INTERCOMPARISON OF TWO GAUSSIAN MODELS IN THE URBAN ZAGREB AREA

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Abstract: In this work intercomparison of two Gaussian models will be presented. One is EPA regulatory model ISC3 and other model is GALA (Gaussian model with ALADIN input). The GALA is developed in Meteorological and Hydrological Service of Croatia. Intercomparison is done using modelled meteorological data sets for urban Zagreb area as models input. This data are provided through limited area numerical weather prediction model ALADIN. Pre-processing provides dispersion parameters i.e. mixing height and stability which are important input data necessary for the calculations of air pollution models. Mixing heights are calculated with the bulk Richardson number method and stability is calculated based on vertical temperature gradient and mean wind speed.

The intercomparsion of the models shows differences (or similarities) in calculated concentrations from the point source located in Zagreb. The simulations of ISC3 with input parameters based on measurements are further analyzed. This will provide an important evaluation of model performance that is a base for accurate interpretation of models intercomparison.