Towards the Evaluation of Cloud-Aerosol Interaction Using Super-Droplet Method

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http://www.es.jamstec.go.jp/esc/research/Holistic/index.ja.html

Clouds play an important role in climate system. Especially, there are still large uncertainties in the indirect aerosol forcing on the climate change. Towards the quantitative evaluation of this cloud-aerosol interaction, we are extending Super-Droplet Method to incorporate several sorts of chemicals as the Cloud Condensation Nuclei and their chemical reactions.

Super-Droplet Method is a novel, particle-based simulation model of cloud microphysics, which suppress the increase of computational cost and make it easy to incorporate various properties of cloud, such as, several sorts of soluble/insoluble CCNs, and their chemical reactions. In this talk, we will present that how the development is going on and what is our future prospects.