

Summer Intern Projects 2016

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Wind Instrument Comparison

Background: We have noticed that the MetNet wind profiler (measuring horizontal wind velocity from 0.25 km to 2 km above the ground) produces very different results from national weather model predictions. We would like to compare to different measurements and models

Project 1: Compare Wind Profiler to Nearby Surface Stations

Task 1: Pair datasets by time

Task 2: Produce statistics to show how wind speed and direction are related for these instruments: surface versus elevated.

Task 3: Group by weather classifications and see how this effects the relationship between surface wind and elevated wind.

Project 2: Compare Wind Profiler to Weather Model Output

Task 1: Pair datasets by time and interpolate to get vertical profiles on the same levels

Task 2: Produce statistics to show how wind velocities from the two datasets relate at different vertical levels

Task 3: Group by weather classifications and see how this effects the relationship between model and observation.