

Biogeosciences



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Date: July 15th, 2021

Subject: Technical corrections

Manuscript ID: BG-2020-435 “New insights into large-scale trends on apparent organic matter reactivity in marine sediments and patterns of benthic carbon transformation”

Dear Associate Editor Marilaure Grégoire,

On behalf of all co-authors, thanks for the excellent news about our manuscript. We have addressed the final comment by the reviewer:

"The various rates of reaction are represented as R_j (Equation 1 and Table 3), r_n (Equation 9 and Table S4) and C_{ox} (Equation 4). I think these divergent symbols for quantities that appear to be dynamically similar can still be a cause of confusion, e.g., C is also concentration in Equation 1. It all seems unnecessary. Further, why use $C_{ox,total}$ for a flux if JOM_{out} is also the same flux? Wouldn't one symbol (J) be enough?"

The symbols employed were corrected (Eq. 1—10; Table 3, 6, and S4; Fig. 7) as suggested and their use revised throughout the manuscript for consistency. We believe these changes satisfy the Reviewer's comment.

Sincerely yours

A handwritten signature in black ink that reads "Felipe Sales de Freitas".

Felipe Sales de Freitas and co-authors