

Review of the first revision of hess-2021-279 - How well are we able to close the water budget on the global scale?

By Fanny Lehmann et al.

Dear authors,

first of all, I would like to thank you for this comprehensive and very careful revision! Almost all of my comments and questions were answered satisfactorily and I appreciate the additional work and research that you have done for this revision. Furthermore, having published a similar (but less comprehensive and, in the meantime, outdated) study several years ago, I highly acknowledge the amount of work that you have put in the study. Evaluating global datasets and water budget closures in the absence of a true reliable reference is always a complicated task and I have to say, that you did a very good job in discussing and reasoning your results. It should be also appreciated that you have compiled a very helpful openly accessible repository, which is an important step towards a more open and reproducible science (and, by the way, should be mandatory for all publications in major journals).

So, overall, I am happy to suggest a publication of the manuscript in HESS. Furthermore, I would like to encourage the authors to continue their research on the water budget closure using global freely available datasets as this is highly relevant for many scientists.

Minor comments:

- If I were nitpicky, I would probably suggest to move some of the formulas (RMSD, time-filtering, etc.) to the appendix as they have been published in many other studies as well. This would further improve the reading flow of the manuscript.