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Atmospheric Chemistry and Physics Discussions

Interactive comment on "The impact of observation nudging on simulated meteorology and ozone concentrations during DISCOVER-AQ 2013 Texas campaign" *by* X. Li et al.

Anonymous Referee #2

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The area of this study is suitable for publishing at ACP and technical setup is acceptable, but the authors did not convince me that the results led to substantial new science findings. More importantly, the writing at its current condition is not acceptable for publication. It needs to be rewritten in its entirety with the help of the coauthors, if they want to resubmit.

Specifically, the sentences are ambiguous, incomplete, and awkward throughout the text. One has to go over several times for many sentences to guess what the authors are trying to say. The amount of corrections needed is beyond what a reviewer can suggest in details. I am listening a few typical issues below.

It should have been clearly stated early on what exactly the study is trying to accomplish; what variables they “nudged" exactly, and what results they examined. A reader should not have to read through all the details of the model setups to find out what variables they actually “nudged". Statements such as “. . .the impact of OA on the simulated meteorology and ozone concentrations. . .” or “. . . indicated that OA improved the timing of wind transition . . .”, are throughout the paper without indicating OA on what, or nudging what.

Another issue is that this manuscript was not written for more general readers, terminologies were used without providing background. They never explicitly explain the connection between WRF and CMAQ before using WRF-CMAQ. The terms nudging and OA were used interchangeably without explaining the differences.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 27357, 2015.