

Dear Editor,

We thank you for your time and consideration. In the revised version of the manuscript are implemented all changes we proposed in the responses to the review comments.

As suggest by reviewer 1, we propose a new title that better reflect the topic of the article. A new paragraph was added in the discussion section (4.4) to discuss about the applicability of our approach to other cases. The acronyms EH2, DH1, DH2, and Act have been changed in the text and figure to avoid confusion. As relevantly raised by reviewer 2, we added a statement mentioning that the calendar effect was considered and discounted (in 2.2.3 section). Several points in the methods were clarified. Titles in the section 2.2 were reorganized following reviewer 2 advise.

Regarding figures, captions have been completed and clarified. The maps in Fig7 were recomputed using a more intuitive scale in percentage of similarity. The issue of the readability of Figure 10 was raised by the two reviewers, so it has been completely reorganized as a double entry table, with the idea that this presentation would be more intuitive for readers. While preparing the code for the online repository, we found that a test result had been misreported: the global 2B-pls is significant between climate variables and isotopes, and not THI. We deeply apologize for this mistake. It doesn't affect the main results and conclusions. The Fig10 and the text of the manuscript were changed accordingly.

Of course, all the minor and technical changes proposed have been implemented.

The code and data that support the findings of the article have been deposited in an online repository. A code and data availability statement have been added to the manuscript.

I stay at your disposal for any further information or modification, and hope that this new version of the manuscript will be to your convenience.

Best regards,

Léa Terray, on the behalf of all authors