### Data Set Properties

Report Created: 9/12/2012 22:31 using Windographer 2.4.6  
Filter Settings: <Unflagged data>, Synthesized

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude</td>
<td>N 39° 32' 1.741&quot;</td>
</tr>
<tr>
<td>Longitude</td>
<td>W 105° 0' 38.639&quot;</td>
</tr>
<tr>
<td>Elevation</td>
<td>1745 m</td>
</tr>
<tr>
<td>Start date</td>
<td>9/28/2011 11:30</td>
</tr>
<tr>
<td>End date</td>
<td>9/11/2012 10:20</td>
</tr>
<tr>
<td>Duration</td>
<td>11 months</td>
</tr>
<tr>
<td>Length of time step</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Calm threshold</td>
<td>0 m/s</td>
</tr>
<tr>
<td>Mean temperature</td>
<td>3.67 °C</td>
</tr>
<tr>
<td>Mean pressure</td>
<td>82.09 kPa</td>
</tr>
<tr>
<td>Mean air density</td>
<td>1.032 kg/m³</td>
</tr>
<tr>
<td>Power density at 50m</td>
<td>49 W/m²</td>
</tr>
<tr>
<td>Wind power class</td>
<td>1 (Poor)</td>
</tr>
<tr>
<td>Power law exponent</td>
<td>0.13</td>
</tr>
<tr>
<td>Surface roughness</td>
<td>0.008 m</td>
</tr>
<tr>
<td>Roughness class</td>
<td>0.74</td>
</tr>
<tr>
<td>Roughness description</td>
<td>Lawn grass</td>
</tr>
</tbody>
</table>

![Temperature Graph](image-url)
Wind Speed and Direction

Monthly Wind Speed Profile

- Synthesized 30.5 m
- WS10.5

Diurnal Wind Speed Profile

- Synthesized 30.5 m
- WS10.5

Probability Distribution Function

- Actual data
- Best-fit Weibull distribution (k=1.89, c=3.77 m/s)

Total Wind Energy (30.5 m)

Wind Frequency Rose (10.3 m)
Wind Shear

Vertical Wind Shear Profile

Daily Wind Shear Profile

Monthly Wind Shear Profile

Power Law Exponent

## Data Column Properties

<table>
<thead>
<tr>
<th>Number</th>
<th>Label</th>
<th>Units</th>
<th>Height</th>
<th>Possible Records</th>
<th>Valid Records</th>
<th>Recovery Rate (%)</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WS10.5</td>
<td>m/s</td>
<td>10.5 m</td>
<td>50,249</td>
<td>49,882</td>
<td>99.27</td>
<td>2.92</td>
<td>0.30</td>
<td>13.20</td>
<td>1.60</td>
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<tr>
<td>2</td>
<td>WS10.5_SD</td>
<td>m/s</td>
<td>10.5 m</td>
<td>50,249</td>
<td>49,882</td>
<td>99.27</td>
<td>0.787</td>
<td>0.000</td>
<td>6.050</td>
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<td>3</td>
<td>WD10.5</td>
<td>°</td>
<td>18.3 m</td>
<td>50,249</td>
<td>49,102</td>
<td>97.72</td>
<td>149.4</td>
<td>8.0</td>
<td>345.0</td>
<td>89.8</td>
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<tr>
<td>4</td>
<td>Synthesized 30.5 m</td>
<td>m/s</td>
<td>30.5 m</td>
<td>50,249</td>
<td>49,882</td>
<td>99.27</td>
<td>3.35</td>
<td>0.34</td>
<td>15.16</td>
<td>1.84</td>
</tr>
<tr>
<td>5</td>
<td>Air Density</td>
<td>kg/m³</td>
<td></td>
<td>50,249</td>
<td>50,249</td>
<td>100.00</td>
<td>1.032</td>
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<td>0.001</td>
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<td>6</td>
<td>WS10.5_TI</td>
<td></td>
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<td>49,882</td>
<td>99.27</td>
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<td>0.000</td>
<td>1.387</td>
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<tr>
<td>7</td>
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<td>W/m²</td>
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<td>49,882</td>
<td>99.27</td>
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<tr>
<td>8</td>
<td>WS10.5 WPD</td>
<td>W/m²</td>
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<td>50,249</td>
<td>49,882</td>
<td>99.27</td>
<td>27</td>
<td>0</td>
<td>1,188</td>
<td>58</td>
</tr>
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</table>
Report Settings

Report Created: 9/10/2012 13:35 using Windographer 2.4.6
Report Period: September 2011

Wind Speed Data

Wind Direction Data

Report Settings

Report Created: 9/10/2012 13:35 using Windographer 2.4.6
Report Period: October 2011

Wind Speed Data

![Wind Speed Data Graph]

Wind Direction Data

![Wind Direction Data Graph]
Report Settings

Report Created: 9/10/2012 13:39 using Windographer 2.4.6
Report Period: November 2011

Wind Speed Data

[Graph showing wind speed data with chart legend]

Wind Direction Data

[Graph showing wind direction data with chart legend]

Report Settings
Report Created: 9/10/2012 13:38 using Windographer 2.4.6
Report Period: December 2011

Wind Speed Data

Wind Direction Data

Report Settings

Report Created: 9/10/2012 13:38 using Windographer 2.4.6
Report Period: January 2012

Wind Speed Data

Wind Direction Data
Report Settings
Report Created: 9/10/2012 13:38 using Windographer 2.4.6
Report Period: February 2012

Wind Speed Data

Wind Direction Data

Report Settings

Report Created: 9/10/2012 13:37 using Windographer 2.4.6
Report Period: March 2012

Wind Speed Data

Wind Direction Data

Report Settings

Report Created: 9/10/2012 13:37 using Windographer 2.4.6
Report Period: May 2012

Wind Speed Data

Wind Direction Data
Report Settings

Report Created: 9/12/2012 22:35 using Windographer 2.4.6
Report Period: July 2012

Wind Speed Data

Wind Direction Data
**Report Settings**

Report Created: 9/12/2012 22:35 using Windograph 2.4.6  
Report Period: August 2012

**Wind Speed Data**

![Wind Speed Data Graph]

**Wind Direction Data**

![Wind Direction Data Graph]

Report Settings

Report Created: 9/12/2012 22:36  using Windographer 2.4.6
Report Period: September 2012

Wind Speed Data

Wind Direction Data