

AEROSOL BOX MODEL INTERCOMPARISON

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ABSTRACT

We compared three different sulfate aerosol model concepts for a set of representative test cases. All three models describe the sulfate aerosol dynamic including a description of nucleation, condensation, coagulation, chemical sources and gravitational loss. The participating models include a sectional model, a model of moments and a model based on modes and moments. The initial conditions were taken from a present day simulation of the sulfur cycle with a global three-dimensional chemical transport model. We analysed the influence of different model concepts on aerosol number concentration and size distribution and compared those differences with the impact of different nucleation schemes on the simulated aerosol dynamic.