

## ***Interactive comment on “Quantifying the Cenozoic marine diatom deposition history: links to the C and Si cycles” by Johan Renaudie***

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Thanks to Anonymous Referee #1 for their thoughtful review.

Concerning the absence of the Humboldt and the Benguela mid-latitude upwelling zone from the data: as mentioned in the Material and Methods section, leg 175 is not included in the dataset because, at that time, the smear slides descriptions were given semi-quantitatively instead of quantitatively making it difficult to integrate these data in the study; as for Humboldt, while leg 202 is present in the dataset, only Pleistocene sediments were recovered in the four sites of leg 202 that were drilled in the upwelling zone, thus preventing the reconstruction for the Miocene and Pliocene. Please note however that both the Canary (Leg 41) and the California (Leg 63) mid-latitude upwelling zones are present in the dataset. I will include in the revisions however men-

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tions to articles that treated the middle to late Miocene appearance of the Benguela upwelling zone in particular, as they were currently missing in the manuscript. I will also include more background informations on the use of the Os and Sr isotopes, on the Silica Switch and on the direct impact of weathering on the climate. Concerning the structure of the paper, indeed I agree that merging Results and Discussions while separating subsections by time interval could improve the readability of the manuscript. Concerning the size of the maps: while in the latex-produced submission file Figure 4 appeared small it is in fact meant as a full page figure.

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