

Hydrol. Earth Syst. Sci. Discuss., referee comment RC3
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Comment on hess-2022-44

Anonymous Referee #3

Referee comment on "Assessing the influence of water sampling strategy on the performance of tracer-aided hydrological modeling in a mountainous basin on the Tibetan Plateau" by Yi Nan et al., Hydrol. Earth Syst. Sci. Discuss.,
<https://doi.org/10.5194/hess-2022-44-RC3>, 2022

Dear Authors,

This is a very interesting manuscript dealing with the tracer-aided hydrological models in the mountain basin. This topic contribute to developing knowledge in the catchment scale studies and lay down some basic points regarding the sampling strategy in the hydrological studies.

Overall, the manuscript is well organized, results are sound and most of them are well supported although there is a methodological issue (see the points below), and graphs well prepared. In my opinion, there are some moderate issues that requires a throughout revision.

I appreciate the description of the numerical experiment in Tab. 3. This is, certainly, a good way to summarize the faced setting. However, I think that the authors need to improve the model description in the section 2.4. In particular, it is necessary to integrate the experiment 1 section because is not clear how to justify the benchmark parameter and then, the calibration is not clear explained. I think that many information can be deduced from Nan 2021 but it is better for the reader to have an integration. Similar considerations can be achieved for the correction of precipitation (c.ca Line 601, iGCM).

Fig. 1 I suggest to remove the connection lines between the three figures.

Then, I suggest to include the geographical info of Fig.1a and c inside the figure (similar to fig. 1b).

Line 297-298 maybe you miss the word "precipitation" after the first "isotope".