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

J. Renaudie

johan.renaudie@mfn-berlin.de

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Thanks to Reed Scherer for his thoughtful review.

See reply to Anonymous Referee #2 concerning the quality of the smear slide descriptions. Concerning the post-Paleogene cherts: indeed there are some cherts present in post-Eocene sediments, however as Muttoni & Kent 2007 (Fig. 2) showed, their abundance starting from the middle Eocene onwards (after horizon Ac) is considerably lower than before and therefore unlikely to affect significantly the manuscript results in my opinion.

Concerning the comment on page 4 line 24: indeed there is a differential in dissolution rate between diatoms and radiolarians that lowers the abundance of diatom in Equatorial Pacific sediments (as it was discussed in particular in Lisitzin 1972, due to the

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effect of temperature on the kinetics of the dissolution). I will add some comments concerning the dissolution issue in the manuscript. Please note however that this doesn't affect the conclusions concerning the silica cycle as dissolved diatoms are de facto not part of the output of the marine silica cycle.

Thanks also for the many comments concerning the language used in the text: i will indeed edit the text as much as possible to follow these recommendations.

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