

Response to reviewer and editor on the manuscript:

“Rapid and sustained environmental responses to global warming: The Paleocene–Eocene Thermal Maximum in the eastern North Sea”

From the editor:

Dear

Thanks for the revised version. However, you would need to clarify one issue that the referee raised:

"It appears that the chemical index of alteration has been recalculated, but I'm not sure if it is reflected in Fig. 9 and Fig. 10."

Thanks in advance.

With the best wishes

Zhengtang Guo

Our reply:

We understand that this may be a bit unclear. In the last revision, reviewer 2 asked us to recalculate the Chemical Index of Alteration (CIA) taking in account the carbonate fraction of the sediments. We had initially not done this, as we knew the carbonate fraction in the sediments was minimal. However, following this recommendation, we recalculated considering both the fraction of carbonate and apatite, as is often done with the CIA. However, as also stated in our last response to reviewers, this led to a minimal change in the CIA, and no change in the interpretation. However, we should maybe have been clear on how small this change was. It is the order of 0.4-3.2 %, and will therefore not be very visible on a graph plotted between 60-90%. Consequently, it looks like the graphs are not altered. To be absolutely certain, we have remade the figures with the correct graph and uploaded a new manuscript with new versions of Figures 9 and 10. We hope that this will clarify the issue.