

To what extent can statistical post-processing improve upon raw GLAMEPS precipitation forecasts?

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Our previous study has indicated extended logistic regression (ELR) to be successful in calibrating single-model ensemble reforecasts of precipitation, namely from the ECMWF ensemble prediction system, whereas Bayesian model averaging (BMA) was shown to degrade the raw ensemble output for the medium range. This is due to the bias correction in BMA, which applies model output statistics to individual ensemble members. As a result, the spread of the bias-corrected ensemble members is decreased, especially for the longer forecast projections. This study compares the raw ensemble output, BMA and ELR for multi-model short-range ensemble forecasts of precipitation, namely from the grand-limited area model ensemble prediction system (GLAMEPS), using a data set of precipitation observations in a number of water boards in the Netherlands. Preliminary verification results show again that BMA is worse than the raw ensemble output. It will be shown whether ELR shows better skill than the raw output. Special attention will be given to the higher precipitation amounts.