

Interactive comment on “Calcification response to climate change in the Pliocene?” by C. V. Davis et al.

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I would just like to make a quick comment on this interesting manuscript. I refer to the following two sentences excerpted from the abstract (there is another one at the end of the conclusion):

- "Here we present new records of planktic foraminiferal and coccolith calcification from Deep Sea..."
- "Our results suggest no major changes in plankton calcification during the high pCO₂ Pliocene or during the transition into an icehouse world"

Most oceanographers use the term "calcification" to describe a rate, that is a mass of
C2702

CaCO₃ precipitated per unit of time. This manuscript reports data on the mass and size of coccoliths and foraminifera. It is important to note that mass and calcification may not be correlated as cells with light coccoliths (or light foraminifera) may exhibit a rate of calcification higher than cells with heavier coccoliths (or heavy foraminifera) if the mass of CaCO₃ was precipitated over a shorter time interval. In other words, the generation time is required to convert weights into rates of calcification. I therefore suggest that the authors make it clear that the conclusion is that there was no major changes in weights during the high pCO₂ Pliocene or during the transition into an icehouse world, and that no conclusion is drawn on calcification rates.

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