



Supplement of

Constraining the vertical profiles of aerosol component and heating rate over east Asia through assimilating CALIOP observations

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Figures

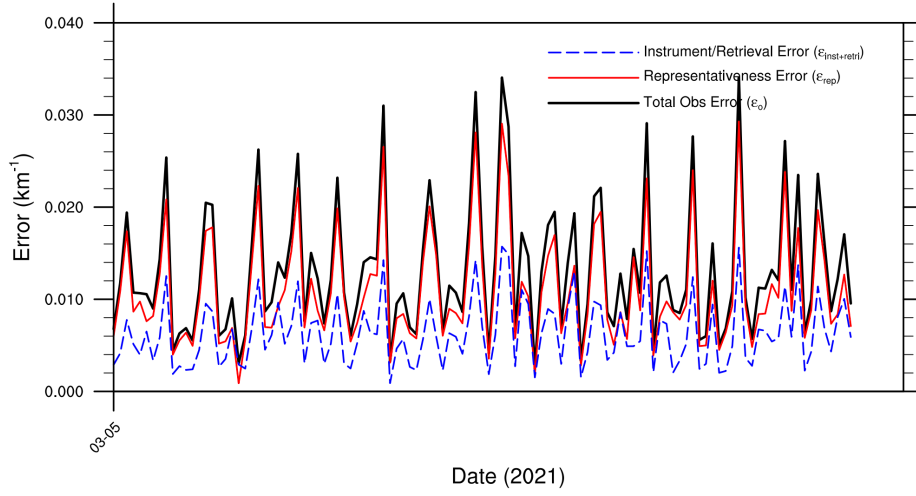


Figure S1. Temporal evolution of the observation errors, including the total observation error (ϵ_o), representativeness error (ϵ_{rep}), and instrumental/retrieval error ($\epsilon_{inst+retri}$), during the assimilation period.

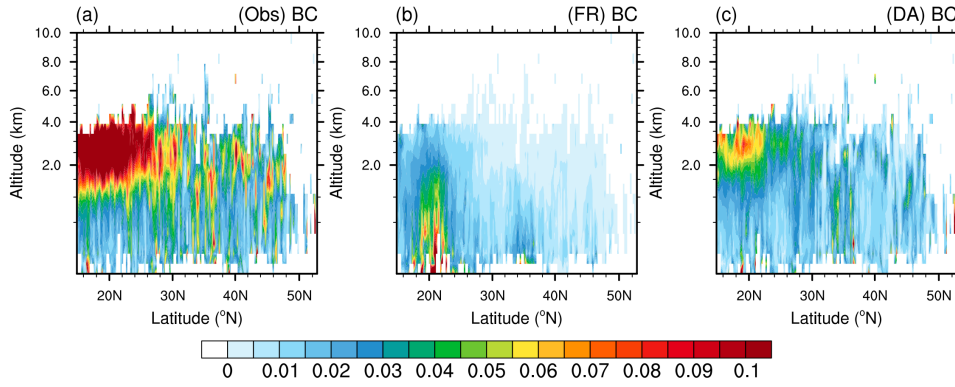


Figure S2. Latitude-altitude cross-sections of black carbon (BC) extinctions (km^{-1}) averaged over the East Asian longitude. The panels show (a) CALIOP observations, (b) FR, and (c) DA experiments.

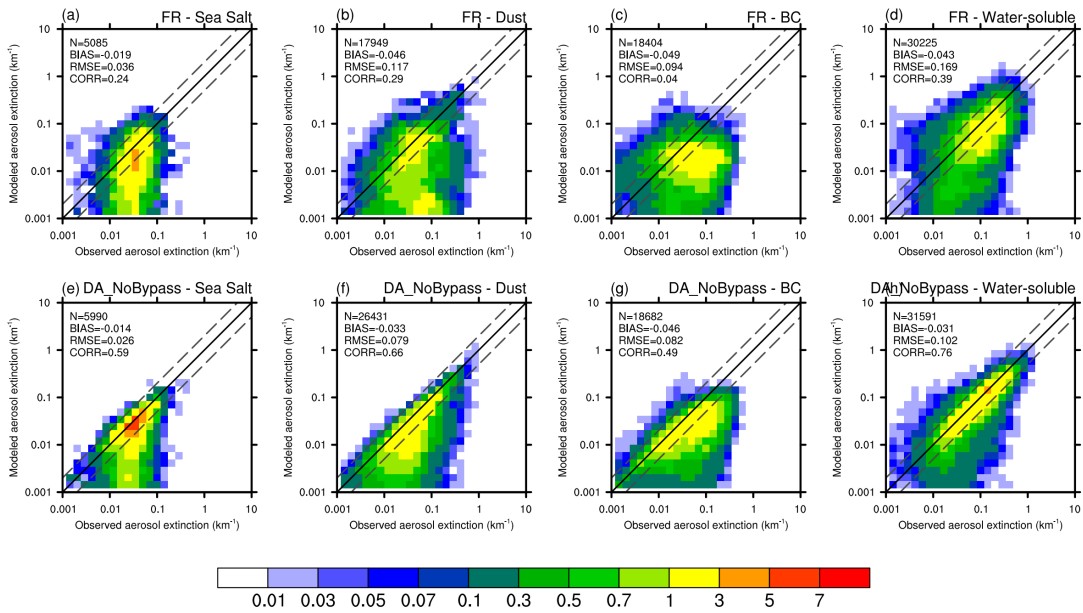


Figure S3. Same as Fig. 3 but for DA_NoBypass experiment.

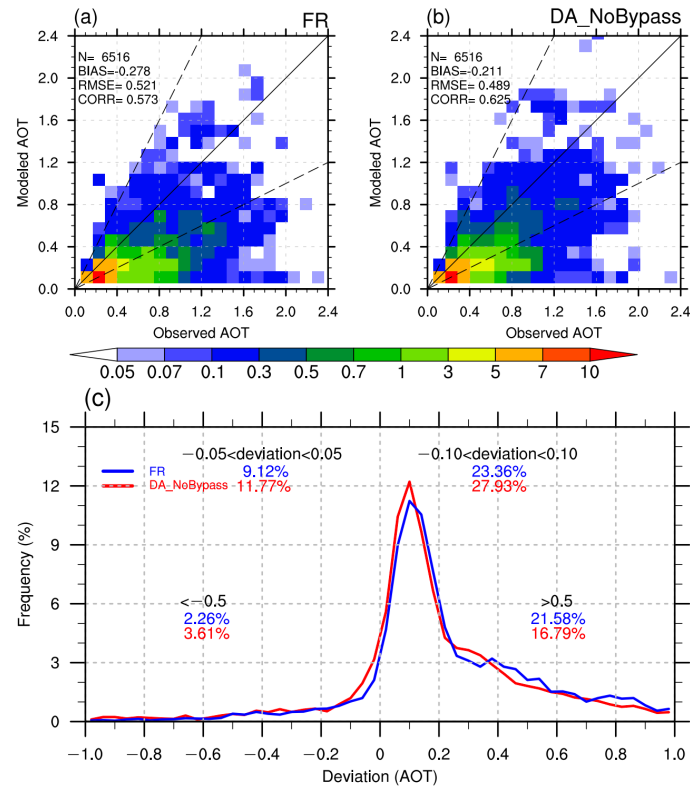


Figure S4. Same as Fig. 6 but for DA_NoBypass experiment.