

We appreciate the comments by the reviewer.

We have added a paragraph under the Modeling framework to address the potential consequence of using the SD model. As a reminder, only pressure, winds and atmospheric and sea level temperatures are nudged, but not the water vapor field. As a result, when contrails form the background water vapor field is converted into part of the contrail ice mass. In other words, the background water vapor field is reduced.

The uncertainty in Table 1, as stated in the caption, is two standard deviations of the four ensemble members. This serves to address the uncertainty due to the background meteorology. We also discussed the uncertainty due to the ice particle size in the manuscript.