



Simultaneous Ensemble Post-Processing for Multiple Lead Times with Standardized Anomalies

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Statistical post-processing of ensemble predictions is usually adjusted to a particular lead time so that several models must be fitted to forecast multiple lead times. To increase the coherence between lead times, we propose to use standardized anomalies instead of direct observations and predictions. By subtracting a climatological mean and dividing by the climatological standard deviation, lead-time-specific characteristics are eliminated and several lead times can be forecasted simultaneously. The results show that forecasts between +12 and +120 h can be fitted together with a comparable forecast skill to a conventional method. Furthermore, forecasts can be produced with a temporal resolution as high as the observation interval e.g., up to ten minutes.