

*With the revision, the authors have addressed the remarks of me and the other reviewer sufficiently. I have only one remaining remark: I think it would be justified to cite the article <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2021MS002892> for a similar mean-preserving variance adjustment scheme in superparameterization as the one presented here, line 100 in the current manuscript, Eq. 9 in the other paper. Also that paper gives another reason superparameterization requires variance to be coupled, namely to transport shallow cumulus clouds smaller than the GCM grid size.*

We sincerely apologize for forgetting to add this reference. It was certainly on our “to do” list for the revisions, but somehow got overlooked. We have added a sentence to the introduction as well as a paragraph to section 2.3 describing the results and variance transport approach in the Janson et al. (2022) paper.