

Interactive comment on “Climate change threatens archeologically significant ice patches: insights into their age, internal structure, mass balance and climate sensitivity” by R. S. Ødegård et al.

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Thank you for a precise review. This feedback gives us inspiration to continue this research on ice patches in Scandinavia. The referee points to two examples that are underdeveloped compared to rich datasets available (wind and ice deformation rates). Our ambition with this paper has been to do an exploratory analysis of field data as a basis for future studies. The available wind dataset is from a meteorological station a few hundred meters from the ice patch. This dataset is unfortunately not representative for the ice patch. This is also the case for the snow accumulation measurements less

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than 100 meters from the front of the ice patch. We think this illustrates challenges: spatial variability of the surface energy balance and redistribution of snow. These topics need to be addressed in detail in future research in order to do reliable calculations. We will certainly add calculations of likely ice deformation rates. Since the time perspective is thousands of years, even very small deformation rates could be significant.

Interactive comment on The Cryosphere Discuss., doi:10.5194/tc-2016-94, 2016.

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