

The Cryosphere Discuss., author comment AC3
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Comment on tc-2021-155

Johannes Oerlemans et al.

Author comment on "Modelling the mass budget and future evolution of Tunabreen, central Spitsbergen" by Johannes Oerlemans et al., The Cryosphere Discuss., <https://doi.org/10.5194/tc-2021-155-AC3>, 2021

Dear Editor,

In our response to the reviewers we have commented on every remark and indicate what we propose to change in a revised manuscript. There are many small points, but also some major issues we want to summarize here for your convenience:

- All calculations will be repeated with a water-depth dependent calving law. This deals with a great part of the comments on calving and bed topography.
- The limitations of the Minimal Glacier Model will be spelled out more clearly, including a statement that the tributary glaciers are just buckets that supply mass when they have a positive budget.
- Our modelling strategy, especially with regard to the meteorological forcing, will be described in more detail.

With kind regards,

Hans Oerlemans

Adrian Luckman

Jack Kohler