

## ***Interactive comment on “Climate evolution across the Mid-Brunhes Transition” by Aaron M. Barth et al.***

### **PAGES Data Review Team**

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The PAGES Data Stewardship Integrative Activity seeks to advance best practices for sharing the data generated and assembled as part of all PAGES-related activities. The CP Special Issue, “PAGES Young Scientists Meeting 2017” is part of this PAGES activity. The co-editors of the Special Issue are reviewing the data availability within each of the CP-Discussion papers in relation to the CP data policy ([https://www.climate-of-the-past.net/about/data\\_policy.html](https://www.climate-of-the-past.net/about/data_policy.html)) and current best practices. The editor team is making recommendations for each paper, with the goal of achieving a high and consistent level of data stewardship across the Special Issue. We recognize that an additional effort will likely be required to meet the high level of data stewardship envisaged, and we appreciate the dedication and contribution of the authors. This includes the use of

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Data Citations (see example below). Authors are also strongly encouraged to deposit significant code into a suitable repository and to cite it using a Data Citation.

We ask authors to respond to our comments as part of the regular open interactive discussion. If you have any questions about PAGES Data Stewardship principles, please contact any of us directly.

Best wishes for the success of your paper.

YSM Special Issue editor team

R.L. Barnett, D.S. Kaufman, M.F. Loutre, M.N. Evans, S.C. Fritz, C. Tabor, Y. Zhang, H. Plumpton, E. Razanatsoa, and E. Dearing Crampton Flood

For this paper:

All papers submitted to “Climate of the Past” must include a Data Availability section that details the location of the data that were used as input to the study, including previously published data that were used for comparison purposes, and the data that were generated by the study.

Input Data (used for analyses) – Data citations are needed for all time-series data that were used in this study. Add a column to Table S1 to list the persistent identifier (doi or URL from NOAA-Paleo) for each record. We recommend that Table S1 be moved to the main text so that data generators are acknowledged more prominently. Change the “researcher” column in Table S1 to “reference” and include the bibliographic citation in the References. If the data are not already available in long-standing data repositories, then we ask the authors to work with the data generators (if possible) to rescue the data and transfer them along with essential metadata to a data repository (NOAA-Paleo, PANGEA, or other registered at re3data.org). Once curated in a public repository, each dataset will be assigned a persistent identifier, which is then cited in this paper to credit the original data generators, in addition to the bibliographic reference.

In this study, the input data were modified for some records to adjust the age scale,

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and all time series were interpolated at 2-kyr intervals. To enable others to reproduce the primary results of this study, and to avoid losing this excellent compilation of proxy data, please transfer this entire modified dataset to a public repository, along with basic metadata for each record. The compilation should include the data and bibliographic citations for each of the constituent records, and the package (with its own persistent identifier) should be attributed to the authors of this study as an outcome of this synthesis.

Input Data (used for comparison) - Please cite and reference the source of the insolation curves shown in Figs. 1a,b,c, 14a. Because these data are used to compare rather than generate the primary outcome of the study, we suggest that a bibliographic reference to the data would suffice, although the authors are encouraged to include a data citation in addition. If, however, the time series were generated by the authors using online software, then both the data behind the calculator and the developer of the software should be cited.

Output Data (analytical) – Please prepare and upload to a registered data repository all of the data and metadata resulting from the primary analyses in the manuscript. This includes the time series of record stacks (Fig. 9), and derived temperature gradients (Fig. 12). Once assigned a persistent identifier (doi or URL from NOAA-Paleo), include the data citation for these files in the manuscript. Most data repositories use landing pages that collect the individual data files under a single identifier.

Output Data (statistical) – For the results of the statistical analyses including PCs (Fig. 4, 6b, 7, 8, 13a) spectral analyses (Figs. 3, 5) and d13C contour plots (Figs. 11, 15), please ensure that the statistical packages that were used to produce the plots are cited and fully referenced in the manuscript with sufficient details so that the plots could be replicated in future. We encourage the authors to upload the results of the statistical analyses to a repository (as above), but leave it to them to determine the likely future utility of the digital result of the statistical analyses relative to the effort involved to curate them.

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The editorial team for the PAGES YSM special issue will review the datasets and data citations prior to accepting the manuscript. As such, please provide them as part of the author responses to editor and reviewer comments. In addition, please reply directly to this data-review comment using the Interactive Discussion so that this exchange can be referenced as a use-case for future editors and authors.

What is a “Data Citation”?

Data Citations track the provenance of a dataset giving credit to the data generator; this is in addition to any references to publications where the data are described. Data Citations are used in the text (or tables) alongside and in the same way as publication citations. In the Reference list, they include: Creators, Title, Repository, Identifier, Submission Year. More information about Data Citations is here: [Here is an example of text and corresponding citations \(using CP punctuation style\)](#):

“The PAGES2k Consortium (2017a) assembled a large global dataset of temperature sensitive proxy records (PAGES2k Consortium, 2017b). Among the records is the paleo-temperature reconstruction from Laguna Chepical (de Jong et al., 2016), which was described by de Jong et al. (2013).”

References

de Jong, R., von Gunten, I., Maldonado, A., and Grosjean, M.: Late Holocene summer temperatures in the central Andes reconstructed from the sediments of high-elevation Laguna Chepical, Chile (32S), *Climate of the Past*, 9, 1921-1932, 2013.

de Jong, R., von Gunten, I., Maldonado, A., and Grosjean, M.: Laguna Chepical summer temperature reconstruction, World Data Center for Paleoclimatology, <https://www.ncdc.noaa.gov/paleo/study/20366>, 2016.

PAGES 2k Consortium: A global multiproxy database for temperature reconstructions C3 CPD Interactive comment Printer-friendly version Discussion paper of the Common Era, *Scientific Data*, 4,170088, 2017a.

### C4

PAGES 2k Consortium: A global multiproxy database for temperature reconstructions of the Common Era, version 2.0.0, NOAA-WDS Paleoclimatology, <https://www.ncdc.noaa.gov/paleo/study/21171>, 2017b.

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Interactive comment on Clim. Past Discuss., <https://doi.org/10.5194/cp-2018-20>, 2018.