	100	3	401	65	1	5	52	0	0	0	0	0	0	0	2697
9	0	0	0	0	0	1	19	79	285	114	163	361	222	213	454	335	442	312	95	0	0	0	0	0	3095
10	0	0	0	0	0	0	25	2	1	177	11	181	372	531	462	675	646	491	166	0	0	0	0	0	3742
11	0	0	0	0	0	0	0	29	15	32	171	308	508	67	470	73	480	202	54	0	0	0	0	0	2408
12	0	0	0	0	0	0	0	2	4	422	363	398	648	312	420	434	633	315	101	0	0	0	0	0	4051
13	0	0	0	0	0	0	1	65	332	190	54	108	342	390	499	311	193	383	122	0	0	0	0	0	2990
14	0	0	0	0	0	2	82	345 ?	586 ?	590	262	339	564	462	542	399	430	148	67	0	0	0	0	0	4818
15	0	0	0	0	0	3	132	386 ?	699	738	766	581	590	522	524	550	452	305	84	0	0	0	0	0	6332
16	0	0	0	0	0	0	16	80	59	6	10	56	167	264	287	411	401	184	61	0	0	0	0	0	2003
17	0	0	0	0	0	0	52	343 ?	579 ?	646	821	579	300	160	4	26	189	219	2	0	0	0	0	0	3919
18	0	0	0	0	0	0	0	1	1	56	9	2	1	0	1	79	132	1	0	0	0	0	0	0	283
19	0	0	0	0	0	1	117	393	437	558	522	512	645	530	421	366	194	229	31	0	0	0	0	0	4956
20	0	0	0	0	0	0	1	1	2	4	12	49	33	43	65	12	175	119	21	0	0	0	0	0	537
21	0	0	0	0	0	1	159	396	565	668	729	686	730	614	455	305	48	133	43	0	0	0	0	0	5533
22	0	0	0	0	0	0	11	75	98	425	119	205	372	142	285	89	401	241	46	0	0	0	0	0	2511
23	0	0	0	0	0	0	91	55	152	128	2	15	1	0	0	0	11	49	0	0	0	0	0	0	504
24	0	0	0	0	0	0	0	0	1	89	80	1	217	336	0	0	15	28	0	0	0	0	0	0	769
25	0	0	0	0	0	0	21	144	118	32	311	184	450	438	524	263	377	220	36	0	0	0	0	0	3118
26	0	0	0	0	0	0	0	2	162	688	732	496	741	393	187	444	466	274	22	0	0	0	0	0	4606
27	0	0	0	0	0	0	68	172	0	0	2	49	133	391	787	620	299	83	7	0	0	0	0	0	2611
28	0	0	0	0	0	0	0	1	2	9	183	447	294	714	673	686	617	424	73	0	0	0	0	0	4123
29	0	0	0	0	0	0	71	395	631	749	775	783	337	442	330	501	237	156	69	0	0	0	0	0	5475
30	0	0	0	0	0	0	0	1	53	42	399	31	101	83	410	56	0	13	6	0	0	0	0	0	1196
31	0	0	0	0	0	0	0	0	6	1	1	18	7	15	232	1	1	1	1	0	0	0	0	0	285
Avg	0	0	0	0	0	0	42	131	216	288	272	247	323	285	303	268	262	173	42	0	0	0	0	0	2667
S/D	0	0	0	0	0	1	54	159	244	277	277	231	234	205	220	226	204	140	42	0	0	0	0	0	1774
S/A	0	0	0	0	0	1.87	1.3	1.22	1.13	0.96	1.02	0.93	0.73	0.72	0.73	0.84	0.78	0.81	1.02	5.29	0	0	0	0	0.67
Min	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	3	205	465	699	749	821	783	741	714	787	686	646	491	166	0	0	0	0	0	6332

Daylight Data Recovery: 7% missing; 1% exceed the 15% QC threshold -- 5059 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 - August 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	4	41	123 ?	229 ?	315	428	446	375	419	320	196	54	89	39	1	0	0	0	0	3078	
2	0	0	0	0	0	5	50	109	211	359	289	165	302	313	510	323	179	60	14	0	0	0	0	0	2888	
3	0	0	0	0	0	2	12	42	117	174	207	429	403	454	146	101	138	39	20	1	0	0	0	0	2285	
4	0	0	0 *	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0 *
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0 *
6	0	0	0	0	0	6	89	143	281	270	312	399	388	424	343	379	246	157	77	7	0	0	0	0	3520	
7	0	0	0	0	0	4	54	132	266	361	393	265	318	386	361	281	246	166	31	1	0	0	0	0	3265	
8	0	0	0	0	0	3	61	116	126 ?	166	445	266	358	154	61	203	281	40	3	0	0	0	0	0	2284	
9	0	0	0	0	0	5	67	156	285	371	392	409	412	388	320	225	182	125	51	1	0	0	0	0	3390	
10	0	0	0	0	0	4	62	127	156	284	422	454	369	268	259	218	116	79	39	2	0	0	0	0	2860	
11	0	0	0	0	0	2	40	133	152	312	312	346	351	302	319	219	212	100	43	1	0	0	0	0	2844	
12	0	0	0	0	0	3	42	106	151	263	309	293	315	271	326	208	121	144	35	1	0	0	0	0	2588	
13	0	0	0	0	0	1	46	174	248	252	180	316	327	292	217	200	192	142	48	0	0	0	0	0	2633	
14	0	0	0	0	0	3	62	122 ?	179 ?	252	312	324	333	336	271	236	180	111	45	1	0	0	0	0	2766	
15	0	0	0	0	0	3	53	80 ?	120	160	244	297	309	352	262	247	183	104	43	1	0	0	0	0	2459	
16	0	0	0	0	0	1	53	147	241	198	276	350	464	433	370	293	196	150	45	0	0	0	0	0	3219	
17	0	0	0	0	0	2	57	115 ?	147 ?	152	153	289	455	490	238	310	240	144	30	0	0	0	0	0	2821	
18	0	0	0	0	0	0	17	91	133	315	212	205	122	62	118	326	257	74	10	1	0	0	0	0	1944	
19	0	0	0	0	0	1	52	145	243	264	275	284	316	314	337	303	206	164	31	0	0	0	0	0	2935	
20	0	0	0	0	0	1	30	112	160	252	329	387	538	423	371	283	270	152	44	0	0	0	0	0	3353	
21	0	0	0	0	0	1	51	120	168	196	215	287	348	339	315	254	177	132	35	0	0	0	0	0	2637	
22	0	0	0	0	0	1	43	143	267	284	344	297	319	287	289	233	228	128	31	0	0	0	0	0	2894	
23	0	0	0	0	0	1	58	140	316	359	173	347	135	78	85	108	64	81	46	0	0	0	0	0	1991	
24	0	0	0	0	0	0	2	28	74	223	261	165	472	448	96	69	171	114	12	0	0	0	0	0	2136	
25	0	0	0	0	0	0	47	156	297	231	325	256	335	327	374	318	199	116	30	0	0	0	0	0	3012	
26	0	0	0	0	0	1	35	122	246	186	206	310	267	342	334	293	171	94	23	0	0	0	0	0	2630	
27	0	0	0	0	0	1	55	156	48	77	154	171	370	281	163	164	172	77	13	0	0	0	0	0	1901	
28	0	0	0	0	0	0	16	65	133	225	348	357	233	223	206	146	116	90	28	0	0	0	0	0	2188	
29	0	0	0	0	0	0	38	114	133	150	202	246	366	347	286	227	199	119	29	0	0	0	0	0	2457	
30	0	0	0	0	0	0	26	102	224	299	278	352	392	363	280	276	86	124	21	0	0	0	0	0	2823	
31	0	0	0	0	0	0	24	87	165	205	178	352	306	394	294	120	70	69	25	0	0	0	0	0	2287	
Avg	0	0	0	0	0	2	44	118	190	247	282	313	345	328	271	233	178	110	33	1	0	0	0	0	2519	
S/D	0	0	0	0	0	2	18	33	69	72	84	77	86	101	100	74	60	35	15	1	0	0	0	0	786	
S/A	0	0	0	0	0	0.89	0.42	0.28	0.36	0.29	0.3	0.25	0.25	0.31	0.37	0.32	0.34	0.32	0.46	2.1	0	0	0	0	0.31	
Min	0	0	0	0	0	0	2	28	48	77	153	165	122	62	61	69	54	39	3	0	0	0	0	0	0	
Max	0	0	0	0	0	6	89	174	316	371	445	454	538	490	510	379	281	166	77	7	0	0	0	0	3520	

Daylight Data Recovery: 7% missing; 1% exceed the 15% QC threshold -- 5059 total daylight 5-minute measurements.

Note: Fractional values that do not appear in the hour columns are included in the calculation for daily values.

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<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