

Interactive comment on “A coupled observation – modeling approach for studying activation kinetics from measurements of CCN activity” by T. Raatikainen et al.

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Response to Referee Comments

We would like to thank Anonymous Referee #1 for the useful comments. Technical comments (in italics) and our replies are given below.

Technical comments: P1830, L1 - Sample flow is assumed at 30% RH but could be (by the author's own comments) much lower or higher. Realistically, this could vary from 2% or less up to 100%. It would be useful for the author to comment on if/how this wide variability in sample flow rate would affect the final results. Much time is spent discussing the impacts of sheath RH so a few sentences on sample RH would help

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complete the analysis.

Because sheath flow is usually ten times larger than sample flow, sheath flow relative humidity dominates in their effect on supersaturation and droplet growth. This clarification has been added to the new manuscript version.

P1831, L25 - Figure 12 is referenced here, near the beginning of the manuscript. It seems this figure should be moved to the beginning (Figure 2 perhaps) so that figures are referenced in the order in which they appear.

The first reference to Fig. 12 should have referenced Appendix B where Fig. 12 is explained. This has been updated to the new manuscript version.

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 1821, 2012.