

Interactive comment on “Development and testing of a desert dust module in a regional climate model” by A. S. Zakey et al.

A. S. Zakey et al.

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Dear Editor,

Concerning the paper :

Development and testing of a desert dust module in a regional climate model A.S. Zakey, F. Solmon, F. Giorgi Atmospheric Chemistry and Physics Discussions, 6, 17491792, 2006 SRefID: 16807375/acpd/200661749

1) We now have submitted the author final comments to every referee . According to the different points emerging during the discussion, we plan to submit a revised version, including:

New extinction coefficient values obtained considering an 'emission like' distribution in Mie calculations.

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A seasonal comparison of AOD with the AERONET Cape Verde station.

Seasonal AOD comparison accounting for a filtering of model result according to daily MISR observations.

Text modifications according to reviewers comments.

2) A number of other points, pointed out by F. Dulac in a free comment, would require your advice :

F. Dulac suggested to present also a seasonal AOD average obtained with MODIS. We do have such a graph (MODIS L3 monthly average). However the screening of the data on daily basis (like we did for MISR) is not done. This would add two graphs to the paper for a limited information gain, given that MODIS does not provide AOD over Sahara bright surface. This would also imply delays in the revised paper submission.

Scatter plot : For the seasonal comparison , F. Dulac was suggesting to perform scatter plots. We performed these plots (actually for MISR and MODIS unscreened) and sent them to F. Dulac : they could be included in the revised version.

Model resolution. F. Dulac was pointing out that the same resolution should have been used between the case study and the seasonal average. We performed a 60 km for the SHADE test case that could be included instead of , or in complement to the initial 40 km resolution results. I also sent these result to F. Dulac. The resolution issue could only be discussed rather superficially : it was not our original purpose to present a detailed sensitivity study of the scheme : beside the resolution, a number of other parameter can affect the result (eg convection scheme).

Our general question is how much of these optional points should be included in the revised version , given that along with the modifications suggested by referees , the number of figure and corresponding text will increase?

Thank you very much for your assistance !

F. Solomon (on behalf of all coauthors)

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 1749, 2006.

ACPD

6, S1249–S1251, 2006

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