

Interactive comment on “Soil-atmosphere exchange of ammonia in a non-fertilized grassland: measured emission potentials and inferred fluxes” by G. R. Wentworth et al.

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Initial Comment: “You’ll find references to prior studies in undisturbed grasslands worldwide, and a global context for your work in our old review paper:

Schlesinger, W.H. and A.E. Hartley. 1992. A global budget for atmospheric NH₃. *Biogeochemistry* 15: 191-211.”

Author Response: We thank you for bringing this review to our attention. The range of NH₃ volatilisation rates from undisturbed grasslands estimated in Schlesinger and Hartley (1992) is 0.3 to 30 ng m⁻² s⁻¹. This value is in good agreement with our inferred net fluxes during August (2.6 ± 4.5 ng m⁻² s⁻¹) where volatilisation was observed to

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dominate over deposition (i.e. net upward flux). Reference to this previous work has been added to end of section 3.2:

“Furthermore, a review by Schlesinger and Hartley (1992) estimate volatilization rates of NH₃ from undisturbed grasslands are between 0.3 and 30 ng m⁻² s⁻¹, which encompasses the values from this work and that of Wichink Kruit et al. (2007).”

Interactive comment on Biogeosciences Discuss., 11, 7541, 2014.

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