

Interactive comment on “Sensitivity of ice flow to uncertainty in flow law parameters in an idealized one-dimensional geometry” by Maria Zeitz et al.

Anonymous Referee #1

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This paper presents the results of a very creative and important inquiry into the question of how uncertainty in ice flow-law parameters may impact the predictions numerical ice-sheet models make for future sea level rise. The results of the work are very convincing and the case is well made to attend to flow-law uncertainty with greater effort in the future. The work is conducted with a simple numerical model under simple idealized experiments. Thus, the work reaches substantial conclusions that are not impacted by other, extraneous details.

I have put most of my minor editorial comments and questions in the marked-up pdf manuscript that I provide as an attachment to the review.

I think that panel B of figure 1 could be re-drafted either using a log scale (not sure if that would work) or just a focus on the top of the ice sheet, so that all the curves don't

simply plot one on top of another (as is the case now).

Please also note the supplement to this comment:

<https://www.the-cryosphere-discuss.net/tc-2020-79/tc-2020-79-RC1-supplement.pdf>

Interactive comment on The Cryosphere Discuss., <https://doi.org/10.5194/tc-2020-79>, 2020.

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Discussion paper

