

## ***Interactive comment on “Oxygen isotope composition of final chamber of planktic foraminifera provides evidence for vertical migration and depth integrated growth” by Hilde Pracht et al.***

**Hilde Pracht et al.**

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Response to Reviewer 2. Takashi Toyofuku

Outlined below is our responses to their questions:

We thank the reviewer for their comments and thorough reviewing and will enact their textual suggestions. We do note however that at P14L17 Faber is not cited twice, it's a part 1 and part 2 paper.

C1

Question 2 of P10L25, can you expect that the difference among size groups will become statistically significant as the number of samples increases?

Its an interesting question, the simplest answer is that we don't know whether by adding more data our results/significance would change. That being said, we do wonder if we expanded the size range to larger and smaller size classes whether we would see a different or a continuation of the trend. Or if we measured more specimens we would get a different result, essentially we can only know what we have measured with our current N and method. We know that, from a previous study, by increasing the number of size fractions or pooled analysis globally there seems to be a size isotope relationship (Ezard et al., 2015). Whether that holds true for individual sites or is the 'global' signal is intriguing.

Reference

Ezard, T.H.G., Edgar, K.M., and Hull, P., 2015. Environmental and biological controls on size-specific  $\delta^{13}\text{C}$  and  $\delta^{18}\text{O}$  in recent planktonic foraminifera, Paleoceanography, doi: 10.1002/2014PA002735

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