

The Cryosphere Discuss., community comment CC1
<https://doi.org/10.5194/tc-2021-139-CC1>, 2021
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Reply on RC1

Steven Margulis

Community comment on "Spatiotemporal distribution of seasonal snow water equivalent in High Mountain Asia from an 18-year Landsat–MODIS era snow reanalysis dataset" by Yufei Liu et al., The Cryosphere Discuss., <https://doi.org/10.5194/tc-2021-139-CC1>, 2021

We greatly appreciate the reviewer's comments, and will provide more details in our formal response, but wanted to provide brief clarifications and/or justifications online for some of the major points to aid in the review process.

The paper was originally conceived primarily as a "data paper" to emphasize the new dataset that focuses on seasonal snow over HMA. It was submitted to Earth System Science Data (ESSD) where we were told it was out of scope because it had "too much analysis" due to the inclusion of analysis of the space-time climatology of seasonal snow. Admittedly, this places this paper somewhere between a typical data paper and research article that uses existing datasets. The rationale for not including additional analysis is to maintain this paper as primarily a standalone description of a new estimate of seasonal snow climatology over HMA. Including additional analysis through an intercomparison lens will not only push this paper over the length limits, it will likely require giving short shrift to both this new dataset and the other datasets included in the intercomparison. The intercomparison paper we are currently drafting is easily a standalone paper itself and therefore merging the two will, in our opinion, water down both sets of material. Hence our preference is to keep this paper short and to the point in terms of providing a new estimate of seasonal snow climatology, while pointing the readers to the new dataset where further analysis can be performed. We will propose inclusion of additional meaningful analysis in the context of the dataset climatology in the revised manuscript.

Clarifications will be added to the revised manuscript with respect to tile selection for the HMA domain (and its impacts), details of the SSiB3 model setup, and Landsat processing.