

Interactive comment on “Determination of oceanic ozone deposition by ship-borne eddy covariance flux measurements” by L. Bariteau et al.

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This paper represents a wonderful technical tour de force for measurement of reactive trace gases to ocean surfaces using the eddy covariance technique and the authors should be congratulated on achieving such a difficult measurement.

Could I suggest the authors might like to refer to the work published recently in GRL, Whitehead et al. (2009). In this work ozone eddy covariance flux measurements are presented for an extensive tidal plane at the French coast. Whitehead et al. report ozone deposition velocities to sea water of $V_d = 0.0302 \text{ cm s}^{-1} \pm 0.0095 \text{ cm s}^{-1}$. This compares very favorably with the authors reported open ocean values from the TexAQS-2006 cruise of $V_d = 0.036 \pm 0.003 \text{ cm s}^{-1}$, which I suggest is remarkably good agreement.

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The much higher values quoted closer to land ($V_d = 0.24 \text{ cm s}^{-1}$) by the authors are interesting and require further investigation but are within ranges reported previously for some locations. One might speculate on surface processes enhancing V_d closer to coastal sites in some cases.

REFERENCE J. D. Whitehead, G. B. McFiggans, M. W. Gallagher, & M.J. Flynn. Direct linkage between tidally driven coastal ozone deposition fluxes, particle emission fluxes and subsequent CCN formation, GEOPHYSICAL RESEARCH LETTERS, VOL. 36, L04806, doi:10.1029/2008GL035969, 2009.

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