

Interactive comment on “Particle-area dependence of mineral dust in the immersion mode: investigations with freely suspended drops in an acoustic levitator” by K. Diehl et al.

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This article presents data on the immersion freezing behaviour of two types of Illite samples (NX (Arginotec) and IMT1 (CMS) and Montmorillonite K10 from Sigma Aldrich. The methods used have been previously published and verified. Droplet sizes used here are much larger than cloud droplet sizes in which ice nucleation would be relevant. The results have been evaluated using the stochastic time dependent approach and singular time -independent approach. The results are of interest to the broader community.

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The paper could benefit from further discussion of the results and some application of the results in terms of discussion between the validity or comparability of the stochastic and singular representations of the data. In addition, some aspects of the discussion have been left for the reader to assess on their own without a full description of what the authors are trying to convey.

As such I recommend publication after noted revisions have been taken into account and after all technical corrections suggested have been made.

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/14/C4627/2014/acpd-14-C4627-2014-supplement.pdf>

Interactive comment on *Atmos. Chem. Phys. Discuss.*, 14, 12887, 2014.