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Interactive comment on “Sedimentary phosphorus and iron cycling in and below the oxygen minimum zone of the northern Arabian Sea” by P. Kraal et al.

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The relationship between the nutrient element phosphorus, the organic component carbon, the redox component iron, and dissolved oxygen in the water column is complex, but extremely important in terms of modern and past biogeochemical cycling. This contribution by Kraal et al. follows on the group’s excellent previous research on these topics and in this area, and is a valuable addition to the literature.

The authors use appropriate analytical techniques to derive sedimentary P and Fe components. The sites are well-placed to capture the heart of the OMZ as well as depths below this—critical to characterizing material that falls through the OMZ but ultimately sediments in more oxygenated water depths. The results are intriguing, especially the role of wind-blown particulates as an important source of CFA in these

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environments—I think that this issue should be explored more in other coastal systems, as we might be over-interpreting the sedimentary CFA records in these other areas.

My only criticism is that the final section on Fe and S cycling in sediments seems to add little to the core topics of the paper. Perhaps I am not thinking this through clearly enough, but I suggest that the authors either justify why and how this is important, or consider shortening/removing this from the current contribution.

Overall, this is an excellently researched, designed, and written study that will be of great value to experts in the area as well as to researchers in related biogeochemical fields.

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