*Forecasting the weather
- ensemble techniques
in probabilistic weather prediction*

Prediction and forecast verification for extreme wind gusts

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Probabilistic forecast verification and prediction are closely related targets in the sense that they generally make use of similar statistical model formulations. Here, we present approaches for a probabilistic analysis and verification of extreme wind gusts that are based on extreme value theory.

We present a closed-form expression of the continuous rank probability score (CRPS) for the generalized extreme value distribution and the generalized Pareto distribution. The CRPS is a proper scoring rule which is well known in probabilistic weather forecasting and used to assess the predictive skill of a forecast distribution. A closed-form expression can not only be used for model selection and verification but also for parameter estimation.