

Interactive comment on “The scale problem in quantifying aerosol indirect effects” by A. McComiskey and G. Feingold

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Thank you for your constructive comments. The minor revisions listed have been addressed through changes in text. We have addressed your comment concerning the illustration of separation through MODIS imagery by modifying Fig. 9. The scales on the insets that represent the same area as Fig. 8 have been matched to the scales from Fig. 8 for easy comparison. We have also added a table that provides statistics for the two data products. Some discussion has been added here to clarify, including an explanation of why MODIS Level 3 data is not used for the observationally-based method that we present.

We respond to the larger question of the utility of the observationally-based method of estimating radiative forcings, given that it relies on a model, by adding some significant

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discussion to the paper in several places and refining our discussion of the method. In preparing this manuscript we contemplated many approaches to deriving global estimates of aerosol indirect effects given the limitations of remote sensing of co-located aerosol from space. We have included some of those thoughts now to demonstrate why we feel a combination of observations and models is the best approach to constraining the radiative forcing of the first aerosol indirect effect.

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