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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 #2

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

The manuscript submitted by Lutterbeck and Bange to Ocean Science Discussions presents an improved and easy to handle chemiluminescence-based method for the analysis of dissolved nitric oxide in seawater. Moreover this manuscript also addresses the topics of nitric oxide in seawater which is of high interest in the fields of chemical oceanography and biogeochemistry since there are various potential microbial nitric oxide production and consumption pathways in the oceans. The manuscript submitted

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by Lutterbeck and Bange is very well written and evaluates in depth all factors that might influence the quality of the measurements. This manuscript opens new perspectives and might contribute to a better understanding of nitrogen cycling in the oceans. Therefore I recommend this manuscript for publication after minor revisions (see below):

- P960 L25: L. 25: NO is not reduced to N₂, but forms nitrous oxide which is reduced to N₂.

- P968: The author should also discuss the possibility of interferences by organic compounds. For example S- and N-nitroso containing compounds are known to produce nitric oxide by photolysis.

- P968-L12-13: Please provide references and add your “preliminary” tests in the manuscript or if possible in supporting information. Moreover the authors should explain more in detail how poisoned plankton might release nitric oxide.

- Table 2: Could you please explain why the standard deviation of the aqueous NO standard solution is more than two times higher than the reference gas?

- Figure 2: Please provide the concentration of H₂S measured in these six seawater samples.

- Figure 3: Please explain in the caption what is the difference between graphs A, B and C.

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

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