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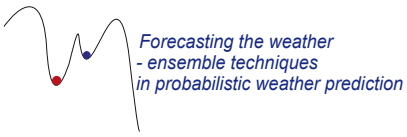

The Austrian updateable model output statistic system (A-UMOS): An adaption of the Canadian UMOS design

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Since the mid 1980s the use of model output statistics (MOS) is well etablished in the daily operational weather forecast. In the latest few years the European Center for Meteorology and Weather Forecasting (ECMWF) has also done some major improvements in its global model. To improve the MOS forecasts for the European Region and to be able to keep up the improvements of the ECMWF we adapted the Canadian Updateable MOS (UMOS, L. J. Wilson and M. Vallée, 2001) for the European region, based on the ECMWF model.

The idea behind the updateable design is that every time a major change in the global model is introduced, a new MOS model version is initialised. As long as there are not enough samples to build stable MOS equations, a blending between the old and the new modelversion is performed. The system contains also two seasons with a blending in between and consists 22 predictants. Most of them are standard meteorological parameters predicted using multidimensional linear regression, for six predictants multiple discriminant analysis is used to compute probability forecasts in up to 6 classes.

Equally high correlation coefficients for the transition period between the model version and between the two seasons shows that the updateable design works well. The developed system provides good results up to a forecast time of 6 days. And, last but not least, the semi-automatic initialisation of a new model version saves a lot of programming time – and hence money.