

Interactive comment on “Sedimentary and mineral dust sources of dissolved iron to the World Ocean” by J. K. Moore and O. Braucher

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Code Error Modifies Simulated Fe Flux from Sediments

After submission of this paper and its posting to the Biogeosciences Discussion Forum, we found an error in the computer code used to estimate the flux of iron from the sediments to the oceans. This bug led to iron flux being underestimated in some regions and overestimated in others. Integrated globally the iron input from the sediments was significantly underestimated in the published version of the manuscript. We have repeated all relevant simulations after correcting this mistake and will soon submit a corrected version of the manuscript to the editor, that will be forwarded to the reviewers. As much of the additional iron from the sediments is lost to scavenging, there is only a modest impact on the phytoplankton and associated biogeochemical cycling. None of the main conclusions in the version of the paper published online at

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BGD will change in the corrected paper. The sedimentary iron input fields in Figure 2 are significantly altered, in general being smoother and more closely following the pattern of biological export of carbon from surface waters. The mean iron concentrations presented in Table 2 are modified by typically $< 2\%$ in most regions, with changes as large as 10% in some deep ocean regions. Changes of similar magnitude are seen in the biogeochemical fluxes from Table 3. But the patterns across the simulations and our main conclusions are not altered after correcting the error in sedimentary iron flux estimation. The generally small changes in iron concentration lead to minor changes in figures 3-10. We apologize for this error and any confusion it causes in evaluating the paper. The final, corrected version of the paper will be available upon publication in Biogeosciences.

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