

## ***Interactive comment on “How quickly do cloud droplets form on atmospheric particles?” by C. R. Ruehl et al.***

**C. R. Ruehl et al.**

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1. Page 14240, the droplet sizing technique: We have added the following text: "The PDI probe used in these experiments was calibrated with polystyrene beads of known  $D$ ". The PDI technique has been used for over 20 years, and we have added additional references (Bachalo 1980 and Bachalo and Houser, 1984) to emphasize that the technique is well established (although it has not until now been used to measure CCN immediately after activation). Finally, we have moved the location of the reference to a paper that discusses the size resolution of the probe (Sankar et al., 1991) so that it immediately follows the quoted accuracy ( $\pm 0.5 \mu\text{m}$ ).

2. Page 14243,  $\alpha$  of ammonium sulfate: We have relaxed the assumption that the temperature gradient along the inner wall of the CFTGC is constant, resulting in a new  $\alpha$  of ammonium sulfate of 0.15 (see response to Reviewer 1).

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3. Scientific notation: We now use standard scientific notation throughout the paper, although  $\alpha$  for ammonium sulfate is given in both the original notation (because the error is given in log space) and in standard scientific notation.

4. Page 14243, the effect of small amounts of soluble material: We have added references to Raymond and Pandis (2003) and Broekhuizen et al. (2004).

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Interactive comment on Atmos. Chem. Phys. Discuss., 7, 14233, 2007.

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