

Interactive comment on “Aerosol indirect forcing in a global model with particle nucleation” by M. Wang and J. E. Penner

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In your simulations, you use cluster activation theory (Kulmala et al., 2006), parameterized based on measurements over a forested continental site (Hyytiälä) to describe aerosol nucleation. Cluster activation theory postulates that clusters containing one sulfuric acid molecule and some other compound(s), possibly an organic molecule from BVOC oxidation, initiate nucleation. What justifies the assumption that cluster activation works the same way over remote oceans as over the boreal forest?

(Please check the spelling of Sihto et al. (2006) in the text.)

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References

Kulmala, M., K. E. J. Lehtinen, and A. Laaksonen (2006). Cluster activation theory as an explanation of the linear dependence between formation rate of 3nm particles and sulphuric acid concentration. *Atm. Chem. Phys.* 6(3), 787–793.

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