

***Interactive comment on “An experimental technique for the direct measurement of N<sub>2</sub>O<sub>5</sub> reactivity on ambient particles” by T. H. Bertram et al.***

**Anonymous Referee #2**

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This paper presents a technique for the measurement of the reactivity of N<sub>2</sub>O<sub>5</sub> on ambient particles. A discussion of gas-particle kinetics and its application to the measurement of N<sub>2</sub>O<sub>5</sub> reactivity is given along with possible sources of uncertainty. Results from laboratory measurements as well as a field deployment in Boulder are given.

Overall, I find this paper to be well written and very appropriate for publication in this forum – there was one typo I noticed on page 695.10. I believe Eq. (4) should be Eq. (1). The measurement uses a straightforward kinetic technique and the laboratory measurements seem to indicate no interference from the reactants/products of the N<sub>2</sub>O<sub>5</sub> source. Improvements to sensitivity will reduce the overall measurement time

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and the effects of humidity on the wall loss. As the authors indicate, I'm sure this technique will be used to investigate other trace gases of atmospheric importance.

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Interactive comment on Atmos. Meas. Tech. Discuss., 2, 689, 2009.