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Climate
of the Past
Discussions

Interactive comment on "Identification of climatic state with limited proxy data" *by* J. D. Annan and J. C. Hargreaves

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Thank you for the comments.

1 In this investigation, the scaling is effectively determined by the selection of 0.4 signal to noise ratio. Eg, for a nondimensionalised proxy with standard deviation set to 1, and a target temperature series with observed standard deviation of s, the scaling to convert the proxy into units of temperature has to be 2.7*s (where 2.7∼=sqrt(2.5ˆ2+1ˆ2)). While acknowledging that it is an essential component of the overall process, we don't intend to consider the calibration of proxies within this manuscript, but instead treat them as observations of a known quality. We will add some discussion of this point in the revision.

2. It is true that this measure of potential predictability is a rather limited assessment of model performance, perhaps indicating little more than the local thermal inertial. We will extend the discussion here to include more of the literature concerning other aspects of model performance.

3 The methods can be considered as somewhat similar, though the analogue technique would not usually involve probabilistic weighting and instead just use the closest matching sample. Therefore, it cannot generate probabilistic analyses.

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