Ocean Sci. Discuss., 12, C1054–C1056, 2015
www.ocean-sci-discuss.net/12/C1054/2015/

Ocean Science
Discussions
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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

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Received and published: 27 October 2015

Referee 1#: 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: Authors: We thank referee #1 for the work on our manuscript and the helpful comments which gave us a useful framework for improving our manuscript.

Referee 1#: 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. Authors: We think this information is already included in the next sentence where we cite Zumft (1997). We added the word denitrification to this sentence to make it clearer.

Referee 1#: L. 25: NO is not directly reduced to N2, but via the intermediate N2O. Please add. Authors: Done.

Referee 1#: 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. Authors: We removed the word “probably”.

Referee 1#: 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. Authors: We changed the sentence in the introduction and added more discussion about the effects of oxygen to the sample handling section.

Referee 1#: p. 5 L. 24: Check sentence, I think a “with the” is missing. Authors: Done.

Referee 1#: p.9 L. 2: Why is the standard deviation so high for the aqueous samples? Please discuss. Authors: Done.

Referee 1#: 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? Authors: Both cleaning with water and a cleaning after every measurement did not improve the standard deviation. We added this information.

Referee 1#: p. 13 L. 6: Write out as iodide, the I- is difficult to read Authors: Done.

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

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