

Second Review Pendleton et al. (2017, revised): Episodic Neoglacial expansion and rapid 20th Century retreat of a small ice cap on Baffin Island, Arctic Canada and modeled temperature change. *Climate of the Past*, doi:10.5194/cp-2017-27.

### **General Comments.**

I have read the revised manuscript and the author's responses to Reviewer #1 and #2. In-general, I'm satisfied with the authors edits, changes, explanations, and reasoning. It is a little difficult at-times to ascertain whether or not the authors actually followed the suggestions or are deferring to the editor's judgement.

Below I emphasize several points to consider as the manuscript moves through the next editorial steps.

- I'm still baffled that the authors chose to model an ice cap on Baffin Island without including the process of superimposed ice formation. Baird et al. (*Journal of Glaciology*, 1952), after all, coined the term "Baffin Type" precisely because of the importance of superimposed ice formation on the mass and energy balance of these types of glaciers / ice caps. Furthermore, there are several simple, well-established, and robust superimposed ice parameterizations available (reviewed, for example, by Reijmer et al., 2012, *The Cryosphere* or Wright et al., 2007, *JGR Earth Surface*). It is unfortunate that it was not possible to find an additional reviewer more-qualified to evaluate (and thereby strengthen) the modeling part of the paper.
- I do understand the realities research and academia - but it feels a little 'presumptuous' to me to submit a manuscript with temporary 'placeholder' section to meet a deadline for a special issue and then swap that section after the peer-review process to include the (now) up-to-date model run in the final manuscript. This assumes a-priori that the new simulation produces consistent results with the 'placeholder' simulation and that the reviewers are satisfied with that approach, the new results, and the new implications that might surface.
- I still prefer the age/distance plot for Figure 3, but I will leave that decision for the editor. If keeping the age/elevation plot I suggest adding vertical GPS uncertainties based on the particular GPS receiver used and position collection procedure.
- I suggest that the authors provide a figure/table and text showing glacier model performance under reasonable ranges of parameter values in the SI, Section 5.