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O-09. Mikhail Sofiev: On influence of NWP driver and NWP-CTM interface on dispersion ensemble

M.Sofiev, P.Siljamo, M.Prank, J.Soares

Finish Meteorological Institute, FMI, Finland
(mikhail.sofiev@fmi.fi)

A problem of construction of a modelling ensemble for air quality assessment and forecasting is considered. One of potential dimensions along which the ensemble can be compiled is the treatment of NWP data, different weather prediction models as sources of the data, and NWP-to-CTM interface. Using simple examples (also an example of ETEX advection exercise of the school), it is shown that one of the problems of ad-hoc created ensembles is the sufficient representation of the uncertainty range by the ensemble members. In many cases simple change of the CTM model parameterization is not enough, neither variation of emission information within its confidence limits is sufficient to cover the actual variability. In these cases a utilization of alternative NWP driver can simplify the problem and eventually lead to an ensemble better reflecting the objective uncertainties of the problem.