

Interactive comment on “Global-scale distribution of ozone in the remote troposphere from ATom and HIPPO airborne field missions” by Ilann Bourgeois et al.

Anonymous Referee #1

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The paper presented by Ilann Bourgeois and a large number of co-authors is not bringing a large number of new knowledge, but it presents a large number of observations of ozone over the Atlantic and the Pacific oceans during the 4 seasons. In this regard, the paper is very important because it helps getting a global view of the ozone distribution in regions that are not too close to sources of precursors. The paper makes use of important field campaigns including ATom and HIPPO. What is really nice is that the data from these airborne campaigns are compared with ozone sonde measurements (when possible) and data from IAGOS in the North Atlantic (civil aircraft measurements).

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I have no major comments to make except to congratulate the teams involved for the wonderful airborne missions conducted under the scientific leadership of Steve Wofsy. The paper is very clearly written with appropriate references and justifications of the statements that are made. The methodology is clearly stated. The results are well presented and the discussion is clear.

I would have wished to see a bit more background material in the introduction, and maybe this can be added. What did we know about ozone above the two oceans from previous experimental studies including space observations and ozone sondes? What did these studies show regarding ozone in the tropics and in the extra-tropics as a function of season? What did we know about the influence above the oceans of African and American biomass burning and lightning? What about the plumes from industrialized countries? And at the end of the paper, does the study confirm what was known or is there any new findings that would change our understanding of the processes involved? Perhaps a few sentences on these issues in the introduction and the conclusions would make the paper more attractive.

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