

Dear Dr. MacGregor,

Thank-you for your positive feedback on the revised MS and your comments highlighting the additional minor changes. We have addressed your comments in the revised MS and with our comments below in red.

Best regards,
Gregory Church and all co-authors

27-45: Consider citing Putzig et al. (2018, <https://www.sciencedirect.com/science/article/pii/S0019103517302543>) here as an extraterrestrial example of 3-D radar imaging. → We have added this reference along with some relevant text to the Introduction.

50: “multiple 2D GPR” Missing word? → Added “multiple 2D GPR profiles”

53-55: Note that this Shreve hydropotential will only be accurate if a substantial vertical fracture network does not further complicate englacial transport, e.g., Gulley et al. (2017, <https://www.cambridge.org/core/journals/journal-of-glaciology/article/effect-of-discrete-recharge-by-moulins-and-heterogeneity-in-flowpath-efficiency-at-glacier-beds-on-subglacial-hydrology/9734138C4BFC1AE1CF9128B241E60992>). That is of course presumably the case for your field site given that you were able to survey from the ground safely. → Thanks for this comment.

109: m^2 → We are a little confused on this change as there is no “m” on this line. On line 110 there is a reference to a distance at 2 m, however this is the distance between line spacing and therefore, 2 m is correct.

210-215: All fair points. Here it might be worth considering Holschuh et al. (2020, <https://pubs.geoscienceworld.org/gsa/geology/article-abstract/48/3/268/579962/Linking-postglacial-landscapes-to-glacier-dynamics>) as an example of in-between 2-D and 3-D acquisition that permits finer resolution of cross-track bed topography. → Have added this reference along with an appropriate sentence.

231: this study is → Updated

237: Here I think the “-ice” is extraneous and “cold” should be replaced with “polar”. → Updated

244: “a maximum of” can be removed without loss of meaning. → Updated

260-263: Break up second sentence...a bit hard to follow. → Updated

275: likely represent → Updated

320: “interconnectability” ...an unusual term...how about “continuity”? → Updated

Other comments:

Furthermore, we have updated the movies as per your pre peer-review request:

1. Title has been updated on elevation slices to state ‘Elevation slice’
2. We have overlaid a black line representing the glacier surface.
3. Finally, we think that the bedrock reflection is difficult to observe on the elevation slices due to the fact that the bedrock is varying so much and is not represented on a single elevation slice. Therefore, the reflection is present at different elevation slices and is difficult to track in such slices.