

Interactive comment on “GeoChronR – an R package to model, analyze and visualize age-uncertain paleoscientific data” by Nicholas P. McKay et al.

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Thank you to the reviewer for these comments. Please find reviewer comments in *italics* and authors' responses in **bold**.

This ms is clearly written and makes a convincing case for standardizing paleo data for subsequent compilation studies. It shows a range of very helpful developments in compiling and compiling multiple records, enabling much more informed analyses than currently available. It is high time for the paleo-community to stop neglecting chronological uncertainties. I hope that this initiative will be taken up and used to make more robust paleoclimatic inferences.

Pending just the addition of a few references, I suggest accepting this manuscript for publication.

We thank the reviewer for their constructive comments, and respond to specific suggestions below.

On p2, please also cite some earlier papers on comparisons between records that take into account chronological uncertainties: doi:10.1177/0959683607075857 doi:10.1016/j.quascirev.2008.07.009 doi:10.1016/j.quascirev.2010.11.012

We will better reference the discussion of earlier work on chronological uncertainty, thank you for the suggestions of additional papers.

For the comparison of Hulu and GISP2, it might also be useful to cite doi:10.1002/jqs.1330 which calculates 'event probabilities' within time-windows for individual records, and then calculates probabilities for synchronous reactions between two records as the product of these probabilities for each time window.

Agreed. We will add discussion of this paper in our expanded discussion of the Hulu/GISP2 comparison.

For section 5.4, a citation to a recent compilation paper in Science might also be helpful here: doi:10.1126/science.aay5538.

Thank you for the suggestion, we will add discussion of this paper.

Details p16 line 5, significant caption Fig. 8: the median

We will fix these typos.

Interactive comment on Geochronology Discuss., <https://doi.org/10.5194/gchron-2020-25>, 2020.

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Discussion paper

