

First, I would like to thank Baldini and colleagues for their detailed point-by-point response to the reviewers' comments. I have now scrutinised their manuscript for the second time and generally I think the authors have gone a long way to address my concerns, primarily by rephrasing, clarifying and extending the main text. However, I'm still not convinced by the proposed mechanism, i.e. that a single high-latitude eruption caused a 1000-year long cold spell over the Northern Hemisphere.

Although the authors claim that "we are the first to detail the positive ice-AMOC feedback following the LSE within the context of the YDE", I'm sorry to say that I think this is not sufficiently supported by climate model simulations (e.g. see other reviewers' comments). The lengthy discussion on previously published model results is welcome but none of the simulations are appropriate to test whether the LS could have caused a YD-like event. On top of that, the published model results of the Common Era are discordant in the way they simulate climate and AMOC response to volcanic forcing and therefore cannot be used to rest the authors' case.

I would feel much more comfortable if the authors would back their claims with model experiments (as also requested by reviewer2), for instance by simulating a large volcanic eruption under deglacial (or glacial) boundary conditions. However, I understand this would take a considerable amount of extra time and the authors didn't envisage undertaking such task to begin with. Anyway, from a proxy point of view I am willing to encourage publication provided that the authors tone down their claims and clearly state in the abstract the speculative nature of the proposed mechanisms. As to the shortcomings with the modelling aspects of this study I will leave it to the other reviewers and the editor to decide whether this work is sufficiently suitable for publication even without support from ad-hoc climate model experiments.