

Dear Editor Dr Melody Sandells,

Thank you very much for managing our manuscript and for your decision to publish the manuscript with revisions.

As directed, we have made the changes set out in the Editor's report and all the proposed modifications we listed in the responses to Reviewers 1, 2 and 3. We have provided a revised version (Revision 1) and a tracked changes (TRACKED) version with for your consideration. We have not included a point by point account here of all changes made as we would be repeating the information provided in the responses to reviewers. Please let us know if this causes any inconvenience and we will provide a list of all changes made.

In response to the Editors comments, we have:

- Emphasised that the main methodology builds on previous work of Price et al., 2014 and 2015.
- Referred to SAR Interferometry as InSAR throughout the text.
- Added a description of the freeboard signature of fast ice under the influence of 'potential' and 'in situ' supercooled ISW to Section 5.4 on L489-497 of the most recent revised version.
- Added a list of novel aspects of this study to Section 5.3 of the discussion on L461-471 of the most recent revised version.

Thank you very much again for further consideration of our manuscript. We look forward to working with you for the final iteration.

Best wishes,

Gemma Brett (on behalf of all co-authors).