

Interactive comment on “Modelling of gaseous dimethylamine in the global atmosphere: impacts of oxidation and aerosol uptake” by F. Yu and G. Luo

Anonymous Referee #1

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This paper is a novel study about the fate of dimethylamine (DMA) in the global atmosphere and presents global simulations of the sources and sinks of DMA with a state-of-the-art CTM. I support the publication of this study in ACP, after some minor corrections/additions in the text. 1. Give the source analysis of NH₃ emissions used in the model (anthropogenic, soils, oceans, biomass burning) and add the references of the database. 2. Page 17730; Line 1: You can also refer to previous studies which calculated emissions of amines based on NH₃ with a global model, before the current work (see doi:10.1155/2010/939171,) 3. Statistical analysis (standard deviation, (root) mean squared error, etc...) has to be added in comparison of DMA with observations

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for Fig. 4 for each site type. Please add it also in the discussion. 4. A table has to be added with the calculated budget of DMA (emissions, dry/wet deposition, chemical destruction per reaction etc.) as well as of the other calculated amines. References from other studies must also be included - NH₃ budget analysis would be also useful for comparison. 5. Page 17734; Line 25: cuts the lifetime of DMA – Please rephrase appropriately.

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 17727, 2014.