Dear Authors,

I am glad that the authors have painstakingly and sincerely addressed all the comments. The manuscript is much improved. While there would still be much to learn from applying a more complex simulation that could incorporate calving and real world bed topography (as mentioned in my previous response), the focus of the study on glacier response to lake level changes alone is valuable. I therefore have only a handful of minor comments to aid the publication of this article.

Introduction: This now reads well from start to finish, sets up the problem and scope clearly. However some more case studies here would help set up your experiments perfectly. While you cite Sattar et al., 2025 (South Lhonak) I would recommend describing this event (and a few others if these can be found), including how much lake level change was observed here, in order to tie this into your rapid drainage experiment. It also might be worth including some specific details from the Teller/Lake Agassiz paper in regards to those historical drainage events, and how much lake lowering is estimated.

Results: *Experiment 3b* is a valuable contribution to the study giving us new insight into the changing stress response of a glacier to genuine rapid changes in lake level.

*Line 303/ Fig 10***:** For the 0 to 200 line and possibly the 0 – 175 line, we see a pre-year-50 taper in mass flux, i.e., the 0–200 m scenario slows down between years 40 and 50. I would be interested to know why this is the case given that the floating area continues to rapidly increase until the 50-year mark on the right-hand plot. I couldn't find any explicit discussion on this issue which appears counterintuitive.

Discussion: There is still a bit of contextual overreach linking modelling of a Greenland outlet glacier to Himalayan/mountain glaciers and GLOFs while you have caveated this slightly at lines 540 – 544 some comment on what the anticipated differences between these two systems could be added here. This might include noting that the bed slopes, subglacial hydrology, and topographic relief of Greenlandic fjords differ significantly from the high-altitude, lake-terminating glacier dynamics found in Himalayan/mountain catchments.

Again it would be great to see more case studies included in the discussion which would help to contextualise your findings allowing you to say whether we see similar glacier responses to this study where we have seen lake lowering events of comparable magnitude.

Other minor comments:

Line 79: Missing comma in Carrivick citation

Line 394: Tsutaki, Baurley, Holt, Sato et al., all missing commas as well.

Line 357: Reynolds et al., 2025 is missing from the reference list

Line 514: ICIMOD 2011 also remains unreferenced.