

Review of “A process-oriented evaluation of CAMS reanalysis ozone during tropopause folds over Europe for the period 2003-2018” by Akritidis et al.

Thank you for carefully answering and taking into account most of my comments. The figures that have been included in the supplementary material are really an added value for the paper and some figures (figures R1 and R4/R5) might even deserve to be included in the main manuscript, I would say. The authors have now provided the essential information about the methods and tools used in their analysis and the findings are also much more interpreted in the revised version of the manuscript.

I only have two minor comments:

1. The reason you gave in your response why you concentrate on Europe (project related) is not very scientific. Please include some scientific arguments (can also be data availability) why the region of interest was Europe, and not other regions in the world with more SST or tropopause fold events.
2. I think you could do better in explaining the spatial variability of the O3S/IAGOS-CAMSRA ozone differences: “The differences seen in the comparison between the observed and CAMSRA O3 concentrations among the examined sites are subject to the uncertainties introduced by the ozonesonde instrument measurements, as well as the proximity of the selected grid points to the respective ozonesonde sites, and the CAMSRA 3-D spatiotemporal representation of the IAGOS take-off landing routes. “ As all the considered sites use ECC sondes (it should also be written in capital letters in the manuscript, not ecc), except Hohenpeissenberg, the ECC ozonesonde uncertainties should be rather modest and very similar for the different ECC sites (so no explanation for the site to site variability). BM sondes experience a higher challenge for measuring tropospheric ozone, but, on the other hand, the Hohenpeissenberg people have a long experience with it. Also the IAGOS instruments at the different airports should be traceable to the same standard, so this cannot explain why the Paris observed profiles deviate much more from CAMSRA than the ones at other airports. The CAMSRA model output should give you an idea about the spatio-temporal variability of tropospheric ozone around the sites/airports: is this higher around Hohenpeissenberg and Paris compared to the other sites? In this context, how are the sites ordered in Fig. 6 and Fig. 10? Making a geographical ordering (e.g. increasing latitude or longitude) might make sense for those figures.