

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Global Solar Radiation on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Instrument: Eppley PSP**  
**Watt-Hours per Square Meter**

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	2	33	258 ?	398	607	783	908	996	995	875 ?	719	638	454	252	72	8	0	0	0	0	7997 ?	
2	0	0	0	0	2	42	112 ?	442 ?	594	774	908	982	1000	846	628 ?	372 ?	277 ?	262	83	5	0	0	0	0	7329 ?	
3	0	0	0	0	2	53	125 ?	122	320 ?	763 ?	923	986	990	786	602 ?	280 ?	329 ?	265	88	10	0	0	0	0	6643 ?	
4	0	0	0	0	3	44	246 ?	420	620	794	799	900 ?	940	698 ?	417 ?	531	250 ?	197 ?	54	5	0	0	0	0	6915 ?	
5	0	0	0	0	2	18	47	149	155	233	177	256	191	237	186	139	77 ?	63	14	4	0	0	0	0	1949	
6	0	0	0	0	1	8	53	175	333	407	305	161	471	399	153	76	70	73	45	5	0	0	0	0	2734	
7	0	0	0	0	4	42	257 ?	423 ?	628	803	937	1004	1017	965	852	684	485	277	90	7	0	0	0	0	8475	
8	0	0	0	0	4	43	279 ?	414	578 ?	756	886	853	574 ?	943	830	668	479	273	79	7	0	0	0	0	7666 ?	
9	0	0	0	0	0	23	84	183	287	311	510	457	498 ?	656	524	574	482	275	81	10	0	0	0	0	4956	
10	0	0	0	0	3	31	127 ?	470 ?	438 ?	781 ?	765 ?	633 ?	882 ?	907	865	692	494	280	92	7	0	0	0	0	7467 ?	
11	0	0	0	0	3	37	125	184 ?	556 ?	636 ?	894 ?	984 ?	997 ?	916	823 ?	618	474 ?	259	76	10	0	0	0	0	7590 ?	
12	0	0	0	0	0	5	66	265 ?	413 ?	668 ?	?	723 ?	472 ?	922 ?	781 ?	535	114 ?	170	72	9	0	0	0	0	5215 ?	
13	0	0	0	0	1	22	98	147	251	317	313	156 ?	72 ?	139	186	158	242 ?	156	88	15	0	0	0	0	2362 ?	
14	0	0	0	0	1	16	74	219	429 ?	340 ?	360 ?	1009 ?	854	902	841	668	474	266	84	7	0	0	0	0	6542 ?	
15	0	0	0	0	0	36	207 ?	397 ?	601 ?	804 ?	916 ?	1011 ?	1015	951	854	638	460	230 ?	92	9	0	0	0	0	8222 ?	
16	0	0	0	0	0	35	127	206	288	?	?	?	477	342	265	302	263 ?	195	68	11	0	0	0	0	2580 ?	
17	0	0	0	0	0	56	140	222 ?	460 ?	781 ?	728 ?	699 ?	703 ?	752 ?	388	148	?	66 ?	17	0	0	0	0	0	5160 ?	
18	0	0	0	0	0	20	84	163	134	128	292	304 ?	316	435	501 ?	383	377 ?	181	67	15	0	0	0	0	3400 ?	
19	0	0	0	0	0	26	108 ?	201 ?	235	314	430	746 ?	618	479	460 ?	380 ?	316 ?	186 ?	52	4	0	0	0	0	4555 ?	
20	0	0	0	0	0	17	59	169 ?	276	389 ?	568 ?	476	165	293	423	225	124	53	17	3	0	0	0	0	3257	
21	0	0	0	0	0	19	169	230	410	739	738	652	535	648	610	437	242	311	94	12	0	0	0	0	5846	
22	0	0	0	0	0	31	162	317	553	673	938	610	1024	859	313	380	424	177	40	3	0	0	0	0	6504	
23	0	0	0	0	0	13	121	291	348	390	440	466	533	432	617	555	463	125	21	18	0	0	0	0	4833	
24	0	0	0	0	0	2	75 ?	269	554	689	585	777	629	731	472	663	432	168	97	18 ?	0	0	0	0	6161	
25	0	0	0	0	0	27	151	314	558	742	868	975	993	846	728	587	413	207	41	12	0	0	0	0	7459	
26	0	0	0	0	0	30	128	267	391	716	837	932	939	881	787	454	187	276	73	5	0	0	0	0	6906	
27	0	0	0	0	0	13	106	303	404	609	817	840	670	187 ?	?	226	290	71	18	5	0	0	0	0	4558 ?	
28	0	0	0	0	0	28	159	254	273	686	813	828	907	867	777	614	377	216	40	4	0	0	0	0	6843	
29	0	0	0	0	0	28	164	340	547	696	750	767	705	92 ?	511	550	220	243	55	4	0	0	0	0	5672	
30	0	0	0	0	0	31	165	334	540	691	841	875	907	910	660	572	423	202	29	1	0	0	0	0	7181	
31	0	0	0	0	0	29	161	362	561	725	858	945	909	847	745	622	135 ?	89	26	0	0	0	0	0	7014	
Avg	0	0	0	0	1	28	137	279	430	605	693	733	710	669	584	464	328	196	60	8	0	0	0	0	5806 ?	
S D	0	0	0	0	1	13	62	100	147	204	237	265	283	278	221	189	138	77	27	5	0	0	0	0	1874	
S/A	0	0	0	0	1.46	0.47	0.45	0.36	0.34	0.34	0.34	0.36	0.4	0.42	0.38	0.41	0.42	0.39	0.46	0.62	0	0	0	0	0	0.32
Min	0	0	0	0	0	2	47	122	134	128	177	156	72	92	153	76	70	53	14	0	0	0	0	0	1949	
Max	0	0	0	0	4	56	279	470	628	804	938	1011	1024	965	865	692	494	311	97	18	0	0	0	0	8475	
n	0	0	0	0	19	350	307	311	315	309	308	299	323	320	322	351	305	337	369	100	0	0	0	0	0	4648

Daylight Data Recovery: 0.0% missing; 0.0% untested; 12.5% exceed the 15% QC threshold -- 5314 total daylight measurements.

Instrument: Eppley PSP Serial Number: 31392F3 Calibration Factor: 7.3961  $\mu\text{V}/\text{W}/\text{m}^2$  Calibration Date: 07/2007

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

July 2009

Direct Normal Solar Radiation  
 Hourly Integrated and Daily Totals  
 Instrument: Eppley NIP  
 Watt-Hours per Square Meter

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	0	0	0?
2	0	0	0	0	0	0	0?	?	?	?	?	?	?	?	?	0?	0?	?	0?	0?	0	0	0	0	0?
3	0	0	0	0	0	0	0?	0	2?	?	?	?	?	?	0?	0?	?	?	0?	0	0	0	0	0	2?
4	0	0	0	0	0	0	?	?	?	?	?	?	?	?	0?	?	0?	?	0	0	0	0	0	0	0?
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	3
6	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
7	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	?	?	0?	0	0	0	0	?
8	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	?	0?	0	0	0	0	0	0?
9	0	0	0	0	0	0	0	0	0	0	0	0	0?	?	0?	?	?	?	0?	0	0	0	0	0	0?
10	0	0	0	0	0	0	0?	?	?	?	?	?	?	?	?	?	?	?	?	0?	0	0	0	0	0?
11	0	0	0	0	0	0	0	0?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	1?
12	0	0	0	0	0	0	0	0?	?	?	?	?	0?	?	?	?	0?	0	0	0	0	0	0	0	1?
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2?	0	0	0	0	0	0	0	5
14	0	0	0	0	0	0	0	0	0?	?	?	?	?	?	?	?	?	?	0?	0	0	0	0	0	0?
15	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	?	0?	0	0	0	0	0	0?
16	0	0	0	0	0	0	0	0	0	?	?	?	0	0	0	0	0?	0	0	0	0	0	0	0	0?
17	0	0	0	0	0	0	0	0?	?	?	0?	0?	0?	0?	0	0	0	1	0	0	0	0	0	0	1?
18	0	0	0	0	0	0	0	0	0	0	1	0?	0?	0	0?	?	?	0?	0	0	0	0	0	0	1?
19	0	0	0	0	0	0	0?	0?	0	0	0	?	0?	0?	0?	0?	0?	0?	0	0	0	0	0	0	0?
20	0	0	0	0	0	0	0	0?	0	0?	0?	0	0	1	0	0	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
22	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
23	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
24	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
25	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	?	*	*	*	*	0	0	0	*
26	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
27	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
28	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
29	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
30	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	*
31	0	0	0	0	0	*	*	*	*	*	*	*	*	*	?	?	?	*	*	*	0	0	0	0	*
Avg	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 *?
SD	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
StA	0	0	0	0	2.13	0.99	1.49	1.73	2.89	0	2.83	2.4	2.9	1.62	2.36	2	2.31	1.99	2.92	3.93	0	0	0	0	1.2
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	0	2	0	1	0	1	1	1	0	2	1	0	1	0	0	0	0	5
n	0	0	0	0	19	243	153	121	105	78	79	68	84	79	85	84	83	89	159	73	0	0	0	0	1585

Daylight Data Recovery: 33.7% missing; 0.0% untested; 35.9% exceed the 15% QC threshold -- 5314 total daylight measurements.

Instrument: Eppley NIP Serial Number: 23398E6 Calibration Factor: 7.1447 μV/W/m² Calibration Date: 07/2007

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Diffuse Solar Radiation (Shadow Band) on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Instrument: Eppley PSP**  
**Watt-Hours per Square Meter**

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	2	26	113 ?	117	114	117	128	123	133	146 ?	224	157	130	81	40	8	0	0	0	0	1660 ?
2	0	0	0	0	2	29	86 ?	111 ?	147	150	131	143	140	196	265 ?	222 ?	126 ?	85	41	5	0	0	0	0	1878 ?
3	0	0	0	0	2	41	114 ?	118	262 ?	180 ?	118	121	115	185	265 ?	254 ?	123 ?	102	43	10	0	0	0	0	2053 ?
4	0	0	0	0	4 ?	23	67 ?	91	107	113	166	280 ?	283	329 ?	270 ?	262	207 ?	108 ?	49	5	0	0	0	0	2364 ?
5	0	0	0	0	3 ?	18	47	147	154	232	177	255	190	235	186	138	64 ?	63	14	4	0	0	0	0	1927
6	0	0	0	0	1	8	53	173	323	369	288	161	460	399	153	76	70	73	45	5	0	0	0	0	2657
7	0	0	0	0	4	27	67 ?	69 ?	79	93	105	131	113	115	112	111	99	74	39	7	0	0	0	0	1245
8	0	0	0	0	?	29	105 ?	115	131 ?	167	196	346	345 ?	206	155	130	110	100	52	7	0	0	0	0	2193 ?
9	0	0	0	0	0	23	84	181	264	310	473	445	448 ?	495	415	253	145	80	40	10	0	0	0	0	3667
10	0	0	0	0	?	21	101 ?	114 ?	166 ?	211 ?	227 ?	245 ?	253 ?	195	107	90	77	61	34	7	0	0	0	0	1909 ?
11	0	0	0	0	?	34	107	144 ?	116 ?	220 ?	165 ?	163 ?	158 ?	166	170 ?	202	201 ?	130	56	10	0	0	0	0	2043 ?
12	0	0	0	0	0	5	66	228 ?	288 ?	285 ?	?	363 ?	422 ?	272 ?	311 ?	244	129 ?	145	68	9	0	0	0	0	2838 ?
13	0	0	0	0	?	22	98	147	249	317	291	113	60	139	186	158	223 ?	151	71	14	0	0	0	0	2241
14	0	0	0	0	?	16	74	227	374 ?	269 ?	256 ?	164 ?	241	191	152	138	111	76	37	7	0	0	0	0	2333 ?
15	0	0	0	0	0	24	65 ?	69 ?	79 ?	94 ?	99 ?	97 ?	103	110	103	131	122	129 ?	68	9	0	0	0	0	1302 ?
16	0	0	0	0	0	37	124	202	261	?	?	?	462	338	265	298	249 ?	168	59	11	0	0	0	0	2474 ?
17	0	0	0	0	0	53	128	186 ?	344 ?	432 ?	534 ?	487 ?	514 ?	520 ?	373	148	?	39 ?	17	0	0	0	0	0	3775 ?
18	0	0	0	0	0	19	84	163	134	128	287	292 ?	303	387	393 ?	247	162 ?	128	60	15	0	0	0	0	2804 ?
19	0	0	0	0	0	26	96 ?	159 ?	237	314	422	624 ?	564	443	438	339 ?	267	144 ?	49	4	0	0	0	0	4125 ?
20	0	0	0	0	0	18	59	163 ?	268	316 ?	493 ?	447	157	285	418	223	124	53	17	3	0	0	0	0	3043
21	0	0	0	0	0	21	157	217	329	408	415	478	481	482	404	334	231	202	67	12	0	0	0	0	4239
22	0	0	0	0	0	31	115	198	232	297	194	324	235	235	285	321	243	143	40	3	0	0	0	0	2896
23	0	0	0	0	0	13	117	248	294	359	375	395	456	347	388	283	155	63	18	9 ?	0	0	0	0	3517
24	0	0	0	0	0	1	75 ?	162	189	286	446	476	481	366	373	180	153	122	76	18 ?	0	0	0	0	3402
25	0	0	0	0	0	29	95	166	147	156	241	198	224	226	217	228	233	119	39	12	0	0	0	0	2328
26	0	0	0	0	0	29	105	209	280	250	262	249	251	244	185	202	153	149	52	5	0	0	0	0	2624
27	0	0	0	0	0	14	91	214	294	357	325	409	467	151 ?	48 ?	222	256	71	17	5	0	0	0	0	2941
28	0	0	0	0	0	25	84	177	230	254	295	352	369	278	212	161	158	136	352	4	0	0	0	0	2773
29	0	0	0	0	0	29	91	177	253	365	357	348	275	75 ?	326	381	204	156	32	4	0	0	0	0	3072
30	0	0	0	0	0	25	72	164	192	269	274	256	191	204	266	206	133	102	25	1	0	0	0	0	2379
31	0	0	0	0	0	25	66	104	129	161	156	161	239	216	184	121	95	88	26	0	0	0	0	0	1772
Avg	0	0	0	0	1	24	91	160	215	249	272	288	295	264	253	208	158	108	43	7	0	0	0	0	2596 ?
S D	0	0	0	0	1	10	25	47	83	97	125	139	145	119	108	78	59	39	17	4	0	0	0	0	763
S/A	0	0	0	0	1.9	0.43	0.28	0.29	0.39	0.39	0.46	0.48	0.49	0.45	0.43	0.37	0.37	0.36	0.41	0.59	0	0	0	0	0.29
Min	0	0	0	0	0	1	47	69	79	93	99	97	60	75	48	76	64	39	14	0	0	0	0	0	1245
Max	0	0	0	0	4	53	157	248	374	432	534	624	564	520	438	381	267	202	76	18	0	0	0	0	4239
n	0	0	0	0	12	340	308	313	317	311	309	304	332	325	329	351	311	340	371	99	0	0	0	0	4674

Daylight Data Recovery: 0.0% missing; 0.0% untested; 12.0% exceed the 15% QC threshold -- 5314 total daylight measurements.

Instrument: Eppley PSP Serial Number: 31393F3 Calibration Factor: 7.6820 μV/W/m<sup>2</sup> Calibration Date: 07/2007

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Dry Bulb Temperature (Roof)**  
**Hourly and Daily Averages**  
**Instrument: CSI HMP-35C**  
**Degrees Celsius**

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	25.5	25.3	24.9	25	24.9	24	24.4	25.5	27.8	29.5	30.1	31.1	31.7	32.4	32.8	33	33	32.8	31.6	29.4	28.6	26.4	25.3	25.7	28.4	
2	24.5	23.3	21.8	21.2	20.8	21	21.8	23.7	25.2	26.7	27.9	28.5	29	29.4	30.2	30.2	30.2	30.2	29.7	27.9	26.1	25	24.1	23.3	25.9	
3	23.1	23.1	22.5	21.8	21.4	21	21.4	21.5	22.2	24.5	25.8	26.4	27.1	27.4	27.8	27.7	27.9	27.7	27.1	25.7	25	24.6	24	22.7	24.6	
4	21.6	20.4	19.7	19.1	18.4	18.4	20.1	23	24.7	26	27	27.3	28	28.2	28.6	29.2	28.7	29	27.9	26.4	24.9	24.8	23.9	22.9	24.5	
5	22.6	22.7	22.6	22.7	22.5	22.6	22.4	22.6	23.3	23.9	23.9	24.2	24	23.6	23.2	23.1	21.5	20.3	20.7	21.5	21.6	22.1	21.8	21.6	22.5	
6	21.6	21.6	21.6	21.6	21.2	21.1	21.1	21.1	21.6	22.9	23.5	22.6	22.9	24.3	23.6	23.1	23.1	23	23.1	22.7	22.3	22	22	21.9	22.3	
7	21.4	21.2	20.6	19.8	19.3	19.3	20.6	22.6	24.5	26	26.9	27.4	27.9	27.8	27.7	27.3	26.8	26.2	25.4	23.9	23.2	22.6	22.2	21.9	23.8	
8	21.3	20.7	20.4	20	20	19.9	21.2	23.2	24.8	26.9	27.6	28.7	27.7	27.1	27.3	27.1	26.8	26.3	25.1	24	23.3	22.8	22.3	21.9	24	
9	21.8	21.6	21.3	21.3	21.3	20.9	21.4	22.2	23.3	23.7	24.3	24.4	24.9	25.5	25.2	25.3	25.2	24.7	23.5	22.3	21.5	20.7	20.3	20	22.8	
10	19.5	19.2	18.4	17.8	17.6	17.9	19.3	21.2	22	22.9	19.3	23.2	23.3	23.5	23.9	24.1	24.1	23.8	23.2	22	20.7	19.9	19.4	19.1	19.3	21
11	17.4	16.7	16.2	16	15.7	16.2	17.4	20.2	22.2	23.4	24.1	24.9	25.5	26.2	26.8	27	27	26.5	25.2	24.3	24	23.9	23.7	23.6	22.3	
12	23.4	22.9	22.6	22.8	23.2	23.3	23	23.8	24.9	26.3	27.5	28.8	29.5	30.5	30.8	31	28.6	27.6	26.1	26.2	25.8	24.1	24.3	25.1	25.9	
13	23.8	23.4	22.4	21.9	21.9	22	22.5	23.3	23.9	25.2	25.6	24	23.6	23.3	23.1	23.2	23.4	23.8	23.8	23.1	22.4	21.9	21.5	21	23.1	
14	20.4	20.1	20	19.9	19.8	19.6	19.8	20.6	22.7	25.2	26	27.2	27.3	27.5	27.6	27.6	27	26.3	25	23.3	22.6	21.8	21.5	21.2	23.3	
15	20.6	19.9	19.8	19	17.9	18.2	20.8	23	24.3	25.8	26.2	27.7	27.9	28.4	28.4	27.9	27.5	26.7	25.7	24.4	23.4	23	23	22.7	23.8	
16	23	23.1	23.4	23.2	23.1	23.1	23.6	24.1	25.1	26.4	27.8	28.8	29.3	29.3	29	29	28.8	28.3	27.1	25.8	25	24.4	24.1	23.7	25.8	
17	23.5	23.3	23.1	22.9	22.8	22.8	23.2	24	26.1	28	28.3	29	30	30.6	30.5	29.7	24.1	22.2	22.9	23	22.5	22.5	22.8	22.8	25	
18	22.5	22.4	22	21.9	21.9	22.1	22.7	23.3	23.4	23.9	24.6	25.6	26.5	26.2	27.3	27.3	27.3	26.7	25.4	24.3	24	23.4	22.4	21.7	24.1	
19	21	20.5	20.2	20.2	20.5	20.6	21.6	23.2	24.2	24.1	25.1	26.8	27.3	27.5	27.3	26.7	26.1	25.7	24.4	23.4	22.9	22.6	22.4	22.3	23.6	
20	22.2	22.2	22.5	22.7	22.9	23	23.4	23.3	23.7	24.7	25.4	25.4	24.6	23.3	24.3	24.3	23.9	23.2	22.9	22.6	22	21.5	21.3	21.3	23.2	
21	21.2	20.7	20.4	20.3	20.2	19.9	20.3	21.9	22.1	24.2	25.5	27.1	26.7	27	27.7	27.6	27	26.8	25.9	24.7	24.2	23.9	23.6	23.1	23.8	
22	22.7	22	21.9	21.5	21.2	21.6	22.5	24.4	25.8	26.5	27.8	28.1	28.8	28.3	27.2	27.3	27.2	26.4	25.7	25.2	25.2	24.6	23	25		
23	22.5	22.6	22.8	22	22	22	22.3	23.5	24.5	25.4	25.8	26.8	27.4	28	28.7	28.9	29.3	28.3	26.4	24.3	24.6	24.7	24.8	24.5	25.1	
24	23.9	23.5	23.4	23.2	22.8	21.3	21	22.3	24.3	25.8	26.8	27.3	28.1	28.7	28.6	29.1	29.1	28.3	27.6	25.6	24.2	23.2	22.7	22.4	25.1	
25	22.3	22.1	22	21.6	21.5	21.6	22.4	23.9	26.4	28	28.9	29.3	30	30	30.2	30.3	30.1	28.5	27.4	27.1	26.7	26.7	26.4	26.1	26.2	
26	25.6	25.4	25.3	25.3	25.2	25.1	25.4	26.1	26.7	28	29.1	30.6	31.6	31.9	32.5	32.1	30.3	28.5	28.4	27.1	27	26.9	26.8	26.3	27.8	
27	25.9	25.5	25.3	25	24.7	24.9	25.3	26	26.7	27.5	28.6	29.6	30.4	29.4	24.5	23.7	25.2	25.4	23.1	22.1	22.7	24	24.7	24.6	25.6	
28	24.2	22.9	22.3	22	21.7	21.9	23	24.6	25.1	26.6	27.9	28.5	29.2	29.8	30.4	30.9	30.9	30.5	28.7	27.7	26.9	26.2	25.9	25.6	26.4	
29	25.3	25	24.8	24.6	24.3	24.5	25.2	26.3	27.1	28.2	29	30.2	30.8	25.4	25.5	29	28.6	28.6	27.3	26.6	26.8	26.6	26.1	25.6	26.7	
30	25.2	24.7	24.3	24.1	24	23.9	24.3	25.2	26.2	27.3	28.2	29	29.8	30.6	31.2	31.2	31.5	31.1	29.9	29	28.5	28.1	27.4	27.1	27.6	
31	26.7	26.2	25.7	25.1	24.5	24.1	24.6	25.7	26.8	28.3	29.5	30.3	31.2	31.9	32.4	32.7	27.8	25.2	25.8	23.8	23.2	23.6	23.4	23.1	26.7	
Avg	22.8	22.4	22.1	21.8	21.6	21.5	22.2	23.4	24.6	25.9	26.7	27.4	27.8	27.8	27.9	27.9	27.3	26.7	25.8	24.8	24.2	23.8	23.5	23.2	24.7	
S D	2	2.1	2.1	2.2	2.3	2.2	1.9	1.6	1.7	1.8	1.9	2.2	2.5	2.6	2.8	2.7	2.7	2.7	2.5	2.2	2	1.9	1.9	1.8		
S/A	0.09	0.09	0.1	0.1	0.11	0.1	0.08	0.07	0.07	0.07	0.07	0.08	0.09	0.09	0.1	0.1	0.1	0.1	0.1	0.09	0.09	0.08	0.08	0.08	0.07	
Min	17.4	16.7	16.2	16	15.7	16.2	17.4	20.2	21.6	22.9	23.2	22.6	22.9	23.3	23.1	23.1	21.5	20.3	20.7	20.7	19.9	19.4	19.1	19.3	21	
Max	26.7	26.2	25.7	25.3	25.2	25.1	25.4	26.3	27.8	29.5	30.1	31.1	31.7	32.4	32.8	33	33	32.8	31.6	29.4	28.6	28.1	27.4	27.1	28.4	
n	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	8928	

Data Recovery: 0.0% missing; 0.0% untested; 0.0% failed QC -- 8928 total measurements.

Instrument: CSI HMP-35C    Serial Number: P0520031    Calibration Factor: 1.00 deg C/mV    Calibration Date: 03/1988

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Relative Humidity (Roof)**  
**Hourly and Daily Averages**  
**Instrument: CSI HMP-35C**  
**Percent**

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	102.4	103.9	104.8 ?	102.3	99.5	101	96.8	90.8	79.4	69.3	63.5	51.9	49	46.1	45.6	47.1	47.4	48.1	58.2	74.6	78.1	82.4	94.8	91.5	76.2	
2	90.2	94.5	101.6	104.4	?	?	103.5	95.5	85.1	75.9	70.6	66.9	66.4	65.2	63.9	62.4	62.8	61.9	63.9	72.1	80	89.1	96.2	98.3	80.5	
3	95.8	90.9	91.8	92	89.5	90.8	88.3	89.3	88.4	71.7	65.4	62.1	57.9	58	58	56.3	55.6	56.5	59.5	66.6	71.7	74.7	77.5	84.1	74.7	
4	88.6	94.1	97.6	99.3	101.6	102.1	97.9	85.4	72.6	66.3	62.1	60.3	56.9	55.5	54.5	52.7	54.4	53.5	57.7	67.7	75.1	73.1	76.5	82.7	74.5	
5	87.5	90.4	89.8	91.7	93.8	91.6	91.6	92.2	88.4	89.6	89.9	89.7	92.6	96.6	100.1	100.9	102.1 ?	?	?	?	?	?	?	?	92.9 ?	
6	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	99.5 ?
7	104.6 ?	?	?	?	?	?	?	102.8 ?	94.5	80.8	72.8	67.1	67	60.7	62.7	63.1	65.5	64.6	61.9	72.1	80.8	81.7	85	88.3	91.7	77.3 ?
8	95.6	99	100.1	101.6	101.8	102.2	99.7	98	89.8	81	79.9	76.8	80.6	73.6	66	60.6	60.4	62.9	73.5	73.7	78.7	85.4	90	92.6	84.3	
9	93.1	95.2	96.8	96.7	95.3	94.8	93.1	91.1	86.1	81	78.9	78.7	75.7	72.5	70.5	69.1	70	73.6	84.1	92.9	96.6	99.6	99.6	99.4	86.9	
10	99.7	100.6	102.7	104.6	104.8	103	97.1	89.5	84.5	77.9	77.6	76.9	76.8	74	73	73.8	74.2	78	84.8	92.9	96.7	98.2	100.1	100	89.2	
11	102.9 ?	?	?	?	?	?	?	?	99.5	85.4	79.9	76.4	76.4	64.7	61.4	63.5	69.2	72.7	73.8	77.7	84.4	89.6	84.4	90.2	88.8	80 ?
12	89.4	92.9	93	92.4	93.4	94.4	95.9	95	93.3	90.3	87.6	84.3	80.5	74.7	75	76.5	80.6	88	87.3	88.8	93.3	103.1 ?	103.7	100.5	89.7	
13	104.3 ?	104 ?	103.3	103.3	103.4	103.9	104	102.4	100.7	97.2	96.2	103.3 ?	?	104.7 ?	?	?	103.7	101.5	97.3	97.8	100.8	104.1 ?	?	?	101.9 ?	
14	?	?	?	?	?	?	?	?	99.5 ?	94	75.5	60	57.4	58.9	55	61.1	63.3	70.1	79.3	94.3	100.6	103.9	104.6	104.5 ?	80.1 ?	
15	?	?	?	?	?	?	?	102.7 ?	94.6	78.3	62.8	55.8	51.7	50.3	48.2	51.8	57	59.8	61.5	71.6	80.8	89.6	96.7	97.7	98	72.7 ?
16	99.1	100.2	99.1	98.4	97	95.4	94.1	94.8	89.3	84.9	80.9	80.3	81.7	83.2	86.5	88.2	90.8	91.8	93.2	98.9	100.1	101.7	103.8	?	92.8	
17	?	?	?	?	?	?	?	104.3 ?	99.8	95.3	94.1	91.1	84.2	83.1	86.8	91.9	97.2 ?	105	104.6	103	100.8	100.6	99.9	99	96.5 ?	
18	98.9	98.4	99.7	100.9	101.3	101.3	100.8	98.9	97.9	96.3	92.4	89.6	88.8	88.9	84.4	82.5	80.2	81.3	82.9	85.4	88.8	94	98.9	101.4	93.1	
19	103.9	?	?	?	105 ?	101.1	92	86	86.1	89.3	87.2	83.6	78.9	75.5	77.5	83.3	86.4	88.5	94.2	99.5	103	104.7 ?	?	?	90.8 ?	
20	?	?	?	?	?	?	104.8 ?	101.1	97.7	95.4	91.3	91.3	96.7	103.4	101.2	99.9	100.2	100.7	101	101.6	103.1 ?	?	?	?	99.3 ?	
21	?	?	?	?	?	?	?	104.8 ?	103.4	95.8	87.3	79.2	82.9	83.6	80.1	81.4	83.3	83.2	92.9	100.5	102.6	102.6	103.1	104.4	92.4 ?	
22	105 ?	?	?	?	?	?	?	101.1	95.4	89.5	83.3	80.8	78.8	83	86	88.1	89.7	95.4	98.7	102.5	102	100.3	101.5	104.3	93.6 ?	
23	103.3	104.1	104.1	104.1	104.3	104.5	104.5	102.6	97.3	92.6	91.4	89.1	87.6	85.8	84.8	85.7	86.3	88.5	94.1	101.5	102.9	103.7	102.5	102.1	97	
24	103.7 ?	?	105 ?	104.8	103.7	102.2	102.6	100.3	92.2	85	82.3	83.3	80.8	75.8	76.7	79.5	84.2	88.8	86.7	90.9	98.1	102.7	104.5	?	92.4 ?	
25	?	?	?	?	?	?	?	103.5	96.3	88	85.8	81.1	77.9	79.3	81.5	84.7	87.6	92.7	96	97.1	99.9	99.5	100.6	101.6	91.4 ?	
26	102.1	103.4	104.3	103.9	103.3	103.3	102	100	98.6	93.2	88.8	81.3	77.8	77.9	76.2	74.3	81.6	80.9	88.8	95.3	95.5	95.5	95	96.8	92.5	
27	99.3	100.5	101.6	102.3	103.3	103.5	102.4	100.7	98.9	97.8	94.3	89.1	86.1	89.9	98.6	102.3	100.5	98.4	99.7	104.8 ?	103.6	102.8	102.8	103.8	99.5	
28	101.3	98.2	97.5	97.6	98.7	100.7	102.3	100.3	100.9	96.4	91.6	89.2	86.1	83.8	79.7	77.4	81.2	85.6	93.3	97.6	99.1	101	101.6	102.5	94.3	
29	102.9	103	103.9	104.1	104.8	104.9 ?	103.4	99.5	96.9	95.3	93.8	88.7	84.4	97.8	98.4	87.5	88	87.8	94.9	99.4	98.4	98.8	99.9	100.1	97.4	
30	99.1	100.7	101.9	102.1	102.7	103.1	102.4	100.2	96.7	92.2	88.2	83.9	80.3	77.3	75.9	77.9	75.1	79.5	87.9	91.7	97.4	96.5	98.7	100.7	92.2	
31	102.1	103.1	99.4	99.1	99.7	100.1	99.3	97.5	95.7	89.7	86.2	84.9	83.1	79.7	77	75.4	89.3	101.3	100.9	102.4	104.6	104	102.6	103.8	95	
Avg	99	98.8	99.9	100.3	100.3	100.2	99.3	97	92.2	86.6	82.6	79.7	76.8	77.3	76.3	77.1	79.7	81.3	85.8	91.3	94.5	96.2	97.7	98.2	89.4 ?	
S D	5.5	4.5	4.4	4.3	4.4	4.3	4.7	5.4	8	10.1	11	12.7	13.1	15	15.1	14.8	15.5	15.8	13.6	11.3	9.6	9	7.4	6.2	8.4	
S/A	0.06	0.05	0.04	0.04	0.04	0.04	0.05	0.06	0.09	0.12	0.13	0.16	0.17	0.19	0.2	0.19	0.19	0.19	0.16	0.12	0.1	0.09	0.08	0.06	0.09	
Min	87.5	90.4	89.8	91.7	89.5	90.8	88.3	85.4	72.6	62.8	55.8	51.7	49	46.1	45.6	47.1	47.4	48.1	57.7	66.6	71.7	73.1	76.5	82.7	72.7	
Max	105	104.1	105	104.8	105	104.9	104.8	104.8	103.4	98.1	96.7	103.3	99	104.7	101.2	102.3	103.7	105	104.6	104.8	104.6	104.7	104.6	104.5	101.9	
n	253	221	225	239	232	237	263	327	368	372	372	369	360	364	360	360	360	360	358	360	352	357	334	322	297	7664

Data Recovery: 0.0% missing; 0.0% untested; 14.2% failed QC -- 8928 total measurements.

Instrument: CSI HMP-35C    Serial Number: P0520031    Calibration Factor: 0.10 %/mV    Calibration Date: 01/1999

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Dry Bulb Temperature (CR10)**  
**Hourly and Daily Averages**  
**Instrument: CSI**  
**Degrees Celsius**

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	25.2	24.8	24.5	24.5	24.6	24.4	25.1	28.1	32.4	36.4	37.4	37	36.7	36.6	37.4	38	38.5	37.6	36.5	33.2	30.3	28.7	26.6	25.6	31.3
2	25.5	24.4	23	21.8	21.1	20.6	22.3	25.6	29.9	32.9	35.4	36.8	36	34.9	35	36.1	35	35.1	34.4	31.8	27.8	25.1	23.8	22.9	29.1
3	22.3	22	21.9	21.5	21.1	20.8	21.9	22.9	22.9	26.5	30.6	32.8	33.1	32.7	32.8	33.6	33.1	32.8	31.8	29	26.3	25.2	24.6	23.3	26.9
4	21.8	20.6	19.5	18.6	17.9	17.5	20.2	25.1	29.7	32.4	34.7	35.3	35.2	34.4	33.8	34.3	34.1	33.5	31.9	28.8	26.1	24.5	23.8	23	27.4
5	22.4	22.3	22.4	22.5	22.5	22.4	22.6	23.2	24.3	25.6	26.5	26.7	26.4	25.5	24.9	24.7	24.3	22.3	21.4	21.3	21.5	21.8	22.1	22.1	23.4
6	22	22	22	22	21.9	21.7	21.6	21.8	23	25.2	27.6	27	26.1	28.4	29.1	27	25.5	24.9	24.5	24	23.1	22.2	21.8	21.7	24
7	21.3	21	20.7	19.9	19.3	19.1	20.7	24.4	28.3	31.7	33.6	34.5	34.3	33.7	33.9	34.2	33.7	32.7	30.9	27.8	24.4	22.9	21.9	21.3	26.9
8	20.7	20.1	19.6	19.3	19.2	19.4	21.2	25	28.8	32.8	35.4	35.9	35.8	33.6	32.9	33.1	33	32.4	30.5	27.3	24.4	22.9	22.2	21.6	27
9	21.1	21.1	20.9	20.6	20.6	20.5	20.7	21.8	23.9	25.5	26.8	28.1	28.6	30.2	30.7	30.6	31.3	31	29.2	25.8	22.9	21.3	20.1	19.5	24.7
10	18.9	18.4	18	17.4	17	16.8	18.6	21.8	25.4	27.3	28.8	29.3	28.9	28.7	29.2	29.8	30.2	29.8	28	24.6	21.2	19.2	18.1	17.7	23.5
11	17.4	16.5	15.7	15	14.7	14.9	16	18.9	24.2	29.3	31.3	32.1	32.2	31.8	32.2	33.2	33.4	32.8	30.8	27.5	25.1	24.1	23.7	23.6	24.9
12	23.5	23.3	22.9	22.9	23	23.3	23.5	24.3	27.3	30.1	32.5	34.5	35	35.4	36.3	36.9	35.2	32.5	30.1	28	26.8	25.7	24.7	24.7	28.4
13	24.6	23.8	23.1	22.3	21.9	21.9	22.3	23.6	25	27.3	29.4	28.5	25.7	24.6	24.1	24.3	24.3	25.7	25.9	25.3	23.9	22.7	21.8	21.2	24.3
14	20.7	20.3	20.1	20	20.1	20.1	20.2	21	24.1	28.5	30.8	31.8	32.3	32	32.7	33.6	33.8	33.1	31.1	27.5	24	22.1	21	20.4	25.9
15	19.8	19.1	18.7	18.6	17.7	17.3	19.4	23.6	27.5	30.9	33.1	34.4	35	34.3	34.5	34.8	34.6	33.1	31	27.7	24.9	23.4	22.7	22.3	26.6
16	22.3	22.7	23.1	23.3	23.3	23.2	23.7	24.8	26	28.3	31	32.5	33.4	33.3	32.4	32.1	31.8	31.8	30.7	28.4	26.5	25.3	24.4	23.9	27.4
17	23.5	23.4	23.2	23	22.9	22.9	23.5	25.2	28.8	33.1	35.7	36	36	36	35.9	34.4	31.1	25.7	24	23.6	23.1	22.6	22.6	22.6	27.5
18	22.6	22.5	22.4	22.1	22	22.1	22.4	23.4	24.6	25.3	26	28.4	30.7	30.9	32.2	33.6	33.2	33.1	30.3	27.6	25.4	24.3	23	21.4	26.2
19	20.4	19.8	19.5	19.4	19.6	19.7	20.5	24.2	27.2	27.5	28.2	30.8	33.3	33.6	33.6	33	32.1	31.1	29	26.1	23.9	22.9	22.3	22.1	25.8
20	22	22	22.1	22.4	22.6	22.8	23.1	23.7	25.5	27.2	29.6	30.7	30.1	27.1	26.1	27.3	27.2	25.9	24.7	23.9	23.1	22.1	21.5	21.2	24.8
21	21.2	20.9	20.6	20.5	20.4	20.2	20.4	23	24.7	28.1	32.5	34.4	35.2	34.5	34.9	35.2	33.7	32	31.1	28.3	25.6	24.3	23.5	22.7	27
22	22.2	21.6	21.1	20.9	20.6	20.5	21.4	24.1	27.8	31.8	33.9	35.5	35.1	34.9	33.4	31.7	31.7	31.4	29.3	27.3	26.1	25.7	25.2	24.3	27.4
23	23.2	22.8	22.7	22.6	22.3	22.1	22.3	23.8	27.1	29.3	30.5	31.5	32.5	32.9	33.4	34.1	34.7	34.6	30.9	27.1	25.2	24.6	24.6	24.6	27.5
24	24.5	24	23.6	23.4	23.2	22.4	21.4	21.7	25.7	30.3	33.5	34.4	35.4	35.3	34.8	34.6	35.2	33.9	32	29.6	26.5	24.5	23.3	22.4	28.2
25	22	21.8	21.6	21.5	21.2	21.1	21.7	25	29.7	34.7	37	37.6	37.1	36.7	36	35.9	36.7	34.8	31.8	29.3	27.7	27.1	26.8	26.5	29.2
26	26	25.5	25.3	25.1	25	25	25.6	27.3	29.4	31.8	34.8	36.2	36.9	36.8	37.2	37.8	35.7	33.4	32.3	30	27.9	27	26.7	26.5	30.2
27	26.2	25.8	25.4	25.1	24.8	24.6	25.1	26.6	29.2	31.2	33.7	35.5	36	35.1	30.8	26	26.1	27.6	26.4	23.8	22.8	22.7	23.5	23.9	27.4
28	24	23.5	22.7	22.2	21.8	21.6	22.6	26.2	27.7	29.2	32.3	34.1	34.6	34.8	35.4	36.2	36.6	36.3	34	30.7	28.5	27.1	26.2	25.7	28.9
29	25.4	25.1	24.8	24.6	24.4	24.2	25	28	30.5	32.8	34.4	35.2	35.7	33.1	27.5	30.1	31.9	31.4	31.2	28.8	27.4	27.1	26.8	26.2	28.8
30	25.6	25.2	24.8	24.6	24.3	24.1	24.9	27	29.6	32.1	33.9	35.1	35.3	35.2	36	36.7	36.9	36.5	34.9	31.8	29.9	28.9	28.2	27.6	30.4
31	27.2	26.7	26.2	25.7	25	24.5	25.2	27.5	29.7	31.6	33.7	35.1	35.5	35.7	36.2	36.8	35.5	28.9	27.1	26	24.2	23.6	23.5	23.3	28.9
Avg	22.8	22.3	22	21.7	21.5	21.3	22.1	24.3	27.1	29.9	32.1	33.2	33.4	33	32.8	32.9	32.6	31.5	29.9	27.5	25.4	24.2	23.6	23.1	27.1
S D	2.3	2.3	2.3	2.4	2.5	2.5	2.1	2.2	2.5	2.9	3.1	3.1	3.3	3.2	3.5	3.8	3.7	3.7	3.4	2.7	2.3	2.2	2.2	2.2	2
S/A	0.1	0.1	0.11	0.11	0.12	0.12	0.1	0.09	0.09	0.1	0.1	0.09	0.1	0.1	0.11	0.11	0.11	0.12	0.11	0.1	0.09	0.09	0.09	0.1	0.08
Min	17.4	16.5	15.7	15	14.7	14.9	16	18.9	22.9	25.2	26	26.7	25.7	24.6	24.1	24.3	24.3	22.3	21.4	21.3	21.2	19.2	18.1	17.7	23.4
Max	27.2	26.7	26.2	25.7	25	25	25.6	28.1	32.4	36.4	37.4	37.6	37.1	36.8	37.4	38	38.5	37.6	36.5	33.2	30.3	28.9	28.2	27.6	31.3
n	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	8928

Data Recovery: 0.0% missing; 0.0% untested; 0.0% failed QC -- 8928 total measurements.

Instrument: CSI    Serial Number: Internal Temp    Calibration Factor: N/A    Calibration Date: 06/1995

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Wind Speed**  
**Hourly and Daily Averages**  
**Instrument: NRG MAX-40**  
**Meters per Second**

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	0.7	0.1	0.8	1	1.7	1.6	1.7	1.2	0.7	1.6	3.5	3.4	3.1	2.9	3	2.9	3.3	2.9	1.8	2.4	3.6	3.7	1.8	3	2.2
2	1.9	1.2	0.8	0.6	0.2	0.3	1.1	1.1	1.5	1.5	1.6	2.1	2.7	3.1	2.4	2.7	2.7	2.4	1	0.1	0	0.3	0.1	0.6	1.3
3	0.9	1.4	1.6	1.5	2.1	1.4	1.6	1.3	1.5	2.4	2	2	2.4	2.6	2	2	2.1	2.3	1.7	0.8	0.9	1.3	1.5	1.1	1.7
4	0.8	1	0.7	0.8	0.6	0.2	0.6	0.9	1.7	1.6	1.3	2	2.7	3.4	2.6	2.7	2.6	2.4	0.9	0.2	0.6	1	1.1	1.5	1.4
5	1.3	1.5	1.6	1.3	1.1	0.5	0.6	1.1	1	1.2	1.3	2	1.7	1.8	2.4	3	4	2.5	2.4	1.9	0.3	0.1	1.2	1.4	1.6
6	1.1	0.7	0.6	0.8	0	0.2	1.2	1.8	2.4	2.1	2.6	2.4	1.9	1.2	2	1.7	2	1.6	0.8	1.1	1	0.5	0.1	1.1	1.3
7	0.4	0.3	0.2	0	0.1	0.1	1	1.4	1.4	1.8	2	2.5	2.3	2.6	2.4	3.1	2.9	2.7	1.8	1.3	1.5	1.4	1	1	1.5
8	0.7	0.6	0.8	1.4	1.7	1.1	1.6	1.8	1.6	1.2	2.2	2.3	3.8	4.5	3.9	4	3.6	3.3	3	2.3	1.7	1.6	1.8	1.4	2.2
9	1.8	1.7	1.7	1.6	1.6	1	1.1	1.5	2.5	2.9	3.2	3.5	3.3	3	3	2.9	3	2.9	2.9	2.1	1.5	1.1	1	0.9	2.1
10	0.8	1.1	1.1	1.1	1.1	1.1	1.8	2.4	3.2	3.8	3.7	3.5	3.7	3.6	3.5	3.1	2.8	2.8	2.7	2.1	0.7	0.6	0.9	1.2	2.2
11	0.6	0.4	0.1	0	0.3	0.1	0	0.3	0.9	1.1	1.9	2.1	2.2	2.5	2.2	2.4	2.9	2.7	2.6	1.6	1.8	2.4	3	3.6	1.6
12	3.6	3.3	2.9	2.8	3.2	3.6	3.5	3.7	3.6	3.6	2.6	3	2.7	3	3.4	3.1	3.4	3.6	2	1.6	1.1	1.6	1.6	3.1	2.9
13	2.7	3	1.2	0.8	1.2	0.4	0.3	0.3	0.3	0.6	1.2	0.4	0.1	1.1	0.9	2.9	2	2	1.7	1.2	0.6	0.9	0.9	1.2	1.2
14	0.2	0.8	0.8	0.5	0.6	0.9	0.4	0.9	1.8	2.5	3.7	3.9	3.8	3.5	3.6	3	3	2.5	2.3	2.2	1.5	1.1	1	0.8	1.9
15	0.1	0.2	0.5	0.1	0.2	0.1	0.6	1.6	1.9	1.7	2.2	1.2	2.1	2.1	2.4	2.8	2.4	2.6	2.5	2.1	2.1	1.8	1.5	1.2	1.5
16	1.6	2.4	2.5	2.3	2	2.4	3.1	3	3.8	4.6	5.3	5.9	4.8	4.5	3.5	4.1	4.8	4.7	4.4	3.2	2.6	1.9	1.8	1.7	3.4
17	2.2	1.9	2	1.8	1.6	1.1	1.6	1.5	1.7	2.1	2.9	3.5	3.7	4.4	4.2	3.9	4.9	1.2	1.6	2.8	3.1	2.7	2.8	4	2.6
18	3.4	3.1	2.1	1.7	1.4	1.3	2	2.2	1.7	1	0.9	2	1.9	2	1.8	1.8	1.8	1.9	2.1	2	0.9	0.1	0	0	1.6
19	0	0.2	0.1	0.5	0.1	0.6	1.6	1.5	1.6	1.8	2	2.4	2.3	2.4	2.7	2.8	2.8	2.7	2.1	1.7	1.8	1.5	1.3	1	1.6
20	0.9	0.9	1	1.4	1.2	0.9	2.3	3.5	3.2	3.2	3.4	3.1	2.8	2.7	3.1	3	2.6	2.7	1.9	1.8	1.1	0.7	0.6	0.1	2
21	0.1	0	0.1	0	0	0.2	0.1	0.7	1.1	1.3	1.2	0.4	1	1.1	1	1.2	1.3	2.6	2.9	2.5	2.3	1.2	0.2	0.3	1
22	0	0	0	0	0	0	0.1	1	1.8	2.2	2.5	2.3	3	3.9	3.5	3.4	4.1	3.1	2.6	2.5	2.3	2	1.7	2	1.8
23	0.2	1	0.6	1.4	0.4	0.2	0.3	0.4	0.7	0.9	1.4	1.5	2	1.6	2.9	2.7	2.4	2.3	2.5	1	0.8	1.7	3.1	2.9	1.5
24	2.3	1.1	1	2.2	2.4	1	0.5	0.6	2.2	1.4	1.2	1.6	1.8	1.6	2.2	2.5	2.6	2.4	2	2	2.3	1.3	1	1	1.7
25	1.1	1.6	1.1	0.2	0	0	0	0.6	0.4	1.5	1.8	2.6	2.3	2.9	3.3	2.7	3.7	3.4	2.5	2.2	1.8	2.5	3.2	3.8	1.9
26	3.1	3.2	2.8	2.7	3.2	2.6	2.5	2.3	2.2	2.5	3	3.2	3.8	4.2	3.5	3.8	4.2	4.3	3.4	2.7	2.2	2.9	3.5	3.1	3.1
27	2.9	2.7	2.6	2.4	1.8	2.4	3	3.3	3.1	2.8	2.9	3.6	3.7	3.1	3.5	1.1	1.6	1.3	1.1	0.6	2.4	3	0.4	0.8	2.3
28	1.5	2.2	1.9	1.5	1.9	2	0.9	2.5	3.3	3.3	3.3	3.9	3.8	3.4	3.4	3.1	2.4	2.8	2.2	2.5	1.9	2	2.2	2.7	2.5
29	2.9	2.8	2.7	2.8	2.2	2.1	2.7	3.2	4.2	3.6	4	4.3	4.4	3.7	1.9	4.1	3.9	4.7	4	3.8	4.3	4.9	4.4	4.4	3.6
30	4.3	4	3.7	3.4	3.1	3.5	3.7	3.8	3.5	3.1	3.3	3.4	3.2	3.3	2.7	3.3	2.8	2.2	1	1.5	1.9	2.7	2.7	3	3
31	3	3.3	3.4	2.4	2.9	3	3.7	4.8	5.3	5	4.4	5	5.1	5	5.5	5.8	6.1	2.6	1.8	4	2.2	2.2	2.5	1.4	3.8
Avg	1.5	1.5	1.4	1.3	1.3	1.2	1.5	1.8	2.1	2.2	2.5	2.7	2.8	2.9	2.8	3	3.1	2.7	2.2	1.9	1.7	1.7	1.6	1.8	2.1
SD	1.2	1.2	1	1	1	1.1	1.1	1.2	1.2	1.1	1.1	1.2	1.1	1	0.9	0.9	1	0.8	0.8	0.9	0.9	1.1	1.1	1.2	0.7
S/A	0.81	0.76	0.75	0.72	0.8	0.91	0.78	0.65	0.56	0.49	0.43	0.44	0.38	0.36	0.33	0.31	0.34	0.3	0.38	0.47	0.56	0.63	0.69	0.68	0.36
Min	0	0	0	0	0	0	0	0.3	0.3	0.6	0.9	0.4	0.1	1.1	0.9	1.1	1.3	1.2	0.8	0.1	0	0.1	0	0	1
Max	4.3	4	3.7	3.4	3.2	3.6	3.7	4.8	5.3	5	5.3	5.9	5.1	5	5.5	5.8	6.1	4.7	4.4	4	4.3	4.9	4.4	4.4	3.8
n	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	8928

Data Recovery: 0.0% missing; 0.0% untested; 0.0% failed QC -- 8928 total measurements.

Instrument: NRG MAX-40 Serial Number: 0 Calibration Factor: 0.76171 m/s/mV Calibration Date: 06/1995

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Wind Direction**  
**Hourly and Daily Averages**  
**Instrument: NRG Vane**  
**Degrees from North**

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	202	178	203	200	202	228	245	232	227	231	239	240	240	225	233	223	222	210	154	151	177	194	184	244	216
2	309	280	260	242	219	172	248	288	307	315	293	242	234	239	248	230	251	292	312	322	316	64	307	296	265
3	305	302	307	314	320	302	314	310	331	324	329	322	309	290	300	291	275	255	251	248	253	278	296	282	299
4	274	259	281	292	296	259	284	296	331	349	346	222	237	237	247	245	234	257	266	202	212	225	216	219	255
5	216	205	212	222	232	269	265	246	334	49	61	74	94	71	66	66	356	53	96	78	70	32	324	339	55
6	242	208	243	274	286	296	304	311	329	318	335	345	333	343	58	67	67	70	78	69	64	68	74	68	360
7	52	26	8	321	328	335	341	3	27	49	46	66	68	82	98	112	121	123	136	132	130	137	145	142	92
8	165	204	213	224	210	219	230	258	282	15	2	31	47	45	51	56	53	68	72	76	71	62	59	62	53
9	71	64	54	62	60	54	47	47	53	62	52	53	53	49	43	60	56	53	51	53	41	45	27	45	53
10	38	2	335	332	334	343	5	12	21	35	36	29	32	38	36	44	42	46	53	57	52	46	57	75	32
11	268	286	286	318	319	339	357	72	109	125	135	198	181	143	173	164	159	131	125	128	174	185	190	197	164
12	198	204	206	215	215	222	225	230	242	251	246	224	216	218	206	186	206	213	211	198	27	95	135	205	214
13	226	239	255	256	247	266	295	136	173	346	73	167	259	136	163	205	238	238	229	215	216	219	235	221	224
14	233	217	265	266	254	303	298	326	342	8	18	30	50	55	64	67	64	65	51	72	66	53	57	84	43
15	101	332	21	17	320	26	71	83	88	81	97	63	97	91	93	87	123	129	127	123	127	133	150	163	106
16	185	204	199	199	190	192	200	205	211	210	219	217	218	218	219	223	223	223	216	215	211	208	203	210	212
17	209	208	208	209	227	244	250	229	183	170	169	184	172	173	167	150	272	188	184	184	185	191	192	208	193
18	203	217	236	212	208	204	215	212	221	234	289	352	360	11	37	59	68	76	78	93	96	287	4	0	191
19	0	311	337	299	280	320	337	356	9	25	37	58	65	75	60	60	66	60	56	54	63	55	46	45	47
20	41	28	41	42	50	41	62	76	60	63	67	78	64	60	54	49	36	40	20	347	329	39	39	44	51
21	324	304	292	301	266	281	270	289	294	291	261	181	180	221	225	143	149	134	124	118	120	124	125	127	154
22	174	195	157	0	0	346	9	61	51	100	91	81	79	100	89	85	89	88	82	88	95	126	126	143	92
23	129	96	82	90	3	340	323	325	359	296	260	258	226	236	227	218	195	186	219	172	161	178	201	219	212
24	212	203	206	221	236	261	200	209	225	244	211	179	208	214	199	206	232	199	188	192	199	202	217	253	212
25	228	205	206	230	205	257	162	220	164	156	149	133	164	151	139	153	190	194	197	194	196	199	193	197	179
26	194	195	194	196	202	205	209	191	191	180	171	190	184	188	181	188	192	197	190	188	179	187	192	196	191
27	199	202	203	202	194	192	200	208	204	191	175	195	190	169	162	72	106	312	300	95	126	142	190	171	185
28	211	210	208	210	212	202	183	208	219	191	185	200	193	185	183	198	183	173	161	177	182	192	198	201	194
29	202	201	202	204	199	185	193	201	199	190	179	185	177	209	184	195	200	194	194	194	193	202	209	206	196
30	210	209	207	213	219	224	225	241	252	253	246	250	239	224	227	217	217	191	178	157	176	193	195	199	219
31	202	202	213	209	203	215	218	215	218	218	206	196	203	199	202	196	210	215	246	232	205	223	223	221	210
Avg	209	212	216	216	219	223	231	232	245	220	179	185	176	168	155	157	183	164	149	149	157	174	190	201	187
n	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	8928

Data Recovery: 0.0% missing; 0.0% untested; 0.0% failed QC -- 8928 total measurements.

Instrument: NRG Vane    Serial Number: 0    Calibration Factor: 0.1408 deg/mV    Calibration Date: 06/1995

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.



**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Peak Wind Speed (1-Minute Gust)**  
**Hourly and Daily Averages**  
**Instrument: NRG MAX-40**  
**Meters per Second**

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	1.4	0.8	1.7	1.8	2.7	2.6	3	2.3	1.8	2.9	6	5.6	5.3	5.1	5.3	4.7	5.4	4.8	3.3	4.4	6.7	6.7	3.4	5.4	3.9
2	4.2	2.4	1.7	1.3	0.5	0.9	2	2.5	3	3.2	3.4	4	5.2	5.4	4.4	4.3	4.7	4.6	2.6	0.4	0.2	0.7	0.3	1.3	2.6
3	1.8	3	3.2	3	4.1	3.2	3.2	2.9	3.5	4.7	4.3	4.4	5	5.2	4.2	4.2	4.3	4.4	3.1	1.3	1.5	2.2	3.1	2.4	3.4
4	1.8	1.5	1.6	1.7	1.4	0.6	1.6	2	3.7	3.4	2.9	4.3	5.2	5.8	5.2	5	4.3	4.4	1.8	0.5	1	1.4	1.6	2.1	2.7
5	1.9	2.4	2.4	2	1.6	1.3	1.2	2.2	2.2	2.2	2.4	3.4	2.8	3.2	3.9	4.8	7.5	4.4	4.2	3.4	1.2	0.3	2.5	3.2	2.8
6	2.3	1.7	1.7	2.3	0.2	1	3.1	4.1	5.1	4.5	4.8	4.5	3.8	2.8	3.6	3.2	3.6	3.3	1.7	2	1.9	1.3	0.8	2.1	2.7
7	1.2	0.8	0.7	0.2	0.5	0.5	1.8	2.7	3.1	3.6	4	4.2	4	4.5	4.3	5	4.4	4.1	3.1	2.2	2.4	2.3	1.8	1.7	2.6
8	1.6	1.3	1.3	1.9	2.5	1.6	2.6	3.4	3.3	2.4	4.2	4.1	6.7	7.6	6.6	6.6	6.2	5.8	5	4	2.9	2.7	3.1	2.3	3.7
9	3.1	2.9	2.8	2.8	2.7	2	2.1	2.8	4.6	5.1	5.6	6.1	6	5.5	5.1	5	5	5.2	5.1	3.7	3	2.1	2.1	1.9	3.8
10	1.7	2.1	1.9	1.9	2.1	2.2	3.4	4.9	5.7	6.6	6.5	6	6.8	6.3	6.1	5.3	4.8	4.8	5.1	4	1.5	1.2	1.5	2.2	3.9
11	1.3	1.1	0.3	0	0.7	0.3	0	1.1	2	2.5	3.6	3.9	3.9	4.4	4.1	4.4	5.2	4.5	4.1	2.6	3.4	4.8	5.7	6.2	2.9
12	6	5.4	4.9	4.5	5.2	6.1	5.9	6.3	6.3	6.1	4.4	4.9	4.6	5	5.4	5.6	5.4	5.9	3.2	2.8	2.2	2.8	2.9	5.2	4.9
13	4.4	5.2	2.5	1.6	2.3	1.3	1	0.9	1.1	1.4	2.3	1.1	0.4	2.5	2.4	4.7	3.6	3.7	3.1	2.3	1.5	1.9	2	2.2	2.3
14	0.8	1.8	2.1	1.3	1.8	2.4	1.6	2.3	3.6	4.6	6.3	7	6.4	6.1	5.7	5.2	5	4.5	3.9	3.8	2.7	2	1.9	1.4	3.5
15	0.4	0.5	1	0.3	0.4	0.5	1.3	3.3	3.4	3.3	3.8	2.5	3.9	3.6	4.1	4.4	4	4.1	3.9	3.2	3.3	2.9	3	2.4	2.6
16	3.1	3.9	4.3	3.9	3.6	4.3	5.3	5.4	6.4	7.9	8.7	9.3	8	7.3	5.6	6.6	8	7.9	7.5	5.3	4.2	3.1	2.9	2.7	5.6
17	3.4	3.1	3.1	2.9	2.6	2.2	2.8	2.7	3	3.8	4.7	6.1	6.8	7.8	7.8	7.3	9.2	2.4	3.2	5.4	5.5	5	5	6.7	4.7
18	5.8	5.3	4	3.1	2.7	2.6	3.3	4	3	2.2	2.3	3.9	3.8	3.9	3.4	3.1	3.1	3.3	3.5	3.4	1.6	0.6	0	0	3
19	0	0.5	0.3	1	0.5	1.4	2.9	2.8	2.9	3.1	3.2	4.2	4	4.2	4.8	4.8	4.6	4.7	4	3.4	3.4	2.8	2.3	1.9	2.8
20	1.9	1.9	2.2	2.9	2.5	2.3	4.3	6.1	5.7	5.4	5.8	5.4	4.9	5	5.6	5.3	4.6	4.8	3.8	3.5	2.4	1.7	1.8	0.8	3.8
21	0.4	0.4	0.8	0.2	0.2	1.2	1	1.9	2.7	3.1	2.8	1.4	2	2.5	2.4	2.7	2.5	4.3	4.7	4.2	3.8	2.3	0.7	0.7	2
22	0.3	0	0	0	0	0.3	0.5	2	3.3	3.8	4.6	4	5	6.4	5.6	5.6	6.6	5.2	4.8	4.5	4.3	3.8	3.3	3.8	3.2
23	1	2.4	1.7	2.7	1.5	1.1	1.3	1.5	2	2.3	3	3.3	3.6	3.2	5	4.5	4.3	4.3	4	2.1	2.1	3.2	5.4	5.1	2.9
24	4.1	2.5	2.2	3.7	4.7	2.4	1.6	2	3.9	3	2.7	3.1	3.3	3.1	3.7	4.6	4.4	4.1	4	4.1	4.3	2.7	2	2	3.2
25	2.3	2.6	2.1	0.6	0.1	0.2	0.5	1.3	1.3	2.8	3.4	4.5	4.4	5.1	5.2	5.1	6.8	6.2	4.6	4.3	3.6	4.9	5.9	6.6	3.5
26	5.5	5.8	5.8	5.2	5.5	4.7	4.2	4.3	4.2	4.5	5.5	6.1	6.4	7.5	6.6	6.9	7.7	7.7	6.4	5.3	4.5	5.3	6.6	5.8	5.8
27	5	4.9	4.7	4.5	3.6	4.6	5.1	5.4	5.4	4.7	4.9	5.9	6.8	6	6.5	2.2	2.8	3	2.5	1.2	4.2	5.5	1.5	2.2	4.3
28	3.1	3.6	3.1	2.5	2.7	3.2	2.1	4.4	5.6	5.8	5.9	6.7	6.3	6	6	5.5	4.5	5.1	4.2	4.7	3.8	3.8	4	4.7	4.5
29	4.8	4.5	4.6	4.7	4	3.9	4.8	5.7	7.2	6.5	7.2	8.1	7.7	6.8	4	7.3	7	8.6	7.1	6.8	7.8	8.7	7.3	7.2	6.3
30	6.9	6.8	6	5.6	5.4	5.5	6.1	6.7	5.9	5.8	6	6	5.4	5.4	4.7	5.4	4.5	3.7	2	2.7	3.8	4.8	4.8	5	5.2
31	4.9	5.5	5.9	4	4.7	4.8	6	7.8	9	8.3	7.5	8.6	9	8.8	9.3	10.4	10.6	4.3	3.4	7	3.5	3.7	4	2.8	6.4
Avg	2.8	2.8	2.6	2.4	2.4	2.3	2.8	3.5	4	4.2	4.6	4.9	5.1	5.2	5.1	5.1	5.3	4.8	4	3.5	3.2	3.1	3	3.2	3.7
SD	1.9	1.8	1.7	1.6	1.7	1.6	1.7	1.8	1.8	1.7	1.7	1.9	1.8	1.7	1.5	1.5	1.9	1.4	1.4	1.6	1.6	1.9	1.9	2	1.2
S/A	0.69	0.66	0.65	0.66	0.73	0.72	0.63	0.52	0.46	0.42	0.36	0.38	0.36	0.32	0.29	0.3	0.35	0.29	0.34	0.45	0.52	0.6	0.62	0.62	0.32
Min	0	0	0	0	0	0.2	0	0.9	1.1	1.4	2.3	1.1	0.4	2.5	2.4	2.2	2.5	2.4	1.7	0.4	0.2	0.3	0	0	2
Max	6.9	6.8	6	5.6	5.5	6.1	6.1	7.8	9	8.3	8.7	9.3	9	8.8	9.3	10.4	10.6	8.6	7.5	7	7.8	8.7	7.3	7.2	6.4
n	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	8928

Data Recovery: 0.0% missing; 0.0% untested; 0.0% failed QC -- 8928 total measurements.

Instrument: NRG MAX-40 Serial Number: 0 Calibration Factor: 0.76171 m/s/mV Calibration Date: 06/1995

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Station Pressure**  
**Hourly and Daily Averages**  
**Instrument: Viasala PTA-427**  
**Millibars**

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	1002	1002	1002	1002	1002	1003	1003	1004	1004	1004	1004	1004	1004	1004	1003	1003	1003	1002	1003	1003	1004	1004	1004	1005	1003	
2	1006	1006	1006	1006	1006	1007	1008	1008	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1009	1009	1010	1010	1010	1010	1008
3	1010	1010	1010	1010	1010	1011	1011	1012	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1012	1012	1013	1013	1014	1014	1012	
4	1013	1013	1013	1013	1013	1014	1014	1015	1015	1015	1015	1014	1014	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013
5	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1011	1011	1011	1010	1009	1009	1008	1008	1008	1008	1007	1006	1010	1010
6	1006	1006	1005	1005	1005	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1007	1007	1007
7	1007	1007	1006	1006	1006	1006	1007	1008	1008	1008	1008	1008	1008	1008	1007	1007	1007	1007	1006	1007	1007	1007	1008	1008	1008	1007
8	1008	1008	1008	1008	1008	1008	1008	1009	1009	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1013	1013	1013	1014	1010
9	1014	1014	1014	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1018	1018	1018	1018	1018	1019	1019	1020	1020	1021	1021	1017	1017
10	1021	1020	1021	1021	1021	1022	1022	1023	1023	1023	1024	1024	1023	1023	1023	1023	1023	1023	1023	1023	1022	1023	1023	1023	1022	1022
11	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1022	1022	1021	1021	1020	1020	1019	1018	1018	1018	1017	1017	1018	1017	1016	1020
12	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1013	1013	1012	1011	1011	1011	1011	1011	1012	1012	1012	1011	1013
13	1011	1011	1011	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1010	1010	1011	1011	1011	1011	1012	1012	1012	1011
14	1012	1012	1013	1013	1013	1013	1014	1015	1016	1017	1017	1017	1017	1017	1016	1016	1017	1017	1017	1017	1018	1018	1019	1019	1019	1016
15	1019	1018	1018	1018	1019	1019	1020	1020	1020	1021	1020	1020	1020	1019	1018	1018	1017	1017	1017	1017	1017	1017	1016	1016	1016	1018
16	1015	1015	1015	1014	1014	1014	1014	1013	1013	1012	1012	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1010	1010	1012
17	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1007	1006	1005	1005	1007	1006	1006	1006	1007	1007	1007	1007	1008
18	1007	1007	1007	1007	1007	1008	1009	1009	1010	1010	1010	1010	1010	1010	1011	1011	1011	1012	1012	1013	1014	1014	1015	1015	1010	1010
19	1015	1015	1015	1015	1015	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1017	1017	1017	1016
20	1016	1016	1016	1015	1015	1016	1016	1016	1016	1017	1017	1017	1017	1016	1015	1015	1016	1015	1016	1016	1016	1016	1016	1016	1016	1016
21	1016	1015	1015	1016	1016	1016	1017	1017	1017	1018	1018	1018	1017	1017	1017	1016	1016	1016	1017	1017	1017	1018	1018	1018	1017	1017
22	1018	1017	1017	1017	1017	1018	1018	1019	1019	1019	1019	1019	1019	1018	1017	1017	1016	1016	1015	1016	1016	1016	1015	1015	1017	1017
23	1014	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1012	1011	1011	1010	1009	1009	1009	1010	1010	1010	1010	1010	1010	1010	1011
24	1010	1010	1010	1010	1010	1010	1010	1011	1011	1012	1012	1012	1012	1012	1011	1012	1011	1010	1011	1011	1011	1012	1012	1012	1012	1011
25	1012	1012	1012	1012	1012	1013	1014	1014	1014	1014	1014	1014	1014	1013	1013	1012	1012	1012	1012	1012	1012	1012	1013	1013	1013	1013
26	1013	1012	1012	1012	1013	1013	1014	1014	1014	1014	1014	1014	1013	1013	1013	1012	1011	1011	1011	1011	1012	1013	1013	1013	1014	1013
27	1014	1013	1013	1014	1014	1014	1014	1015	1014	1015	1015	1015	1014	1013	1014	1014	1013	1015	1015	1014	1014	1014	1014	1014	1014	1014
28	1014	1014	1014	1014	1014	1014	1014	1015	1015	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013
29	1013	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013	1013	1012	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1011	1010	1011
30	1010	1010	1011	1011	1011	1012	1012	1013	1013	1013	1013	1013	1014	1013	1013	1013	1012	1012	1012	1012	1013	1013	1014	1014	1014	1012
31	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1013	1012	1012	1012	1013	1013	1014	1016	1016	1016	1016	1014	1014
Avg	1013	1012	1012	1012	1012	1013	1013	1013	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013
SD	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
StA	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	0
Min	1002	1002	1002	1002	1002	1003	1003	1004	1004	1004	1004	1004	1004	1004	1003	1003	1003	1002	1003	1003	1004	1004	1004	1005	1003	1003
Max	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1024	1024	1023	1023	1023	1023	1023	1023	1023	1023	1022	1023	1023	1023	1022	1022
n	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	8928	

Data Recovery: 0.0% missing; 0.0% untested; 0.0% failed QC -- 8928 total measurements.

Instrument: Viasala PTA-427    Serial Number: 493926    Calibration Factor: 0.104 mBar/mV + 800 mBar    Calibration Date: 06/1995

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.28 N Latitude 76.22 W Longitude 26 Meters AMSL Time Zone -5**

**July 2009**

**Battery Voltage (CR10)**  
**Hourly and Daily Averages**  
**Instrument: CSI**  
**Volts DC**

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	12.6	12.6	12.6	12.6	12.6	12.6	13	13.1	13	13	13	13	13	13	13	13	13	12.9	12.8	12.8	12.7	12.7	12.7	12.7	12.8
2	12.6	12.6	12.6	12.6	12.6	12.6	13	13.2	13.1	13	13	13	13	13	13	13	13	13	12.8	12.8	12.7	12.7	12.7	12.7	12.9
3	12.7	12.6	12.6	12.6	12.6	12.6	13	13.1	13.3	13.2	13.1	13	13.1	13.1	13.1	13.1	13.1	13	12.9	12.8	12.8	12.7	12.7	12.7	12.9
4	12.7	12.7	12.6	12.6	12.6	12.6	13	13.2	13.1	13	13	13	13	13	13.1	13	13.1	13	12.8	12.8	12.8	12.7	12.7	12.7	12.9
5	12.7	12.7	12.6	12.6	12.6	12.6	12.6	13.1	13.2	13.2	13.2	13.2	13.2	13.3	13.3	13.3	13	13	12.8	12.8	12.8	12.8	12.8	12.8	12.9
6	12.8	12.7	12.7	12.7	12.7	12.7	12.7	13.1	13.1	13.3	13.2	13.2	13.2	13.2	13.2	13	12.9	12.9	12.8	12.8	12.8	12.8	12.8	12.8	12.9
7	12.7	12.7	12.7	12.7	12.7	12.6	13.1	13.2	13.1	13.1	13	13	13.1	13.1	13	13.1	13.1	13	12.8	12.8	12.8	12.7	12.7	12.7	12.9
8	12.7	12.7	12.6	12.6	12.6	12.6	13	13.2	13.1	13	13	13	13	13.1	13.1	13.1	13.1	13.1	12.9	12.8	12.8	12.7	12.7	12.7	12.9
9	12.7	12.7	12.7	12.6	12.6	12.6	12.7	13.3	13.3	13.2	13.2	13.2	13.2	13.1	13.1	13.1	13.1	13	12.9	12.8	12.8	12.8	12.8	12.7	12.9
10	12.7	12.7	12.7	12.7	12.7	12.6	13	13.3	13.2	13.2	13.1	13.1	13.2	13.2	13.1	13.1	13.1	13	12.9	12.8	12.8	12.8	12.7	12.7	12.9
11	12.7	12.7	12.7	12.7	12.6	12.6	13.1	13.4	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	12.9	12.8	12.8	12.8	12.8	12.8	12.9
12	12.7	12.7	12.7	12.7	12.7	12.7	12.7	13.2	13.2	13.1	13.1	13	13	13	13	13	13	13.1	12.9	12.8	12.8	12.8	12.7	12.7	12.9
13	12.7	12.7	12.7	12.6	12.6	12.6	12.9	13.2	13.2	13.2	13.1	13.1	13.1	12.9	13.1	13.3	13.2	13.3	13.2	12.9	12.9	12.8	12.8	12.8	12.9
14	12.7	12.7	12.7	12.7	12.7	12.6	12.7	13.2	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13	12.9	12.8	12.8	12.8	12.7	12.7	12.9
15	12.7	12.7	12.6	12.6	12.6	12.6	13	13.3	13.2	13.1	13	13	13	13.1	13	13	13.1	13	12.9	12.8	12.8	12.8	12.7	12.7	12.9
16	12.7	12.7	12.7	12.7	12.6	12.6	13.1	13.2	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	12.9	12.8	12.8	12.8	12.8	12.8	12.9
17	12.7	12.7	12.7	12.7	12.7	12.7	13	13.2	13.1	13	13	13	13	13	13	13	13	12.8	12.8	12.8	12.7	12.7	12.7	12.6	12.9
18	12.6	12.6	12.6	12.6	12.6	12.6	12.7	13.2	13.1	13.1	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13	12.9	12.8	12.8	12.8	12.7	12.7	12.9
19	12.7	12.7	12.7	12.6	12.6	12.6	13.1	13.2	13.2	13.2	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	12.9	12.8	12.8	12.8	12.7	12.9
20	12.7	12.7	12.7	12.7	12.7	12.7	12.7	13.1	13.2	13.2	13.1	13.1	13.1	13.1	13.2	13.2	13.2	13.1	12.9	12.8	12.8	12.8	12.8	12.7	12.9
21	12.7	12.7	12.7	12.7	12.7	12.6	13.1	13.3	13.2	13.1	13.1	13	13	13	13	13	13.1	13.1	13	12.8	12.8	12.8	12.8	12.7	12.9
22	12.7	12.7	12.7	12.7	12.6	12.6	13	13.3	13.2	13.1	13	13	13	13	13.1	13.1	13.1	13.1	12.9	12.8	12.8	12.8	12.8	12.7	12.9
23	12.7	12.7	12.7	12.7	12.6	12.6	12.8	13.3	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	12.9	12.8	12.8	12.8	12.7	12.7	12.9
24	12.7	12.7	12.7	12.6	12.6	12.6	12.7	13.2	13.2	13.1	13	13	13	13	13	13	13	13.1	13	12.8	12.8	12.7	12.7	12.7	12.9
25	12.7	12.7	12.7	12.6	12.6	12.6	13	13.2	13.1	13	13	13	13	13	13	13	13	13	12.8	12.8	12.7	12.7	12.7	12.7	12.9
26	12.7	12.6	12.6	12.6	12.6	12.6	12.9	13.2	13.1	13.1	13	13	13	13	13	13	13	13.1	12.9	12.8	12.8	12.7	12.7	12.7	12.9
27	12.7	12.7	12.6	12.6	12.6	12.6	12.9	13.2	13.1	13.1	13	13	13	12.9	12.8	13.1	13.2	13	12.8	12.8	12.7	12.7	12.7	12.7	12.9
28	12.7	12.6	12.6	12.6	12.6	12.6	12.9	13.2	13.2	13.1	13.1	13	13	13	13	13	13	13	12.9	12.8	12.8	12.7	12.7	12.7	12.9
29	12.7	12.7	12.7	12.6	12.6	12.6	13	13.2	13.1	13.1	13	13	13	12.9	13.1	13.1	13.1	13.1	12.9	12.8	12.8	12.8	12.7	12.7	12.9
30	12.7	12.7	12.7	12.6	12.6	12.6	13	13.2	13.1	13.1	13	13	13	13	13	13	13	13	12.9	12.8	12.8	12.7	12.7	12.7	12.9
31	12.7	12.7	12.6	12.6	12.6	12.6	12.9	13.2	13.1	13.1	13	13	13	13	13	13	12.9	12.9	12.8	12.7	12.7	12.7	12.7	12.7	12.8
Avg	12.7	12.7	12.7	12.6	12.6	12.6	12.9	13.2	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13	12.9	12.8	12.8	12.8	12.7	12.7	12.9
SD	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0
StA	0	0	0	0	0	0	0.01	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0
Min	12.6	12.6	12.6	12.6	12.6	12.6	12.6	13.1	13	13	13	13	12.9	12.9	12.8	13	12.8	12.8	12.8	12.7	12.7	12.7	12.6	12.8	12.8
Max	12.8	12.7	12.7	12.7	12.7	12.7	13.1	13.4	13.3	13.2	13.2	13.2	13.2	13.3	13.3	13.3	13.3	13.2	13	12.9	12.8	12.8	12.8	12.8	12.9
n	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	8928

Data Recovery: 0.0% missing; 0.0% untested; 0.0% failed QC -- 8928 total measurements.

Instrument: CSI    Serial Number: Battery    Calibration Factor: N/A    Calibration Date: 06/1995

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.