

P2, L5-13: The abstract is better than before, but I find it overly long and a bit lacking in details towards the end. I would therefore suggest deleting the last few sentences, which describe little in terms of concrete results:

*“The cumulative deformation of ice over millennia could explain the observed curved layering in the basal parts of the ice patch, which makes it difficult to relate the present thickness to previous thickness of the ice patch. Ice deformation and surface processes (i.e. wind and melt water) may have caused significant displacement of artefacts from their original position. Thus, the dating and position of artefacts cannot be used directly to reconstruct previous ice patch extent. In the perspective of surface energy and mass balance, ice patches are in the transition zone between permafrost terrain and glaciers. Future research will need to carefully address this interaction to build reliable models.”*

P3, L21: change ‘is fast’ to ‘occurs rapidly’

P3, L22: I would put a paragraph break before ‘Ice patches’

P3, L23: change ‘the thermal regime’ to ‘their thermal regime’

P4, L9-11: The meaning of the wording ‘cooperation with the archaeologist...’ isn’t very clear, so I would recommend rewriting or deleting this sentence

P6, L16: you use the term ‘artefacts’ to refer to archaeological artefacts earlier in the paper, so to avoid any ambiguity it would be better to use a different word here (e.g., ‘errors’? ‘problems’?)

P6, L18: to make it clear what you’re referring to here I would add the word ‘positional’ – e.g., ‘estimated positional standard deviation...’

P6, L25: should be ‘5 points m<sup>-2</sup>’

P7, L12/13: provide proper references (e.g., map sheet number, publisher) for the ‘topographical maps from the Norwegian mapping authorities’

P7, L15: please define what ‘N50’ is referring to here

P7, L17: change ‘on the range 10-20 cm giving...’ to ‘in the range 0.1-0.2 m, giving...’

P7, L21: please explain why it is not representative for wind speed

P10, L12: wording is currently a bit unclear, so I would recommend changing it to: ‘The total measured mass loss was >10 m of ice at the site...’

P10, L30: change to ‘observations in the field’

P11, L12: change '10.8 ms<sup>-1</sup>' to '10.8 m s<sup>-1</sup>'

P11, L21: please define the wind speed that 'strong gale' refers to

P12, L17: change 'the ice gradually decreasing...' to 'the ice which gradually decreases...'

P12, L19: it is ambiguous as to whether the 0.1m/year (which should be written '0.1 m yr<sup>-1</sup>') refers to the thickness of superimposed ice or the level of impermeable ice. Please clarify.

P16, L2: change 'surface' to 'surfaces'

P16, 12-20: it's very useful to see these calculations of suggested ice deformation rates!

P16, L21: change 'calculations are uncertain' to 'calculations have high uncertainty'

P18, L5: change 'to level' to 'to a level'

P18, L29-30: this sentence is unclear, so please reword: "Since the surface ice shows modern age artefacts melted out in front of Juvfonne since 2009 have been sub-aerially exposed after the LIA but prior to 2009."

P19, L6-7: the 'well-known mass balance feedback mechanisms' may not be well known for non-experts, so please describe them here