

The Cryosphere Discuss., author comment AC1  
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## Reply on RC1

Jan Nitzbon et al.

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Author comment on "Brief communication: Unravelling the composition and microstructure of a permafrost core using X-ray computed tomography" by Jan Nitzbon et al., The Cryosphere Discuss., <https://doi.org/10.5194/tc-2022-79-AC1>, 2022

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Dear Mikhail Kanevskiy,

We thank you for taking the time to thoroughly review our manuscript and appreciate the overall positive evaluation. We agree with your view that applying CT imaging to study permafrost soils bears great potential for future research and are happy if our study can contribute towards this strand of research.

We are very thankful for your numerous suggestions to improve the text, and will consider all of them for the revised manuscript. In particular, we appreciated your comments on improving the terminology to refer to different types of excess ice and massive ice contained in the core. Moreover, we will replace the term „sediment phases“ by „sediment types“ which is hopefully less confusing, as the term „phase“ was also criticized by the second reviewer.

We are confident that our revised manuscript will be significantly improved thanks to your valuable comments and suggestions.

Kind regards,

Jan Nitzbon (on behalf of all authors)