

Interactive comment on “Sensitivity of ensemble Lagrangian reconstructions to assimilated wind time step resolution” by I. Pisso et al.

Anonymous Referee #2

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This paper is in some ways more of a technical note, with a relatively narrow scope. However, I think its conclusions are potentially quite useful.

(i) My main objection is that its conclusion are supported by only one ozonesonde. The paper would be MUCH stronger if more than one sonde were used, and if the effect of grid resolution were tested over different regions/seasons. The paper does make the comment, that due to the high measurement frequency of the ozone measurement, one sonde corresponds to 10,000 measurement points. While this may be technically true, it is highly misleading. The sonde could be represented by a far smaller number of independent measurements without affecting the conclusions of the paper. I would that recommend a greater number of sondes be examined before publication in APCD.

Other comments:

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(ii) Some aspects of the trajectories weren't discussed very clearly or explicitly: their ozone initialization (I gather from REPROBUS but wasn't sure ...), the specification of ozone production/loss along the trajectories.

(iii) It would be desirable to see something like a correlation coefficient, or some other statistical measure of agreement, rather than simply a qualitative inspection of Figure 1.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 8619, 2009.