



# Probabilistic temperature forecasting with statistical calibration in Hungary

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Weather forecasting is mostly based on the outputs of deterministic numerical weather forecasting models. Multiple runs of these models with different initial conditions result in forecast ensembles which are used for estimating the distribution of future atmospheric variables. However, these ensembles are usually under-dispersive and uncalibrated, so post-processing is required.

In the present work Bayesian Model Averaging (BMA) is applied for calibrating ensembles of temperature forecasts produced by the operational Limited Area Model Ensemble Prediction System of the Hungarian Meteorological Service (HMS).

We describe two possible BMA models for temperature data of the HMS and show that BMA post-processing significantly improves calibration and probabilistic forecasts although the accuracy of point forecasts is rather unchanged.

Comments: arXiv admin note: substantial text overlap with [arXiv:1202.4442](https://arxiv.org/abs/1202.4442)

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