

## ***Interactive comment on “Pollen-based temperature and precipitation changes in the Ohrid Basin (western Balkans) between 160 and 70 ka” by Gaia Sinopoli et al.***

### **Anonymous Referee #3**

Received and published: 28 October 2018

The quantitative palaeoclimate reconstructions during the Quaternary is an important to understand the climate changes and its potential forcing mechanisms, thus can helpful for predicting climate changes in future global warming. In this study, a quantitative reconstruction of climate parameters was provided based on the pollen data from the Lake Ohrid in southern Europe, using two complementary approaches including ‘Modern Analogues Technique’ and ‘Weighted Averaging Partial Least-Squares Regression’ during the period from 160 to 70 ka. It is useful for better understanding climatic changes during the key periods of MIS 6 and MIS 5 in the South Europe.

In current version I would suggest a minor revision before accepting it for publication.

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Here are a few basic comments that could guide the authors to submit a more detailed manuscript.

1. For the reconstruction, *Pinus* has been excluded in this study due to its overwhelming presence in the DEEP would potentially masks climatically controlled environmental signals from other taxa. Because this change should effect on the quantitative reconstruction, so a more detail comparison on reconstruction of climate parameters between *Pinus* including and its excluding is best presented in the supplementary information.
2. In Figure A2, the most values of Squared-chord distance between the first and the last analogue for a chosen climate parameter (TANN) calculated by MAT method are more than 0.3. The values may be larger than the no-analog/analog threshold that could accurate and precise palaeoclimate reconstruction. Therefore, a systematically analysis between the Squared-chord distance and precision of palaeoclimate reconstruction need to employ.
3. Results suggest that the Lake Ohrid palaeoclimate reconstruction shows greater similarity with climate patterns inferred from northern European pollen records than with southern European records in figure 6. Because the Lake Ohrid locates in the southern European, thus a more detail explanation and possible mechanism should be mentioned.
4. Please check all the language in the text, and correct it to the English, e.g. page 5 lines 1-3, and page 6 lines 35-36.

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Interactive comment on Clim. Past Discuss., https://doi.org/10.5194/cp-2018-71, 2018.

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