

# ***Interactive comment on “MATCH–SALSA – Multi-scale Atmospheric Transport and CHemistry model coupled to the SALSA aerosol microphysics model – Part 1: Model description and evaluation” by C. Andersson et al.***

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By mistake two replies were lacking in our first reply to anonymous Referee #2. The concerns and our corresponding replies are:

R3. Section 2.3, P3274, L24 – P3275, L6: The text describes that MATCH-SALSA can be coupled to an online cloud activation model. I assume this coupled model is only used for quantifying cloud drop number concentration and is not used in this study? Please clarify this.

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A3. The cloud activation model is used for quantifying the cloud droplet number concentration. The activated fraction of particles is coupled to one version of the wet scavenging scheme. We will explain this more clearly in the revised manuscript.

R4. Section 3, P3276, L1: Are the vertical levels in the model terrain following? Please state this in the text.

A4. We will include the following information in the revised manuscript: The vertical distribution is inherited from the meteorological model, which in this case is hybrid (eta) coordinates, with shallow terrain following layers close to the ground and thicker pressure levels higher up.

Attached is the full updated document with all concerns and replies to anonymous Referee #2.

Please also note the supplement to this comment:

<http://www.geosci-model-dev-discuss.net/7/C1579/2014/gmdd-7-C1579-2014-supplement.pdf>

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Interactive comment on Geosci. Model Dev. Discuss., 7, 3265, 2014.

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