

Interactive comment on “On the contribution of Aitken mode particles to cloud droplet populations at continental background areas – a parametric sensitivity study” by T. Anttila and V.-M. Kerminen

Anonymous Referee #2

Received and published: 11 June 2007

The manuscript presents a study on the significance of different physical and chemical properties on the cloud activation of Aitken mode particles. The manuscript presents a very nice idea of using probabilistic collocation method for a sensitivity analysis. It gives a quantitative approximation of the effects of these properties and can be helpful, for example, in modelling when choosing the accuracy of description of these properties. I recommend publishing this manuscript.

Minor comments:

In the "BASE"-scenario, a "jump" is found for the lowest updraft velocity. It might be a good idea to validate this by making calculations for intermediate values (0.2 - 0.4 m/s)

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of updraft velocities to see if this is really an artifact or an actual tendency. Nevertheless, the results of this test are not required to be added in the manuscript, only a short comment on it.

Technical corrections:

Page 6087, line 26 and page 6088, line 5: 'Svenningsson' misspelled

Page 6096: a space missing between 10^{-4} and 'as'

page 6099 line 28, page 6100, line 5, page 6100, line 23, and page 6101, line 7: correct abbreviations of journals

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 6077, 2007.

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