



## **Statistical postprocessing for precipitation forecasts during the West African Monsoon**

Peter Vogel (1), Tilmann Gneiting (1,2), Peter Knippertz (1), Andreas Fink (1), and Andreas Schlüter (1)

(1) Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany, (2) Heidelberg Institute for Theoretical Studies (H-ITS), Heidelberg, Germany

Statistical postprocessing for ensemble forecasts has undergone many improvements recently. Commonly used methods are Bayesian Model Averaging (BMA) and Ensemble Model Output Statistics (EMOS), but have predominantly been applied over the midlatitudes (e.g. North America or Europe).

The prediction of precipitation events during the wet period of the West African Monsoon (WAM) is highly challenging and ensemble forecasts for precipitation in West Africa during this period have low skill. The present contribution investigates for the first time how statistical postprocessing methods can improve precipitation forecasts to obtain calibrated and sharp predictive distributions.

Perhaps surprisingly, the ECMWF ensemble is unable to outperform climatological forecasts. However, BMA and EMOS postprocessed forecasts can cope with the poor quality of the raw ensemble forecasts and yield predictive distributions that are as calibrated as, but sharper than, climatology.