Re-review notes for Boxall et al.,

Seasonal land ice-flow variability in the Antarctic Peninsula (tc-2022-55)

A few comments –
The discussion in 5.1 is now very good, fundamentally what is needed are observations of melt days at a smaller spatial resolution than are currently widely available. Yes, the gradient of melt days with altitude is steep, but there are melt ponds at a few hundred meters' elevation in the AP, on the eastern side (where they are revealed more easily due to low snow accumulation). See attached photo.

No real changes to suggest to Section 5.1 except to remove the last sentence in the secton: *We would expect any subsurface meltwater to perpetually flow towards the grounding line due to gravity.* It gives the wrong impression, that a firn aquifer on a slope would 'drain away' and not accumulate water. As Harper et al., 2012 and Koenig et al., 2013 note, there are perennial aquifers on the grounded and sloping Greenland ice sheet, and they pool water in the topographic lows and spill over, slowly and perennially, toward the coast.

Ok, one more comment: the cooling trend is real (and likely tied to shifts in the PDO), but it's not like surface melting stopped anywhere where it was common before. And the cooling trend, following the PDO shift again, may be reversing. As you note, Banwell et al., 2021, showed near-record melting in 2020-2021 in the region.

On Section 5.2, I note that while the opening paragraph makes a strong case for influx of CDW, and I'm sure that is happening, there is not a strong case for seasonality of the inflow. Ah, I see that is the first line of the next paragraph.

In the first paragraph, for this last sentence: *with inferred patterns of melting observed recently along the Coriolis- favoured flank of Dotson Ice Shelf, West Antarctica (Gourmelen et al., 2017).* You might also cite the more wide-ranging work of Karen Alley (note, I'm a co-author on these papers, but they do cover many more of these features than the excellent Gourmelen work).

Paragraph beginning 'Ultimately', I think you don't need the word 'historical' in that sentence.

Reviewer #1 response, Comment #4: The near-grounding line focus of the speed-up, no matter the cause (ocean or surface melt) is more likely an indication that basal shear stress in the glaciers is large, preventing a rapid or extensive transfer of reduced longitudinal compression upstream. This is true for several coastal areas of Antarctica (e.g., Getz Ice Shelf, which -is- seeing a strong ocean-derived basal melting, but little upstream propagation of increased flow speed).

I read through all the responses to the Reviewer 2 comments (mine) and I am fine with all of them.

My recommendation to the editor is that the paper is ready to publish from a science standpoint.

A picture of Crane Glacier, looking downstream; the large blue area is an ice-capped meltwater lake. The image was taken in April 2013. The point being that extensive melting does occur upstream of the grounding line in the AP; for the glaciers feeding the GVIIS, a bit more spatial resolution in melt-day mapping is required (for another study at another time).