

Interactive comment on “The mineral dust cycle in EMAC 2.40: sensitivity to the spectral resolution and the dust emission scheme” by G. Gläser et al.

Anonymous Referee #3

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A scientific significance of the manuscript is the assessment of two dust emission schemes in the spectral resolutions of T42, T63, T85 and T106 in a global model. It is helpful for global dust simulation. This work could be published after some suggested revisions.

1) A major concern is on the section 4 evaluating two single dust events modeled with the T85TG. The contents of section 4 with 5 pages are beyond the manuscript title “The mineral dust cycle in EMAC 2.40: sensitivity to the spectral resolution and the dust emission scheme”. Can this title reflect the contents of this presented paper? Please shorten the section 4 or combine it with the section 3.2.

2) In Abstract (line 8), are the scavenging and wet deposition same?

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3) It could be better to add the figures with the differences of BK- and TG-emission schemes in Figs. 2 and 3, because it is hard to distinguish the differences Figs. 2 and 3 in understanding their descriptions in the section 3 and Table 2.

4) Page 27296, line 22: Table 2 doesn't give the ratio of scavenging (wet deposition) to the total deposition.

5) With Table 2, the Eq. (1) and Fig. 4 could be redundant. Please cut them.

6) Page 27297, line 4: please explain why the wet-to-total deposition rate is dependent on the BK- and TG-emission schemes.

7) I guess that this paper could be from a thesis. Some sentences are not well rewritten or organized. (E.g. Page 27293, line 19: , page 27297, line 6-7, page 27298, line 10; chapter). Please improve them.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 27285, 2011.

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