

Review of “Inland migration of near-surface crevasses in the Amundsen Sea Sector, West Antarctica”

Having read the revised manuscript along with the authors’ diligent and comprehensive responses to reviewer comments, I am of the opinion that the article has been improved and should be published. I just have a couple of suggested revisions.

1. Line 64: “we extend deep-learning neural network frameworks to satellite synthetic aperture radar (SAR) imagery collected by the Sentinel-1 constellation from 2015–2022”. Some of the studies you cite in this line use Sentinel-1 imagery, so I’m not sure the statement is quite accurate - maybe it’s best to say you provide an alternative.
2. In my original review, I suggested removing the section on the firn model as it didn’t add much to the paper, and was a slightly confusing presentation of a simple idea. The authors have responded that they’d like to keep it, which is fair enough. However, I think there are a few statements left in the that article that suggest something beyond a straightforward application of an existing model. I recommend tidying up these last bits, e.g. line 72: “We then develop a simple geometric model for the tensile strength of polar firn to aid the interpretation of our observations.”. (I still think that the article would benefit from boiling a lot of the content around the firn model to a statement of the form “we apply the porous material model of Jelitto and Schneider (2018) to firn.”)
3. In general, I think the figures need a bit of tidying up. In particular, making sure text is large enough to read.

References:

Jelitto, H. and Schneider, G.A., 2018. A geometric model for the fracture toughness of porous materials. *Acta materialia*, 151, pp.443-453. <https://doi.org/10.1016/j.actamat.2018.03.018>