This is my second review for this manuscript. Significant improvements have been made by the authors. Thank you very much. Here are some comments that I hope will help the author improve this manuscript.

Comments

1. Line 12: please delete “(WT)”.
2. Lines 41-47: the explanation about the selection of the TMPA product is not convincing and misleads readers. The IMERG inherits all attributes of TMPA. In addition, the precipitation estimates of TMPA came from multiple satellites with different orbits and satellite sensors, the same as IMERG. I think the effectiveness and applicability of the proposed approach should be based on the data that is being updated and better, rather than the data that has stopped updating, which does not make much sense.
3. The reliability of the results is doubtful, as the total number of rain gauges is too small, especially for P95 (see Table A1). Appropriate discussion for this should be added.
4. It is not clear that the TMPA used in this study is calibrated against a standard satellite product or uncalibrated or native product.
5. Line 111: please provide the full name of PCA at the first appearance.
6. Lines 115: ‘in order”>>in order to.
7. Line 127: please provide the full name of EOF.
8. I suggest providing the flowchart of the method used in this study.

9. Lines 199-202: The description of the weighting method is very crude and vague. Please provide detailed weighting criteria or theoretical support for Table A2. In my opinion, the weighting method used in this study is highly arbitrary.
10. Why introduce ERA5 as a reference to compute the bias? It makes no sense for validation. If necessary, please provide appropriate reasons.
11. The unweighted RF means equal weight for each metric?