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Controls on redox-sensitive trace metals in the Mauritanian oxygen minimum zone

***Comments on revised manuscript:***

The authors have improved the manuscript significantly along the lines suggested by the reviewers. There is however still an issue regards oceanographic nomenclature, the authors suggest that during the two occupations of the same sampling site, the water masses are the same. This description though is based on a T/S relationship, which might have been fine for physical oceanography in the past, but a broader chemical oceanography view, taking in oxygen and nutrients for instance, would indicate that they are distinctly different water masses with regard to their recent history. In this case they could be described as water parcels instead of water masses.

***Specific comments:***

*Calculation of $K_Z$ using microstructure probe*: In the reply to my comment it was mentioned that the microstructure profiler data near the bottom, not trace metal data, were not needed to determine the diffusive and advective fluxes between 20 and 50 m. The data from the benthic boundary layer would be useful to include in the context of recent work from the Peruvian OMZ (Croot et al., 2019) where Fe(II) distributions were used to calculate the Fe(II) fluxes from the sediments, and also the Oregon coast where $O_2$ variations in the sediments were examined (McCann-Grosvenor et al., 2014).

*Vertical velocities used in calculations and their contribution to the calculated fluxes:* One thing that still was not clear in the revised manuscript was what the vertical advection contribution was to the flux estimates. Including a paragraph on the relative contributions would be useful in this respect as it still looks like in many cases this is a key term because of the high concentrations. Also in this context, near the benthic boundary layer tides [e.g. Peru (Mosch et al., 2012), Oregon (McCann-Grosvenor et al., 2014).] may have a significant vertical velocity associated with them (Trowbridge and Lentz, 2018) and in particular for 'updraft events' related to the tides (Sevadjian et al., 2015) how would this then impact the estimation of the fluxes? The reason why I mention this is that in the present work the flux calculations are still not discussed in detail as to the contributions and uncertainties.

*Low $O_2$ waters arriving from the south*: In the context of the authors work, another recent work has shown that there has been very low $O_2$ concentrations in near surface waters to the south of the present study site and in the path of waters to that region (Machu et al., 2019).

**References cited:**

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