

Interactive
Comment

***Interactive comment on* “Technical Note: Analytical formulae for the critical supersaturations and droplet diameters of CCN containing insoluble material” by H. Kokkola et al.**

H. Kokkola et al.

Received and published: 14 February 2008

We thank the Referee for the comments that will surely help improve the paper. Here are our replies to the points in the Referee Comment.

Page 17970, line 8. A general reference (i.e. Seinfeld and Pandis, 1998) is needed here.

The above reference will be added to the text.

Page 17970, line 14. There is typo in "Köhler"

This will be corrected in the revised version.

Page 17970, line 15. I think the way this statement is written suggests that Abdul-

S9276

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



Interactive
Comment

Razzak and Ghan (2004) parameterization is the only one that uses the critical diameter and supersaturation to calculate activated droplets. The statement may be written in a more general form including appropriate references (i.e., Twomey, 1959. Nenes and Seinfeld, 2003,...).

We will refine the statement and include also other references for which this solution is applicable.

Page 17971, line 1. Although it has become "customary" to account for soluble fraction in this manner, it would be appropriate to include a pertinent reference here.

We will include the following reference here: K. Lehmann, A. Massling, A. Tilgner, S. Mertes, D. Galgon and A. Wiedensohler, Size-resolved soluble volume fractions of submicrometer particles in air masses of different character, Atmospheric Environment, Volume 39, Issues 23-24, July-August 2005, Pages 4257-4266

Page 17971, Line 26. I think a more appropriate term here is "suggest" as the authors did not consider the effect of surface tension on S^ calculations.*

We will change the term to "suggest" in the revised manuscript.

Since the symbol S^ was introduced earlier I think using it consistently long the paper (instead of repeating "critical supersaturation") may improve reading.*

We will use S^* for critical supersaturation in the revised version.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 17967, 2007.

[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)