

Response to Editor

Thank you for your thorough response and revised manuscript. I am pleased to recommend publication, subject to a few minor amendments, listed below.

We sincerely thank the editor for the positive evaluation of our manuscript and for recommending it for publication. We have carefully addressed all comments and revised the manuscript accordingly. Our detailed responses to each comment are provided below.

Comment 1

Your attention is also drawn to the data availability statement: the editorial team have provided advice on this, but having data available 'on reasonable request' is no longer sufficient. Please follow their guidance and do ask for advice as required.

Thank you for highlighting this issue. We have revised the Data Availability Statement according to the journal's updated guidance. Because the datasets are subject to institutional data management policies of the affiliated university, they cannot currently be deposited in a public repository. However, the corresponding author is willing to provide access to the data for research purposes upon reasonable request and in accordance with institutional data management policies.

Comment 2

Please could you check the colour schemes in Figures 2 and 6. I found these rather hard to interpret, and would also like to check that you have passed them through the colour checker.

Thank you for this valuable suggestion. We carefully checked the colour schemes of Figures 2 and 6 using colour-blindness simulation tools and revised the colour palettes to improve accessibility and readability. The colours were adjusted to ensure better discrimination among different variables, including for readers with colour vision deficiencies.

Comment 3

In Figure 2, the melt periods dominate the plot to an extent that the data are hard to interpret. I'd prefer this to be redrawn with new colours, and perhaps with the melt

periods as transparent bars. The precip and melt data could be bars rather than continuous lines (would avoid having a negative melt axis!).

Thank you for this helpful suggestion. We have redesigned Figure 2 by displaying the melt periods as transparent background bars rather than solid-colour areas. In addition, precipitation and snowmelt data have been converted from continuous lines to bar plots, which improves the visualization of these variables and eliminates the need for a negative melt axis.

Comment 4

In Figure 6, the anions are hard to read. Please do check the colours and consider whether the scaling/outline thickness can be amended to aid interpretation.

Thank you for pointing this out. We revised the colour palette of the ions using a colour-blind-friendly scheme and adjusted the graphical elements to improve readability. Specifically, the outline thickness of the bars and error bars was reduced, and they-axis scaling was revised to allow clearer comparison among sampling sites.