

**Global Solar Radiation on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Watt-Hours per Square Meter**  
**Elizabeth City State Universit - January 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	10	54	69	143	268	267	160	56	37	7	0	0	0	0	0	0	0	1072	
2	0	0	0	0	0	0	0	17	98	160	207	256	269	255	258	?	123	?	33	0	0	0	0	0	1677	
3	0	0	0	0	0	0	0	11	89	159	?	?	?	?	?	151	?	56	0	0	0	0	0	0	466	
4	0	0	0	0	0	0	0	24	91	?	?	?	?	?	?	144	?	53	0	?	0	0	0	0	312	
5	0	0	0	0	0	0	0	9	78	169	?	194	?	276	?	202	207	?	89	?	62	0	0	0	1287	
6	0	0	0	0	0	0	0	13	83	?	197	?	?	?	?	221	?	160	?	73	0	0	0	0	944	
7	0	0	0	0	0	0	0	3	65	187	?	?	353	?	353	?	323	270	?	130	?	42	0	0	1725	
8	0	0	0	0	0	0	0	34	147	?	?	?	?	?	?	?	?	44	0	0	0	0	0	0	225	
9	0	0	0	0	0	0	0	3	15	47	50	51	88	96	27	49	9	0	0	0	0	0	0	0	433	
10	0	0	0	0	0	0	0	25	147	?	?	?	?	?	?	?	?	69	1	0	0	0	0	0	241	
11	0	0	0	0	0	0	0	34	156	?	?	?	?	?	?	?	?	83	0	0	0	0	0	0	273	
12	0	0	0	0	0	0	0	27	66	?	?	?	?	?	?	?	?	81	0	0	0	0	0	0	175	
13	0	0	0	0	0	0	0	33	136	?	?	?	?	?	?	?	?	82	0	0	0	0	0	0	251	
14	0	0	0	0	0	0	0	35	141	?	?	?	?	?	?	?	?	84	0	0	0	0	0	0	260	
15	0	0	0	0	0	0	0	32	143	?	?	?	?	?	?	?	?	87	2	0	0	0	0	0	264	
16	0	0	0	0	0	0	0	1	10	127	?	208	?	?	?	?	?	83	1	0	0	0	0	0	431	
17	0	0	0	0	0	0	0	40	156	?	?	?	?	?	?	?	?	101	2	0	0	0	0	0	299	
18	0	0	0	0	0	0	0	41	157	?	?	?	?	?	?	?	?	80	3	0	0	0	0	0	282	
19	0	0	0	0	0	0	0	41	157	?	?	?	?	?	?	?	?	92	?	2	0	0	0	0	292	
20	0	0	0	0	0	0	0	37	143	?	?	?	?	?	?	273	?	205	?	58	3	0	0	0	719	
21	0	0	0	0	0	0	0	41	153	?	?	?	?	?	?	?	?	95	?	3	0	0	0	0	291	
22	0	0	0	0	0	0	0	47	173	?	?	?	?	?	395	?	140	?	116	?	80	1	0	0	951	
23	0	0	0	0	0	0	0	21	135	?	259	?	?	?	?	?	?	167	?	89	3	0	0	0	675	
24	0	0	0	0	0	0	0	30	115	?	?	342	?	367	?	381	?	303	241	?	132	?	44	1	1956	
25	0	0	0	0	0	0	0	4	54	64	237	351	?	417	?	374	?	263	118	47	4	0	0	0	1933	
26	0	0	0	0	0	0	0	48	161	?	?	?	?	?	?	?	?	97	?	70	5	0	0	0	381	
27	0	0	0	0	0	0	0	49	135	249	321	?	358	?	397	?	330	?	215	?	127	80	5	0	2266	
28	0	0	0	0	0	0	0	23	144	?	?	269	338	?	212	49	87	42	9	2	0	0	0	0	1175	
29	0	0	0	0	0	0	0	38	132	?	?	?	?	?	?	?	?	?	107	?	5	0	0	0	0	283
30	0	0	0	0	0	0	0	10	77	103	119	148	211	204	136	66	45	3	0	0	0	0	0	0	1123	
31	0	0	0	0	0	0	0	10	65	138	294	377	360	317	?	284	?	160	?	96	11	0	0	0	2111	
Avg	0	0	0	0	0	0	0	26	112	148	217	278	294	251	191	117	66	2	0	0	0	0	0	0	799	
S/D	0	0	0	0	0	0	0	15	45	64	85	102	95	105	83	45	27	2	0	0	0	0	0	0	648	
S/A	0	0	0	0	0	0	0	0.57	0.4	0.43	0.39	0.37	0.32	0.42	0.44	0.39	0.41	1.26	0	0	0	0	0	0	0.81	
Min	0	0	0	0	0	0	0	1	10	47	50	51	88	49	27	37	7	0	0	0	0	0	0	0	175	
Max	0	0	0	0	0	0	0	49	173	259	342	377	417	395	284	205	107	11	0	0	0	0	0	0	2266	

Daylight Data Recovery: 0% missing; 55% exceed the 15% QC threshold -- 3720 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:	EC
Latitude:	36.30° N
Longitude:	76.25° W
Elevation:	4 Meters AMSL
Time Zone:	-5

Instrument:	PSP
Calibration Constant:	7.12 uV/Wm-2
Serial Number:	17897F3
Calibration Date:	9/13/96

**Direct Normal Solar Radiation**  
**Hourly Integrated and Daily Totals**  
**Watt-Hours per Square Meter**  
**Elizabeth City State Universit - January 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	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4
2	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	?	0	?	0	0	0	0	0	0	0	10
3	0	0	0	0	0	0	0	0	1	2	?	?	?	?	?	1	?	1	0	0	0	0	0	0	0	4
4	0	0	0	0	0	0	0	0	1	?	?	?	?	10	?	?	0	?	0	0	0	0	0	0	0	12
5	0	0	0	0	0	0	0	0	1	1	8	?	2	?	1	?	1	0	?	0	?	0	0	0	0	14
6	0	0	0	0	0	0	0	0	0	2	?	1	?	?	5	?	0	?	0	?	0	0	0	0	0	9
7	0	0	0	0	0	0	0	0	1	2	?	?	3	?	1	?	0	6	?	0	?	0	0	0	0	13
8	0	0	0	0	0	0	0	2	3	?	?	?	?	?	?	3	?	?	0	?	0	0	0	0	0	7
9	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	5
10	0	0	0	0	0	0	0	1	1	?	3	?	?	6	?	6	?	5	?	?	0	0	0	0	0	27
11	0	0	0	0	0	0	0	0	0	?	4	?	?	5	?	6	?	5	?	4	?	?	1	0	0	25
12	0	0	0	0	0	0	0	1	0	?	?	?	5	?	?	?	8	?	?	1	0	0	0	0	0	15
13	0	0	0	0	0	0	0	2	5	?	?	?	?	?	?	5	?	?	?	0	0	0	0	0	0	12
14	0	0	0	0	0	0	0	3	6	?	5	?	?	?	?	4	?	?	1	0	0	0	0	0	0	19
15	0	0	0	0	0	0	0	2	7	?	?	?	?	?	?	5	?	?	0	0	0	0	0	0	0	14
16	0	0	0	0	0	0	0	0	0	1	?	2	?	7	?	7	?	6	?	3	?	?	0	0	0	27
17	0	0	0	0	0	0	0	1	1	?	2	?	4	?	5	6	5	5	?	4	?	1	0	0	0	35
18	0	0	0	0	0	0	0	1	2	?	3	?	4	?	4	6	5	4	?	3	?	1	0	0	0	33
19	0	0	0	0	0	0	0	2	4	?	2	?	5	?	8	7	7	?	5	?	6	?	0	?	0	47
20	0	0	0	0	0	0	0	2	3	?	?	6	?	5	?	6	?	6	?	0	?	0	0	0	0	29
21	0	0	0	0	0	0	0	2	2	?	?	?	2	?	?	?	3	?	?	0	?	0	0	0	0	10
22	0	0	0	0	0	0	0	1	5	?	?	?	?	8	?	5	?	3	?	0	?	0	0	0	0	22
23	0	0	0	0	0	0	0	0	1	?	1	?	?	?	5	?	?	?	0	?	0	0	0	0	0	7
24	0	0	0	0	0	0	0	1	2	?	?	2	?	3	?	2	?	1	4	?	0	?	0	0	0	14
25	0	0	0	0	0	0	0	0	0	0	2	?	3	?	2	?	2	?	1	0	0	0	0	0	0	10
26	0	0	0	0	0	0	0	2	4	?	3	?	?	8	?	7	?	8	?	?	0	?	0	0	0	31
27	0	0	0	0	0	0	0	1	1	2	?	2	?	2	?	1	?	3	?	0	0	0	0	0	0	15
28	0	0	0	0	0	0	0	1	2	?	5	?	1	1	?	0	0	0	0	0	0	0	0	0	0	11
29	0	0	0	0	0	0	0	1	2	?	?	5	?	4	6	7	?	4	?	?	0	?	0	0	0	29
30	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	5
31	0	0	0	0	0	0	0	0	1	1	4	2	2	1	?	1	?	0	?	0	0	0	0	0	0	12
Avg	0	0	0	0	0	0	0	1	2	2	3	4	4	4	3	1	0	0	0	0	0	0	0	0	0	17
S D	0	0	0	0	0	0	0	1	2	1	2	2	3	3	2	2	0	0	0	0	0	0	0	0	0	11
S/A	0	0	0	0	0	0	0	0.98	0.97	0.7	0.77	0.6	0.71	0.8	0.72	1.91	1.22	3.68	0	0	0	0	0	0	0	0.62
Min	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Max	0	0	0	0	0	0	0	3	7	5	8	8	8	10	8	6	1	0	0	0	0	0	0	0	0	47

Daylight Data Recovery: 0% missing; 46% exceed the 15% QC threshold -- 3720 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:	EC
Latitude:	36.30° N
Longitude:	76.25° W
Elevation:	4 Meters AMSL
Time Zone:	-5

Instrument:	NIP
Calibration Constant:	6.83 uV/Wm-2
Serial Number:	17828E6
Calibration Date:	9/13/96

**Diffuse Solar Radiation on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Watt-Hours per Square Meter**  
**Elizabeth City State Universit - January 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	8	44	57	118	220	221	132	46	31	6	0	0	0	0	0	0	0	884
2	0	0	0	0	0	0	0	14	82	133	172	212	223	210	207	98	28	0	0	0	0	0	0	0	1378
3	0	0	0	0	0	0	0	9	74	130	?	?	?	?	?	39	19	0	0	0	0	0	0	0	272 ?
4	0	0	0	0	0	0	0	18	63	?	?	?	?	180	?	51	22	0	0	0	0	0	0	0	334 ?
5	0	0	0	0	0	0	0	7	64	139	225	?	181	?	221	?	162	161	?	66	?	41	0	0	1266 ?
6	0	0	0	0	0	0	0	9	65	?	155	?	132	?	?	102	?	124	?	124	?	16	0	0	776 ?
7	0	0	0	0	0	0	0	2	53	148	?	?	287	?	285	?	263	192	?	104	?	35	0	0	1368 ?
8	0	0	0	0	0	0	0	10	29	?	?	?	?	?	?	45	?	?	?	?	33	0	0	0	117 ?
9	0	0	0	0	0	0	0	2	12	39	41	42	73	79	22	40	7	0	0	0	0	0	0	0	359
10	0	0	0	0	0	0	0	11	36	?	60	?	?	121	?	131	?	101	?	79	?	?	32	1	570 ?
11	0	0	0	0	0	0	0	12	31	?	50	?	?	57	?	57	49	?	?	?	18	0	0	0	329 ?
12	0	0	0	0	0	0	0	12	31	?	?	?	113	?	?	?	47	?	?	?	18	0	0	0	221 ?
13	0	0	0	0	0	0	0	11	31	?	?	?	?	?	?	47	?	?	?	?	18	0	0	0	107 ?
14	0	0	0	0	0	0	0	11	29	?	45	?	?	?	?	41	?	?	?	?	14	0	0	0	141 ?
15	0	0	0	0	0	0	0	11	30	?	?	?	?	?	?	64	?	?	?	?	31	2	0	0	137 ?
16	0	0	0	0	0	0	0	1	8	102	?	188	?	273	?	128	?	110	?	93	?	?	24	1	927 ?
17	0	0	0	0	0	0	0	12	30	?	50	?	55	?	55	47	?	43	?	?	20	1	0	0	421 ?
18	0	0	0	0	0	0	0	13	31	?	50	?	56	?	58	60	59	72	?	87	?	44	2	0	532 ?
19	0	0	0	0	0	0	0	13	30	?	47	?	50	?	50	49	?	43	?	43	?	19	?	1	394 ?
20	0	0	0	0	0	0	0	14	38	?	?	98	?	88	?	99	?	265	?	212	?	162	?	41	1017 ?
21	0	0	0	0	0	0	0	15	35	?	?	?	59	?	?	?	47	?	?	?	23	?	2	0	180 ?
22	0	0	0	0	0	0	0	34	119	?	?	?	?	373	?	215	?	147	?	94	?	60	1	0	1042 ?
23	0	0	0	0	0	0	0	16	102	?	206	?	?	179	?	?	?	?	129	?	62	2	0	0	696 ?
24	0	0	0	0	0	0	0	23	85	?	?	266	?	286	?	299	?	241	?	222	?	105	?	36	1563 ?
25	0	0	0	0	0	0	0	3	44	52	193	281	?	333	?	299	?	209	95	38	3	0	0	0	1550
26	0	0	0	0	0	0	0	13	30	?	69	?	88	?	100	?	108	?	64	?	53	4	0	0	530 ?
27	0	0	0	0	0	0	0	32	106	199	253	?	287	?	321	268	?	230	?	105	63	4	0	0	1867
28	0	0	0	0	0	0	0	21	115	?	301	?	219	267	?	173	41	72	34	8	1	0	0	0	1252
29	0	0	0	0	0	0	0	30	99	?	?	59	?	60	61	60	?	57	?	?	26	?	3	0	454 ?
30	0	0	0	0	0	0	0	8	63	84	98	121	172	167	111	54	37	3	0	0	0	0	0	0	917
31	0	0	0	0	0	0	0	8	53	113	239	307	295	260	?	226	?	130	?	77	8	0	0	0	1716
Avg	0	0	0	0	0	0	0	13	54	106	145	160	178	151	110	81	31	1	0	0	0	0	0	0	752
S D	0	0	0	0	0	0	0	8	30	67	77	95	105	84	72	37	17	2	0	0	0	0	0	0	519
S/A	0	0	0	0	0	0	0	0.6	0.56	0.63	0.53	0.59	0.59	0.56	0.65	0.46	0.55	1.29	0	0	0	0	0	0	0.69
Min	0	0	0	0	0	0	0	1	8	39	41	42	49	41	22	31	6	0	0	0	0	0	0	0	107
Max	0	0	0	0	0	0	0	34	119	301	266	307	373	299	230	162	77	8	0	0	0	0	0	0	1867

Daylight Data Recovery: 0% missing; 46% exceed the 15% QC threshold -- 3720 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: EC  
Latitude: 36.30° N  
Longitude: 76.25° W  
Elevation: 4 Meters AMSL  
Time Zone: -5

Instrument: PSP  
Calibration Constant: 9.38 uV/Wm-2  
Serial Number: 25782F3  
Calibration Date: 9/13/96