

Interactive comment on “Captive Aerosol Growth and Evolution (CAGE) chamber system to investigate particle growth due to secondary aerosol formation” by Candice L. Sirmollo et al.

Anonymous Referee #2

Received and published: 30 December 2020

The Captive Aerosol Growth and Evolution (CAGE) chamber system is a novel idea in order to investigate particle growth related to secondary aerosol formation. The use of a gas-permeable ePTFE membrane ensures that the gas composition of the chambers matches the ambient one. The manuscript is well written and provides a detailed analysis of the design and the evaluation of their performance.

Specific comments: One key aspect not shown is related to temperature measurements of the air inside the chambers. It is clearly very difficult to maintain the same temperature between the two chambers when one covered to prevent sunlight and the other uncovered during the field deployments. The blower used to circulate air through

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the exterior of the chambers minimizes such effects to some extent. Where there any temperature measurements conducted either from the external of the chambers or from inside of the chambers or from the sampled air (event the readings from the instrumentation) and if yes how different were the two chambers (the covered vs the uncovered). The temperature difference might affect the wall loss profiles for the two chambers and the reaction rates.

Page 4, line 127: radial O-rings. What material are they made from.

Page 5 line 145: Can you provide the related data in the SI from the spectroradiometer for the reduction.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2020-443, 2020.

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