

Interactive comment on “How wrong are climate field reconstruction techniques in reconstructing a climate with long-range memory?” by Tine Nilsen et al.

Anonymous Referee #2

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Review of CP-2018-17

Here the authors test how the reconstruction method BARCAST performs for target data that has different spatiotemporal covariance structure than what the method assumes. I think this paper addresses an important topic that hasn't really been addressed in the climate field reconstruction community.

I only have minor, mostly presentation-based comments.

I'm not sure that the title of the paper is as informative and accurate as it might be. The title implies that they are making broad claims about all climate field reconstruction techniques when they only tested one. And is long-range memory really the problem?

C1

Isn't it more accurate to say that the problem is when there is long-range memory that a method assumes isn't there or when the method treats it incorrectly? I would recommend adjusting the title to more accurately reflect the work in the paper.

The discussion of the science presented here is quite thorough. Though there are places where I think the text should be tightened and focused. In particular, the abstract takes a long time to set up the problem and discuss the work that was done. I would recommend cutting down and focusing the text of the abstract and also perhaps Section 5, which essentially contains three separate concluding discussion subsections.

p.1 l.2 Citation needed for unsuitability of the CE and RE metrics

Figure 3 caption doesn't explain what each of the (a)-(b) panels are uniquely showing.

I would recommend highlighting in both the abstract and the conclusions how the authors very nicely were able to test the issue of long-range memory in isolation by constructing the spatial fields statistically rather than through climate models. I think this is important to highlight because it's not usually (or ever yet?) done.

Interactive comment on Clim. Past Discuss., <https://doi.org/10.5194/cp-2018-17>, 2018.