



EGUsphere, referee comment RC2
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Comment on egusphere-2022-482

Anonymous Referee #2

Referee comment on "Sensitivity of the pseudo-global warming method under flood conditions: A case study from the Northeastern U.S." by Zeyu Xue et al., EGU sphere, <https://doi.org/10.5194/egusphere-2022-482-RC2>, 2022

This article deals with a hot topic that may suit HESS. This study examines the sensitivity and robustness of the PGW method over NEUS by conducting multiple PGW experiments. In addition, several PGW experiments are conducted to answer the three key questions related to the application of the PGW method. The results may help further understand the impact of different PGW simulations on climate projections. Overall, I think it is a pretty good job. However, some scientific or presentation issues need to be carefully addressed. Therefore, the reviewer recommends that this manuscript should be accepted after minor revision.

Minor revision:

- It is recommended to use consecutive line numbers.
- It is suggested that some necessary statistical parameters should be provided to quantify the difference in precipitation and temperature simulation performance of different schemes.
- The figures legend/caption is not self-explanation, which should be improved. In addition, many subgraphs in Figures 2 and 3 are very similar, making their differences challenging to identify. It is suggested to adopt the form of Figs.8-12 or add the statistical parameters mentioned in question 2.
- Figure 1 recommends that the macro location comes from the continent to geologically locate. The locations of the three regions should be marked in Figure 1
- Please clarify the "returned" flood period (2055 April to 2056 July). Is this the 50-year return period for floods considered? Why not consider using other periods?
- Please check whether Figure 13 is incorrect. Also, please adjust the color bars in Figures 11, 3, and S1, as some of them are not valid.
- The authors should rearrange the structures of the manuscript. The discussion is missing, maybe the result should change to result and discussion. You must buy the results from other similar studies in the discussions section. It is worth completing comparisons or differences with similar studies in other regions of the country or the world with related studies.

- The authors should further clarify the shortcomings and limitations of the study.
- Please check the format of the references to meet the journal's requirements.