



Modeling Aerosol Formation in Alpha-pinene Oxidation Experiments: Impact of Non-ideality of Aerosol Mixture

S. Compernelle, K. Ceulemans, J.-F. Müller
Belgian Institute for Space Aeronomy, Brussels, Belgium

We have applied BOREAM (Biogenic hydrocarbon Oxidation and Related Aerosol formation Model)[1] to simulate alpha-pinene oxidation and the resulting formation of secondary aerosol (SOA). Condensation is estimated with the vapor pressure group contribution method of Capouet et al.[2]. As the non-ideality of the aerosol mixture affects the condensation, also the activity coefficients are calculated. Several versions of the UNIFAC[3] method are tested for this purpose, and missing parameters for e.g. hydroperoxides and nitrates are inferred from fittings to SPARC[4] calculations. We will also look at the salting effect of seeds on SOA formation, and the possibility of phase splitting.

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