

***Interactive comment on “An eddy-stimulated hotspot for fixed nitrogen-loss from the Peru oxygen minimum zone” by M. A. Altabet et al.***

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First we thank the anonymous referee for his/her thoughtful comments.

Regarding the referee's questions about the 'two phenomena' producing peaks in biogenic N2 in the hotspot, we are positing that the biogenic N2 peak sitting just above the OMZ to have developed on the shelf and transported offshore in the eddy streamer. Evidence for this is 1) its co-occurring [O2] above suboxic conditions, 2) its high  $\delta^{15}\text{N}_2$  anomaly and 3) its unusual stoichiometry with the NO3- deficit. In contrast, we posit that the biogenic N2 deeper within the OMZ was produced locally by a local downward injection of organic matter from the overlying eddy streamer. Evidence is the lack of co-occurring O2 and the presence of expected  $\delta^{15}\text{N}_2$  anomalies and stoichiometry with the NO3- deficit. In our revision, we will make this distinction clearer.

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The referee's 'minor editorial suggestions' are all reasonable and will be incorporated in the revision. We do take  $[O_2] < 5 \mu\text{M}$  as defining the OMZ and this will be noted in the figure legend.

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