The Cryosphere Discussions

The Cryosphere Discuss., author comment AC1
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Reply on RC1

Daniel H. Richards et al.

Author comment on "Ice fabrics in two-dimensional flows: beyond pure and simple shear" by Daniel H. Richards et al., The Cryosphere Discuss., https://doi.org/10.5194/tc-2021-118-AC1, 2021

We wish to thank the reviewer for her thorough review of the manuscript and numerous helpful comments. We understand the rationale behind the comments raised by the referee and provide responses to each in the attached supplement. In a number of instances relating to the nature of the model, we acknowledge that more explanation in the present paper is warranted and should be incorporated in a revised version. We also argue here that certain concerns raised by the reviewer are not rendering the model as invalid or inappropriate for the first order analysis and prediction of ice fabrics that this contribution is focussed on. We also assure the reviewer that the model has been tested by direct comparison with experiments, propose more quantification of confidence in the model, and clarify the motivation for focusing here on 2D flow.

Please also note the supplement to this comment:
https://tc.copernicus.org/preprints/tc-2021-118/tc-2021-118-AC1-supplement.pdf