

I would like to add a short comment to this paper. In the absence of a continuous dataset of stratospheric volcanic sulfur emission and aerosol optical properties datasets prior to 11,500 years BP, I think it is a good idea to get comparable information from a synthetic product that takes into account ice core data but also tephra data from proximal deposits. I also acknowledge, that you are emphasizing inherent limitations of this synthetic product (e.g. comparably large error bars for age and strength of VSSI), and suggest to use or combine with, where possible, more precise data derived from ice-core records (Lin et al., 2022; Sigl et al., 2022; Toohey and Sigl, 2017). However, user of the dataset will likely employ it for many purposes, including linking the eruption record to rapid climate change, extreme events and societal collapse. A lot of progress has been achieved in the past decade regarding the dating of past eruptions using for example new-generation ice-core analyses or annual-resolution radiocarbon analyses. The LaMEVE database which forms the backbone of the PalVol v1 reconstruction, however, was built over a decade ago (Crowweller et al., 2012), and represents an earlier state of research, which has since been modified or refined many times.

Upon noting numerous eruption ages in Table A1 which differ from what is currently considered the best estimates, I have downloaded the LaMEVE eruption catalogue (<https://www2.bgs.ac.uk/vogripa/view/controller.cfc?method=lameve>) and critically assessed the dating of past eruptions in this dataset against revised age estimates published since. My analysis is incomplete and biased towards Late Glacial, Holocene and Common Era eruptions. Dating errors are considered to represent 2σ uncertainties unless stated otherwise.

Volcano	Date (PALVOL)	Date (revised)	Method for revision	References
Changbaishan	942 (± 4) CE	Nov 946 CE	Dendrochronology, ice core, radiocarbon	(Oppenheimer et al., 2017)
Katla (Eldgjá)	934 (± 2) CE	939 CE	Documentary, ice core	(Oppenheimer et al., 2018; Sigl et al., 2015)
Bárdarbunga (Vatnaöldur)	870 CE	877 (± 1) CE	Ice core	(Plunkett et al., 2023)
Churchill (White River Ash, eastern lobe (WRAe))	847 (± 1) CE	853 (± 1) CE	Ice core	(Mackay et al., 2022)
Ilopango (TBJ)	450 (± 30) CE	431 (± 2) CE	Ice core	(Smith et al., 2020)
Okmok II	76 BCE	43 BCE	Ice core, dendroclimatology	(McConnell et al., 2020)
Santorini	1610 (± 14) BCE	1609–1560 BCE (95.4% probability)	Radiocarbon, dendrochronology	(Manning, 2022)
Aniakchak II	1645 (± 10) BCE	1628 (± 1) BCE	Ice core, dendroclimatology	(Pearson et al., 2022)
Laacher See	12,916 BP	13,006 (± 9) BP	Radiocarbon, dendrochronology	(Reinig et al., 2021)
Taupō (Oruanui)	27,100 (± 960) BP	25,319 (± 250) BP	Ice core	(Dunbar et al., 2017; Sigl et al., 2016)
		25,335–25,800 BP (95.4% probability)	Radiocarbon	(Muscheler et al., 2020)

I invite the authors of this paper to address my comments. I suggest that these amendments could be made in the corresponding tables of this manuscript, providing a basis for updating the PalVol reconstruction in its next iteration. You could also mention in this manuscript that there is a floating continuous volcanic forcing record for the time period 12.8-13.2 ka BP, aimed to support transient model simulations for the Younger Dryas inception (Abbott et al., 2021).

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