

Interactive comment on “Global trends in extreme precipitation: climate models vs. observations” by B. Asadieh and N. Y. Krakauer

Anonymous Referee #2

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Conditional on few minor revisions, I recommend the paper titled "Global trends in extreme precipitation: climate models vs. observations" to be accepted by HESS.

The paper has taken both parametric and non-parametric approaches to quantify and compare the changes in annual daily rainfall maxima between a relatively new observational dataset and CMIP-5 climate model data. The temporal and spatial matching between the observed and model data makes it a meaningful comparison. Few minor points have been suggested to make the paper better.

1. Consider adding few lines or citing a paper to explain the justification of using the linear regression, which is assuming that the annual block maxima (daily rainfalls) is normally distributed when block maxima should follow GEV.

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2. Since two types of methods-parametric and non-parametric, were applied, few lines could be added in discussion section explaining what were the similarities and differences in the results comparing the two methods.

3. Consider citing Chou & Neelin (2004)'s work when referring to wet getting wetter and dry getting dryer in page-11372, line-1.

4. Titles of all figures are wordy and not clearly readable. Additionally, for figure-2: the red dots are not clearly labeled.

5. In page-11376, line-7, the statement "The 19 climate models give 19 global averages..." gives an impression that 19 climate models were used while 15 were used with 19 runs.

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