

***Interactive comment on “Seasonal ozone vertical profiles over North America using the AQMEII group of air quality models: model inter-comparison and stratospheric intrusions” by Marina Astitha et al.***

**Anonymous Referee #2**

Received and published: 28 May 2018

I have read the manuscript and i would like to make the following comments:

Since the modeling systems have different horizontal grid spacing, vertical layers and meteorological drivers, can the authors connect the differences in model performance to these variations in model configuration?

Lower correlations and high UT errors are shown for spring besides winter (Figures 5 and 6). It would be helpful if the authors provide similar plots with Fig. 7 with average ozone vertical profiles from all stations for spring. This would indicate any consistent

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model behavior in the vertical as with the winter case.

How are the models performing in the meteorological fields for the stratospheric intrusion cases? Can that possibly explain the underestimation of the high ozone values in the upper layers of the atmosphere?

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Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-98>, 2018.

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