

Interactive comment on “Conceptual study on nucleation burst evolution in the convective boundary layer – Part III: Physico-chemical characterization” by O. Hellmuth

Anonymous Referee #2

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Paper III

General comments: See paper I

Specific comments:

* page 11521, line 22-> (Hence...) This sentence is hard to understand, and should be reworded.

page 11522, line 5, The background aerosol concentration considered here is very low. As stated in the general comments, the background aerosol concentration is extremely

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low, lower than usually encountered anywhere.

* page 11522, line 13: the emission rate; is it possible to give the mean emission rate?

* page 11522 line 18; OH is given by an empirical relation: it might be useful to give a more clear reference to the relation used

* page 11523 line 13 When the sulfuric acid concentration exceeds a certain threshold value...

Is it possible to give the numerical value of the threshold?

* page 11524, line 11. To note... I did not understand this sentence. Could it be clarified?

* line 17, ...sulfuric insert acid.

* page 11528, line 19-26. The differences... -> ...propagation.

This is a confusing paragraph. It should be rewritten for clarity

Conclusions, page 11541, line 23: I do not think that the scenarios can be said to consider typical conditions due to the low background aerosol (eg. the condensation sink is probably 1-2 orders of magnitude lower than generally during continental boundary layer bursts), so this should be reworded.

Technical comments:

* some typing errors * page 11525, line 23, exceedance of maximum -> reaching the maximum? * figures: scaling of figures 3 b, c and d and of figure 10c should be changed to give better resolution of the interesting areas

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 11517, 2005.

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