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Climate of the Past
Discussions

Interactive comment on "Blocking induced by the strengthened Siberian High led to drying in west Asia during the 4.2 ka BP event — a hypothesis" *by* Aurel Perşoiu et al.

Anonymous Referee #1

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Perşoiu et al. present a very clearly written hypothesis attempting to explain the underlying climate dynamics that accounted for the widespread 4.2ka event. While much is known about the character and extent of the 4.2ka event, what is lacking is understanding of the causes, so the hypothesis presented here is very useful. Thinking about the seasonality of climate takes this study further than previous syntheses of this event. It is well thought through and argued. Figure 3 presents a useful summary of their hypothesis. The hypothesis itself is plausible. Future work – producing better records from more sites – is now required to help test this hypothesis. Good, thorough methodology for choosing which sites to include in your study.

I have very few suggestions for changes. One is that Dean et al. 2017 (actually 2018) is cited in the table but not in the reference list. Also, I know this is a synthesis and is focussed on the climatology, however because the hypothesis comes from the proxy data, I wonder if you could plot at least some of the proxy data on a summary graph. This would help with your argument and help readers to assess for themselves what the proxy data show. The authors could also go into more detail on what type of palaeo records, and from where, are required to properly test this hypothesis.

In summary, this paper is very well written and presents a useful and plausible hypothesis so I recommend it for publication with some changes.

In answer to the specific questions asked of reviewers for CP https://www.climate-of-the-past.net/peer_review/review_criteria.html : 1. Yes 2. Yes 3. Yes, to a certain extent 4. Yes 5. Yes 6. N/a 7. Yes 8. Yes 9. Yes 10. Yes 11. Yes 12. N/a 13. No 14. Yes 15. Yes

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