**SUMMARY**

The authors should be commended for the improvements that they made in response to the reviewers' comments. The paper reads better now; however, I personally think that it would benefit from another round of major revisions.

As pointed out by Doug Benn, the crevasse depth calving criterion was developed with the intention of modeling long timescale variations in terminus behavior, not individual calving events. That said, the crevasse depth calving criterion, like other calving parameterizations, is essentially a function that transforms stresses into calving rates. I think everybody agress that calving rates should depend on stresses, but there is significant uncertainty in the form of that relationship. If the paper focused more on stress (and velocity) variations, then it could be written in a way that would be somewhat independent of the chosen calving parameterization and would therefore be more impactful.

Focusing more on stresses may also help to highlight what is really new about this study. There is a fair bit of literature on tidal response of glaciers, looking at both changes in ice flow and calving. The authors cite some papers, but I think there are more that they should include. I've listed some below. My list is definitely not exhaustive. These papers include both observational and theoretical/modeling studies. Previous observational studies didn't have information on terminus morphology (and certainly not on changes in terminus morphology) and as far as I'm aware the theoretical studies have assumed that the terminus is vertical. This study builds on that previous work by addressing the question of *how terminus morphology affects glacier response to tidal variations.*

So essentially, I'm suggesting the following:

1. Motivate the study by more extensively discussing the impacts of tides on glacier flow and calving, and point out that previous studies haven't considered the impact of terminus morphology on tidal response.
2. Use the model to demonstrate how terminus morphology affects tidal response. You can then discuss in general terms how tides might be expected to affect calving rates since calving is a function of stress.
3. Then, to demonstrate the potential impact of tides in a coupled glacier-ocean model, you use the crevasse-depth calving criterion and look at changes in calving with and without tides (which you've already done). Given that the crevasse-depth calving criterion is not designed to model individual calving events, the most important result might be the impact of tides on average calving rates in a coupled model and not the timing of calving events (falling vs. rising tide, etc.)

It's not clear to me whether changes of this magnitude would require additional simulations or if this can just be done through re-structuring of the current text and figures. There is also still the issue about the importance of elastic stresses over timescales of a few hours. I don't know how difficult it would be to set up a simulation that included elastic stresses, but it would be interesting to compare the tidal response of a viscous rheology to that of a viscoelastic rheology to one or two tidal cycles just to get a sense of the error in ignoring elastic stresses. Perhaps the papers by Christmann et al. and Mosbeux et al. would be helpful (they address a slightly different set up than this study)?

I also have one specific comment related to Figure 2. Has the multibeam data been presented previously? It would be interesting to see how the entire terminus looks instead of just at a couple

of profiles. (If it has been published elsewhere, then that should be cited in Section 3.1.1.)

**REFERENCES ON TIDAL RESPONSE**

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