

General Comments

I think the manuscript has been substantially improved, especially with the clarification of the method and the inclusion of a better designed Pseudo Proxy Experiment. However, I still have some concerns regarding: (1) the clarity of the method's explanation (which should be central for a technical note), (2) some unsustained conclusions and (3) the repetition of several sentences along the text.

I indicate lines and pages as in the file with tracked changes.

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(1): Method's explanation

1. In this version of the text the method is much better explained. However, I still can't find anywhere a description of what is meant by 90%, 99%, etc. uncertainty ellipses.

The first appearance of the 90%, 99%, etc. in the text is in the following sentence (line 33, page 7):

“We can do so at different levels of proxy-time uncertainty, e.g., 90% or 99%, comparable to common expressions of uncertainty intervals.”

At other time it says: “To do so, we consider the proxy values valid at all dates within their a 90% dating uncertainty, then identify the range of these values, and take the mid-point of the range as the proxy value for this date.” Which, to my point of view makes no sense.

I think a clear definition of x% ellipse uncertainty need to be provided, as it is a main part of the methodology.

2.

Line 23, page 17

“Valid analogues are those simulation fields that are within the resultant tolerance envelopes for all pseudoproxy locations available for a date.”

I find this sentence of extreme importance for the methodology. However, it only appears in the Results section. I think it should be moved to the description of the method, where it is much needed. The term “valid analogues” appears several times in the text but I think in this sentence is the first time that a proper definition is given, thus its relevance.

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(2): Unsustained conclusions

3. Line 11, page 29

“Generally, the reconstruction success appears to be better for proxy setups that only include UK0 records (Figure 11b,c)“

How can you say is „better“ when you don't know the truth? If you want to make a conclusion

like this you should do this experiment in PPE setup. There is no base for such a statement.

Line 31, page 33

“That is, the method performs slightly better using 51-year averaged simulation data than using 101-year averaged data, and it performs even better using interannual data.”

Again, I find this conclusions dangerous and erroneous, not derived from the present analysis. how do you know is better when you did experiments only when not knowing the truth (not PPE setup)?

I think this conclusion doesn't follow from your results and is inappropriate.

From you analysis you can only say that using 51 means leads to finding more possible analogues, if this. Whether this leads to a better reconstruction is not shown in this paper.

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(3): Repetition of sentences:

Several time in the text I found (almost identical) sentences repeated. Please, read the new text carefully and avoid this type of problems. Information should be more organized and not unnecessary repeated.

Here only 3 examples, but there are many more:

- Line 23, page 6:

We construct the pseudoproxies following the procedure of Bothe et al. (2019a, more specifically their ensemble approach)

Line 7, page 14:

We calculate the pseudoproxies following the procedure of Bothe et al. (2019a, more specifically their ensemble approach) but omit their effective dating uncertainty error term.

- Line 19, page 6:

The data is available in monthly resolution for the full simulation period for air temperature in 1.5 meter height, and as snaphots every ten simulation years for surface temperature

Line 18, page 14:

Data is available in simulation monthly resolution for air temperature in 1.5 meter height but only as snaphots every ten simulation years for surface temperature.

- Line 32, page 6

Figure 1a shows the 17 pseudoproxy locations and allows to identify their slight offset to the real proxy locations (Figure 1b) due to the discrete character of the simulation data

Line 1, page 16

Figure 1a shows the 17 pseudoproxy locations. These are close to the realistic proxy locations.

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Specific Comments

Figure 1: It is really hard to notice any differences between panels (a) and (b). Please, plot in only 1 panel and overlay a grid.

Figure 3: Include 1 more column for P01 setup, in a different colour.

Figure 6 and 9: Panel (a) is in Kelvin while all the other panels and text are in °C. Please, unify.

Also, the captions are really unorganized and difficult to follow. The first describe all the panels and then go on to describe them all again.

Figure 7 and 10: Add latitude and Longitude.

You use „QUEST-Famous“ and „, QUEST Famous“. Please, select only one denomination.

Typo: snahots (appears twice in the text)