

Interactive comment on “Technical Note: Estimating aerosol effects on cloud radiative forcing” by S. J. Ghan

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I had decided to not use the IPCC AR5 definition of effective radiative forcing because it was not published yet, but since it will be published shortly I will use the terminology in the revision.

The clean estimates of the radiative flux are only used for additional diagnostic purposes. Just as the clear sky diagnostic flux estimate does not mean clouds are neglected in the simulations, the diagnostic clean sky flux estimates does not mean aerosols are neglected in the simulations. I will make this more obvious in the revision.

The manuscript did not discuss effects of aerosols on longwave cloud forcing, so I will
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add a paragraph noting that the distinction between ΔC and ΔC_{clean} is not important for the longwave because anthropogenic aerosol particles do not produce a significant direct impact on the longwave flux. For CAM5 the difference is only 0.01 W m^{-2} in the global annual mean.

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Interactive comment on Atmos. Chem. Phys. Discuss., 13, 18771, 2013.