CORRECTION of

Review of Contrail study by

Jafarimoghaddam & Soler

subm. to JECATS

This is my original comment (last paragraph of Point 8 in my review), which I would like to correct:

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8. *Unusual behaviour in earlier simulations*

   Fig. 12 of the current manuscript shows that the centre of mass of the contrail changes very little over several hours: less than 30 m in 5 h for CoCiP and less than 20 m over 15 h for MultiCon. It seems unrealistic that sedimentation is so weak that the centre of mass changes by only few tens of metres over many hours. There are three interpretations:
   - *The setup of the test case is unrealistic.*
   - *The numerical implementation of sedimentation has flaws.*
   - *Let’s assume, the test case is well-chosen, the implementation is correct and the results are correct: Based on your result, sedimentation appears negligible, which is in stark contrast to your efforts of improving the details of the implementation. This contradiction is not reconciled in the manuscript.*

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The original comment was incorrect: the fall distances are 300 m and 200 m, not 30 m and 20 m. Therefore, sedimentation is not negligible in this case, and my concern is not fully justified.

However, I still think the plots can be improved. In Figs. 4–9, the contrail essentially vanishes after 4 h in four of the six cases. Could you please explain why some ice remains at the lower boundary of the moist layer (z = -200 m)? To me, this steady-state situation appears to be a numerical artefact. In reality, ice crystals would fall into the subsaturated layer below and eventually sublimate there. Fig. 12 appears to show the same pattern, with the only difference being that it takes about 10 h to reach this spurious steady state, probably due to the lower ambient temperature in this case.

In addition, assuming a constant relative humidity for 10 h or even 15 h is not very realistic. In reality, vertical transport affects the water vapour supply. I therefore recommend shortening the x-axis. Similarly, the same z-axis range used in Figs. 4–9 could be used in Figs. 11 and 12.