

Review of re-submission

Funder et al present a revised manuscript based off a number of reviews/comments made on the initial submission. One of the primary concerns raised by not only me, but a few of the reviewers had to do with the issue of isotopic inheritance in bedrock samples. The main issue being that if you only have a few samples from one location, they are all from bedrock, and they yield consistent ages, one still cannot rule out the possibility that minor amounts of inheritance has influenced all the samples and the deglaciation age is slightly too old. This concept of minor “baseline” inheritance appears to exist within the literature. As it applies to this study, the concern is that if you take the ^{10}Be ages at face value in a few locations then, yes, deglaciation of the outer coast could have happened early/mid Younger Dryas and then one can say the ice margin retreated through the Younger Dryas. If by chance, however, there is a small amount of inheritance and the “true” deglaciation age is younger (e.g., end of YD or later), then you cannot really say anything about ice-margin behavior during the YD because the ice margin was still in the ocean.

My primary criticism of version 1 was that the authors took the bedrock ^{10}Be ages at face value and didn't really consider the alternative (inheritance), and then spun their dataset to argue for YD retreat at their sites with new ^{10}Be ages. The argument in this revision is still the same, but I am pleased to see that the authors at least acknowledge the possibility of isotopic inheritance. For example, the topic of inheritance appears in the abstract, introduction, and at the start of section 4, no complaints on my end. I think really what we have here is a difference of interpretation. The authors default is to say these bedrock ^{10}Be ages are “real” and then interpret those ages within the context of YD ice-margin behavior while, based on personal experience working in SW Greenland, I probably would have framed this study from the assumption that the bedrock samples might indeed be influenced by a slight amount of isotopic inheritance considering what else we know about regional deglaciation. Without a lot more measurements, there is no way say who is right here. Just a difference of scientific opinion, which should in no way hold up publication. The publication of the ^{10}Be ages themselves is a contribution.

Moving beyond the inheritance issue, a few minor things I noticed that the authors should clean up:

- take another thorough look for typos and check where you have placed paragraph breaks.
- Might just be the version I have in front of me, but double check the photo resolution for images in Figure 2.
- I still advocate for up in the Sisimiut region, based on the recent ^{10}Be ages from the coast, you can conclude 1) ice margin was out in the ocean until ~ 11.6 ka, and 2) the Fiskebanke moraines have to be >11.6 ka (Young et al, 2020). As it is, they place a line on a figure marking the “Preboreal” ice-margin position in the region, but I think that

glosses over the level of detail we actually know about the ice-margin history in that region based off recent 10Be ages.

- On Fig.4, shouldn't there also be a blue arrow in the Disko region as well since there is a well-constrained ice-margin advance in the early/middle YD, followed by retreat through the remainder of the YD. Maybe touching upon Richard's point, but interpreting Greenland ice cores as a direct proxy for ice-margin behavior, one might expect an early/mid YD advance followed by retreat...which is what the chronology implies in Disko Bugt.
- Lastly, I encourage these authors to place their 10Be sample information in the ICE-D database (<http://ice-d.org/>). I personally think the community should be embracing this database as it's more tailored towards the needs of cosmogenic isotope users versus some of the more generic repositories, and I think it is pretty user friendly. The authors cannot upload their dataset themselves, but if they contact me, I'd be happy to do it.