Interactive comment on “The role of atmospheric ions in aerosol nucleation – a review” by M. B. Enghoff and H. Svensmark

Anonymous Referee #1

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The MS is well written and the topic is important. However, it is not all clear to me why this review has been written. Similar type of reviews have been published recently e.g. by Curtius and and in atmospheric point of view a special issue by Finnish-Estonian group was published in 2007.

I think that authors should justify, why this review have been made and why it should be published.

Besides that I have some scientific/technical comments

1) In equation 1 the Zeldovich factor is missing, and should be included

2) In equation 3, the notation is somewhat unclear. indexes a and b should be better described in physical point of view.
3) It would be important to mention and also explain the activation of clusters, which is a proper mechanism of new particle production (see Kulmala, Lehtinen, Laaksonen, ACP, 2006)

4) On sign preference, authors should also explain the recent measurements by Winkler et al. (2008, Science)

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 7477, 2008.