AEROSOL MODELING IN CHIMERE

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Aerosol modelling is a challenging problem to better improve particle emissions reduction strategies over Europe. The chemical transport model CHIMERE has been improved to take account for particle transport, formation, deposition at the continental scale. The aerosol model contains both inorganic and organic species, primary and secondary in origins.

Main inorganic species are nitrate, sulfate, ammonium and water, this latter component essentially drives the size evolution of particles and absorption of semi-volatile compounds in the bulk phase.

Secondary organic aerosols from biogenic and anthropogenic gas precursors are partitioned between gas and particulate phases through a temperature dependent partition coefficient. First developments are presented with preliminary simulation results over Europe.