

## ***Interactive comment on “Cloud-scale model intercomparison of chemical constituent transport in deep convection” by M. C. Barth et al.***

**M. C. Barth et al.**

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We appreciate the comments given by the reviewer and thank him/her for his/her interest in our paper. Responses to the specific comments of the referee are given here.

*1. At conclusions section, the authors should improve the discussion about how this kind of approach can be efficiently used to improve the traditional convective schemes (with or not chemistry) in the large-scale global/regional models.*

The conclusions have been revised to suggest ways that convective transport and lightning- $\text{NO}_x$  parameterizations can be improved. Namely, we suggest cloud resolving scale and large scale model intercomparisons (similar to that done by Ovtchinnikov and Ghan, 2005).

*2. Page 8044, line 7: Insert a blank space between “finitedifference”*

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3. Page 8048, line 2: *MPDATA* needs a reference.

The Smolarkiewicz and Grabowski (1990) citation is now included.

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Interactive comment on Atmos. Chem. Phys. Discuss., 7, 8035, 2007.

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7, S4662–S4663, 2007

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