

## ***Interactive comment on “A seasonality trigger for carbon injection at the Paleocene-Eocene thermal maximum” by J. S. Eldrett et al.***

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Received and published: 22 January 2014

Both reviewers emphasize the quality and the importance of the continental record of the PETM described in this contribution. However, based on both reviews and on my own reading, the stratigraphic interpretation appears to be a major issue. In your answer to the review of Carlos Jaramillo, you argue that the CIE is identified by the occurrence of A. Augustum. But in that case, as pointed by the second reviewer, the CIE should start at 2274 mbsf, while you assume 2264 mbsf. Anywat, there is something unclear here: 1) You mention that you calibrate the beginning of the CIE with the occurrence of A. Augustum in your answer to Jaramillo. But in fact, it is not the timing of the CIE that you calibrate, but the environmental changes linked to the PETM. 2) In the conclusion, you say that there is a climate shift before the CIE, as shown by

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the occurrence of A. Augustum before the CIE. So the real question is : how do you fix precisely the beginning of the CIE ? It cannot be fixed with the occurrence of A. Augustum.

This is a critical point that must be solved in your final response, before submission of a revised ms.

I also agree with the reviewer that some statistical analysis must be performed.

Finally, why is the main text so short ? You can easily extend it, particularly about the stratigraphic question. Some key figs, such as fig S1, must appear in the main text. Clearly this text is formatted for another journal, but this format is not the Clim. Past usual format. You can reorganize the scientific discussion to make it clearer and more complete, especially since your database is of very high quality.

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Interactive comment on Clim. Past Discuss., 9, 5837, 2013.

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