

In my review of the earlier submission, I raised the issue of bubble contributions to gas transfer. I am pleased that the authors addressed the issue directly in this revision. Here the authors argue against solubility as an important control for gas transfer effect by invoking laboratory studies in the circular wave tank (Krall, 2013). I agree that would be good evidence against bubbles as a major mechanism of gas transfer in those studies. I wonder if they could offer a little more insight into how the rate of bubble generation in their tank relates to that in the ocean. Is there evidence that wave-breaking occurs at similar rates in the tank as in the open ocean at similar wind stress? If they wish, this could be addressed with minor modification to the text and should not require further review.

Overall, I think the manuscript is a very useful contribution and recommend publication.

A few typos and minor grammatical issues are noted below:

P2 line6 typo “me” should be “be”

P6 line16. The partitioning of the text into paragraphs is a bit random throughout the paper. This was a good example. There’s a one sentence paragraph that directly relates to the rest of the text in this section. Why not one paragraph. I noticed this throughout and it was a bit distracting.

P9 Figure 4 caption. Delete comma after “Conditions”.

I’m a little confused about Fig 3 and Fig 4. The text says that Figure 4 shows data “in comparison to the same parameterization” used for Alkor 2009. The figure itself shows only 2010 data and there is no comparison shown. Also the wind speed axis scale changed between Fig 3 and 4 which makes it difficult to compare.

P11. Grammatical issues with the caption to Figure 6. This is not a sentence: “For the measurements on RV Aranda in 2010 open ocean conditions, assumed to be with a virtually unlimited fetch, are marked with filled circles, while the fetch limited measurements in the archipelago are marked with open circles.”

P12 line 13 spelling

P12 line 15. Another odd one sentence paragraph which could easily be part of the next paragraph.

P12 line 25. Comma is in the wrong place. Should be: “...Aeolotron that, at very...”

P12 line 29 “the the”

P14 line 11 “the the”