AQA - Air Quality model for Austria – Evaluation and Developments

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The regional weather forecast model ALADIN of the Central Institute for Meteorology and Geodynamics (ZAMG) is used in combination with the chemical transport model CAMx (www.camx.com) to conduct forecasts of gaseous and particulate air pollution over Europe. The forecasts which are done in cooperation with the University of Natural Resources and Applied Life Sciences in Vienna (BOKU) are supported by the regional governments since 2005 with the main interest on the prediction of tropospheric ozone.

The daily ozone forecasts are evaluated for the summer 2008 with the observations of about 150 air quality stations in Austria. In 2008 the emission-model SMOKE was integrated into the modelling system to calculate the biogenic emissions. The anthropogenic emissions are based on the newest EMEP data set as well as on regional inventories for the core domain. The performance of SMOKE is shown for a summer period in 2007.

In the frame of the COST–action 728 „Enhancing mesoscale meteorological modelling capabilities for air pollution and dispersion applications", multi-model ensembles are used to conduct an international model evaluation. The model calculations of meteorological- and concentration fields are compared to measurements on the ensemble platform at the Joint Research Centre (JRC) in Ispra. The results for 2 episodes in 2006 show the performance of the different models as well as of the model ensemble.