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Title: Verification of European Monthly Wind Speed Forecasts
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Abstract:
 Analysis of the ECMWF monthly forecasts and hindcasts will be presented revealing that there is statistically significant skill in predicting weekly mean wind speeds over areas of Europe at lead times of at least day 14-20. Previous research on wind speed predictability has focused on the short to medium range timescales - typically finding that forecasts lose all skill by the later part of the medium range forecast. To our knowledge, this research is the first to look beyond the medium range timescale by taking weekly mean wind speeds instead of averages at the hourly or daily resolution, for the ECMWF monthly forecast. We will show that the operational forecasts had high levels of correlation (~0.6) between the forecasts and observations over the winters of 2008-2012 for some areas of Europe. The hindcasts covering 20 winters show a more modest level of correlation but are still skillful. Additional analysis examines the probabilistic skill for the UK with the application of wind power forecasting in mind. It is also shown that there is forecast 'value' for end users (operating in a simple cost/loss ratio decision making framework). We will conclude that end users who are sensitive to winter wind speed variability over the UK, Germany and some other areas of Europe should therefore consider forecasts beyond the medium-range timescale as it is clear there is useful information co
ntained within the forecast.
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