



The SRNWP-V project: a comparison of regional European forecast models

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A major aim of the SRNWP-V (Short Range Numerical Weather Prediction-Verification) programme is to make an inter-comparison of the performance of the main operational limited-area SRNWP models. Currently there are 4 reference models in the inter-comparison: HIRLAM reference (FMI), Aladin-France, COSMO-DWD, the 12 km UM, and the ECMWF high resolution operational global model. Forecasts initialised at 00Z are verified as a function of forecast range (not availability) using the Met Office operational verification system.

The project is now in its extended phase. The first phase saw the verification of the following parameters: pmsl, 2m temperature, 2m relative humidity, 10m winds and 6h total precipitation against station observations, over the common area (in this case Aladin-France).

The project has seen the establishment of a common framework for the exchange and verification of forecasts from representative reference versions of the main limited area operational models. Results have been produced since January 2010. The comparison aims are similar to the long established WMO Commission for Basic Systems (CBS) framework of verification for the comparison of global model forecasts, but for this the focus is on weather-related parameters for which limited area models are designed and used. In distinction to the CBS exchange of verification scores, where each centre performs its own verification, with possibly significant differences in observations or analyses used, this comparison has used a single consistent verification suite. This eliminates some of the uncertainty in the comparison.

There is no clear evidence of any single model having a significantly large advantage over the others. For some parameters some models are better but for other parameters other models perform better. In addition the model systems develop over time so that relative advantages can change as improvements are made. By continuing the comparison in future the benefits of these should become evident.