

The Cryosphere Discuss., author comment AC2  
<https://doi.org/10.5194/tc-2021-60-AC2>, 2021  
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## Reply on RC2

Alexandra Hamm and Andrew Frampton

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Author comment on "Impact of lateral groundwater flow on hydrothermal conditions of the active layer in a high-Arctic hillslope setting" by Alexandra Hamm and Andrew Frampton, The Cryosphere Discuss., <https://doi.org/10.5194/tc-2021-60-AC2>, 2021

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We would like to thank the reviewer for the time they have taken to offer insightful and constructive comments to our manuscript. We have addressed the comments in our responses to the reviewer below. This has led to several improvements and clarifications to our study. In particular, the main changes include the shift of focus away from the downhill cooling effect towards the uphill warming effect; the reworking of the model geometry to account for a more realistic downhill boundary; the addition of text in figure captions and reworking of some figures for clarification and the reworking of the conclusion. With these changes we believe the manuscript has been significantly improved.

Please find our responses to the comments in the attached pdf file.

Please also note the supplement to this comment:

<https://tc.copernicus.org/preprints/tc-2021-60/tc-2021-60-AC2-supplement.pdf>