

## ***Interactive comment on “Seismic and sedimentological evidence of an early 6th century AD earthquake at Lake Ohrid (Macedonia/Albania)” by B. Wagner et al.***

**B. Wagner et al.**

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We would like to thank the referees for very helpful comments and suggestions to improve the manuscript. As we included almost all suggested modifications in the revised version of the manuscript, we here refer only to comments, which could not be fulfilled or, which we hope to answer in this letter.

Comments by Reviewer #1 (C Gebhardt)

(1) Korca-Ohrid Earthquake Source Zone not shown in Fig. 1

The earthquake source zone is outside the frame of Fig. 1 and the inset is too small;

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we therefore did not show this zone in Fig. 1

(2) P. 4336 L. 2: City of Ohrid – please indicate on Fig. 1. How far away is the city of Skopje from the lake?

The city of Ohrid is now indicated in Fig. 1. As also the city of Skopje is outside the frame of Fig. 1, we mention in the text that the city of Skopje is located ca. 120 km northeast of the city of Ohrid.

(3) P. 4344 L. 3: Did you observe contourites in the seismic profiles?

The surface sediments indicate lake internal currents at present (Vogel et al. 2010). Hydroacoustic patterns, which could indicate contourite drift, are tentatively indicated in some seismic profiles from other parts (W and SW) of Lake Ohrid, but more work would be needed to check, if these are real contourites and how they are related to past changes in aeolian activity and lake level fluctuations.

(4) References should be updated once this manuscript goes into press

Lindhorst et al. (in review) was deleted as there is no progress and the manuscript is still in review. We modified the text accordingly.

Comments by Reviewer #2 (S Giradclos)

(1) ... from the presented data and manuscript, other possible causes for this mass wasting deposit were NOT discussed. This is the weak point of the article. A thickness map of the mass wasting deposit to indicate where it probably started, thus also leading to better interpretation, would be a nice to add.

We included a thorough discussion of other possible causes for the mass wasting deposit and hope that there is more evidence now that an earthquake most likely triggered the mass wasting deposit. A thickness map of the mass wasting deposit would require several profiles across the mass wasting deposit. Although 2-3 profiles exist, we feel that more profiles and a higher resolution would be needed to create a thickness map

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for this deposit.

(2) Figure 4: please highlight the small turbidites with grey background too. 960-980; 548-350 cm

We highlighted the two turbidites, but they are very thin and probably not visible in a print version of the figure.

(3) p.4343 line 20-22, “and are relatively high compared with other sites from the north-eastern or southeastern part of the lake.” Please give indication of the values, quantify your comparison

The values and a discussion are given in the following sentences.

(4) p.4345 line 13-17, I don't understand the following sentence. “The thick mass wasting deposit, which underlies core sequence Co1262, could be a valuable example for an older mass wasting deposit triggered by an earthquake, as most existing sediment records spanning into the last glacial cycle have disturbed sedimentation at the Late Pleistocene/Holocene transition.” Explain what you are meaning and add refs to prove your interpretation

We modified these sentences and moved them to chapter 5, as we think that there should be no references cited in the conclusions.

General remarks

As we have received in the meantime the results of radiocarbon dating on 6 samples, we added J Rethemeyer, who has conducted the analyses at the University of Cologne, to the co-authors.

All radiocarbon data are now included and discussed in the text and shown in Fig. 4 and Table 1. The new radiocarbon data confirm the previously presented core chronology for the Holocene and the timing of the mass wasting deposit. However, they led to slight modifications of chapter 2 (Material and methods) and chapter 4 (Chronology),

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particularly in the Pleistocene/Holocene transition.

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Interactive comment on Clim. Past Discuss., 8, 4333, 2012.

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