

Interactive comment on “On the radiative impact of aerosols on photolysis rates: comparison of simulations and observations in the Lampedusa island during the ChArMEx/ADRIMED campaign” by S. Mailler et al.

S. Mailler et al.

sylvain.mailler@lmd.polytechnique.fr

Received and published: 30 September 2015

Dear Dr. Dulac,

First of all, we wish to thank you for the very careful attention brought to our manuscript at every stage of its processing, and apologize for the long delays on our side. We are now finally able to submit a revised manuscript, hoping that you could consider it for publication in Atmospheric Chemistry and Physics.

C7434

The Reviews were very useful and allowed us to improve the manuscript in many aspects: - Providing a figure of the Nox emissions on the simulation domain (Fig. 2 in the revised manuscript) which is actually very useful for the interpretation of the effect of aerosols on ozone concentrations: from these two maps (Fig. 2 and Fig. 15C in the revised manuscript), it appears very clearly that screening by aerosols results in weaker ozone concentrations in Nox-rich regions, and stronger ones in NOX-poor regions. - Provide a more quantitative analysis of the bias and correlation of the simulated vs. Observed AOD at 12 locations, showing that the performance of the model is rather satisfying in Africa and the Mediterran basin, but not so in continental Europe. The addition of this new table for statistical scores allowed us to replace many qualitative evaluations by quantitative statements.

The answers to your questions and comments are given in the attached document.

Best regards,

S. Mailler

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/15/C7434/2015/acpd-15-C7434-2015-supplement.pdf>

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 7585, 2015.

C7435