

## ***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.***

### **Anonymous Referee #2**

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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.

(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.

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

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as the baseline to investigate...".

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

(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.

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Interactive comment on Geosci. Model Dev. Discuss., 8, 9965, 2015.