We would like to thank the reviewer for his/her constructive comments which help to improve the manuscript. Our point-to-point replies (in blue) to the comments are given below (the original comments are copied here in *Italic*). The manuscript has been revised accordingly. All the changes to the manuscript have been highlighted using the Microsoft word "track-changes" tool in one version of the submitted revised manuscript.

Anonymous Referee #1

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

The database of NH_3 emissions and references are now added to Section 2.3.

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,)

Yes, thanks for the tip. The mentioned reference (Myriokefalitakis et al., 2010) focused on amines from oceans only and didn't report modeled concentrations of amines in the air. We have added a few sentences to describe this work and modify the corresponding text.

3. Statistical analysis (standard deviation, (root) mean squared error, etc…) has to be added in comparison of DMA with observations for Fig. 4 for each site type. Please add it also in the discussion.

Yes, we added statistical analysis. Instead of standard deviation or (root) mean squared error, we provided normalized mean bias (NMB) which shows the level of under-prediction. Since we added simulations for monomethylamine (MMA) and trimethylamine (TMA) per suggestion of referee #2, we didn't separate the statistics for each site type due to small number of observations available. Relevant discussions have been added to the text.

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.

Good point. Budget information was not saved in the output files of our previous simulations. We have modified the code and re-run the model (at a higher horizontal resolution, 2^{o}x2.5^{o}) to output the budget information. Table 2 in the revised manuscript gives the calculated budget of MMA, DMA, and TMA. During the re-run of the simulations, we also modify the approach to calculate the average lifetime. In our ACPD manuscript, the lifetime was calculated as the inverse of average oxidation rate and uptake sink (both in s^{-1}). In the revised manuscript, we calculate the mean oxidation and uptake lifetime as the ratio of amine burden of each gird box to

the sinks associated with oxidation and uptake. This slightly increases the mean oxidation and uptake lifetime over oceans.

We couldn't find any other studies which present the budget information of methylamines. As suggested by the referee, we did include NH_3 budget information in Table 2.

5. Page 17734; Line 25: cuts the lifetime of DMA – Please rephrase appropriately.

Rephrased.