

## ***Interactive comment on “Quantifying the effect of seasonal and vertical habitat tracking on planktonic foraminifera proxies” by Lukas Jonkers and Michal Kučera***

**Anonymous Referee #1**

Received and published: 8 February 2017

The manuscript of Jonkers and Kucera on “Quantifying the effect of seasonal and vertical habitat tracking on planktonic foraminifera proxies” reads good. However, the topic and the findings discussed in the manuscript are not new. Some of the newest findings on the seasonal production of species were possibly published earlier by another member of the same working group (Kretzschmer et al. 2016). Having said this, I still like the presentation of the results and new figures providing an interesting perspective of a familiar problem. I would guess that the manuscript can be published with minor revisions. Please find my comments below.

Line 68, seasonality, please refer Kretzschmer et al. (2016) Line 140, *G. bulloides*, does include all genotypes and morphotypes in this case? Please clarify. In line 296,

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genotypes are mentioned and may be discussed here. Line 160, Southern, in lower case. Lines 224-229: Using a sine function is not imperative. Could this not be improved in the present manuscript, in comparison to Jonkers and Kucera (2015)? Line 243, Discussion: to my impression, the discussion has started long before. Reorganize chapters? Line 249-250, “role” of temperature and “dominant in controlling”: better replace “role” and “dominant in controlling” by “correlation” and “related to”. The effect of temperature is neither proven nor quantified, since it rather effects foraminifera indirectly through oxygen concentration, and other variables. Lines 267, 310, 379: Referring as to “homeostatic . . . / homeostasy” in protists sounds wrong to me. Please delete in lines 267 and 379, and reword in line 310. Line 314: “constant seasonality and depth habitat”, please give a reference. Lines 319-325: This is not new, and the authors try to convince the choir. Line 328-329: “. . . because temperature change forces the foraminifera to live in a seasonal or vertical ‘window’ “. What is the difference to Kretzschmer et al. (2016)? Caption Fig. 10: Please explain: depth (z) In general, figures could need some more explanation.

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Interactive comment on Clim. Past Discuss., doi:10.5194/cp-2016-125, 2016.

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