**Interactive comment on** “Reduced efficacy of marine cloud brightening geoengineering due to in-plume aerosol coagulation: parameterization and global implications” by G. S. Stuart et al.

**Anonymous Referee #1**

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This manuscript investigates aerosol coagulation in the very early plume development and discusses the resulting implications on geoengineering by marine cloud brightening. The analysis is based on model simulations. The paper is well organized and scientifically sound. The drawbacks of the paper are that it is rather technical and probably not of very broad scientific interest. On the other hand, the results from the analysis are important for marine geoengineering applications and therefore worth to be published. The paper would benefit from discussing shortly whether the obtained results have any implications beyond geoengineering. For example, are there other potential applications for the derived simple parameterization of in-plume coagulation?

Other than that, I cannot pinpoint any issues that would require further actions in the paper.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 18679, 2013.