

I thank the authors for their responses to my comments. The manuscript is significantly improved. Specific comments are listed below:

2. Hydrometeor mass growth and loss (Figure 9)

Thank you to the authors for examining the calculation of Q_{ten} . The revised equation description and the author's explanation make sense. In the new description from L. 225 to 233, though, there appears to be a mistake in the ordering of the equations that disrupts the flow of the text. The text reads "The total hydrometeor mixing ratio is given by:", and then two equations are given. Eq. 5 appears out of place here. The authors should revise this text to correctly place Eq. 5 and the sentence describing it on L. 230.

Thank you to the authors for including Fig. R3. To my eye, the lines in Fig. 9a,b were very symmetrical, but Fig. R3 proves that this is not the case.

6. Supplemental Material

Thank you to the authors for addressing my comments on the supplemental material. In their response, the authors state "We have added this interpretation to the manuscript" when referring to the NLM simulation. I believe that is the line of text at L. 320-321 that reads "In the absence of strong... difficult to initiate (Fig. S3)". I wonder if NLM should be explicitly mentioned here, so that the reader understands what Fig. S3 refers to and it makes it clearer that they have an NLM simulation. This would also warrant adding NLM back to Table 1. Ultimately, it is the authors' choice about how to treat NLM in the manuscript, but I think the results are interesting as a comparison to the lake and/or mountain simulations.

8. Grammar

The grammar in this manuscript is greatly improved, but there are still several grammatical errors that the authors should address to improve readability. Here are a few examples:

L. 423-424 - "... proving the near-surface moistening promote convection initiation." This should say "proving that near-surface moistening promotes convection initiation".

L. 93-95 - "... regional moisture budget (Wang et al., 2019, 2020a), providing the basic conditions for the cloud-precipitation process." This should say "regional moisture budget (Wang et al., 2019, 2020a) and providing the basic conditions for the cloud-precipitation process."

L. 389 - : "Across the configurations with a lake configurations" – this appears to be a typo. I'm not entirely sure what the author's are trying to say.

Use of the term “plains”

Perhaps this is something that I did not notice in my first read of the manuscript, but the authors frequently refer to “the plains” as a region that they compare to, without ever introducing what this means. I assume that this is referring to the Great Plains region of the United States, but maybe I’m mistaken. The authors should say what they are referring to when they mention “the plains” upon first use in the manuscript. Also, if they are referring to the Great Plains, is that the best comparison? There is no lake effect precipitation in the Great Plains. Perhaps the authors are instead thinking of the Great Lakes region, which they refer to in L. 83.