



The AQMEII Two-Continent Regional Air-Quality Model Evaluation and Intercomparison

Stefano Galmarini (1), Michael Moran (2), and S. Trivikrama Rao (3)

(1) JRC/IES, (2) Environment Canada, (3) US-EPA

Recognizing the need for improved and comprehensive evaluations of regional-scale numerical photochemical modeling systems, an international collaborative research project entitled “Air Quality Model Evaluation International Initiative (AQMEII)” has been launched by scientists and managers from Europe and North America (Galmarini et al., 2010). The primary objectives of this project are to assess the state of science in current regional-scale air quality models, to rapidly advance the science in these models, and to help establish the models’s credibility in simulating the spatial and temporal features embedded in air quality observations so that the models can be more confidently used in both the research and policy arenas (Rao et al., 2010). The first phase of the AQMEII project is now underway. Participating air-quality modelling groups from the United States, Canada, and across Europe are performing full-year retrospective simulations for 2006 for both European and North American domains. Prepared files of emissions, meteorology, and chemical boundary conditions for both continents have been made available to all participants. Each participating group will in turn submit a wide range of predicted fields on common grids to AQMEII, including emissions, meteorological, concentration, and deposition fields. Model performance will be evaluated against comprehensive sets of network observations, non-routine observational data sets, and peer models based on operational, diagnostic, dynamic, and probabilistic evaluation approaches. Model ensembles will be considered and examined throughout the process. This talk will provide a status report on the project present the preliminary results and the way forward of the activity.