

Interactive comment on “Climate change and Northern Hemisphere lake and river ice phenology” by Andrew M. W. Newton and Donal Mullan

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We are grateful to both reviewers for the time they have taken to offer such detailed and insightful comments. The comments from both reviewers are broadly well-aligned and we are happy to make the suggested changes as they will improve the manuscript. We are confident that these changes are achievable and upon making them, the manuscript will be significantly stronger as a result. The proposed changes are outlined in detail on the attached supplementary pdf, but the main changes will include:

- Condensing the text by refocusing the narrative on the larger scale and removing the finer detailed analyses.

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- Improving the write-up of the methods, as well as including extra analyses on the SOI, such that the workflow and results are as clear as possible.

- Modifying the time spans used by adding a new one (1946-1975) and modifying an existing one (1991-2005 changed to 1976-2005). This will allow for a greater comparability between the different time periods and remove any bias caused with the implementation of the shorter time period in the original manuscript.

- Refining figures and text to ensure that the discussion of the statistics is as clear as possible.

- In general the text will also be modified to make the objectives clearer at the start of the paper. We will also modify the discussion to take account of specific points that have been raised by the reviewers and this will be improved upon by integrating the results with the published literature more effectively.

Please also note the supplement to this comment:

<https://tc.copernicus.org/preprints/tc-2020-172/tc-2020-172-AC1-supplement.pdf>

Interactive comment on The Cryosphere Discuss., <https://doi.org/10.5194/tc-2020-172>, 2020.

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