

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 1.

Page 5599 line 16: “The 2 km layer is shown here as being representative of boundary layer clouds.”

I may be mistaken but it appears that the authors present data at 2 km altitude, is that correct? It would seem better to show mean values in the first 2 km of the atmosphere ... these would be more representative of conditions in the boundary layer. Please comment, clarify, and/or change the manuscript accordingly to address this concern.

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Our logic for showing this layer was to show a typical layer where boundary-layer clouds would be located. The results are essentially the same when averaging over the boundary layer. We've added text to say this layer is representative of low-level clouds rather than the boundary layer.

Page 5603 line 2: Would you mind adding a sentence, or explaining for this reviewer's benefit, the advantage of the coefficient of determination, compared to simple correlation coefficient, in the context of the model-observation comparison?

We've added the sentence, “We use the coefficient of determination rather than the correlation coefficient (R) because the coefficient of determination quantifies the fraction of the variance in the measurements that is captured by the model.”

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

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