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Appendix A:

Regression Analysis: H versus C, n, p, Ta, Sin δ , r, W, G

The regression equation is

$$H = -19.3 - 0.0413 C + 0.645 n - 0.0480 p + 1.53 Ta - 4.88 \text{ Sin } \delta - 0.0596 r - 0.029 W + 0.114 G$$

273 cases used, 3 cases contain missing values

Predictor	Coef	SE Coef	T	P
Constant	-19.265	5.715	-3.37	0.001
C	-0.041296	0.008553	-4.83	0.000
n	0.64532	0.08953	7.21	0.000
p	-0.04796	0.02723	-1.76	0.079
Ta	1.5251	0.1924	7.93	0.000
Sin δ	-4.8756	0.9944	-4.90	0.000
r	-0.05965	0.05418	-1.10	0.272
W	-0.0293	0.1974	-0.15	0.882
G	0.11417	0.08078	1.41	0.159

S = 2.32884 R-Sq = 69.5% R-Sq(adj) = 68.6%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	8	3261.47	407.68	75.17	0.000
Residual Error	264	1431.80	5.42		
Total	272	4693.27			

Source	DF	Seq SS
C	1	2024.29
n	1	609.87
p	1	146.11
Ta	1	233.86
Sin δ	1	223.30
r	1	5.22
W	1	7.99
G	1	10.83

Unusual Observations

Obs	C	H	Fit	SE Fit	Residual	St Resid
16	81	14.030	14.133	0.836	-0.103	-0.05 X
17	44	17.180	18.057	0.922	-0.877	-0.41 X
22	88	25.550	20.834	0.417	4.716	2.06R
27	100	7.670	14.291	0.456	-6.621	-2.90R
44	88	26.160	20.765	0.317	5.395	2.34R
61	69	26.290	21.033	0.280	5.257	2.27R
68	69	25.610	20.606	0.355	5.004	2.17R
83	75	18.670	23.376	0.469	-4.706	-2.06R
87	56	17.920	23.974	0.451	-6.054	-2.65R
93	81	18.400	18.286	0.830	0.114	0.05 X
97	94	7.900	12.705	0.591	-4.805	-2.13R
112	75	24.780	18.173	0.395	6.607	2.88R
148	81	22.120	16.852	0.639	5.268	2.35R
152	63	23.510	18.706	0.373	4.804	2.09R

159	75	26.310	18.769	0.294	7.541	3.26R
163	56	13.340	17.312	1.231	-3.972	-2.01RX
165	81	22.180	17.133	0.407	5.047	2.20R
166	81	22.160	16.868	0.335	5.292	2.30R
167	75	23.880	18.516	0.608	5.364	2.39R
168	75	21.840	16.928	0.335	4.912	2.13R
200	88	17.600	22.752	0.424	-5.152	-2.25R
258	63	12.440	20.152	0.410	-7.712	-3.36R

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large influence.



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Appendix B:

Regression Analysis: H versus C, n, p, Ta, Sin δ , r, W

The regression equation is

$$H = -19.3 - 0.0389 C + 0.662 n - 0.0396 p + 1.54 Ta - 4.91 \text{ Sin } \delta - 0.0588 r + 0.169 W$$

273 cases used, 3 cases contain missing values

Predictor	Coef	SE Coef	T	P
Constant	-19.294	5.726	-3.37	0.001
C	-0.038896	0.008399	-4.63	0.000
n	0.66190	0.08893	7.44	0.000
p	-0.03959	0.02663	-1.49	0.138
Ta	1.5406	0.1925	8.00	0.000
Sin δ	-4.9123	0.9959	-4.93	0.000
r	-0.05881	0.05428	-1.08	0.280
W	0.1687	0.1393	1.21	0.227

S = 2.33322 R-Sq = 69.3% R-Sq(adj) = 68.4%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	7	3250.64	464.38	85.30	0.000
Residual Error	265	1442.63	5.44		
Total	272	4693.27			

Source	DF	Seq. SS
C	1	2024.29
n	1	609.87
p	1	146.11
Ta	1	233.86
Sin δ	1	223.30
r	1	5.22
W	1	7.99



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Unusual Observations

Obs	C	H	Fit	SE Fit	Residual	St Resid
16	81	14.030	14.615	0.765	-0.585	-0.27 X
17	44	17.180	18.159	0.921	-0.979	-0.46 X
27	100	7.670	14.477	0.438	-6.807	-2.97R
44	88	26.160	20.847	0.312	5.313	2.30R
61	69	26.290	21.250	0.235	5.040	2.17R
68	69	25.610	20.515	0.350	5.095	2.21R
83	75	18.670	23.644	0.430	-4.974	-2.17R
87	56	17.920	23.745	0.422	-5.825	-2.54R
93	81	18.400	18.320	0.831	0.080	0.04 X
97	94	7.900	12.667	0.591	-4.767	-2.11R
112	75	24.780	18.158	0.396	6.622	2.88R
148	81	22.120	17.122	0.611	4.998	2.22R
152	63	23.510	18.515	0.348	4.995	2.16R
159	75	26.310	18.802	0.293	7.508	3.24R
163	56	13.340	17.030	1.218	-3.690	-1.85 X
165	81	22.180	17.336	0.382	4.844	2.10R

166	81	22.160	16.878	0.336	5.282	2.29R
167	75	23.880	18.427	0.606	5.453	2.42R
168	75	21.840	16.962	0.335	4.878	2.11R
200	88	17.600	22.824	0.422	-5.224	-2.28R
258	63	12.440	20.333	0.390	-7.893	-3.43R

R denotes an observation with a large standardized residual.

X denotes an observation whose X value gives it large influence.



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Appendix C:

Regression Analysis: H versus C, n, p, Ta, Sin δ , r

The regression equation is

$$H = -21.0 - 0.0374 C + 0.664 n - 0.0440 p + 1.61 Ta - 4.49 \text{ Sin } \delta - 0.0529 r$$

273 cases used, 3 cases contain missing values

Predictor	Coef	SE Coef	T	P
Constant	-20.977	5.560	-3.77	0.000
C	-0.037413	0.008316	-4.50	0.000
n	0.66377	0.08899	7.46	0.000
p	-0.04397	0.02640	-1.67	0.097
Ta	1.6054	0.1850	8.68	0.000
Sin δ	-4.4877	0.9330	-4.81	0.000
r	-0.05294	0.05411	-0.98	0.329

S = 2.33526 R-Sq = 69.1% R-Sq(adj) = 68.4%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	6	3242.65	540.44	99.10	0.000
Residual Error	266	1450.62	5.45		
Total	272	4693.27			

Source	DF	Seq SS
C	1	2024.29
n	1	609.87
p	1	146.11
Ta	1	233.86
Sin δ	1	223.30
r	1	5.22



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Unusual Observations

Obs	C	H	Fit	SE Fit	Residual	St Resid
16	81	14.030	14.526	0.762	-0.496	-0.22 X
17	44	17.180	17.921	0.900	-0.741	-0.34 X
27	100	7.670	14.781	0.359	-7.111	-3.08R
44	88	26.160	20.767	0.305	5.393	2.33R
61	69	26.290	21.097	0.198	5.193	2.23R
68	69	25.610	20.339	0.318	5.271	2.28R
83	75	18.670	23.537	0.422	-4.867	-2.12R
87	56	17.920	23.720	0.422	-5.800	-2.53R
93	81	18.400	18.316	0.832	0.084	0.04 X
97	94	7.900	12.542	0.583	-4.642	-2.05R
112	75	24.780	18.022	0.380	6.758	2.93R
148	81	22.120	17.198	0.608	4.922	2.18R
152	63	23.510	18.774	0.275	4.736	2.04R
159	75	26.310	19.033	0.224	7.277	3.13R
163	56	13.340	17.107	1.217	-3.767	-1.89 X
166	81	22.160	17.110	0.276	5.050	2.18R
167	75	23.880	18.709	0.559	5.171	2.28R
200	88	17.600	22.871	0.420	-5.271	-2.29R

258 63 12.440 20.307 0.390 -7.867 -3.42R

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large influence.



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Appendix D:

Regression Analysis: H versus C, n, p, Ta, Sin δ , W

The regression equation is

$$H = -22.3 - 0.0401 C + 0.662 n - 0.0435 p + 1.49 Ta - 5.43 \sin \delta + 0.155 W$$

273 cases used, 3 cases contain missing values

Predictor	Coef	SE Coef	T	P
Constant	-22.311	5.005	-4.46	0.000
C	-0.040128	0.008324	-4.82	0.000
n	0.66233	0.08896	7.45	0.000
p	-0.04348	0.02639	-1.65	0.101
Ta	1.4918	0.1872	7.97	0.000
Sin δ	-5.4309	0.8736	-6.22	0.000
W	0.1552	0.1388	1.12	0.264

S = 2.33398 R-Sq = 69.1% R-Sq(adj) = 68.4%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	6	3244.25	540.71	99.26	0.000
Residual Error	266	1449.02	5.45		
Total	272	4693.27			

Source	DF	Seq SS
C	1	2024.29
n	1	609.87
p	1	146.11
Ta	1	233.86
Sin δ	1	223.30
W	1	6.82



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Unusual Observations

Obs	C	H	Fit	SE Fit	Residual	St Resid
16	81	14.030	14.605	0.765	-0.575	-0.26 X
17	44	17.180	18.152	0.921	-0.972	-0.45 X
27	100	7.670	14.591	0.425	-6.921	-3.02R
44	88	26.160	20.764	0.303	5.396	2.33R
61	69	26.290	21.264	0.234	5.026	2.16R
68	69	25.610	20.537	0.349	5.073	2.20R
83	75	18.670	23.809	0.403	-5.139	-2.24R
87	56	17.920	23.949	0.377	-6.029	-2.62R
93	81	18.400	18.511	0.813	-0.111	-0.05 X
97	94	7.900	12.594	0.587	-4.694	-2.08R
112	75	24.780	18.026	0.377	6.754	2.93R
148	81	22.120	16.908	0.578	5.212	2.31R
152	63	23.510	18.646	0.327	4.864	2.10R
159	75	26.310	18.834	0.292	7.476	3.23R
163	56	13.340	16.952	1.216	-3.612	-1.81 X
165	81	22.180	17.393	0.378	4.787	2.08R
166	81	22.160	16.896	0.336	5.264	2.28R
167	75	23.880	18.370	0.603	5.510	2.44R
168	75	21.840	16.997	0.334	4.843	2.10R

200	88	17.600	22.776	0.419	-5.176	-2.25R
258	63	12.440	20.089	0.318	-7.649	-3.31R

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large influence.



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Appendix E:

Regression Analysis: H versus C, n, Ta, Sin δ , r, W

The regression equation is

$$H = -21.5 - 0.0381 C + 0.672 n + 1.64 Ta - 5.07 \text{Sin } \delta - 0.0696 r + 0.193 W$$

Predictor	Coef	SE Coef	T	P
Constant	-21.453	5.593	-3.84	0.000
C	-0.038133	0.008360	-4.56	0.000
n	0.67205	0.08856	7.59	0.000
Ta	1.6387	0.1821	9.00	0.000
Sin δ	-5.0664	0.9936	-5.10	0.000
r	-0.06955	0.05378	-1.29	0.197
W	0.1931	0.1379	1.40	0.162

S = 2.33669 R-Sq = 69.0% R-Sq(adj) = 68.3%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	6	3275.09	545.85	99.97	0.000
Residual Error	269	1468.78	5.46		
Total	275	4743.87			

Source	DF	Seq SS
C	1	2025.77
n	1	688.88
Ta	1	345.30
Sin δ	1	246.50
r	1	7.85
W	1	10.71



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Unusual Observations

Obs	C	H	Fit	SE Fit	Residual	St Resid
27	100	7.670	14.199	0.404	-6.529	-2.84R
44	88	26.160	20.847	0.309	5.313	2.29R
61	69	26.290	21.203	0.232	5.087	2.19R
68	69	25.610	20.485	0.349	5.125	2.22R
83	75	18.670	23.760	0.427	-5.090	-2.22R
87	56	17.920	24.056	0.375	-6.136	-2.66R
97	94	7.900	12.470	0.584	-4.570	-2.02R
112	75	24.780	17.972	0.379	6.808	2.95R
152	63	23.510	18.261	0.309	5.249	2.27R
159	75	26.310	18.913	0.285	7.397	3.19R
163	56	13.340	18.742	0.387	-5.402	-2.34R
165	81	22.180	17.161	0.364	5.019	2.17R
166	81	22.160	17.005	0.324	5.155	2.23R
167	75	23.880	19.155	0.365	4.725	2.05R
168	75	21.840	16.903	0.334	4.937	2.13R
200	88	17.600	22.917	0.416	-5.317	-2.31R
258	63	12.440	20.214	0.381	-7.774	-3.37R

R denotes an observation with a large standardized residual.

Appendix F:

Regression Analysis: H versus C, n, p, Ta, Sin δ

The regression equation is

$$H = -23.6 - 0.0386 C + 0.664 n - 0.0472 p + 1.56 Ta - 4.99 \text{ Sin } \delta$$

273 cases used, 3 cases contain missing values

Predictor	Coef	SE Coef	T	P
Constant	-23.592	4.874	-4.84	0.000
C	-0.038638	0.008221	-4.70	0.000
n	0.66402	0.08899	7.46	0.000
p	-0.04718	0.02620	-1.80	0.073
Ta	1.5564	0.1781	8.74	0.000
Sin δ	-4.9890	0.7796	-6.40	0.000

S = 2.33508 R-Sq = 69.0% R-Sq(adj) = 68.4%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	5	3237.43	647.49	118.75	0.000
Residual Error	267	1455.84	5.45		
Total	272	4693.27			

Source	DF	Seq SS
C	1	2024.29
n	1	609.87
p	1	146.10
Ta	1	233.86
Sin δ	1	223.30



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Unusual Observations

Obs	C	H	Fit	SE Fit	Residual	St Resid
16	81	14.030	14.522	0.762	-0.492	-0.22 X
17	44	17.180	17.932	0.900	-0.752	-0.35 X
27	100	7.670	14.862	0.349	-7.192	-3.12R
36	88	16.540	14.421	0.602	2.119	0.94 X
44	88	26.160	20.697	0.297	5.463	2.36R
61	69	26.290	21.120	0.196	5.170	2.22R
68	69	25.610	20.372	0.317	5.238	2.26R
83	75	18.670	23.695	0.390	-5.025	-2.18R
87	56	17.920	23.908	0.376	-5.988	-2.60R
93	81	18.400	18.489	0.813	-0.089	-0.04 X
97	94	7.900	12.485	0.580	-4.585	-2.03R
112	75	24.780	17.912	0.363	6.868	2.98R
148	81	22.120	16.998	0.573	5.122	2.26R
159	75	26.310	19.045	0.223	7.265	3.13R
163	56	13.340	17.030	1.214	-3.690	-1.85 X
166	81	22.160	17.110	0.276	5.050	2.18R
167	75	23.880	18.637	0.554	5.243	2.31R
200	88	17.600	22.824	0.417	-5.224	-2.27R
258	63	12.440	20.087	0.318	-7.647	-3.31R

R denotes an observation with a large standardized residual.

X denotes an observation whose X value gives it large influence.

Appendix G:

Regression Analysis: H versus C, n, Ta, Sin δ , r

The regression equation is

$$H = -23.7 - 0.0364 C + 0.673 n + 1.73 Ta - 4.58 \sin \delta - 0.0643 r$$

Predictor	Coef	SE Coef	T	P
Constant	-23.664	5.375	-4.40	0.000
C	-0.036391	0.008282	-4.39	0.000
n	0.67349	0.08871	7.59	0.000
Ta	1.7272	0.1711	10.09	0.000
Sin δ	-4.5792	0.9324	-4.91	0.000
r	-0.06435	0.05375	-1.20	0.232

S = 2.34085 R-Sq = 68.8% R-Sq(adj) = 68.2%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	5	3264.38	652.88	119.15	0.000
Residual Error	270	1479.49	5.48		
Total	275	4743.87			

Source	DF	Seq SS
C	1	2025.77
n	1	638.88
Ta	1	345.30
Sin δ	1	246.57
r	1	77.85



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Unusual Observations

Obs	C	H	Fit	SE Fit	Residual	St Resid
27	100	7.670	14.525	0.331	-6.855	-2.96R
44	88	26.160	20.753	0.302	5.407	2.33R
61	69	26.290	21.019	0.192	5.271	2.26R
68	69	25.610	20.282	0.318	5.328	2.30R
83	75	18.670	23.646	0.420	-4.976	-2.16R
87	56	17.920	24.064	0.376	-6.144	-2.66R
112	75	24.780	17.791	0.357	6.989	3.02R
152	63	23.510	18.532	0.242	4.978	2.14R
159	75	26.310	19.197	0.200	7.113	3.05R
163	56	13.340	19.052	0.318	-5.712	-2.46R
165	81	22.180	17.525	0.254	4.655	2.00R
166	81	22.160	17.295	0.250	4.865	2.09R
200	88	17.600	22.985	0.414	-5.385	-2.34R
258	63	12.440	20.172	0.381	-7.732	-3.35R

R denotes an observation with a large standardized residual.

Appendix H:

Regression Analysis: H versus C, n, Ta, Sin δ

The regression equation is

$$H = -27.1 - 0.0379 C + 0.673 n + 1.68 Ta - 5.20 \text{Sin } \delta$$

Predictor	Coef	SE Coef	T	P
Constant	-27.129	4.533	-5.98	0.000
C	-0.037858	0.008197	-4.62	0.000
n	0.67350	0.08878	7.59	0.000
Ta	1.6779	0.1662	10.10	0.000
Sin δ	-5.1996	0.7757	-6.70	0.000

S = 2.34272 R-Sq = 68.6% R-Sq(adj) = 68.2%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	4	3256.53	814.13	148.34	0.000
Residual Error	271	1487.34	5.49		
Total	275	4743.87			

Source	DF	Seq SS
C	1	2025.77
n	1	638.88
Ta	1	345.30
Sin δ	1	246.57

Unusual Observations

Obs	C	H	Fit	SE Fit	Residual	St Resid
27	100	7.670	14.607	0.325	-6.937	-2.99R
44	88	26.160	20.666	0.293	5.494	2.36R
61	69	26.290	21.042	0.191	5.248	2.25R
68	69	25.610	20.320	0.316	5.290	2.28R
83	75	18.670	23.848	0.384	-5.178	-2.24R
87	56	17.920	24.324	0.307	-6.404	-2.76R
97	94	7.900	12.222	0.569	-4.322	-1.90 X
98	100	7.290	11.223	0.567	-3.933	-1.73 X
112	75	24.780	17.635	0.332	7.145	3.08R
152	63	23.510	18.635	0.226	4.875	2.09R
159	75	26.310	19.228	0.199	7.082	3.03R
163	56	13.340	19.134	0.311	-5.794	-2.50R
166	81	22.160	17.314	0.249	4.846	2.08R
200	88	17.600	22.938	0.412	-5.338	-2.31R
223	94	10.280	11.530	0.555	-1.250	-0.55 X
258	63	12.440	19.889	0.299	-7.449	-3.21R

R denotes an observation with a large standardized residual.

X denotes an observation whose X value gives it large influence.



Appendix I:

Data Set



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Day		Julian Day	Solar Radiation (MJ/m2)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2011	July	20	201	16.48	87.50	4.3	0	27.7	0.351957	79	5.9	16
		21	202	14.39	87.50	2.9	0	27	0.348751		5.2	13.8
		22	203	22.64	56.25	8.3	0	28.4	0.345441		5.5	17.7
		23	204	16.88	87.50	7.5	1	27.5	0.34203		5.2	13.3
		24	205	21.54	75.00	7.9	0	28.3	0.338516		5.9	17.3
		25	206	22.37	81.25	6.5	0	28.8	0.334901		5.3	13
		26	207	16.59	87.50	5.5	0	27.6	0.331186		4.8	14.3
		27	208	14.44	68.75	4.7	0	27.5	0.32737		5.3	14.9
		28	209	22.06	81.25	8.1	0	28.3	0.323456		5.6	14.7
		29	210	21.08	81.25	6.5	0	28.4	0.319444		6.2	14.6
		30	211	21.41	68.75	10.9	2.5	27.6	0.315335		5.5	18.3
		31	212	22.92	68.75	9.4	0	28	0.311129		5.6	15.4
	August	1	213	25.06	56.25	8.7	0	28.8	0.306828	80	6.3	17.5
		2	214	24.55	50.00	9.1	0	28.3	0.302432		6	16.4
		3	215	21.44	81.25	8.4	0	27.8	0.297943		4.9	16.8
		4	216	14.03	81.25	5.7	32.5	26	0.293362		4	11.4
		5	217	17.18	43.75	8.0	37	26.4	0.288689		4.6	15.7
		6	218	19.89	62.50	7.0	2.5	26.4	0.283926		5.4	15.5
		7	219	24.66	50.00	7.1	0	28.6	0.279074		5.3	14.8
		8	220	23.5	43.75	9.8	0	28.1	0.274135		5.4	13.3
		9	221	26.37	56.25	9.8	0	28.1	0.269109		5.3	13.9
		10	222	25.55	87.50	9.4	0	27.7	0.263997		5.1	14.1
		11	223	26.27	18.75	10.3	0	28.6	0.258802		5.8	16
		12	224	24.53	25.00	10.7	0	28.4	0.253524		5.4	16.7
		13	225	23.82	68.75	8.7	0	28.8	0.248164		5.4	15.2
		14	226	23.05	75.00	7.1	0	28.5	0.242726		4.4	16.6
		15	227	7.67	100.00	3.4	0	26.5	0.237208		2.7	9.5
		16	228	12.58	93.75	1.1	0	27.3	0.231614		4	11.5
		17	229	16.87	81.25	4.1	0	26.8	0.225945		4.3	15.4
		18	230	22.12	50.00	10.2	0	28.8	0.220202		4.7	14.5
		19	231	24.97	62.50	11.0	0	28.4	0.214388		5.1	16.3

Day		Julian Day	Solar Radiation (MJ/m ²)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2011	August	20	232	23.94	43.75	9.8	0	28.4	0.208503	80	4.6	14.3
		21	233	24.74	50.00	9.0	0	28.5	0.202549		5.3	17
		22	234	20.18	75.00	8.9	0	27.4	0.196529		4.5	15.5
		23	235	18.67	68.75	7.2	6	26.8	0.190443		4.5	15.6
		24	236	16.54	87.50	6.2	25	25.3	0.184295		4.1	16
		25	237	16.32	81.25	7.6	8	25.7	0.178085		4.1	13.3
		26	238	20.86	50.00	8.4	0	27	0.171816		4.2	10.7
		27	239	22.61	68.75	8.1	0	27.4	0.165489		5.7	15.7
		28	240	14.59	93.75	8.7	0	26.5	0.159107		4.2	13.3
		29	241	23.13	56.25	9.7	0	27.5	0.152671		4.8	14.8
		30	242	18.77	62.50	8.3	0	27.2	0.146184		4.6	13
	31	243	24.72	62.50	8.4	0	27.4	0.139647	5.1	13.6		
	September	1	244	26.16	87.50	7.9	0.5	27.7	0.133063	77	5	15
		2	245	14.47	87.50	3.9	0	26.9	0.126435		4.7	14.2
		3	246	25.84	75.00	9.4	0	28.5	0.119763		4.2	17.9
		4	247	21.74	62.50	9.8	0	27.9	0.11305		5.2	12.9
		5	248	24.39	37.50	10.3	0	28.2	0.106299		5	12.9
		6	249	21.55	50.00	8.8	0	27.7	0.099511		5	15.1
		7	250	26.07	62.50	9.3	0	28.8	0.092689		5.3	16.2
		8	251	27.2	43.75	9.8	0	28.5	0.085836		5.4	14.8
		9	252	27.07	37.50	9.8	0	28.8	0.078953		5.7	16.5
		10	253	15.47	68.75	4.2	0	26.4	0.072043		5.5	14.6
		11	254	19	81.25	7.7	1.5	26.7	0.065108		5.5	18.7
		12	255	9.96	100.00	2.9	8	24.9	0.058151		4.7	13.8
		13	256	14.65	87.50	4.3	8	25.8	0.051173		5.3	17.9
		14	257	17.72	81.25	3.7	2	26.2	0.044178		5.3	14.9
		15	258	23.72	56.25	4.6	0	27.4	0.037168		5.5	16.2
		16	259	22.91	37.50	3.7	0	27.3	0.030145		4.9	13.3
		17	260	19.73	75.00	5.7	0	27.2	0.023111		4.9	11.4
		18	261	26.29	68.75	7.0	0	27.5	0.01607		4.9	13.1
	19	262	27.27	43.75	8.7	0	27.5	0.009023	5	13.6		

Day		Julian Day	Solar Radiation (MJ/m2)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2011	September	20	263	26.79	50.00	10.7	0	27.8	0.001972	77	4.8	16.9
		21	264	22.54	43.75	7.5	0	28	-0.005079		5	14.4
		22	265	27.59	56.25	8.2	0	28.6	-0.012128		5.5	15.9
		23	266	27.49	37.50	7.6	0	28.3	-0.019173		5.3	15.9
		24	267	24.74	43.75	6.3	0	27.4	-0.026211		5.2	14.1
		25	268	25.61	68.75	4.8	0	27.8	-0.03324		5	15.7
		26	269	26.73	31.25	7.2	0	28.8	-0.040258		5.1	14.7
		27	270	23.56	62.50	5.3	0	28.7	-0.047262		4.9	14.3
		28	271	26.94	37.50	7.3	0	28.7	-0.05425		4.6	15.6
		29	272	25.63	62.50	5.4	0	29	-0.061218		3.7	14.2
	30	273	26.43	43.75	8.5	0	28.9	-0.068166	3.6	17.1		
	October	1	274	26.98	43.75	8.3	0	28.4	-0.07509	79	4.4	14.4
		2	275	25.39	56.25	7.6	0	28.6	-0.081989		4.4	12.4
		3	276	25.42	81.25	7.2	0	28.8	-0.088859		4.5	16.5
		4	277	21.15	62.50	8.6	0	29	-0.095699		4.6	15.1
		5	278	22.8	62.50	8.8	0	28.3	-0.102506		3.9	13.6
		6	279	25.14	50.00	9.3	0	28.9	-0.109278		4.4	15.6
		7	280	26.83	31.25	9.8	0	28.7	-0.116012		4.6	15.2
		8	281	26.38	18.75	9.2	0	28.9	-0.122707		4.7	14.8
		9	282	22.49	37.50	8.0	0	28.9	-0.12936		4.6	13.1
10		283	18.67	75.00	8.6	2	28.2	-0.13597	4.6		12.8	
11	284	26.5	43.75	8.2	0	29	-0.142533	4.6	13.4			
12	285	23.8	75.00	8.0	0	29	-0.149048	4	13.2			
13	286	18.3	68.75	6.5	0	28	-0.155513	3.1	10.8			
14	287	17.92	56.25	8.8	8.5	27.9	-0.161925	3.6	15.5			
15	288	22.37	31.25	8.5	0	27.9	-0.168283	3.3	14.3			
16	289	22.41	43.75	9.7	0	27.7	-0.174585	3	10.6			
17	290	24.05	50.00	9.5	0	27.9	-0.180828	3.8	16.4			
18	291	23.29	68.75	9.2	0	27.9	-0.187011	3.7	14.7			
19	292	21.27	50.00	7.7	0	28	-0.193132	2.8	12.9			
20	293	18.4	81.25	7.0	32	26.4	-0.199189	2.4	12.9			

Day		Julian Day	Solar Radiation (MJ/m ²)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)
2012	February	5	36	15.96	68.75	6.6	1	26	-0.281867	2.1	10.9
		6	37	17.33	87.50	3.6	10	25.4	-0.276978	3.2	12.7
		7	38	18.53	75.00	7.1	0	25.9	-0.272001	3.1	15.7
		8	39	7.9	93.75	0.1	3	24.7	-0.266939	2.8	11.1
		9	40	7.29	100.00	1.5	5.5	23.7	-0.261791	2.3	9.5
		10	41	22.21	37.50	8.3	0	25.9	-0.25656	2.8	9.7
		11	42	26.41	12.50	10.3	0	26	-0.251247	3.7	10
		12	43	24.4	12.50	10.1	0	26.1	-0.245854	4.4	14.7
		13	44	23.41	56.25	8.2	0	26.8	-0.240381	4.2	13.8
		14	45	12.48	87.50	2.5	17.5	25	-0.234831	2.8	11.5
		15	46	13.12	87.50	2.9	12.5	24.9	-0.229205	2.6	12
		16	47	22.48	50.00	6.9	0	26.2	-0.223504	2.9	10.3
		17	48	16.66	87.50	4.0	0	26	-0.217731	2.7	12.2
		18	49	21.57	75.00	8.7	0	26.2	-0.211886	3.8	13.8
		19	50	20.68	81.25	7.8	0	25.3	-0.205971	3.4	14.4
		20	51	24.38	12.50	9.8	0	26.2	-0.199989	3.6	11.4
		21	52	24.23	56.25	8.1	0	25.7	-0.193941	3.7	12
		22	53	18.41	68.75	7.6	0	25.4	-0.187828	3.6	13.8
		23	54	24.78	75.00	5.5	0	25.6	-0.181653	3.4	12.2
		24	55	17.93	68.75	6.2	0	26.5	-0.175418	3.4	13.8
		25	56	23.92	75.00	8.3	0	26.8	-0.169124	4.4	15.5
		26	57	23.47	43.75	8.0	0	27.2	-0.162773	3.2	9.8
		27	58	21.13	75.00	7.2	0	27.6	-0.156368	2.9	11.1
		28	59	18.51	93.75	6.0	0.5	26.1	-0.14991	2.1	10.1
		29	60	20.23	62.50	7.7	0	26.7	-0.143401	1.8	6.3



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Day		Julian Day	Solar Radiation (MJ/m ²)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2012	March	1	61	23.49	25.00	9.6	0	27.4	-0.136844	74	2.5	9.6
		2	62	25.81	50.00	9.9	0	27.5	-0.130241		2.6	10.4
		3	63	25.03	43.75	9.1	0	27.6	-0.123594		1.7	12.2
		4	64	22.12	68.75	8.5	0	27.4	-0.116904		1.8	8.7
		5	65	21.29	62.50	8.3	0	27.3	-0.110175		2	11.9
		6	66	23.43	31.25	9.2	0	27.5	-0.103407		2.3	11.4
		7	67	22.09	75.00	7.6	0	28	-0.096605		2.2	8.8
		8	68	22.36	56.25	7.7	0	28.2	-0.08977		2.8	13.4
		9	69	25.49	43.75	8.9	0	27.8	-0.082903		2.2	8.2
		10	70	20.59	56.25	8.9	0	27.3	-0.076008		2.4	9.3
		11	71	18.8	56.25	8.7	0	27.4	-0.069088		2.4	8.8
		12	72	23.4	43.75	9.3	0	27.7	-0.062143		2.3	10.4
		13	73	20.67	50.00	8.3	0	27.4	-0.055177		3.1	9.9
		14	74	22.72	62.50	4.2	0	27.5	-0.048191		3	11.2
		15	75	22.29	43.75	7.2	0	27.3	-0.04119		2.9	10.7
		16	76	19.36	93.75	5.4	20.5	27	-0.034174		2.4	8.8
		17	77	16.04	75.00	3.4	10	25.7	-0.027146		1.9	9
		18	78	22.84	12.50	9.5	0	27.4	-0.020108		2.7	11
		19	79	24.85	0.00	10.0	0	27.7	-0.013064		1.9	11.1
		20	80	26.26	6.25	9.6	0	27.9	-0.006015		1.8	7.9
		21	81	24.57	25.00	9.7	0	27.7	0.001035		2.2	8.1
		22	82	24.98	12.50	9.4	0	27.8	0.008086		2.4	8.6
		23	83	23.84	31.25	9.4	0	27.7	0.015134		2.1	7.4
		24	84	27.27	12.50	9.9	0	27.3	0.022176		2.9	9.2
		25	85	25.61	12.50	9.9	0	27	0.029211		3.2	13
		26	86	23.68	6.25	9.7	0	27.2	0.036236		2.5	9.8
		27	87	21.72	25.00	9.6	0	27.5	0.043248		2.4	9.1
		28	88	19.64	68.75	7.5	0	26.9	0.050245		2.5	10.9
		29	89	20.2	62.50	7.3	0	26.7	0.057225		2.3	8.4
		30	90	22.12	81.25	6.2	24.5	26.4	0.064185		2.6	10.4
		31	91	20.75	75.00	8.0	0	26.9	0.071123		2	9.8

Day		Julian Day	Solar Radiation (MJ/m ²)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2012	April	1	92	23.21	56.25	5.4	2	26.9	0.078036	78	2.3	7.9
		2	93	21.74	37.50	8.2	23	26.2	0.084923		2.5	16.2
		3	94	23.51	62.50	6.4	0	26.4	0.09178		2.2	11.6
		4	95	18.72	56.25	7.3	0	26.7	0.098607		2.2	8.2
		5	96	25.5	43.75	8.4	0	27.3	0.105399		2.9	13.7
		6	97	22.66	50.00	7.3	0	28	0.112155		2.6	10.1
		7	98	24.54	31.25	9.2	0	28.2	0.118873		2.3	9.5
		8	99	15.47	56.25	6.5	10	26.5	0.12555		2.2	14.2
		9	100	15.26	62.50	4.4	0	26.2	0.132185		2.4	8.4
		10	101	26.31	75.00	7.1	7.5	26.9	0.138775		2.6	11.3
		11	102	17.51	62.50	4.4	1	27.2	0.145318		1.7	6.1
		12	103	20.43	81.25	7.3	0	27.6	0.151812		2	11.4
		13	104	21.34	62.50	7.4	0	27.7	0.158255		2.1	8.1
		14	105	13.34	56.25	8.1	50.5	26.1	0.164644		2	15.8
		15	106	16.74	100.00	6.3	0	26.3	0.170978		1.9	7.1
		16	107	22.18	81.25	6.5	2	26.4	0.177255		2.1	8.5
		17	108	22.16	81.25	6.2	9.5	26.4	0.183473		2.5	11.4
		18	109	23.88	75.00	7.5	23	27.1	0.18963		2.1	12.7
		19	110	21.84	75.00	5.6	5	26.5	0.195724		2.3	10.3
		20	111	12.53	87.50	5.6	2	25.6	0.201753		1.8	11.1
		21	112	22.79	62.50	6.9	0	26.6	0.207715		1.8	14
		22	113	14.32	87.50	3.4	6	26.7	0.21361		2.7	11.9
		23	114	15.16	93.75	1.6	0	26.6	0.219434		3.9	15.7
		24	115	11.29	75.00	3.7	10.5	26	0.225186		3.5	12.8
		25	116	23.84	56.25	9.2	0.5	27.5	0.230865		3.5	12.1
		26	117	21.75	43.75	10.5	0	27.6	0.236469		3.4	13.2
		27	118	19.97	25.00	10.6	9	27.3	0.241997		3.5	12.7
		28	119	22.72	62.50	7.8	0	27.4	0.247446		3.8	14.8
		29	120	23.43	50.00	10.7	0	28.2	0.252816		3.9	13.6
		30	121	22.18	50.00	10.3	2.5	27.7	0.258105		4	14.7

Day		Julian Day	Solar Radiation (MJ/m ²)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2012	May	1	122	26.08	31.25	9.7	0	28.1	0.263312	81	4.3	14.2
		2	123	27.04	25.00	10.5	0	27.8	0.268434		4.2	11.4
		3	124	27.89	12.50	11.1	0	27.6	0.273472		4.8	12.9
		4	125	28.1	0.00	9.0	0	27.6	0.278423		5.4	14.4
		5	126	27.39	18.75	11.0	0	28.5	0.283287		5.8	17.1
		6	127	25.88	6.25	8.8	0	29	0.288061		3.9	14.7
		7	128	24.53	43.75	11.3	0	28.9	0.292746		2.5	11.5
		8	129	22.64	18.75	8.6	0	29	0.29734		3.4	10.2
		9	130	21.32	31.25	9.0	0	28.7	0.301841		3.2	13.8
		10	131	25.65	6.25	9.9	0	29	0.306249		4.1	9.9
		11	132	21.88	12.50	10.0	0	28.4	0.310563		4.6	15.2
		12	133	24.27	12.50	9.8	0	28.7	0.314781		4.2	14
		13	134	25.88	12.50	9.5	0	29.3	0.318904		4	14.7
		14	135	25.63	25.00	10.9	0	28.8	0.322929		4.9	14
		15	136	24.7	18.75	10.3	0	28.7	0.326856		4.9	14.6
		16	137	27.31	6.25	10.7	0	29	0.330684		5.3	12.4
		17	138	25.76	12.50	10.3	0	28.7	0.334413		4.6	13.9
		18	139	22.19	25.00	10.0	0	28.6	0.338041		5.1	15.4
		19	140	23.04	37.50	9.3	0	29.7	0.341569		5.4	11.4
		20	141	22.15	75.00	6.1	0	29.7	0.344994		5.4	13.5
		21	142	17.6	87.50	8.7	0	29.4	0.348317		5.6	16.4
		22	143	22.45	31.25	9.4	0	29.3	0.351537		5.8	14.4
		23	144	21.32	56.25	9.0	0	29.2	0.354653		6.2	17.4
		24	145	21.2	68.75	8.0	0	28.5	0.357664		6.8	20.2
		25	146	18.46	87.50	6.5	0	28.3	0.360571		7	20.2
		26	147	7.91	93.75	0.9	3	26.1	0.363372		6.5	18.3
		27	148	20.26	75.00	7.8	2	27.4	0.366068		6.4	18
		28	149	16.89	68.75	6.6	0	27.8	0.368657		5.9	15.6
		29	150	21.1	81.25	6.0	0	28.7	0.371139		6.2	15.6
		30	151	18.52	100.00	7.8	0	28.7	0.373514		6.8	18.5
		31	152	20.3	75.00	5.8	0	28.7	0.375781		6.1	17.6

Day		Julian Day	Solar Radiation (MJ/m ²)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2012	June	1	153	20.35	81.25	9.0	0	28.9	0.37794	84	6.3	17.3
		2	154	22.56	56.25	9.0	0	28.7	0.379991		6.1	16.1
		3	155	17.45	87.50	5.8	0	28	0.381934		6	17.4
		4	156	22.42	43.75	10.2	0	28.2	0.383767		6.3	16.4
		5	157	21.05	87.50	6.5	0	28.5	0.385491		6.3	16.1
		6	158	15.72	100.00	1.9	0.5	27.2	0.387105		5.4	17.4
		7	159	21.6	87.50	8.6	0	28.9	0.38861		6.1	18
		8	160	21.66	81.25	6.6	0	29.5	0.390004		6.3	19.3
		9	161	17.14	93.75	2.7	0	29.4	0.391289		6.2	17.8
		10	162	21.89	75.00	7.4	0	29.5	0.392463		6.4	17.6
		11	163	19.06	75.00	6.4	0	28.7	0.393526		5.2	14.4
		12	164	16.02	75.00	1.9	0	27.8	0.394479		5.1	14.4
		13	165	10.28	93.75	0.2	7.5	26.3	0.39532		4.2	15.1
		14	166	17.03	93.75	8.5	0	26.7	0.396051		5	16.8
		15	167	24.2	75.00	8.8	0	28.3	0.396671		5.2	16.6
		16	168	22.26	56.25	8.5	0	28.5	0.397179		5.6	18.8
		17	169	23.01	62.50	6.7	0	28.4	0.397576		6	19.3
		18	170	19.24	81.25	4.5	0	28.2	0.397862		5.6	17.5
		19	171	21.07	81.25	5.8	0	28	0.398036		5.6	16.3
		20	172	19.46	81.25	8.8	0	27.8	0.3981		6.2	17.8
		21	173	17.76	81.25	7.2	0	27.5	0.398051		5.3	13.2
		22	174	18.78	43.75	9.6	0	27.5	0.397892		4.7	13.4
		23	175	19.22	43.75	10.0	0	27.5	0.39762		4.7	12.6
		24	176	18.37	62.50	8.4	7.5	26.5	0.397238		4.4	12.9
		25	177	16.03	81.25	5.2	1	26.6	0.396745		4	15
		26	178	18.16	37.50	10.2	5.5	26.6	0.39614		4.3	14.8
		27	179	22.2	43.75	10.1	0	27.3	0.395424		4.2	13.2
		28	180	23.87	50.00	10.0	0	27.7	0.394597		5	15.3
		29	181	23.87	62.50	9.1	0	28	0.393659		4.6	16.2
		30	182	23.35	81.25	8.1	0	28	0.39261		4.6	21.1

Day		Julian Day	Solar Radiation (MJ/m2)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2012	July	1	183	15.81	75.00	4.7	0	27.2	0.391451	75	5.8	15.7
		2	184	13.86	100.00	3.2	2.5	25.7	0.390181		5	17.8
		3	185	17.12	87.50	3.0	1.5	26.7	0.388801		5.3	15.8
		4	186	21.48	43.75	7.8	0	28	0.387311		5.2	16.6
		5	187	26.28	50.00	9.9	0	29	0.385712		6.1	18.1
		6	188	23.81	43.75	10.2	0	28.3	0.384002		5.9	18.9
		7	189	20.51	37.50	9.8	0	28	0.382183		5.9	15.1
		8	190	21.39	62.50	8.5	0	27.8	0.380256		5.7	22.5
		9	191	18.98	56.25	9.4	0	27.1	0.378219		6.3	16.7
		10	192	23.42	68.75	7.9	0	27.8	0.376074		5.1	16.5
		11	193	26.03	62.50	9.7	0.5	29.2	0.373821		5.1	21.8
		12	194	25.72	31.25	8.4	0	29.9	0.371461		4.4	16.9
		13	195	22.81	50.00	7.5	0	29.1	0.368993		3.7	13.2
		14	196	17.29	81.25	5.3	0	28.2	0.366418		2.4	10.3
		15	197	17.19	81.25	4.8	0	27.8	0.363736		3.3	15.1
		16	198	20.92	62.50	6.9	0	28.1	0.360949		3.8	9.5
		17	199	21.98	43.75	9.8	0	28.1	0.358056		4.4	14
		18	200	12.44	62.50	8.8	0	27	0.355059		4.7	13
		19	201	25.46	31.25	10.3	0	28.6	0.351957		5.4	16.1
		20	202	25.58	50.00	9.6	0	28.8	0.348751		5.9	17.1
		21	203	21.28	68.75	7.2	0	28.9	0.345441		5.6	14.9
		22	204	23.11	18.75	10.2	0	29.1	0.34203		6.2	16.6
		23	205	25.07	6.25	9.8	0	28.9	0.338516		7	20.3
		24	206	23.18	37.50	8.6	0	28.9	0.334901		6.7	16.4
		25	207	25.41	31.25	10.3	0	28.9	0.331186		6	16.6
		26	208	22.92	37.50	10.0	0	29.3	0.32737		5.2	14.2
		27	209	25.67	12.50	10.4	0	29	0.323456		4.9	13
		28	210	24.95	50.00	10.0	0	28.9	0.319444		6	14.4
		29	211	25.4	43.75	10.0	0	28.5	0.315335		5	12.7
		30	212	27.2	43.75	10.1	0	29.2	0.311129		5.6	15.2
		31	213	26.69	37.50	10.0	0	29.1	0.306828		5.6	17.9

Day		Julian Day	Solar Radiation (MJ/m ²)	Cloud cover (%)	Sunshine hours (hrs)	Precipitation (mm)	Open Air Mean Temperature (deg. C)	Sine value of Declination Angle	Relative Humidity (%)	Wind Speed (m/s)	Max gust wind speed (m/s)	
2012	August	1	214	26.76	25.00	10.1	0	28.3	0.302432	81	5.5	13.3
		2	215	25.34	37.50	10.0	0	28.4	0.297943		5.7	18.5
		3	216	24.08	56.25	8.8	0	28.6	0.293362		5.8	18
		4	217	16.42	87.50	1.7	0	28.2	0.288689		5.8	14.3
		5	218	19.92	81.25	7.7	0	28.5	0.283926		5.8	17.2



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