

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Watt-Hours per Square Meter
Elizabeth City State Universit - August 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	17	202	400	622	797	933	1011	1020	965	847	679	473	255	65	0	0	0	0	0	8285
2	0	0	0	0	0	38	216	410	594	772	847	656	650	943	830	639	447	206	55	0	0	0	0	0	7303
3	0	0	0	0	0	25	152	360	560	743	872	943	952	895	759	605	394	193	49	0	0	0	0	0	7500
4	0	0	0	0	0	17	107	260	494	683	800	896	869	750	617	474	58 ?	45	14	0	0	0	0	0	6085
5	0	0	0	0	0	11	51	263	462	747	886	843	815	874	236	267	188	48	53	0	0	0	0	0	5744
6	0	0	0	0	0	21	156	363	577	738	698	778	489	312	381	545	274	159	28	0	0	0	0	0	5518
7	0	0	0	0	0	9	61	212	315	299	402	402	514	462	334	471	411	219	44	0	0	0	0	0	4155
8	0	0	0	0	0	23	155	350	558	743	898	856	849	886	756	301	272	186	42	0	0	0	0	0	6875
9	0	0	0	0	0	27	124	190	352	728	863	851	954	883	729	617	421	211	41	0	0	0	0	0	6990
10	0	0	0	0	0	11	87	219	265	461	615	810	721	716	618	471	293	154	36	0	0	0	0	0	5477
11	0	0	0	0	0	13	144	332	531	716	892	895	665	402	641	557	386	189	32	0	0	0	0	0	6394
12	0	0	0	0	0	16	132	319	509	688	706	648	511	531	433	312	221	98	34	0	0	0	0	0	5159
13	0	0	0	0	0	15	130	316	474	678	652	959	902	796	692	579	380	117	31	0	0	0	0	0	6722
14	0	0	0	0	0	12	111	300	509	681	792	762	449	345	88	330	118	162 ?	39	0	0	0	0	0	4698
15	0	0	0	0	0	6	45	227	354	480	660	769	892	686	628	221	185	110	25	0	0	0	0	0	5287
16	0	0	0	0	0	15	78	135	310	448	609	898	603	657	518	600	388	212	34	0	0	0	0	0	5504
17	0	0	0	0	0	11	115	295	503	685	815	892	821	775	735	532	355	150	25	0	0	0	0	0	6710
18	0	0	0	0	0	11	91	270	486	514	704	715	691	760	676	449	338	121	20	0	0	0	0	0	5844
19	0	0	0	0	0	12	149	236	493	590	778	846	830	860	648	316	339	163	22	0	0	0	0	0	6282
20	0	0	0	0	0	7	97	225	418	605	656	914	687	467	117	38	12	2	1	0	0	0	0	0	4246
21	0	0	0	0	0	6	55	216	306	337	569	753	784	627	673	389	258	148	36	0	0	0	0	0	5159
22	0	0	0	0	0	3	106	155	295	699	822	671	502	399	386	477	308	177	25	0	0	0	0	0	5026
23	0	0	0	0	0	10	160	328	539	718	843	938	878	784	609	534	316	117	15	0	0	0	0	0	6791
24	0	0	0	0	0	5	137	331	537	728	877	857	820	730	630	544	389	125	34	0	0	0	0	0	6744
25	0	0	0	0	0	2	97	322	528	722	852	866	842	875	754	547	365	154	14	0	0	0	0	0	6942
26	0	0	0	0	0	14	106	303	550	603	732	922	817	811	536	411	238	93	16	0	0	0	0	0	6152
27	0	0	0	0	0	10	118	323	479	697	802	930	800	738	705	498	268	132	16	0	0	0	0	0	6515
28	0	0	0	0	0	3	116	282	471	656	748	752	838	787	530	260	148	31	17	0	0	0	0	0	5640
29	0	0	0	0	0	7	107	262	417	615	848	597	481	557	124	148	234	87	17	0	0	0	0	0	4499
30	0	0	0	0	0	6	111	291	530 ?	692	838	892	720	713	678	219	130	71	6	0	0	0	0	0	5897
31	0	0	0	0	0	5	97	283	392	548	511	382	495	539	617	511	314	112	8	0	0	0	0	0	4814
Avg	0	0	0	0	0	12	116	283	466	639	759	803	737	694	565	437	288	137	29	0	0	0	0	0	5966
S D	0	0	0	0	0	8	39	65	96	123	125	147	160	181	204	156	113	59	15	0	0	0	0	0	987
S/A	0	0	0	0	0	0.62	0.33	0.23	0.21	0.19	0.16	0.18	0.22	0.26	0.36	0.36	0.39	0.43	0.52	3.7	0	0	0	0	0.17
Min	0	0	0	0	0	2	45	135	265	299	402	382	449	312	88	38	12	2	1	0	0	0	0	0	4155
Max	0	0	0	0	0	38	216	410	622	797	933	1011	1020	965	847	679	473	255	65	0	0	0	0	0	8285

Daylight Data Recovery: 0% missing; 33% exceed the 15% QC threshold -- 37397 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 - August 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	49	589	766	848	888	906	918	915	919	922	895	834	709	376	0	0	0	0	0	10534
2	0	0	0	0	0	149	602	759	833	830	674	228	331	851	893	719	600	509	290	0	0	0	0	0	8268
3	0	0	0	0	0	105	283	604	694	764	774	755	732	704	605	533	441	310	100	0	0	0	0	0	7404
4	0	0	0	0	0	13	99	183	376	450	423	507	427	306	312	260	1	2	0	0	0	0	0	0	3362
5	0	0	0	0	0	0	0	117	265	559	638	501	432	547	6	65	66	0	1	0	0	0	0	0	3197
6	0	0	0	0	0	101	429	623	751	757	463	424	164	74	176	390	148	181	14	0	0	0	0	0	4694
7	0	0	0	0	0	1	1	22	26	6	11	6	48	36	5	205	530	554	210	0	0	0	0	0	1662
8	0	0	0	0	0	98	437	604	696	750	777	563	500	652	654	150	227	300	99	0	0	0	0	0	6507
9	0	0	0	0	0	57	81	22	155	609	671	515	657	675	664	701	657	517	181	0	0	0	0	0	6161
10	0	0	0	0	0	1	3	19	10	48	101	301	198	311	258	226	99	72	20	0	0	0	0	0	1667
11	0	0	0	0	0	32	367	561	641	707	751	646	404	144	472	550	514	377	89	0	0	0	0	0	6256
12	0	0	0	0	0	32	263	421	512	592	426	335	182	151	87	90	64	1	4	0	0	0	0	0	3159
13	0	0	0	0	0	25	232	366	405	513	317	665	676	555	488	466	461	140	23	0	0	0	0	0	5334
14	0	0	0	0	0	14	130	341	479	569	571	416	153	67	2	77	15	110	?	45	0	0	0	0	2987
15	0	0	0	0	0	0	1	64	99	117	286	428	545	360	376	29	8	6	3	0	0	0	0	0	2321
16	0	0	0	0	0	22	18	5	45	71	104	501	121	228	147	549	360	324	70	0	0	0	0	0	2566
17	0	0	0	0	0	17	191	353	522	604	632	673	566	565	686	549	430	234	72	0	0	0	0	0	6095
18	0	0	0	0	0	11	37	290	528	224	368	350	252	291	391	282	331	119	0	0	0	0	0	0	3473
19	0	0	0	0	0	49	359	127	491	407	561	546	530	637	489	77	343	298	61	0	0	0	0	0	4976
20	0	0	0	0	0	2	44	73	167	227	181	524	191	53	0	1	0	1	0	0	0	0	0	0	1464
21	0	0	0	0	0	0	2	77	35	10	219	440	451	229	350	166	64	100	73	0	0	0	0	0	2217
22	0	0	0	0	0	0	101	69	204	657	664	363	168	94	126	373	266	343	92	0	0	0	0	0	3520
23	0	0	0	0	0	72	319	379	438	593	658	650	491	451	364	442	407	80	24	0	0	0	0	0	5367
24	0	0	0	0	0	7	349	623	757	821	811	676	476	411	403	409	388	79	75	0	0	0	0	0	6285
25	0	0	0	0	0	0	246	610	718	803	789	672	663	809	798	712	699	502	97	0	0	0	0	0	8117
26	0	0	0	0	0	46	142	362	700	398	426	688	526	598	221	153	73	2	24	0	0	0	0	0	4357
27	0	0	0	0	0	29	267	522	505	652	703	769	514	517	605	500	175	197	50	0	0	0	0	0	6004
28	0	0	0	0	0	0	281	450	546	593	472	456	534	546	259	65	37	1	2	0	0	0	0	0	4243
29	0	0	0	0	0	2	171	327	308	317	524	250	236	296	1	16	117	65	8	0	0	0	0	0	2639
30	0	0	0	0	0	7	211	550	704	?	771	801	749	516	521	608	59	27	35	6	0	0	0	0	5563
31	0	0	0	0	0	12	110	384	204	200	108	4	14	64	323	521	411	160	8	0	0	0	0	0	2526
Avg	0	0	0	0	0	31	205	344	441	500	510	501	407	408	377	330	284	204	68	0	0	0	0	0	4610
S D	0	0	0	0	0	38	167	235	257	266	244	208	216	254	266	246	233	194	87	0	0	0	0	0	2185
S/A	0	0	0	0	0	1.22	0.81	0.68	0.58	0.53	0.48	0.41	0.53	0.62	0.7	0.74	0.82	0.95	1.28	0	0	0	0	0	0.47
Min	0	0	0	0	0	0	0	5	10	6	11	4	14	36	0	1	0	0	0	0	0	0	0	0	1464
Max	0	0	0	0	0	149	602	766	848	888	906	918	915	919	922	895	834	709	376	0	0	0	0	0	10534

Daylight Data Recovery: 0% missing; 23% exceed the 15% QC threshold -- 37397 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 - August 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	12	48	59	74	67	70	68	67	64	62	57	49	41	21	0	0	0	0	0	762
2	0	0	0	0	0	18	49	51	59	94	207	402	287	105	73	115	135	57	24	0	0	0	0	0	1677
3	0	0	0	0	0	17	96	92	112	119	140	168	189	204	244	238	174	101	39	0	0	0	0	0	1934
4	0	0	0	0	0	16	90	178	256	320	397	375	414	440	343	290	52 ?	43	12	0	0	0	0	0	3226
5	0	0	0	0	0	10	43	190	272	280	280	324	353	343	213	209	139	42	45	0	0	0	0	0	2743
6	0	0	0	0	0	15	63	89	95	122	248	327	301	220	223	259	189	106	24	0	0	0	0	0	2282
7	0	0	0	0	0	8	52	195	295	270	388	391	452	403	304	322	143	59	22	0	0	0	0	0	3303
8	0	0	0	0	0	14	60	93	117	136	170	288	328	261	209	179	165	102	32	0	0	0	0	0	2155
9	0	0	0	0	0	24	108	174	245	241	239	309	275	219	175	145	103	66	23	0	0	0	0	0	2346
10	0	0	0	0	0	10	73	201	246	405	489	454	475	382	379	293	236	132	32	0	0	0	0	0	3808
11	0	0	0	0	0	9	64	97	129	147	194	241	238	252	235	185	138	87	23	0	0	0	0	0	2041
12	0	0	0	0	0	14	79	145	190	220	300	294	305	376	351	242	184	86	30	0	0	0	0	0	2816
13	0	0	0	0	0	13	84	164	217	260	334	280	202	250	275	265	161	73	26	0	0	0	0	0	2604
14	0	0	0	0	0	11	85	155	204	222	256	335	279	271	78	273	104	134 ?	36	0	0	0	0	0	2444
15	0	0	0	0	0	5	38	184	287	370	376	334	333	329	307	190	178	102	24	0	0	0	0	0	3058
16	0	0	0	0	0	14	69	129	262	354	468	365	435	421	359	236	212	129	29	0	0	0	0	0	3482
17	0	0	0	0	0	11	78	149	178	207	231	220	243	243	177	171	155	96	20	0	0	0	0	0	2179
18	0	0	0	0	0	10	81	138	161	319	328	350	408	449	345	244	186	82	17	0	0	0	0	0	3119
19	0	0	0	0	0	10	78	176	170	255	247	279	281	258	236	251	177	91	17	0	0	0	0	0	2527
20	0	0	0	0	0	6	86	184	301	398	453	373	463	388	101	36	11	2	1	0	0	0	0	0	2804
21	0	0	0	0	0	5	50	178	270	309	343	305	317	383	377	259	219	126	31	0	0	0	0	0	3173
22	0	0	0	0	0	3	82	130	156	187	218	304	321	297	283	238	191	100	20	0	0	0	0	0	2532
23	0	0	0	0	0	7	94	180	270	246	215	283	341	321	268	226	126	88	15	0	0	0	0	0	2681
24	0	0	0	0	0	4	44	76	88	95	146	193	332	346	291	281	209	105	31	0	0	0	0	0	2242
25	0	0	0	0	0	2	43	86	104	105	138	205	182	141	129	108	66	43	8	0	0	0	0	0	1361
26	0	0	0	0	0	12	80	152	135	279	315	244	275	248	327	298	197	84	14	0	0	0	0	0	2659
27	0	0	0	0	0	8	63	105	178	182	153	182	274	247	232	171	182	93	14	0	0	0	0	0	2083
28	0	0	0	0	0	3	61	118	161	209	313	290	311	292	317	212	125	27	16	0	0	0	0	0	2457
29	0	0	0	0	0	6	69	143	257	343	376	341	275	276	111	134	186	73	15	0	0	0	0	0	2607
30	0	0	0	0	0	5	65	89	106 ?	113	137	178	214	246	213	165	111	63	5	0	0	0	0	0	1709
31	0	0	0	0	0	5	78	139	268	375	380	352	449	447	349	201	146	79	7	0	0	0	0	0	3274
Avg	0	0	0	0	0	10	70	137	189	234	276	292	310	294	245	210	150	81	22	0	0	0	0	0	2519
S D	0	0	0	0	0	5	18	42	73	98	107	81	91	95	93	69	53	31	10	0	0	0	0	0	638
S/A	0	0	0	0	0	0.51	0.25	0.31	0.39	0.42	0.39	0.28	0.29	0.32	0.38	0.33	0.35	0.38	0.46	2.76	0	0	0	0	0.25
Min	0	0	0	0	0	2	38	51	59	67	70	68	67	64	62	36	11	2	1	0	0	0	0	0	762
Max	0	0	0	0	0	24	108	201	301	405	489	454	475	449	379	322	236	134	45	0	0	0	0	0	3808

Daylight Data Recovery: 0% missing; 23% exceed the 15% QC threshold -- 37397 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