

We could like to thank the Editor for his constructive and useful comments. We have now incorporated the comments below into the new manuscript and provided the replies point by point below.

Associate Editor Decision: Publish subject to technical corrections (26 Nov 2019) by Christof Janssen

Comments to the Author:

Dear Authors,

Thank you for the revised version of your manuscript which clarifies the raised issues. I therefore congratulate you to your very interesting paper that can be published subject to technical corrections.

To eliminate eventual ambiguities, I propose to delete

- "following equation 1" in the phrase "Note that under the assumption the atmospheric N<sub>2</sub> content ..."

This phrase is deleted as proposed above

- the three phrases from "Since no information about N<sub>2</sub> is available ...." to "correspond to the true dO<sub>2</sub>norm/N<sub>2</sub>norm." (because all these quantities have not been defined yet and potentially create more confusion than they explain)

These phrases are now deleted

- "the following" in the phrase beginning with "Indeed this dilution effects"

This phrase is now deleted

You should also replace "this" by "these" in the same phrase and "addition of N<sub>2</sub> of 10 ppm" by "addition of 10 ppm N<sub>2</sub>" at a later instance.

"This" is now replaced with "these" and modified as proposed above