

Interactive comment on “Comparing Bayesian and traditional end-member mixing approaches for hydrograph separation in a glacierized basin” by Zhihua He et al.

Anonymous Referee #2

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This is a very interesting and well written manuscript that compares the traditional tracer-based end-member mixing model approach with different versions of a Bayesian mixing model to quantify water sources to runoff in a glacierized catchment in Kyrgyzstan. The findings of this work may have practical implications when applying these approaches to other catchments and are therefore surely interesting to the readers of HESS.

The manuscript is logically organized, it is nicely illustrated, the interpretation is well supported by the data, and the discussion is coherent and with relevant and updated references. However, there are some moderate and minor issues that need to be

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clarified and that I invite the Authors to consider.

Please, find these comments, suggestions, and a few corrections in the attached annotated manuscript. I hope they can be useful to the Authors to improve their work.

Please also note the supplement to this comment:

<https://www.hydrol-earth-syst-sci-discuss.net/hess-2019-394/hess-2019-394-RC2-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2019-394>, 2019.

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