

Dear Prof. Risebrobakken,

Thank you for the revision and acceptance of our manuscript for publication in the Journal 'Climate of the Past', following the technical corrections.

We have replaced the word 'gapless' in line 179 (in the track changes version) with 'continuous' in the following sentence: "*the short core was subsampled in 1 cm continuous increments*".

Further, we thank you for the comment regarding the statement on mixing in line 328. It is correct, that mixing would not necessarily lead to a hiatus/interruption in the sedimentation. We have probably caused some confusion here and therefore decided to delete the sentence to provide more clarity. In the sentences above, we already explain possible reasons for the ^{14}C age offset, as it was also observed in another study at this lake. We also mention that the sample material appeared very uniformly coloured during sampling without visible stratification. Mixing cannot be ruled out *per se*, but we assume that bioturbation is rather neglectable in a deep and cold lake in Siberia. Sediment surface mixing, as caused by coring processes or natural resuspension could occur, but the relatively uniform accumulation and volumetric sedimentation rates at the study site support our argumentation towards a truth worthy Pb-Cs age-depth model excluding the ^{14}C ages, also supported by the reviewers.

Additionally, we have made a small adjustment in line 563 (last track changes version; changed "(Figure 5)" to "(Fig. 5)"). Please do not hesitate to contact me if anything remains unclear.

Best regards,

Amelie Stieg

Corresponding author