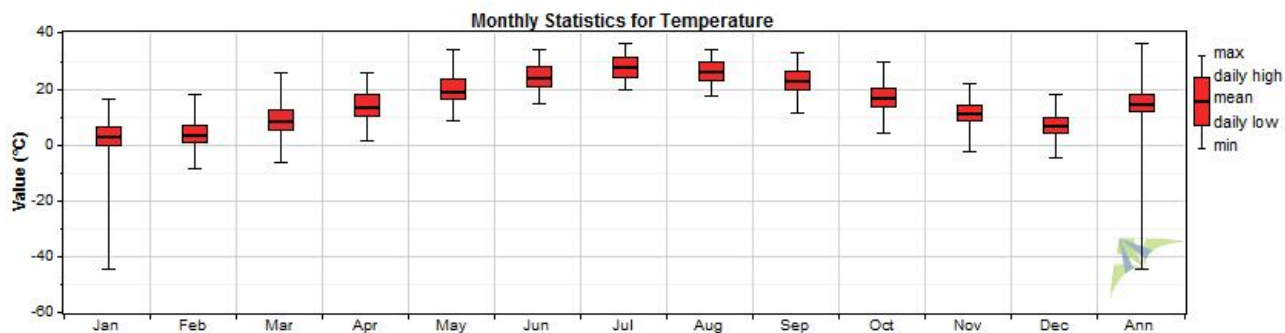


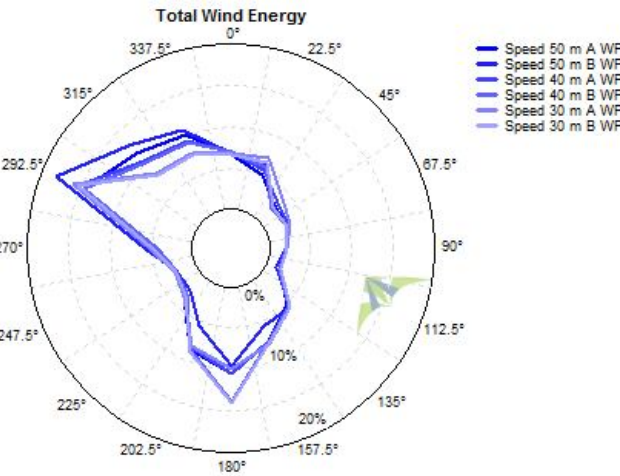
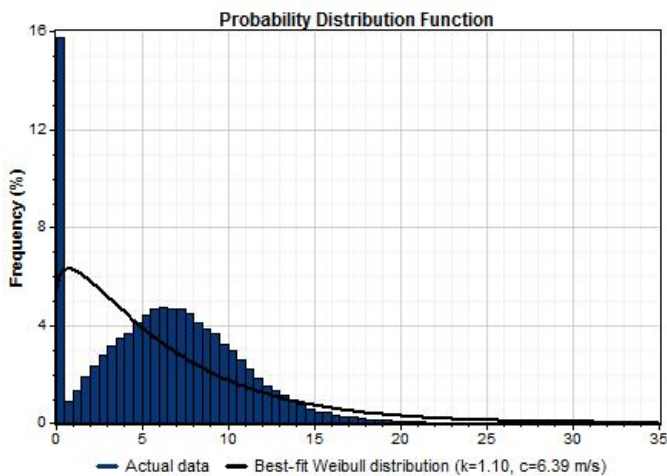
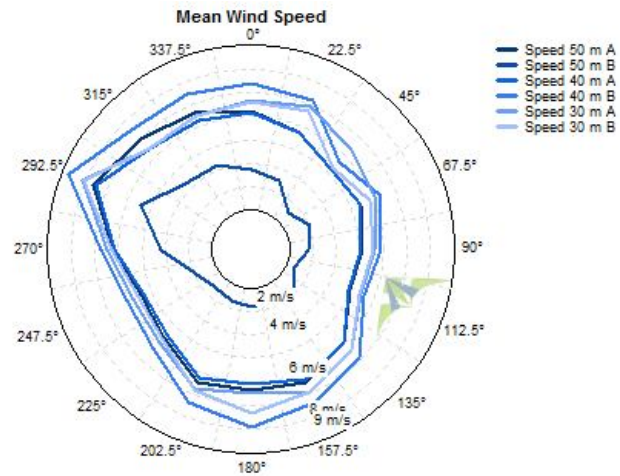
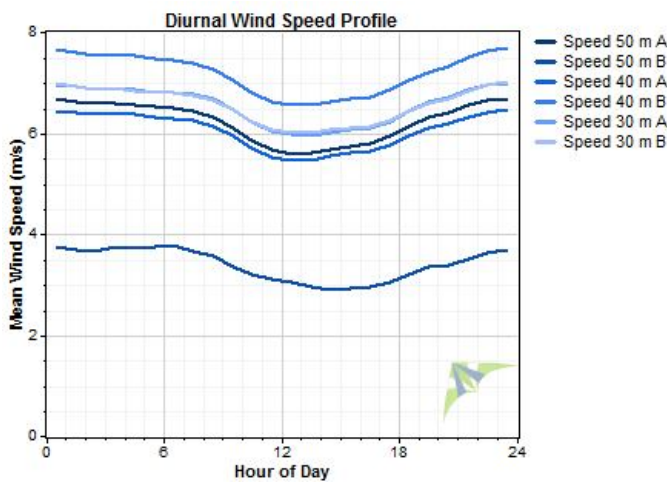
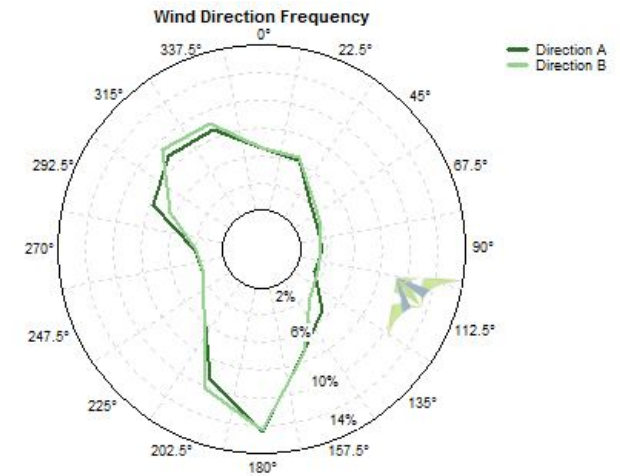
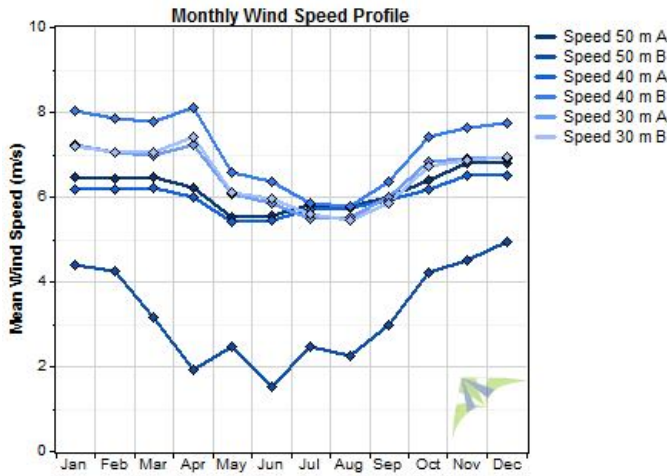
Data Set Properties

Report Created: 9/19/2016 10:23 using Windographer 3.3.11
 Filter Settings: <Unflagged data>

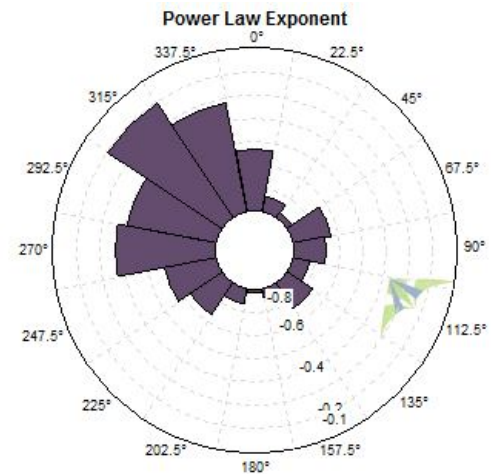
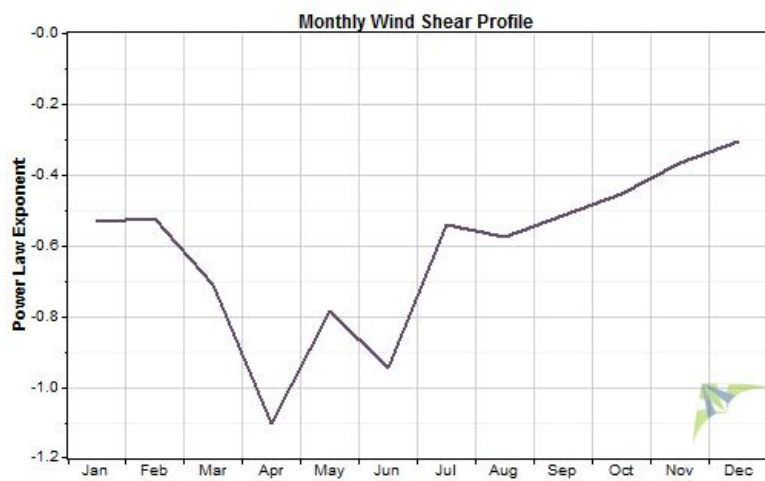
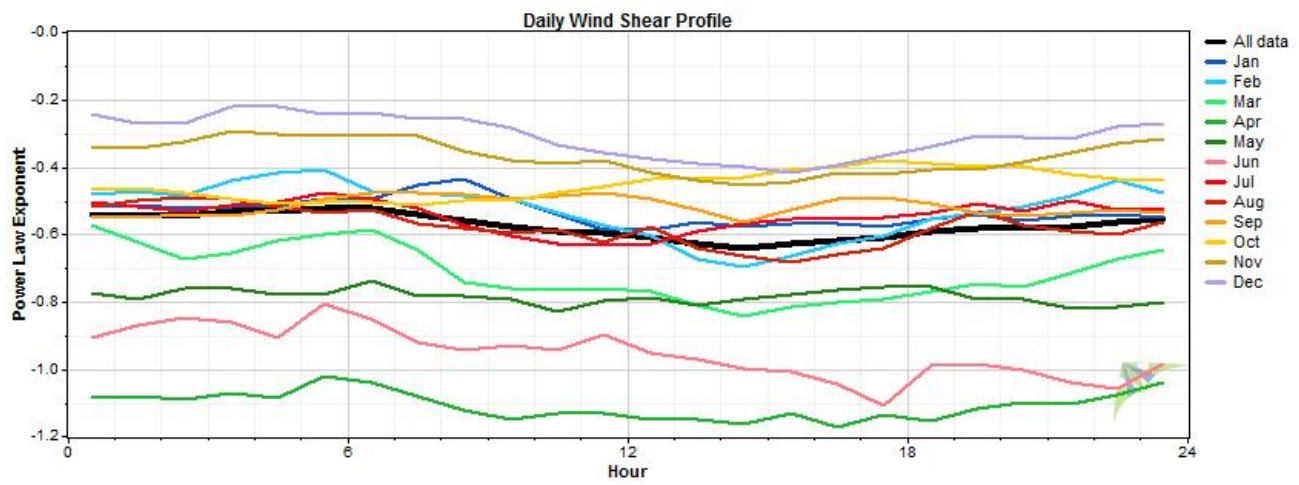
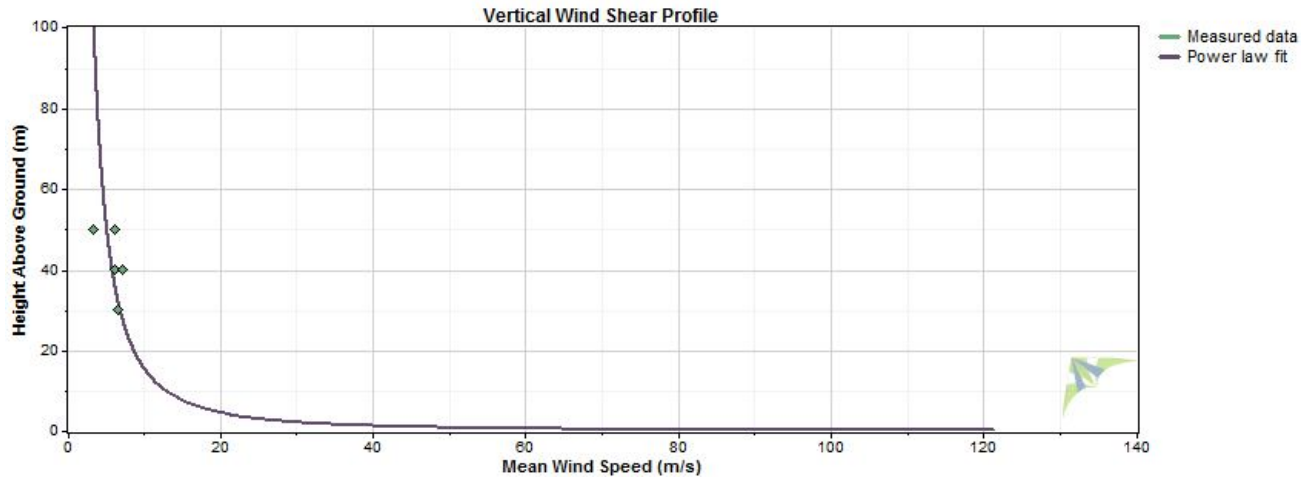
Variable	Value
Latitude	S 0° 0' 0.000"
Longitude	W 0° 0' 0.000"
Elevation	4 m
Start date	9/13/2009 00:00
End date	6/16/2016 00:00
Duration	6.8 years
Length of time step	10 minutes
Calm threshold	0 m/s
Mean temperature	14.7 °C
Mean pressure	101.2 kPa
Mean air density	1.226 kg/m ³
Power density at 50m	315 W/m ²
Wind power class	3 (Fair)
Power law exponent	-0.572
Surface roughness	n/a
Roughness class	n/a



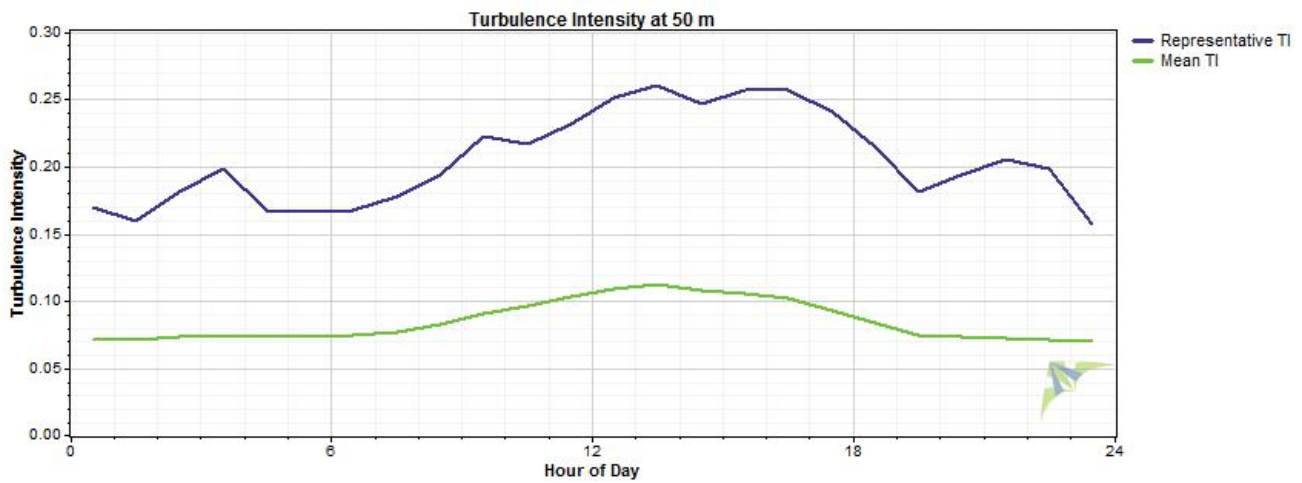
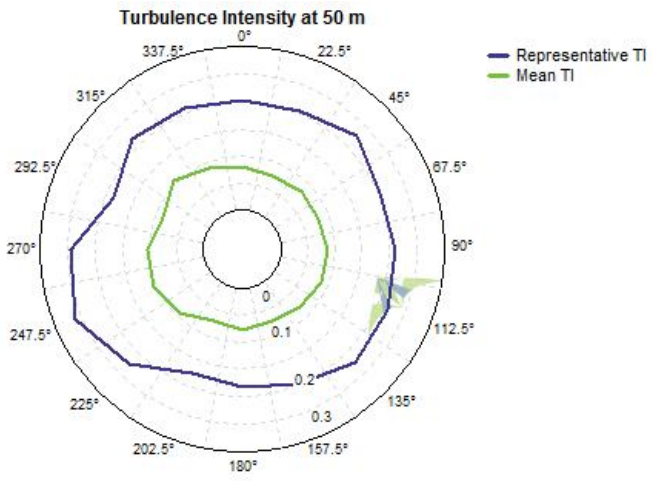
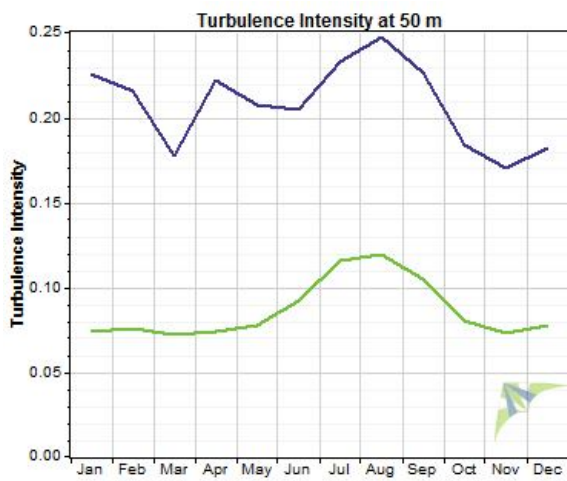
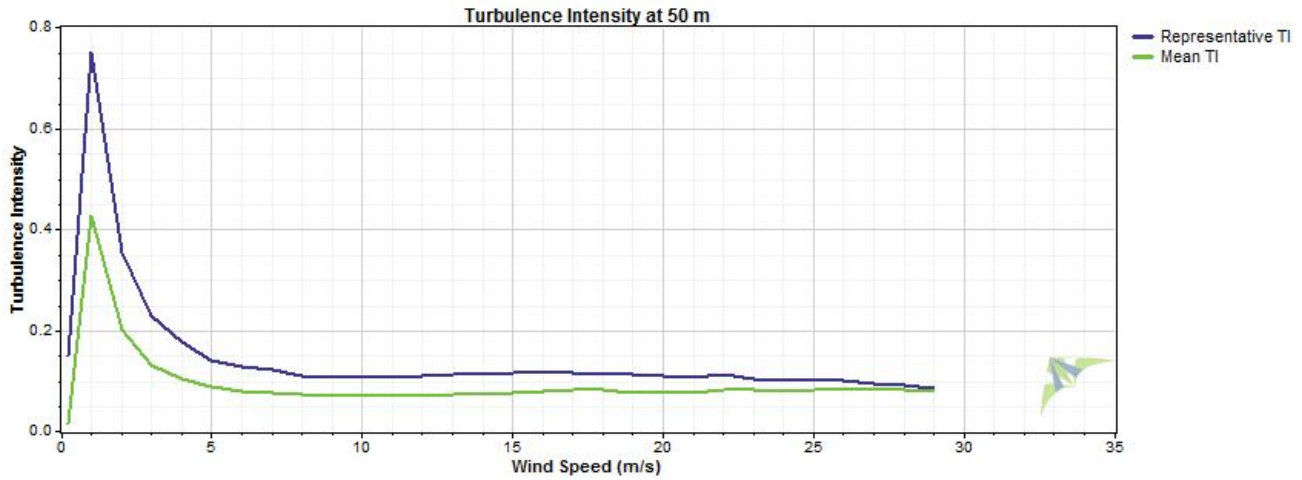
Wind Speed and Direction



Wind Shear



Turbulence Intensity



Environmental Summary

	Mean	Min	Max
Temperature (°C)	14.7	-44.4	36.0
Pressure (kPa)			
Air Density (kg/m3)	1.22	1.14	1.54

Wind Speed Sensor Summary

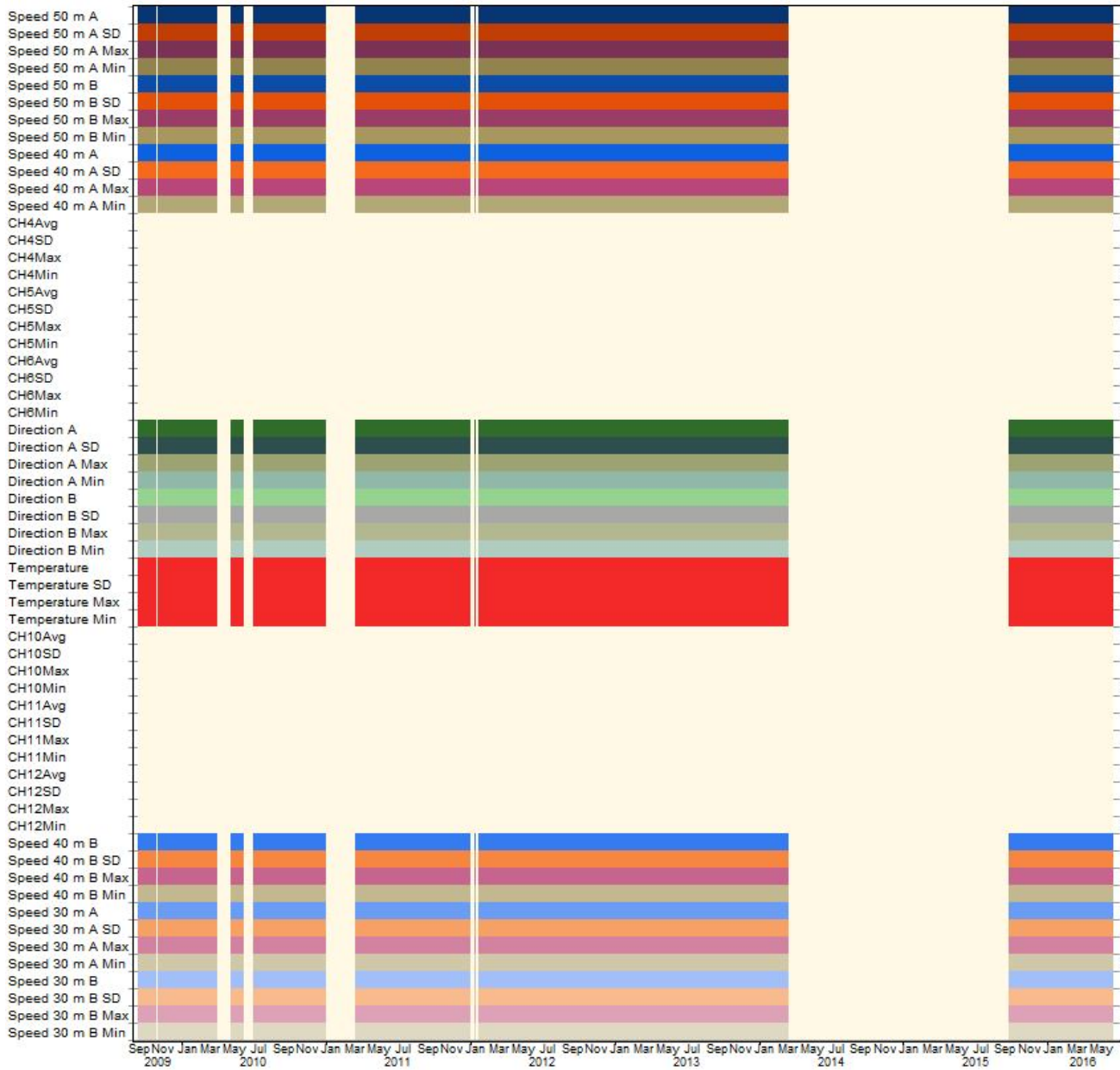
Variable	Speed 50 m A	Speed 50 m B	Speed 40 m A	Speed 40 m B	Speed 30 m A
Measurement height (m)	50	50	40	40	30
Mean wind speed (m/s)	6.231	3.415	6.051	7.187	6.555
MoMM wind speed (m/s)	6.187	3.255	6.005	7.122	6.504
Median wind speed (m/s)	6.176	0.360	6.009	6.870	6.290
Min wind speed (m/s)	0.290	0.360	0.350	0.390	0.320
Max wind speed (m/s)	30.720	29.958	29.215	78.677	28.281
Weibull k	1.104	0.676	1.155	2.115	2.124
Weibull c (m/s)	6.388	2.537	6.258	8.104	7.388
Mean power density (W/m ²)	376	235	336	415	315
MoMM power density (W/m ²)	364	221	326	404	307
Mean energy content (kWh/m ² /yr)	3,297	2,061	2,941	3,639	2,756
MoMM energy content (kWh/m ² /yr)	3,192	1,932	2,852	3,538	2,685
Energy pattern factor	2.511	9.488	2.447	1.807	1.804
Frequency of calms (%)	0.00	0.00	0.00	0.00	0.00
Possible data points	355,392	355,392	355,392	355,392	355,392
Valid data points	252,810	252,810	252,816	252,816	252,816
Missing data points	102,582	102,582	102,576	102,576	102,576
Data recovery rate (%)	71.14	71.14	71.14	71.14	71.14
Variable	Speed 30 m B				
Measurement height (m)	30				
Mean wind speed (m/s)	6.563				
MoMM wind speed (m/s)	6.518				
Median wind speed (m/s)	6.317				
Min wind speed (m/s)	0.330				
Max wind speed (m/s)	80.602				
Weibull k	2.046				
Weibull c (m/s)	7.381				
Mean power density (W/m ²)	322				
MoMM power density (W/m ²)	314				
Mean energy content (kWh/m ² /yr)	2,821				
MoMM energy content (kWh/m ² /yr)	2,753				
Energy pattern factor	1.842				
Frequency of calms (%)	0.00				
Possible data points	355,392				
Valid data points	252,816				
Missing data points	102,576				
Data recovery rate (%)	71.14				

Flag Statistics

	Data Column	Time Steps Flagged As <Unflagged data>	Invalid
1	Speed 50 m A	252,810	6
2	Speed 50 m A SD	252,810	6
3	Speed 50 m A Max	252,810	6
4	Speed 50 m A Min	252,810	6
5	Speed 50 m B	252,810	6
6	Speed 50 m B SD	252,810	6
7	Speed 50 m B Max	252,810	6
8	Speed 50 m B Min	252,810	6
9	Speed 40 m A	252,816	0
10	Speed 40 m A SD	252,816	0
11	Speed 40 m A Max	252,816	0
12	Speed 40 m A Min	252,816	0
13	CH4Avg	0	0
14	CH4SD	0	0
15	CH4Max	0	0
16	CH4Min	0	0
17	CH5Avg	0	0
18	CH5SD	0	0
19	CH5Max	0	0
20	CH5Min	0	0
21	CH6Avg	0	0
22	CH6SD	0	0
23	CH6Max	0	0
24	CH6Min	0	0
25	Direction A	252,816	0
26	Direction A SD	252,816	0
27	Direction A Max	252,816	0
28	Direction A Min	252,816	0
29	Direction B	252,816	0
30	Direction B SD	252,816	0
31	Direction B Max	252,816	0
32	Direction B Min	252,816	0
33	Temperature	252,816	0
34	Temperature SD	252,816	0
35	Temperature Max	252,816	0
36	Temperature Min	252,816	0
37	CH10Avg	0	0
38	CH10SD	0	0
39	CH10Max	0	0
40	CH10Min	0	0
41	CH11Avg	0	0
42	CH11SD	0	0
43	CH11Max	0	0
44	CH11Min	0	0
45	CH12Avg	0	0
46	CH12SD	0	0
47	CH12Max	0	0
48	CH12Min	0	0
49	Speed 40 m B	252,816	0
50	Speed 40 m B SD	252,816	0
51	Speed 40 m B Max	252,816	0
52	Speed 40 m B Min	252,816	0

	Data Column	Time Steps Flagged As <Unflagged data>	Invalid
53	Speed 30 m A	252,816	0
54	Speed 30 m A SD	252,816	0
55	Speed 30 m A Max	252,816	0
56	Speed 30 m A Min	252,816	0
57	Speed 30 m B	252,816	0
58	Speed 30 m B SD	252,816	0
59	Speed 30 m B Max	252,816	0
60	Speed 30 m B Min	252,816	0
61	Air Density	355,392	0
62	Speed 50 m A TI	252,810	6
63	Speed 50 m B TI	252,810	6
64	Speed 40 m A TI	252,816	0
65	Speed 40 m B TI	252,816	0
66	Speed 30 m A TI	252,816	0
67	Speed 30 m B TI	252,816	0
68	Speed 50 m A WPD	252,810	6
69	Speed 50 m B WPD	252,810	6
70	Speed 40 m A WPD	252,816	0
71	Speed 40 m B WPD	252,816	0
72	Speed 30 m A WPD	252,816	0
73	Speed 30 m B WPD	252,816	0

Data Coverage



Data Column Properties

#	Label	Units	Height	Possible Data Points	Valid Data Points	Recovery Rate (%)	Mean	Min	Max	Std. Dev
1	Speed 50 m A	m/s	50 m	355,392	252,810	71.14	6.237	0.290	30.720	4.215
2	Speed 50 m A SD	m/s	50 m	355,392	252,810	71.14	0.499	0.000	8.576	0.382
3	Speed 50 m A Max	m/s	50 m	355,392	252,810	71.14	7.432	0.290	35.916	4.908
4	Speed 50 m A Min	m/s	50 m	355,392	252,810	71.14	4.843	0.290	24.167	3.440
5	Speed 50 m B	m/s	50 m	355,392	252,810	71.14	3.406	0.360	29.958	4.545
6	Speed 50 m B SD	m/s	50 m	355,392	252,810	71.14	0.376	0.000	11.599	0.775
7	Speed 50 m B Max	m/s	50 m	355,392	252,810	71.14	4.276	0.360	35.182	5.543
8	Speed 50 m B Min	m/s	50 m	355,392	252,810	71.14	2.494	0.360	23.827	3.512
9	Speed 40 m A	m/s	40 m	355,392	252,816	71.14	6.047	0.350	29.215	4.020
10	Speed 40 m A SD	m/s	40 m	355,392	252,816	71.14	0.532	0.000	7.211	0.414
11	Speed 40 m A Max	m/s	40 m	355,392	252,816	71.14	7.313	0.350	35.218	4.780
12	Speed 40 m A Min	m/s	40 m	355,392	252,816	71.14	4.551	0.350	22.332	3.203
13	CH4Avg			355,392	0	0.00				
14	CH4SD			355,392	0	0.00				
15	CH4Max			355,392	0	0.00				
16	CH4Min			355,392	0	0.00				
17	CH5Avg			355,392	0	0.00				
18	CH5SD			355,392	0	0.00				
19	CH5Max			355,392	0	0.00				
20	CH5Min			355,392	0	0.00				
21	CH6Avg			355,392	0	0.00				
22	CH6SD			355,392	0	0.00				
23	CH6Max			355,392	0	0.00				
24	CH6Min			355,392	0	0.00				
25	Direction A	°	10 m	355,392	252,816	71.14	258.0	0.0	359.2	102.6
26	Direction A SD	°	10 m	355,392	252,816	71.14	5.6	0.0	132.7	5.2
27	Direction A Max	°	10 m	355,392	252,816	71.14	0.0	0.0	0.0	0.0
28	Direction A Min	°	10 m	355,392	252,816	71.14	0.0	0.0	0.0	0.0
29	Direction B	°	10 m	355,392	252,816	71.14	261.8	0.0	359.2	103.5
30	Direction B SD	°	10 m	355,392	252,816	71.14	6.2	0.0	132.7	5.6
31	Direction B Max	°	10 m	355,392	252,816	71.14	0.0	0.0	0.0	0.0
32	Direction B Min	°	10 m	355,392	252,816	71.14	0.0	0.0	0.0	0.0
33	Temperature	°C	2 m	355,392	252,816	71.14	14.7	-44.4	36.0	9.0
34	Temperature SD	°C	2 m	355,392	252,816	71.14	0.1	0.0	1.9	0.1
35	Temperature Max	°C	2 m	355,392	252,816	71.14	14.9	-44.0	36.2	9.0
36	Temperature Min	°C	2 m	355,392	252,816	71.14	14.5	-44.9	35.9	9.0
37	CH10Avg			355,392	0	0.00				
38	CH10SD			355,392	0	0.00				
39	CH10Max			355,392	0	0.00				
40	CH10Min			355,392	0	0.00				
41	CH11Avg			355,392	0	0.00				
42	CH11SD			355,392	0	0.00				
43	CH11Max			355,392	0	0.00				
44	CH11Min			355,392	0	0.00				
45	CH12Avg			355,392	0	0.00				
46	CH12SD			355,392	0	0.00				
47	CH12Max			355,392	0	0.00				
48	CH12Min			355,392	0	0.00				
49	Speed 40 m B	m/s	40 m	355,392	252,816	71.14	7.187	0.390	78.677	3.550
50	Speed 40 m B SD	m/s	40 m	355,392	252,816	71.14	0.626	0.000	1,363.189	2.736
51	Speed 40 m B Max	m/s	40 m	355,392	252,816	71.14	8.661	0.390	97.035	4.132
52	Speed 40 m B Min	m/s	40 m	355,392	252,816	71.14	5.443	0.390	23.509	2.982

#	Label	Units	Height	Possible Data Points	Valid Data Points	Recovery Rate (%)	Mean	Min	Max	Std. Dev
53	Speed 30 m A	m/s	30 m	355,392	252,816	71.14	6.555	0.320	28.281	3.217
54	Speed 30 m A SD	m/s	30 m	355,392	252,816	71.14	0.696	0.000	7.211	0.436
55	Speed 30 m A Max	m/s	30 m	355,392	252,816	71.14	8.229	0.320	37.841	3.925
56	Speed 30 m A Min	m/s	30 m	355,392	252,816	71.14	4.614	0.320	22.302	2.604
57	Speed 30 m B	m/s	30 m	355,392	252,816	71.14	6.562	0.330	80.602	3.306
58	Speed 30 m B SD	m/s	30 m	355,392	252,816	71.14	0.703	0.000	1,363.189	2.746
59	Speed 30 m B Max	m/s	30 m	355,392	252,816	71.14	8.228	0.330	96.975	3.985
60	Speed 30 m B Min	m/s	30 m	355,392	252,816	71.14	4.630	0.330	21.175	2.744
61	Air Density	kg/m ³		355,392	355,392	100.00	1.226	1.141	1.542	0.033
62	Speed 50 m A TI			355,392	252,810	71.14	0.08	0.00	4.39	0.10
63	Speed 50 m B TI			355,392	252,810	71.14	0.09	0.00	3.35	0.27
64	Speed 40 m A TI			355,392	252,816	71.14	0.09	0.00	2.83	0.08
65	Speed 40 m B TI			355,392	252,816	71.14	0.10	0.00	17.33	0.08
66	Speed 30 m A TI			355,392	252,816	71.14	0.12	0.00	1.92	0.08
67	Speed 30 m B TI			355,392	252,816	71.14	0.13	0.00	16.91	0.10
68	Speed 50 m A WPD	W/m ²		355,392	252,810	71.14	376	0	18,553	674
69	Speed 50 m B WPD	W/m ²		355,392	252,810	71.14	235	0	17,206	627
70	Speed 40 m A WPD	W/m ²		355,392	252,816	71.14	336	0	15,957	605
71	Speed 40 m B WPD	W/m ²		355,392	252,816	71.14	415	0	306,733	883
72	Speed 30 m A WPD	W/m ²		355,392	252,816	71.14	315	0	14,476	519
73	Speed 30 m B WPD	W/m ²		355,392	252,816	71.14	322	0	329,809	831