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Interactive comment on "An improved method for the determination of dissolved nitric oxide (NO) in seawater samples" *by* H. E. Lutterbeck and H. W. Bange

Anonymous Referee #1

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The method paper by Lutterbeck & Bange is well-written and useful for the measurements of relatively low concentrations of NO in seawater, with a method that is applicable for on-board work. Experimental procedures are described in sufficient detail to reproduce the work, and the method has been successfully tried with water column profiles of a cruise to the South Pacific. I recommend acceptance after corrections/amendment according to the following minor textual comments:

p.2 L. 21: Here I miss the information that NO is an obligate and well-proven intermediate in denitrification. Please insert a sentence with this information.

L. 25: NO is not directly reduced to N2, but via the intermediate N2O. Please add.

L. 26: The role of NO as an intermediate in the anammox reaction is now firmly established, e.g. by Kartal 2011, a study that you already cite.

p.3 L. 13 and also p. 11, discussion of sample handling: What is "rapidly oxidized to N2O"? Please give an indication for realistic concentrations in your samples; for example Kharitonov et al (1994, JBC) found a half-life of 2 hours for 100 nM NO in presence of atmospheric O2 concentrations. This time is even longer for the lower concentrations found in the present study. If it is conflicting with the study cited (Lewis and Deen 1994, who used much higher, micromolar concentrations) please discuss.

p. 5 L. 24: Check sentence, I think a "with the" is missing.

p.9 L. 2: Why is the standard deviation so high for the aqueous samples? Please discuss.

L. 14: Why wasn't the syringe cleaned/flushed with H2O after each measurement? Why is ethanol needed for the cleaning, or is it just because of faster evaporation?

p. 13 L. 6: Write out as iodide, the I- is difficult to read

Interactive comment on Ocean Sci. Discuss., 12, 959, 2015.