

## ***Interactive comment on “First air–sea gas exchange laboratory study at hurricane wind speeds” by K. E. Krall et al.***

**Anonymous Referee #1**

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This is a very well written pilot (the author’s word choice) laboratory study presenting unique laboratory measurements of air-water gas transfer at extreme wind speed speeds. The results are highly relevant to the oceanographic community. I’d recommend publication as is with a few possible suggestions for improvement for the author’s consideration:

1. Might consider title change to “First laboratory study of air-sea gas exchange at hurricane wind speeds ” 2. Section 5.2: I’d suggest considering a few more comments on DMS. You state:

“Vlahos et al. (2011) present measured transfer velocities of dimethylsulfide (DMS), which show a decrease in the gas transfer velocity when bubble clouds are present at high wind speeds. For both tracers used in this study, this decrease is not observed.”

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Based on the chemical arguments put forward by Vlahos et al., which related specifically to DMS, if their theoretical arguments were applied to the gases used in this study what would be the predicted reduction in transfer rates at highest winds for the gases used in this study? Is this even possible to calculate? If it were possible, it would provide a more quantitative test of their theory (including an error assessment).

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Interactive comment on Ocean Sci. Discuss., 10, 1971, 2013.