This is my second time for reviewing the manuscript drafted by the authors (Lan et al.). Compared with the previous version, I would like to compliment their efforts on reorganizing the structure. At least for now, it is more readable to me for understanding the messages they want to deliver. The points in their response also answer most of my concerns in the previous version. To be honest, the current status of the manuscript is publishable, after some minor revisions are done. However, I hope the authors can spend some efforts in revising or adding more details about the ocean model parts. It may benefit more readers for understanding the importance for each experiment mentioned in section 2.3. If both the editor and authors think these comments are unnecessary, it is ok to just move on to the next step.

1. Section 2.3 now clearly lists the five experiments finished in this manuscript. However, it will be useful to describe the reasons behind each experiment more. For example,
    A. Section 3.1. describes that the C-30NS is aimed to compared with A-CTL. I hope some descriptions can be added either in the introduction or section 3.1. for explaining why coupling in the tropical region is more important than that in the high latitudes (yeah, people can guess MJO as a tropical atmosphere system, but it can still be helpful)
    B. The reason behind the experiment in section 3.2 is about the effect of fine vertical resolution in the ocean model. However, it is very interesting to see that the authors try to demonstrate it by making the thickness of the layer (the one below the SST layer) up to 10 or 30 m. I hope the authors can give more physical explanations on the reasons for doing it. I can expect less temperature changes if this layer is thicker, but why testing it? Normally, it may be done by changing vertical resolution near sea surface. Because the vertical resolution in the upper 10 m of C-30NS is ~1 m, I may decrease the vertical resolution in the upper 10 m, instead of setting a thick near-surface layer.
    C. Section 3.3 is the experiment I still cannot understand after the revision… Line 462 wants to study how thick a vertically-gridded ocean mixed layer. It makes me expect the authors will artificially average the temperature or salinity structure near the sea surface. Line 464 then mentions “the ocean model (SIT) bottom at 10, 30, and 60 m, which included the top 12, 14, and 16 levels”. From Table 1, the authors describe it as the thickness of the ocean model is 10, 30 and 60 m, respectively. It seems like a confliction between line 462 and 464 to me. To me, artificially mixing the near-surface

layer is more reasonable, because the heat during the air-sea interaction can be downward transported to more than 60-m depth via turbulent mixing. Setting the bottom of ocean model less than a certain number is to force the heat to be trapped. It will for sure affect the SST, but may not be consistent with the authors' purpose in discussing the effect of surface mixed layer.

D. I don't have any questions for the sections 3.4 and 3.5.

2. Because I do not expect I will review this manuscript once again, and the manuscript may be published after this revision, I suggest the authors pay extra efforts in checking the grammar or errors within sentences. For example,

- Line 64: may, in turn, "yield"
- Line 142: which "considered" the (tense needs to be consistent in each paragraph)
- Line 225: "air-sea"