

Interactive comment on “Measurements of HONO during BAQS-Met” by J. J. B. Wentzell et al.

J. J. B. Wentzell et al.

jeremy.wentzell@ec.gc.ca

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The authors would like to thank Referee #1 for his suggested improvements to the manuscript. Our responses to the comments are as follows.

Comment #1: The authors have expanded the discussion in section 4, including discussion two afternoons when winds brought air from the Southwest to the site. These cases were used to illustrate that the HONO observed did not have a sufficient lifetime to have been produced over the lake.

Comment#2: The authors did not intend to discount the importance of HONO production on aerosol surfaces, merely to indicate that, in this instance, it was likely less important than the proposed photolytically enhanced bulk surface reaction.

Comment#3: HYSPLIT had been used when examining the origin of air masses used.

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This point has been clarified in the manuscript.

Comment#4: The authors have looked into some specific cases in section 4.2 and calculate that the lifetime of HONO is not sufficient for it to have produced over the lake and must have been formed when air was passing over the ground nearer the site.

Comment#5: The HONO/NO₂ ratio smaller than HONO/NO_x is an error. This has been corrected.

Comment#6: The so-called daytime “unknown” HONO source does not include $k_2[\text{NO}][\text{OH}]$ and dark heterogeneous processes; this point has been clarified.

Comment#7: The word built has been corrected as have the references.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 15295, 2010.

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