

Interactive comment on “Synchronous variations of precipitation and temperature at Lake Qinghai, NE Tibetan Plateau during the past 800 years and their relations to solar activity: evidence from Li/Ca ratios and $\delta^{18}\text{O}$ values of ostracod shells” by Z. Zhu et al.

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The two Referee Comments and one Interactive Comment point to a number of substantial concerns on the validity of the approach and the robustness of the conclusions. From these comments it is obvious that the manuscript cannot be published in CP in the present form. To have a chance of still being published in CP, the authors will need to reply to all reviewer comments in detail. Furthermore, the manuscript needs to be

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revised thoroughly, which means re-writing of many parts.

The most important points to be addressed in a revision are the following:

- It needs to address more convincingly the interpretation of the proxies ($\delta^{18}\text{O}$ and Li/Ca in ostracod shells). Especially the interpretation of the Li/Ca ratios, obviously a novel proxy in ostracod shells, needs to be presented in detail.
- Also, a revised manuscript needs to explain in detail how the chronology was obtained. This involves a realistic estimate of the chronological uncertainty in the lower parts of the record. Ideally, the authors can add independent chronologic evidence for the interval AD 1200–1850.
- Finally, the mechanistic interpretations will probably need to be more conservative in a revised manuscript, so that they do not go beyond what can be concluded with some certainty from the data.

Given the severity of the concerns expressed by the referees and the implied substantial revisions required, I would need to send the revised manuscript for review once more.

If the authors think that they need more time for additional analysis in order to base their study on a broader and better dated datasets, then withdrawal of the manuscript and resubmission at a later point would be an alternative option.

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