According to the revision suggestions, we have made the following corrections to the manuscript. We sincerely thank the editor and reviewer for the effort for improving the manuscript.

I thank the authors for addressing most of my comments. I believe the manuscript is now in better shape. I have some remaining minor suggestions/comments:
• The description of the algorithm steps should be in the imperative not the present tense (see Section 3.2)

Reply: It has been revised in the manuscript.

• I see that the title has been revised to include "case study" which is accurate. However, "case" study does not appear again in the text. I believe this should be explicitly mentioned again, at least in the discussion section.

Reply: We have incorporated the term 'case study' in the Outlook section as suggested.

• As suggested, the authors have merged the Summary and Outlook section with the Discussion section. I think the reorganization is good, but the contents of the new "Discussions and summary" section should be trimmed and made more specific. A summary is not a repetition of previous sections; it should be more concise. For example, the paragraph starting with "It is important to note that in this study we did not apply IA corrections to the SAR images." on page 20 does not belong in the summary and discussion section. This is a methodological choice and should be described in the earlier sections. The "Discussions and Summary" section should instead focus on the main results and include a discussion on their validity.

Reply: We agree that the 'Discussion and Summary' section required trimming, and that methodological details regarding IA correction belong in earlier sections. Accordingly, we have relocated the IA correction description to Section 2.2.

• In the discussion and summary section (page 24), the authors mention: 'For future work, we plan to further explore the freeboard-backscatter relationship under various conditions.' This style is more appropriate for a proposal than for a scientific paper. It would be better to highlight the limitations of this work (as it is a case study) and suggest that further studies (not necessarily by the authors) should explore the freeboard–backscatter relationship using a larger dataset.

Reply: Thanks for the helpful comments. In the revised manuscript in the Discussions and summary section, we have revised this sentence as follows:
"Given the limitation of this case study, future work should explore the freeboard-backscatter relationship under various conditions using larger datasets."

• Page 25: "The photon-level elevation measurements represent a similarly fine spatial scale to the OIB ATM, but contain higher uncertainty than that of the beam segment elevations (ATL07)." Please clarify this statement. ATL07 is derived from the photon product ATL03, and many researchers have used ATL03 over sea ice, although it is more challenging. If you chose not to use ATL03 because of its difficulty, you should clarify that, or else omit the comparison. As written, the statement is misleading and suggests that photon heights are not accurate. At the very least, you should provide a reference to support this claim.

Reply: It has been deleted in the revised manuscript.