

Interactive comment on “Particle export fluxes to the oxygen minimum zone of the Eastern Tropical North Atlantic” by Anja Engel et al.

Anonymous Referee #2

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Particle export fluxes to the oxygen minimum zone of the Eastern Tropical North Atlantic

This paper by Engel et al. describes the flux and composition of particles from surface waters through the oxygen minimum zone of the water column off the coast of Mauritania in the Eastern Tropical North Atlantic. Two deployments of surface-tethered drifting sediment traps collected particles at 7-8 depths including the OMZ from 300-500m. Calculated transfer efficiencies of the total POM and various characterized components of the particles indicate lower attenuation through the OMZ than predicted from seawater temperature. Particle composition data showed highest transfer efficiencies for TEP and lowest for amino acids. The paper is well written and a nice contribution regarding particle flux dynamics in OMZs. I have no major issues with the text and recommend publication after minor revisions detailed below.

C1

Minor comments:

- pg 3, line 57: add comma after citation
- pg 4, line 81: ref LeMoigne et al., 2012 is missing from reference list; LeMoigne et al., 2016 is listed but not cited, perhaps one of these is an error
- pg 4, line 85: typo, Alldredge is misspelled
- pg 4, line 98: typo, change 'be' to 'been'
- pg 5, line 130 (and elsewhere throughout): I am not familiar with this spelling of 'Mauretania' with an e and could not find other references to Mauritania spelling as such so would recommend changing (certainly if this is an accepted spelling it does not need to be changed)
- pg 5, line 131: 'drifting' is written twice
- pg 6, line 145: hyphenate 'surface-tethered'
- pg 8, line 185: insert 'of' (Aliquots of samples...)
- pg 9, line 215: remove 'in' (...were filtered onto...)
- pg 9, line 221: hyphenate 'peroxydisulphate-containing'
- pg 9, line 231: ref Dittmar et al., 2009 is missing from reference list
- pg 11, line 269: close parentheses after 'sample'
- pg 17, line 432: opal is incorrectly capitalized
- pg 19, line 488: Keil et al., 2016 is missing from reference list (or incorrectly cited here as 2015 is in the list)
- pg 20, line 494: insert 'the' (...explain the relative...)
- pg 24, lines 592-600: the two Buesseler et al., 2007 references should be distinguished as a and b here and when cited in the manuscript
- pg 26, line 652: Giering reference is formatted incorrectly (begins with 'Sarah')
- pg 27, line 675: Kartensen et al., 2008 is not cited in manuscript but is listed here
- pg 31, line 760: Ploug and Jorgensen, 1999 is not cited in manuscript but is listed here
- pg 34: If possible, it would be nice to include the calculated degradation indices along with the amino acid composition in table 2.

C2

