

**Reviews, and response to reviews, of the essay on:
Lake Ice**

Reviewer #1

13. Lake Ice		
Page No.	Line No.	Comment
79	2372	Colours on figure are hard to see The editors regret that, due to the size of the lake ice figures, the colours are hard to see in the document sent for review. The figures will be published online at a larger size and it will be easier to see the colours.
80	2386	Same as above The editors regret that, due to the size of the lake ice figures, the colours are hard to see in the document sent for review. The figures will be published online at a larger size and it will be easier to see the colours.

General comments: All circumolar maps are very hard to interpret with the current colour scale. Editors note: See comments in the table. Colours will be more evident when figures are published online at larger size.

Reviewer #2

13. Lake Ice		
Page No.	Line No.	Comment
76	2329	Please can you add “than the mean” after “1-4 weeks”, I understand that is it mentioned in the bullet above, but I still wondered shorter than what... This has been done.
76	2332	Again, please can you add “than the mean” after “1-4 weeks”, This has been done.
78, 79, 80	2373, 2386, 2403	Fig. 45, 46, 47. I understand why you have chosen the colour scheme that you are using. However, since a lot of the changes are in the lower spectrum it is very difficult to see those light colours on the map. Is it possible to use different colours to make it more clear? The editors regret that, due to the size of the lake ice figures, the colours are hard to see in the document sent for review. The figures will be published online at a larger size and it will be easier to see the colours.

General comments: This is a very clear and well-written chapter. I have only a few minor comments.

Reviewer #3

13. Lake Ice		
Page No.	Line No.	Comment

General comments: The editors note that no general comments were provided. Nor did the reviewer provide any specific comments in the table.

Reviewer #4

13. Lake Ice		
Page No.	Line No.	Comment
77	2340	<p>Authors write: “Broad spatial patterns in these trends are also related to major atmospheric circulation patterns originating from the Pacific and Atlantic oceans such as the El Niño-La Niña/Southern Oscillation, the Pacific North American pattern, the Pacific Decadal Oscillation and the North Atlantic Oscillation/Arctic oscillation”. Taken into account, that authors do not demonstrate such relations, it seems that this sentence could be deleted.</p> <p>The editors note that this is introductory material. There is no need for the authors to demonstrate the relationships – the interested reader can go to the references. There is no need to delete the sentence in question.</p>
77	2345	<p>Authors write: “Despite the robustness of lake ice as an indicator of climate change, a dramatic reduction in ground-based observational recordings has occurred globally since the 1980s... Satellite remote sensing has thus assumed a greater role in lake ice”. The question: Is satellite data good enough for study of physical processes in lakes, covered with ice?</p> <p>The final sentence of the first paragraph has been modified to say that remote sensing has assumed a greater role in observing lake ice phenology, and four recent references have been added as evidence for the larger role of remote sensing and that it works.</p>

General comments: The chapter could be published with minor improvements

Reviewer #5

13. Lake Ice		
Page No.	Line No.	Comment

General comments: The editors note that no general comments were provided. Nor did the reviewer provide any specific comments in the table.

Reviewer #6

13. Lake Ice		
Page No.	Line No.	Comment

General comments: The editors note that no general comments were provided. Nor did the reviewer provide any specific comments in the table.