

**Direct Normal Solar Radiation
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Bluefield State College - December 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	0	0	77	511	835	946	966	947	898	789	495	7	0	0	0	0	0	0	6471
2	0	0	0	0	0	0	0	34	628	722	757	914	925	819	615	683	384	2	0	0	0	0	0	0	6481
3	0	0	0	0	0	0	0	0	2	4	1	4	7	28	10	55	45	0	0	0	0	0	0	0	157
4	0	0	0	0	0	0	0	3	16	2	8	60	22	96	153	38	28	1	0	0	0	0	0	0	429
5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6	0	0	0	0	0	0	0	16	279	87	522	394	528	729	231	452	236	1	0	0	0	0	0	0	3476
7	0	0	0	0	0	0	0	0	1	240	75	94	0	0	0	0	0	0	0	0	0	0	0	0	409
8	0	0	0	0	0	0	0	0	0	2	31	0	1	0	0	0	0	0	0	0	0	0	0	0	34
9	0	0	0	0	0	0	0	0	0	1	90	889	963	943	895	764	445	2	0	0	0	0	0	0	4993
10	0	0	0	0	0	0	0	7	593	829 ?	896	505	372	110	150	0	0	0	0	0	0	0	0	0	3463
11	0	0	0	0	0	0	0	0	1	15	174	121	360	572	274	489	233	0	0	0	0	0	0	0	2239
12	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
13	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
14	0	0	0	0	0	0	0	0	0	387 ?	846	945	989	992	950	854	723	392	2	0	0	0	0	0	7080
15	0	0	0	0	0	0	0	0	101 ?	854 ?	931 ?	979	995	979	767	99	21	0	0	0	0	0	0	0	5727
16	0	0	0	0	0	0	0	0	633	881	960	997	1003	978	922	805	493	6	0	0	0	0	0	0	7678
17	0	0	0	0	0	0	0	0	0	0	1	1	0	14 ?	5	23	3	0	0	0	0	0	0	0	46
18	0	0	0	0	0	0	0	0	216	756	895	944	951	916	692	321	59	0	0	0	0	0	0	0	5749
19	0	0	0	0	0	0	0	0	101	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	103
20	0	0	0	0	0	0	0	0	0	1	19	131	86	853	778	660	344	4	0	0	0	0	0	0	2875
21	0	0	0	0	0	0	0	0	247	235	657	529	640	180	80	15	120	0	0	0	0	0	0	0	2702
22	0	0	0	0	0	0	0	0	0	0	0	0	68	420 ?	359	177	93	0	0	0	0	0	0	0	1118
23	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
24	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
25	0	0	0	0	0	0	0	0	0	542	?	?	948 ?	894	921 ?	683 ?	307 ?	209	10	0	0	0	0	0	4515 ?
26	0	0	0	0	0	0	0	0	1	1	1	20	344 ?	952 ?	910	790	449	1	0	0	0	0	0	0	3469
27	0	0	0	0	0	0	0	0	278	557	311	217	31	69	2	4	0	0	0	0	0	0	0	0	1469
28	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
29	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
30	0	0	0	0	0	0	0	0	0	259	327	375	409	136	565 ?	808	593	42	0	0	0	0	0	0	3515
31	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
Avg	0	0	0	0	0	0	0	2	132	227	281	324	341	375	318	258	150	3	0	0	0	0	0	0	2394
S/D	0	0	0	0	0	0	0	7	208	327	371	398	404	416	361	320	192	8	0	0	0	0	0	0	2536
S/A	0	0	0	0	0	0	0	3.35	1.57	1.44	1.32	1.23	1.19	1.11	1.14	1.24	1.28	2.98	0	0	0	0	0	0	1.06
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	34	633	881	960	997	1003	979	922	808	593	42	0	0	0	0	0	0	7678

Daylight Data Recovery: 0% missing; 3% exceed the 15% QC threshold -- 3596 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 - December 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	0	10	69	127	69	50	50	46	39	29	13	0	0	0	0	0	0	0	503
2	0	0	0	0	0	0	0	9	43	71	80	66	60	72	89	39	16	0	0	0	0	0	0	0	546
3	0	0	0	0	0	0	0	10	70	137	143	175	243	269	165	131	43	0	0	0	0	0	0	0	1388
4	0	0	0	0	0	0	0	11	77	129	160	226	221	183	153	93	37	0	0	0	0	0	0	0	1290
5	0	0	0	0	0	0	0	6	32	30	69	81	61	63	32	22	12	0	0	0	0	0	0	0	409
6	0	0	0	0	0	0	0	9	67	139	124	224	160	163	145	92	27	0	0	0	0	0	0	0	1148
7	0	0	0	0	0	0	0	8	68	120	182	222	99	31	36	55	10	0	0	0	0	0	0	0	830
8	0	0	0	0	0	0	0	1	14	56	37	68	138	90	32	12	9	0	0	0	0	0	0	0	456
9	0	0	0	0	0	0	0	3	38	106	146	85	55	52	44	34	15	0	0	0	0	0	0	0	578
10	0	0	0	0	0	0	0	6	39	51 ?	82	235	242	224	124	59	13	0	0	0	0	0	0	0	1074
11	0	0	0	0	0	0	0	6	39	130	201	230	244	151	129	77	25	0	0	0	0	0	0	0	1234
12	0	0	0	0	0	0	0	0	18	44	87	63	121	127	74	35	10	0	0	0	0	0	0	0	581
13	0	0	0	0	0	0	0	1	22	32	67	79	131	82	62	26	10	0	0	0	0	0	0	0	513
14	0	0	0	0	0	0	0	3	34 ?	54	51	44	46	48	48	43	21	0	0	0	0	0	0	0	391
15	0	0	0	0	0	0	0	3	30 ?	54 ?	56 ?	47	44	40	44	96	18	0	0	0	0	0	0	0	430
16	0	0	0	0	0	0	0	3	26	39	45	49	52	47	41	33	16	0	0	0	0	0	0	0	351
17	0	0	0	0	0	0	0	0	5	20	37	74	69	147	83	60	37	0	0	0	0	0	0	0	532
18	0	0	0	0	0	0	0	4	44	54	54	50	51	52	65	79	38	0	0	0	0	0	0	0	490
19	0	0	0	0	0	0	0	3	38	93	113	67	93	118	82	25	7	0	0	0	0	0	0	0	638
20	0	0	0	0	0	0	0	1	14	95	174	249	233	103	71	47	24	0	0	0	0	0	0	0	1012
21	0	0	0	0	0	0	0	8	65	97	79	158	156	204	143	53	43	0	0	0	0	0	0	0	1007
22	0	0	0	0	0	0	0	1	32	65	86	87	182	236 ?	156	66	33	0	0	0	0	0	0	0	945
23	0	0	0	0	0	0	0	3	26	61	108	97	106	88	104	42	14	1	0	0	0	0	0	0	650
24	0	0	0	0	0	0	0	0	11	38	55	63	54	64	51	33	9	0	0	0	0	0	0	0	380
25	0	0	0	0	0	0	0	2	29	47	53	59	62	64 ?	102 ?	68 ?	28	0	0	0	0	0	0	0	514
26	0	0	0	0	0	0	0	3	35	78	98	158	89	46	37	32	15	0	0	0	0	0	0	0	592
27	0	0	0	0	0	0	0	1	30	102	148	210	243	235	147	100	31	0	0	0	0	0	0	0	1248
28	0	0	0	0	0	0	0	1	17	42	66	92	70	62	38	21	13	0	0	0	0	0	0	0	423
29	0	0	0	0	0	0	0	1	18	93	45	72	129	60	53	32	24	1	0	0	0	0	0	0	528
30	0	0	0	0	0	0	0	1	38	105	179	176	130	180	127	38	21	1	0	0	0	0	0	0	995
31	0	0	0	0	0	0	0	0	11	44	75	108	68	85	64	42	14	0	0	0	0	0	0	0	513
Avg	0	0	0	0	0	0	0	4	35	76	96	118	119	111	83	52	21	0	0	0	0	0	0	0	716
S/D	0	0	0	0	0	0	0	3	19	35	47	69	68	68	43	28	11	0	0	0	0	0	0	0	312
S/A	0	0	0	0	0	0	0	0.87	0.55	0.47	0.5	0.58	0.57	0.62	0.52	0.53	0.51	1.19	0	0	0	0	0	0	0.44
Min	0	0	0	0	0	0	0	0	5	20	37	44	44	31	32	12	7	0	0	0	0	0	0	0	351
Max	0	0	0	0	0	0	0	11	77	139	201	249	244	269	165	131	43	1	0	0	0	0	0	0	1388

Daylight Data Recovery: 0% missing; 1% exceed the 15% QC threshold -- 3596 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