EMS Annual Meeting Abstracts
Vol. 12, EMS2015-223, 2015
15th EMS / 12th ECAM


# Verification of precipitation forecasts for hydrological modelling for small basins in the Czech Republic

Martin Vokoun
Czech Republic (vokounm@fzp.czu.cz)

Precipitation forecast has great significance in hydrological forecast, particularly for issuing flood alerts. Temporal and spatial distribution of precipitation determines runoff depths, especially in small basins. This study aims at comparison of three different short range precipitation forecasting approaches, focusing on small basins in the Czech Republic with distinct orography. First approach is a deterministic forecast of ALADIN-CZ model. Next two methods are based on the ensemble forecast system ALADIN-LAEF and on a combination of ensemble and deterministic forecast, respectively. The analysis focuses on the verification of assumption that the ensemble forecast provides more reliable results and the combination of deterministic and ensemble forecast gives more accurate description of rainfall event temporal evolution. To determine behavior and the levels of dependency between available model forecasts the verification scores are used. This verification is based on comparison of precipitation forecast in horizontal resolution 4.7 km with rainfall measurements generated by combination of rain gauges and radar based data.