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Atmospheric Chemistry and Physics Discussions

Interactive comment on "An evaluation of ozone dry deposition in global scale chemistry climate models" *by* C. Hardacre et al.

Anonymous Referee #2

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This paper discusses an analysis of ozone dry deposition as simulated in global chemistry models, along with a comparison with site observations. This paper is nicely written and contains a large amount of useful information. My only significant complaint is that, owing to the conclusion that ozone deposition flux to the oceans is the largest source of variability between the models, it would have been nice to include a discussion of that topic, along with observations where available, in the paper. The paper should be accepted after the authors address my minor comments.

Minor comments

Page 22795, line 2: also add Tai, A.P.K., M. val Martin, C.L. Heald (2014), Nature Climate Change, doi:10.1038/nclimate2317

Page 22797, line 21: what about the other models, which approach do they use? Identify in Table 1 which models use Wesely. Note that the CAM-Chem model has since HTAP been updated (Val Martin, M., C.L. Heald, S.R. Arnold (2014), Coupling dry deposition to vegetation phenology in the Community Earth System Model (CESM): Implications for the simulation of surface O3, Geophys. Res. Lett., 41, doi:10.1002/2014GL059651)

Page 22798, lines 11-20: I don't quite understand why the normalization is done using a constant 3 ppbv instead of the model surface ozone (which is used in Figures 6 and 7). Please explain rationale.

Page 22800, line 10: could you identify how many models were similar with those studies?

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 22793, 2014.