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Atmospheric Chemistry and Physics Discussions

Interactive comment on "The importance of interstitial particle scavenging by cloud droplets in shaping the remote aerosol size distribution and global aerosol-climate effects" *by* J. R. Pierce et al.

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Thanks, reviewer 2.

It would be interesting to see how this process alters the simulated aerosol size distribution – this would also help interpret the reported changes to aerosol number concentrations. A suggestion would be to plot simulated aerosol size distributions from the BASE simulation in comparison to one of the other simulations at a few locations.

We now include a figure that shows the size distributions at the 21 sites we used for model evaluation. "Figure 3 shows the annual-mean size distributions at each location

for the measurements and the model for the BASE and INT65nm10um238K simulations. The inclusion of interstitial coagulation decreases the number of sub-100nm particles at many remote locations."

P5593, Line 27. Spracklen et al. (2007a, b) cited but not in reference list. P5597, Line 16 Missing ")". P5600, Line 18. Missing "particles" after "CCN-sized".

The reference in the text was supposed to be Spracklen et al. (2005a,b), the original two GLOMAP papers. We fixed this in the text.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 5589, 2015.