

Probing NWP model deficiencies by statistical postprocessing - DTU Orbit (08/11/2017)

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The objective in this article is twofold. On one hand, a Model Output Statistics (MOS) framework for improved wind speed forecast accuracy is described and evaluated. On the other hand, the approach explored identifies unintuitive explanatory value from a diagnostic variable in an operational numerical weather prediction (NWP) model generating global weather forecasts four times daily, with numerous users worldwide. The analysis is based on two years of hourly wind speed time series measured at three locations; offshore, in coastal and flat terrain, and inland in complex topography, respectively. Based on the statistical model candidates inferred from the data, the lifted index NWP model diagnostic is consistently found among the NWP model predictors of the best performing statistical models across sites.

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