



Towards a simple and easy to interpret wind verification scheme

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During MesoVICT the verification of 2D- surface wind fields will receive special attention. Vector fields like wind are more complex to verify than scalar quantities. It is common approach to verify the single scalar components with traditional verification measures. This makes an overall and easy to understand interpretation of wind speed and direction verification difficult. Alternatively only wind speed is verified, which is useful for evaluating wind storms or estimating wind power. Wind direction is rarely verified. Although it is an important quantity for e.g. the correct frontal position, or in the case of forest fires.

In this presentation a new and simple verification procedure is introduced dealing with wind speed and direction. It is a grid-point based scheme but can be applied for spatial, for temporal as well as for ensemble forecast evaluations. In a first step differences of forecasts and observations of wind speed and direction are calculated and are filled in a scatter plot. The different quadrants of the scatter plot can be interpreted in the following way (quadrants are counted anti-clockwise):

- I) Forecasted wind direction too cyclonic (directed towards the cyclone center), wind speed too high
- II) Forecasted wind direction too cyclonic, wind speed too low
- III) Forecasted wind direction too anti-cyclonic, wind speed too low
- IV) Forecasted wind direction too anti-cyclonic, wind speed too high

Several examples and possibilities of a statistical evaluation of these scatter plots will be presented during the conference.