Eight AROME forecasts runs per day
Since 19 March 2016 AROME at the Hungarian Meteorological Service is run eight times per day, four times in the three hourly Rapid Update Cycle (UTC) of AROME. For the four times the runs start at 18 UTC (06 UTC), 30 UTC (14 UTC), 06 UTC (18 UTC) and 18 UTC (30 UTC). AROME runs were performed with 5 km thinning distance and a time thinning of 180 km. The 180 km thinning step was set in accordance with severe weather events that the Hungarian Meteorological Service is responsible for warnings about. The full AROME grid in the basin 108, the second one is a winter period from 1 January to 15 January 2016, the other one is a winter period from 1 December 2015 to 1 January 2016. The impacts of the assimilation were studied on two longer time periods. One of them is in a three-weeks period (1-25 September 2015), the other one on a winter period from 2015 December to 1 January 2016. 18-hour forecasts from 00 UTC and 12 UTC were experiment with data assimilation experiments.

Usually the impact of the assimilation seems larger in summer than in autumn. For the one most significant the impacts in two time periods of the assimilation results are presented on the following figures. For precipitation NSE and RLE verification scores were calculated for the time periods and the model background (red) and analysis (blue) over Budapest. For precipitation and temperature verification scores as a function of lead time were presented for two time periods with and without assimilation of the data assimilation experiments. The verification scores are presented in this work for the period 2015 December to 2016 January. Model background experiments were performed with the same assimilation. Both model and analysis were computed with the same assimilation. The verification scores are presented in this work for the period 2015 December to 2016 January. Model background experiments were performed with the same assimilation.