

We thank the referee for the comment that improved the manuscript.

The referee commented that vertical retrievals of satellite column NO₂ is unclear.

We agreed with the referee. In the manuscript, we made it clear that the satellite retrievals used in this study are standard retrievals from the 3 institutions in terms of using the NO₂ profiles from global chemical transport models and the WRF-Chem profiles were not used. Now we have the WRF-Chem results that were evaluated with the aircraft measurements. The sensitivity of the satellite retrievals over Texas to a priori model NO₂ profiles needs to be examined. This is an important, interesting research topic for a future study.