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Interactive comment on "New constraints on terrestrial and oceanic sources of atmospheric methanol" *by* D. B. Millet et al.

D. B. Millet et al.

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We thank Martin Johnson and Peter Liss for their comment. In fact we do account for resistance to mass transfer in both the gaseous and aqueous phases.

We use the standard two-film model described by Liss and Slater [1974]:

F = KL * (Cg/H - Cl)

1/KL = 1/kl + 1/(H*kg)

kl is the liquid phase transfer velocity, and we use the parameterization of Nightingale et al. [2000] (as described in the Johnson and Liss comment) for this.

kg is the gas-phase transfer velocity, and we use the parameterization of Asher [1997] for this. We apologize that this was not explained in the ACPD manuscript and will

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clarify matters in the revised version.

Liss, P.S., and Slater, P.G.: Flux of gases across air-sea interface, Nature, 247, 181-184, 1974.

Nightingale, P.D., Malin, G., Law, C.S., Watson, A.J., Liss, P.S., Liddicoat, M.I., Boutin, J., and Upstill-Goddard, R.C.: In situ evaluation of air-sea gas exchange parameterizations using novel conservative and volatile tracers, Global Biogeochem. Cy., 14, 373-387, 2000.

Asher, W. (1997), The sea-surface microlayer and its effect on global air-sea gas transfer, in The Sea Surface and Global Change, edited by Peter S. Liss, and Robert A. Duce, Cambridge University Press, Cambridge, UK.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 7609, 2008.

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