

## ***Interactive comment on “A cavity ring down/cavity enhanced absorption device for measurement of ambient NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub>” by G. Schuster et al.***

**G. Schuster et al.**

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We thank J. Orphal for his comment. Our replies and indications of changes to be made to a revised manuscript are listed below.

**Comment** References to several (more or less recent) papers describing very similar instruments (i.e. based on CRDS/CEAS and used for in-situ NO<sub>3</sub> measurements) - the list here below is probably still incomplete - are missing in this manuscript. I do not understand why this is so, but I do suggest that the authors not only mention these papers but also discuss the performance of their new instrument compared to the other studies. I am surprised that the referees did not mention this problem. A short literature survey clearly shows this problem, and I think the paper will be much stronger if such a comparison and discussion is made. In my opinion this is important.

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**Reply** The aim of this paper was not to produce a comprehensive comparison of all existing devices for NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> measurement but to provide a detailed description of a new device. With one exception (Nakayama et al) the instruments referred to by J. Orphal all use broad band light sources, do not all measure N<sub>2</sub>O<sub>5</sub> and are thus not 100 percent comparable. The Nakayama instrument is a pulsed CRDS device and is thus similar to instruments already cited. However, in reply to this comment and related comments of the two reviewers, we shall provide a table with the reported detection limits of our device and the present generation of NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> instruments using cavity methods. The broad-band devices have also been cited in the introductory text.

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Interactive comment on Atmos. Meas. Tech. Discuss., 1, 67, 2008.

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