

Interactive comment on “Impacts of air–sea interactions on regional air quality predictions using WRF/Chem v3.6.1 coupled with ROMS v3.7: southeastern US example” by J. He et al.

J. He et al.

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Reply to Comments by Reviewer #2

General comments: This paper evaluates the sensitivity of different cumulus parameterization schemes in the WRF/Chem model on model predictions, as well as 1-D OML and 3-D ocean coupling on the impacts of air–sea interactions on air quality predictions. It reveals that considering the subgrid-scale clouds will predict better precipitation, and the air-sea interactions have significant impacts on chemical predictions. It is well organized and written, and subjected to minor revisions before publication.

C4065

Reply:

We thank the reviewer for the positive comments. We have addressed all the comments, please see below our point-by-point reply. The line/page numbers refer to those in the track mode version of the revised paper.

Specific comments:

(1) Page 9969, line 9, the reference Wang et al. (2015b) is not listed in the reference list, as well as the Wang et al. (2015a) in line 14.

Reply:

They were actually included in our original reference list, but the years are missing for both references. We have added the missing info for both references in the revised paper.

(2) Page 9991, Table 1, "Severed as baseline" might be a typo, as well as the "Severed as the baseline to investigate....".

Reply:

We have corrected the typos in the revised paper.

(3) Table 3, why wind direction is not evaluated?

Reply:

We have included wind direction evaluation in the revised paper, see revised Tables 2 and 3a and a brief discussion on WD10 performance in lines 267-268, page 12.

(4) Figure 5, the plot (a) and (b) are not labeled clearly in the figure, and also the parameters each line represents. Figure 6 has the same problem.

Reply:

We have enlarged those figures in the revised paper.

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