

***Interactive comment on “Global direct aerosol radiative forcing, as constrained by comprehensive observations” by Chul E. Chung et al.***

**Chul E. Chung et al.**

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We apologize that the paper was not clear enough to you. We did not claim that the global mean TOA direct radiative forcing of anthropogenic aerosols is ( $-0.28 \sim +0.05$ )  $\text{Wm}^{-2}$ . This number is for total (anthropogenic + natural) carbonaceous, sulfate and nitrate aerosols. Furthermore, we did not attempt to estimate the anthropogenic fraction of these carbonaceous, sulfate and nitrate aerosols. In other words, we did not assume that fine-mode aerosols are anthropogenic except for fine-mode sea-salt and dust aerosols. However, we did assume that all coarse-mode aerosols are natural, which, as the reviewer pointed out, is not very true due to dust changes.

We will revise the manuscript to improve the clarity and address other issues. Thanks

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for the valuable feedbacks.

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