



The experiment with QPF (Quantitative Precipitation Forecast) in Poland.

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Precipitation forecasting is one of the most important reasons to utilize a numerical weather prediction model. The question about quality of this forecast is crucial.

We take part in the project about QPF (Quantitative Precipitation Forecast) in numerical model prediction realized within the COSMO (Consortium for the Small-scale Modeling). The aim of this project is running many sensitivity experiments on a series where precipitation has verified very poorly. The outcome of these experiments will increase our expertise about humidity in the atmosphere and perhaps will improve the quantitative precipitation forecast.

In Poland we operate the COSMO model version 3.5, 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 and 35 vertical layers. Verification has been performed in terms of 24-hour cumulated precipitation. Observations are derived from a rain gauge network (308 stations).

To choose test cases being dominated by stratiform or convective precipitation we used every day model results (3h forecast and accumulated 24 h), surface data from 56 SYNOP stations and 308 rain gauge stations and radar network.

We received reference version on the model 3.19 with grid scale 7 km. This version was used to sensitivity studies by changing the initial condition, numeric's, and physical parameterizations.

I would demonstrate examples of the model's behaviour in the selected meteorological

situation and would present the results of precipitation forecast derived from different runnings of reference version on the model.