

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

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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.