GENERAL COMMENTS

The authors have made significant improvements to the paper in response to my and the other reviewers' comments. I especially appreciate the revisions to Section 2 and the new section that discusses the use of a viscous flow law for sea ice.

One point, which I don't want belabor too much, is that in my review I suggested that the sea ice buttressing force depends to first order on the sea ice thickness (to a power of 2) and that extension/compression will decrease/increase the buttressing force. The authors response implies that Larsen-B system is more complicated because of its 2D geometry and that the equations I wrote down don't account for shear stresses that would arise in that situation. This is actually not the case. The equations I wrote down were really just statements about the stresses at the glacier-sea ice boundary. The shear stresses will affect both the local sea ice thickness at the glacier-sea ice boundary as well as the tectonic/deviatoric stresses there. I don't expect the authors to address this point anymore than they already have, I just wanted to clarify the point that I was trying to make.

I still struggle a little with the terminology in the paper, which I think could be used more precisely. The authors argue that sea ice buttressing does not affect glacier flow, yet they show that (i) the ice shelves can speed up if the sea ice is removed and (ii) ice shelf retreat leads to speed up of grounded ice. Ice shelves are just extensions of the grounded ice, so isn't the sea ice therefore buttressing the glaciers? Stress perturbations at glacier termini can decay pretty rapidly, and so maybe it shouldn't be that surprising that velocities 20 km from the ice shelf edge don't change very much when sea ice is removed.

I agree with the authors that sea ice doesn't have an immediate impact on ice flow far upstream; I'm just not sure if it is correct to say that the sea ice is not buttressing the glaciers. Related to this, I think the authors could put more emphasis on the timing of events; there is a pretty long lag between break up of sea ice and acceleration of the grounded ice, suggesting a sequence of events in which sea ice distintegration leads to ice shelf break leads to acceleration of grounded ice.

SPECIFIC COMMENTS

L9-12: This is a little confusing. Are you saying that the loss of sea ice buttressing caused the ice shelves in front of these four glaciers to speed up but not the grounded ice? Or some glaciers but not others? I think part of the confusion stems from the fact that the paper talks about all of the glaciers in the Larsen-B Embayment but the abstract specifically discusses just four of them.

L53: This is somewhat ambiguous. Were there no calving events from 2001–2022? Was it just in 2022 that it was difficult to define the calving fronts?

L81: I'm not convinced from Fig. 1b that Crane Glacier started to accelerate in February 2022, especially when you consider the uncertainty shown in the plot.

Fig. 1a: The color (white) for the 2021 sea ice extent is not visible in the legend because of the white background. Perhaps consider adjusting the color scale so that the last line isn't white?

L96: Cite Fig. S3b?

L228–230: I agree that the landfast sea ice removal did not cause a large, instantaneous change in speed at/above the grounding line, but I'm not sure if you can say it wasn't the primary cause. Would the glaciers have sped up if the sea ice had remained intact?

L347: But it does seem to have a buttressing effect on the ice shelves, which are part of the glaciers.

L441–442: Maybe I missed it, but I don't see how the results from this study support this claim.