



Application and verification of „COSMO” model products in Poland.

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The national meteorological service of Poland , operates the LM (DWD) in an operational mode at 14 km grid spacing twice a day (00 UTC and 12 UTC). The size domain is 193 x 161 grid points.

The mesoscale LM model forecast were verified in the monthly period. For the fields generated by the model the following parameters were extracted: 2m temperature, 2m dew point temperature, pressure reduced to MSL and wind speed. These variables were compared with synoptic data from Polish synoptic stations. Mean and RMS errors were calculated using 12 forecast time points (every 6 hours) for a 72 hour forecast starting at midnight. The error estimators were calculated for selected synoptic stations (56)

The precipitation verification is based on the evaluation of contingency tables, for different precipitation thresholds, from which is possible to deduce some verification indices: FBI, POD, FAR, TSS, HSS, ETS have been used in this work .Verification has been performed in terms of 24-hour cumulated precipitation. Observations are derived from a raingauge network (308 stations).

I will present the results of verification from January to December 2004. I would also present the examples of the behavior of the model in the extremely meteorological situation.

I will present in detail two case studies of forecasts of extreme weather events which occurred in Poland in 2004:

1) heavy precipitation caused flood in August 2004

2) very strong winds in November 2004.