



Supplement of

Intercomparison of aerosol optical depths from four reanalyses and their multi-reanalysis consensus

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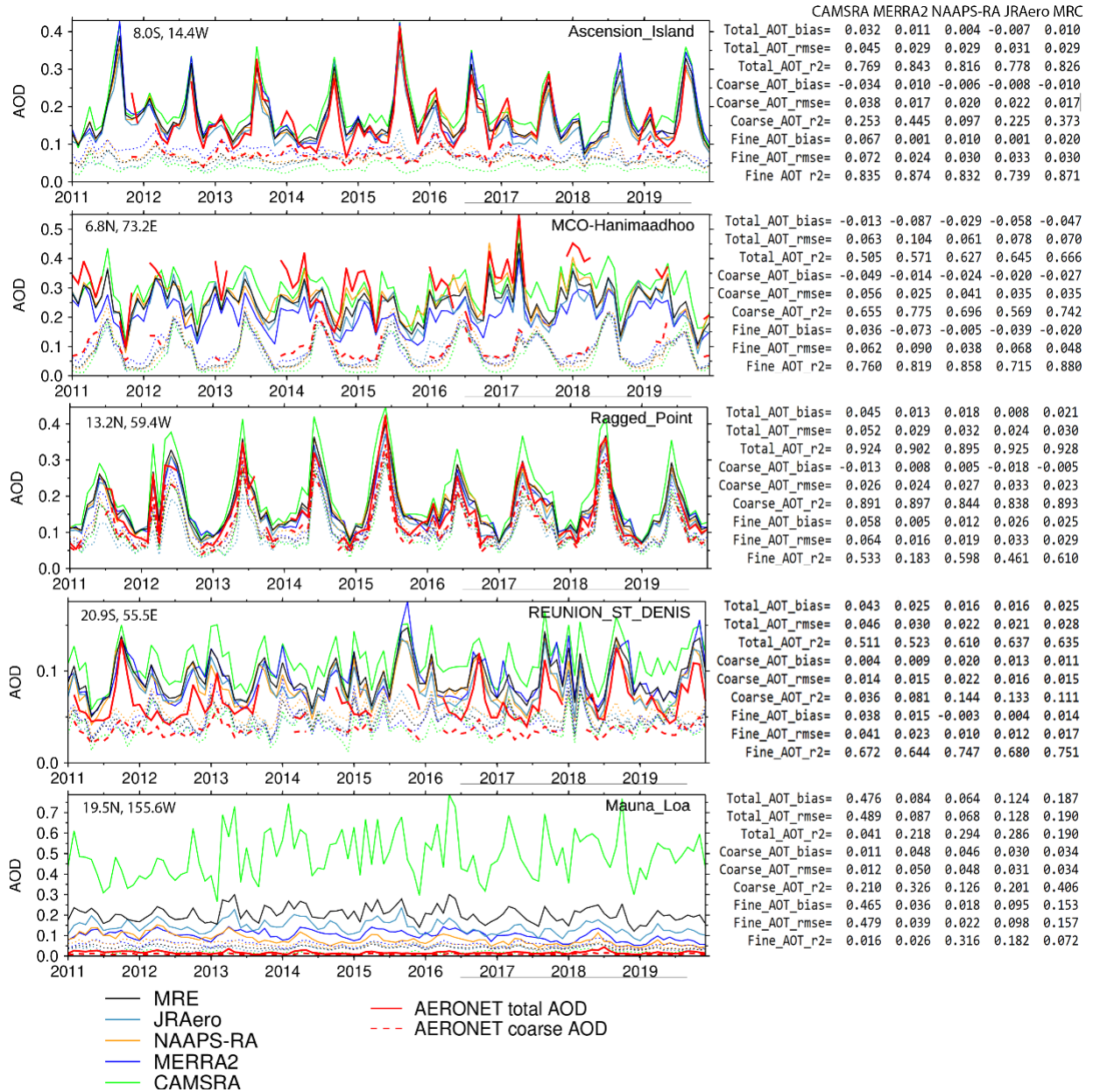


Figure S1. Time series of monthly total, FM and CM AODs at 550nm from the four aerosol reanalyses, the MRC, and AERONET at remote marine sites. Modal AOD RMSE, bias and r^2 of each reanalysis validated with AERONET data is shown on the text column on the right.

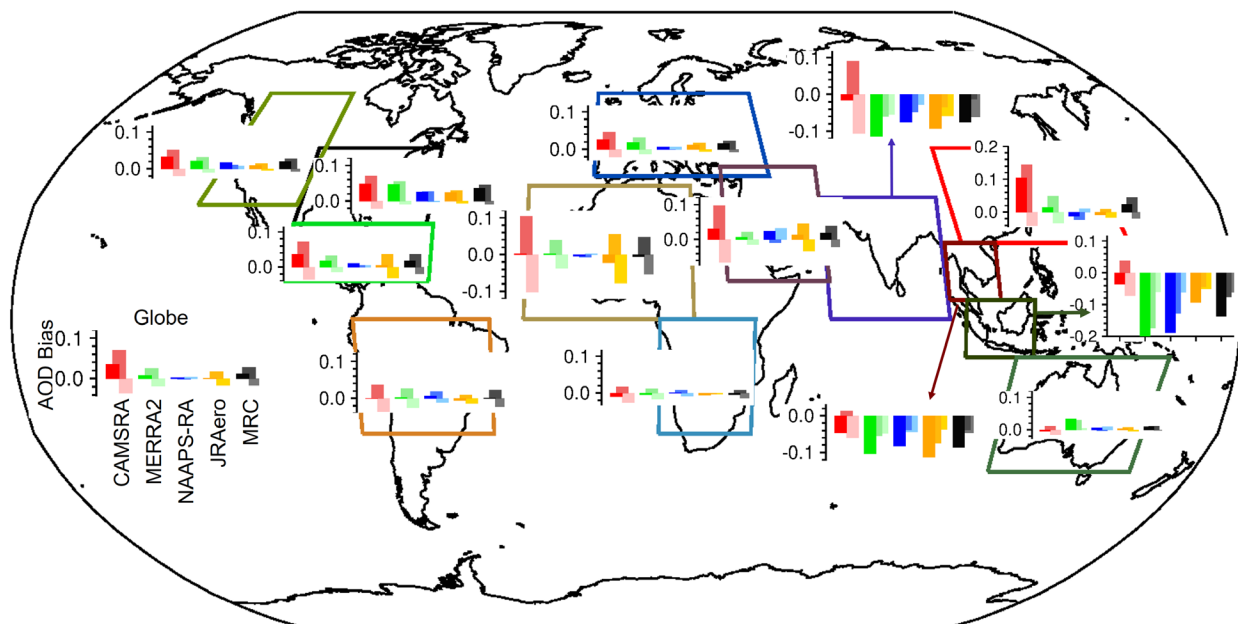


Figure S2. Regional total, FM, and CM AOD biases for the four reanalyses and the MRC compared with AERONET data. Each grouped bars in the same color system present total, FM, and CM AOD biases from left to right (also dark to light). This figure is similar to Fig. 5, except that FM and CM AOD are calculated with considering FM and CM components of dust and sea salt aerosols, while dust and sea salt are considered as CM in Fig. 5.

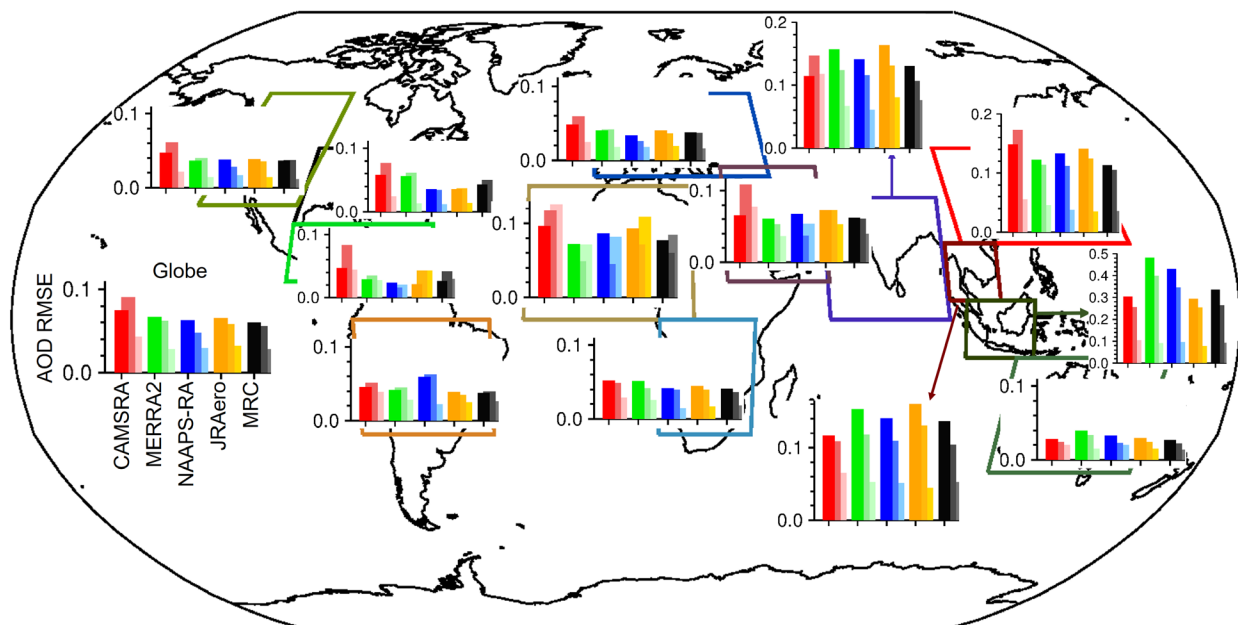


Figure S3. Same as Fig. S2, except for AOD RMSE.

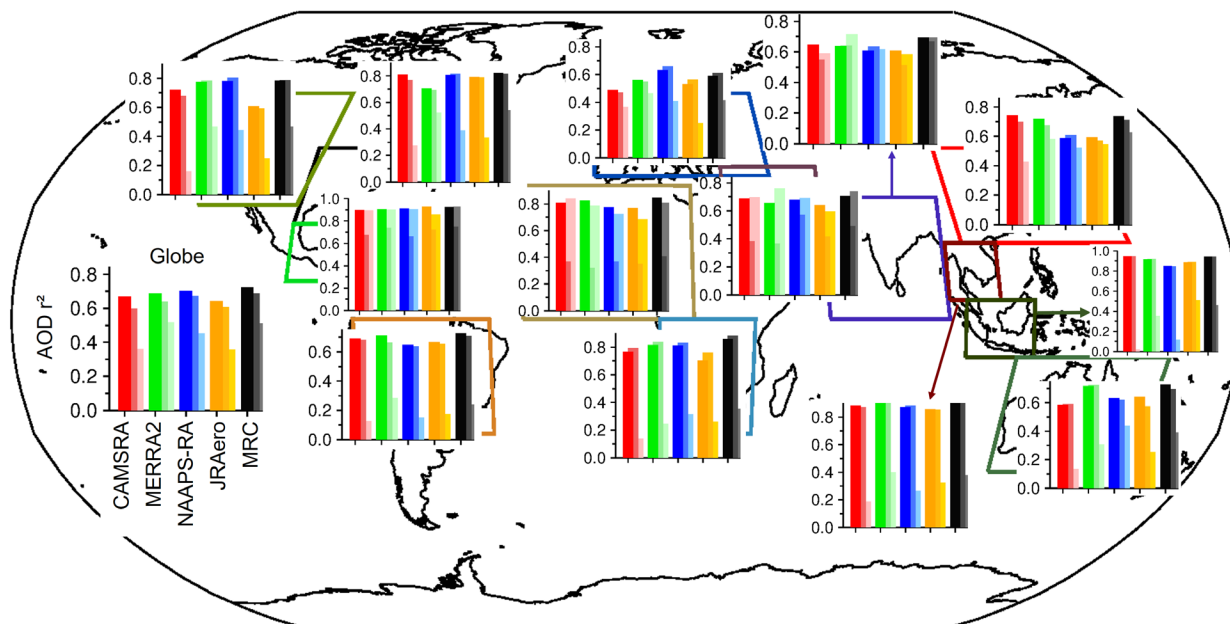
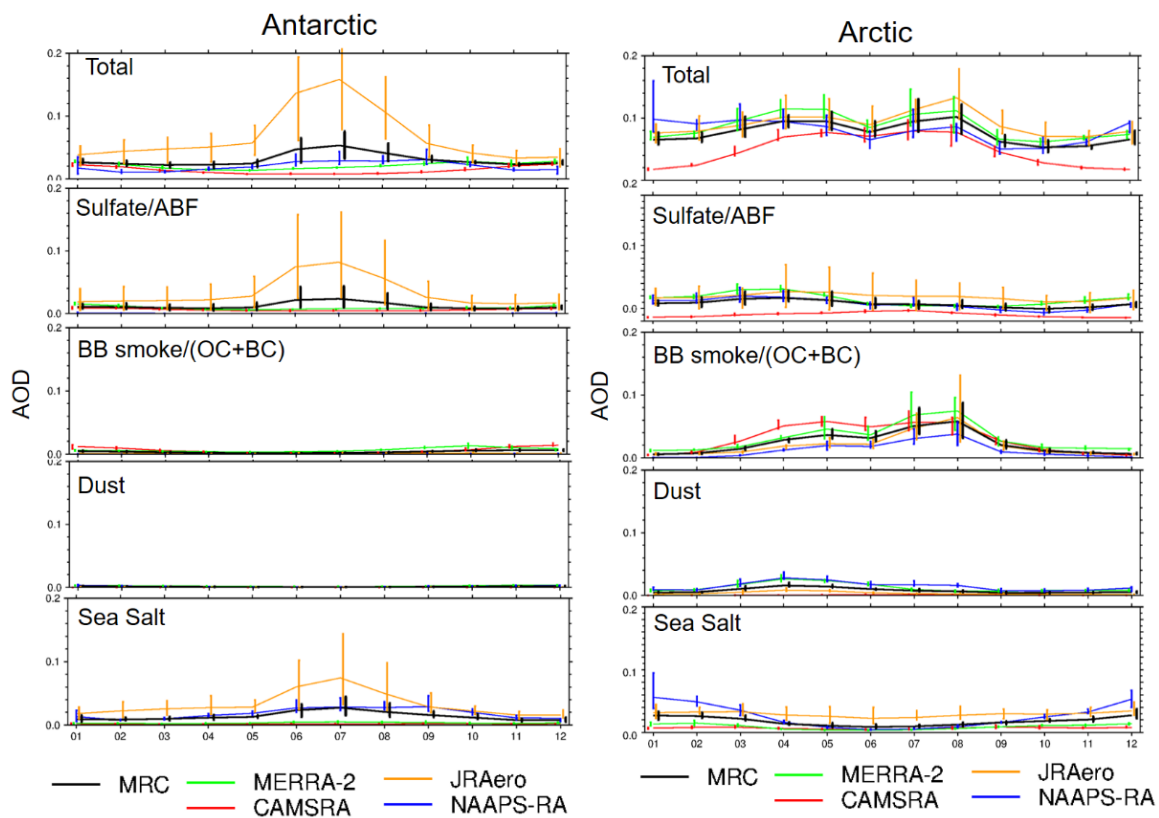
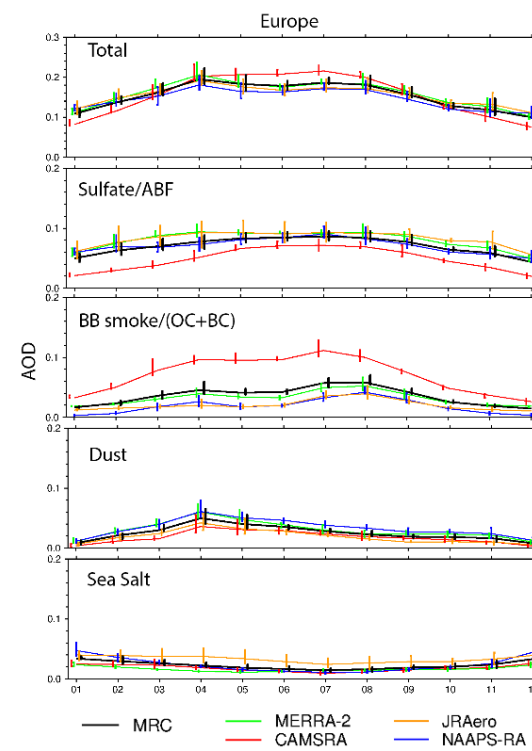
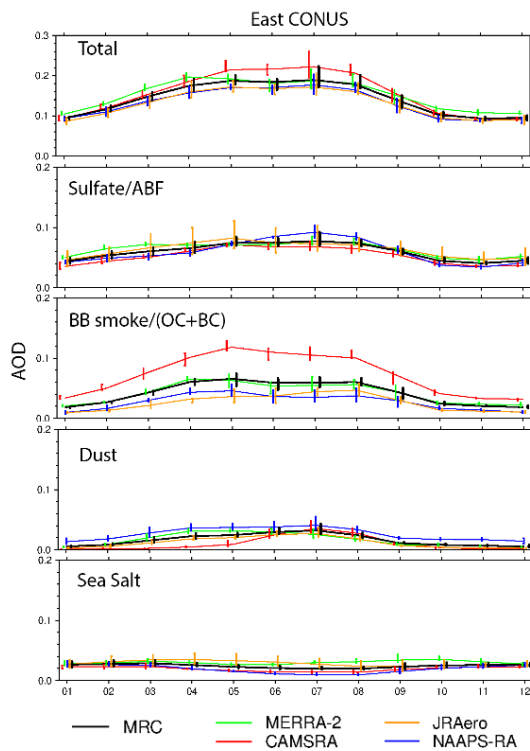
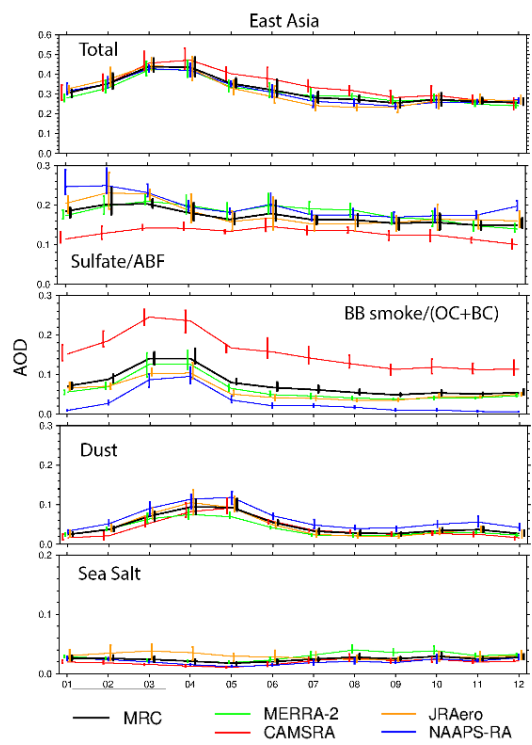
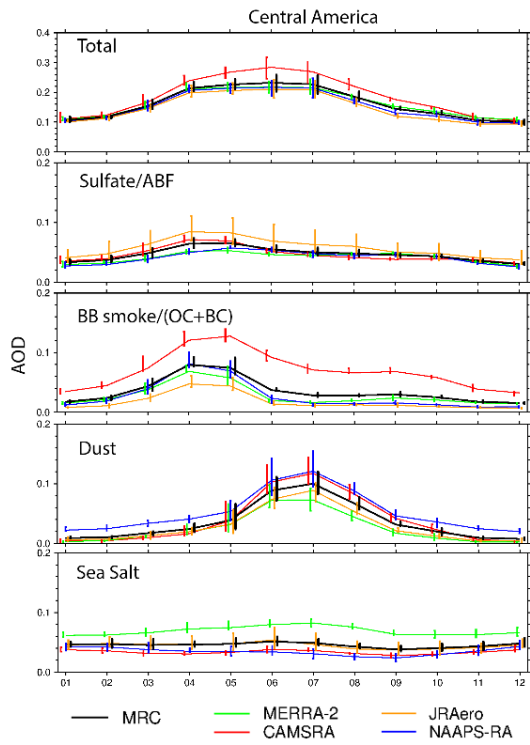
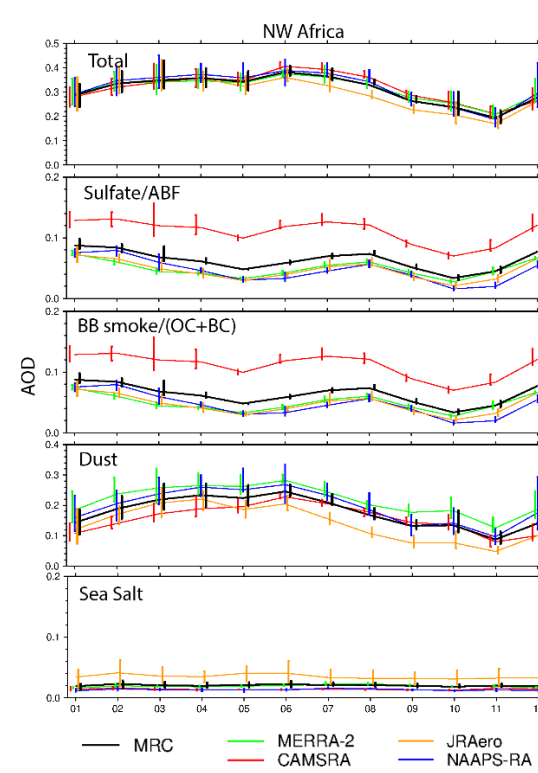
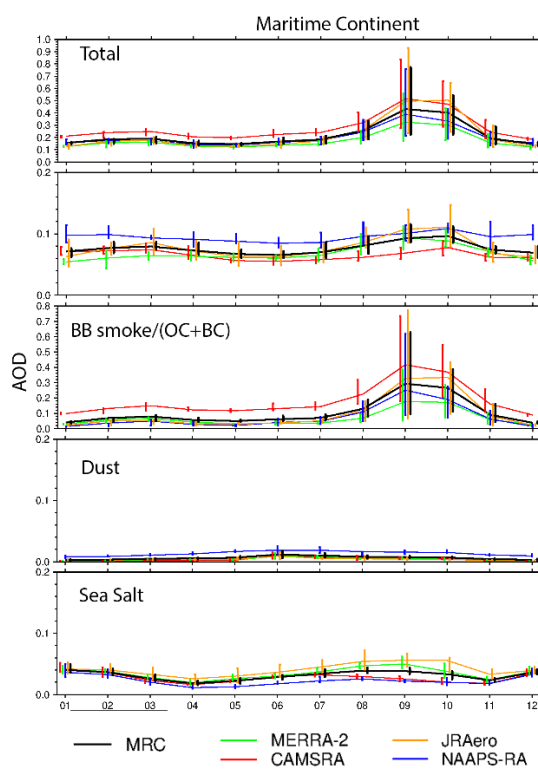
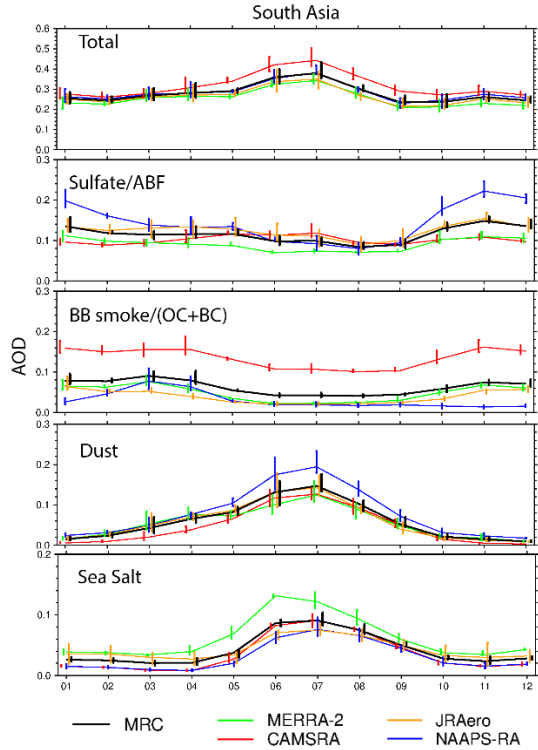
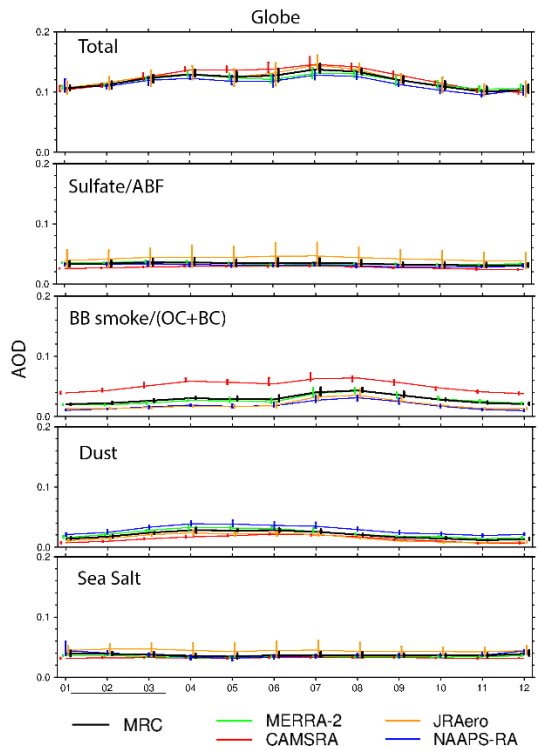
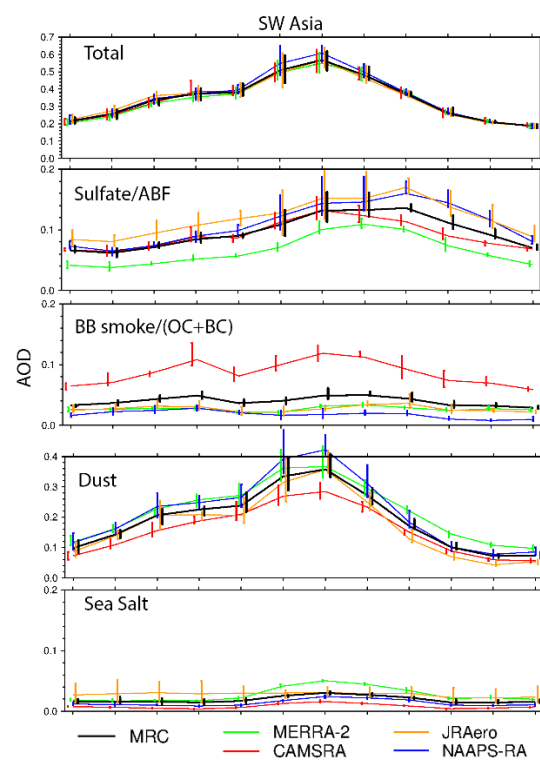
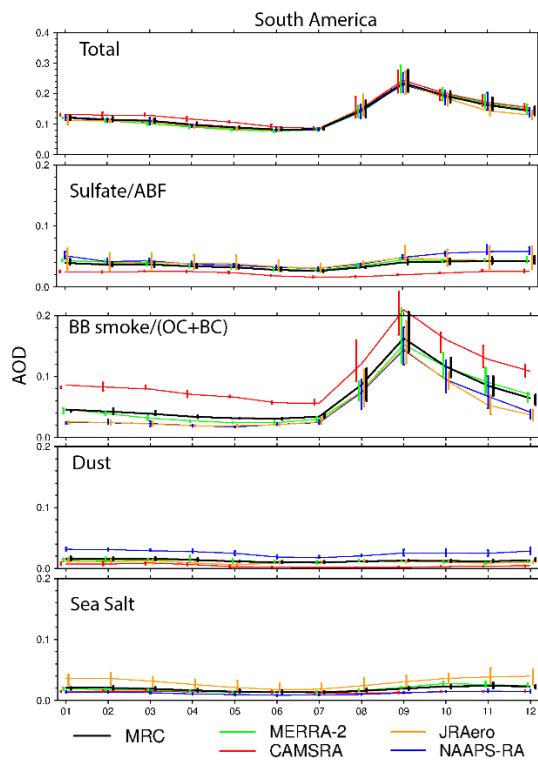
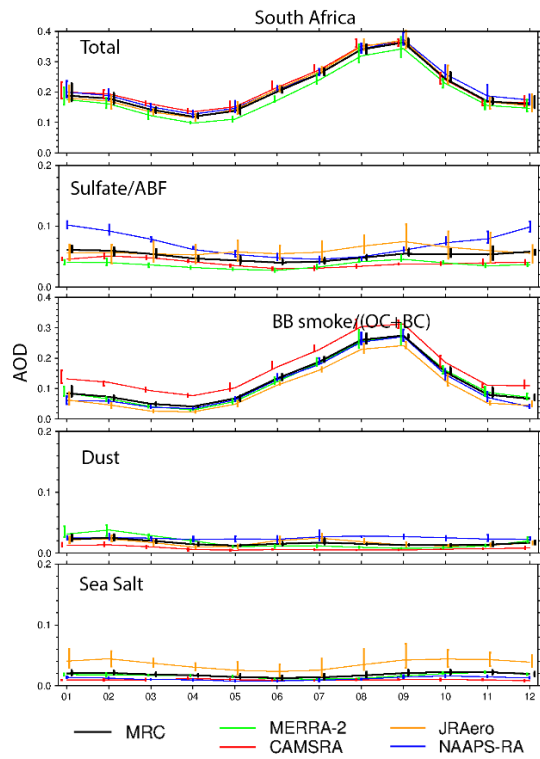
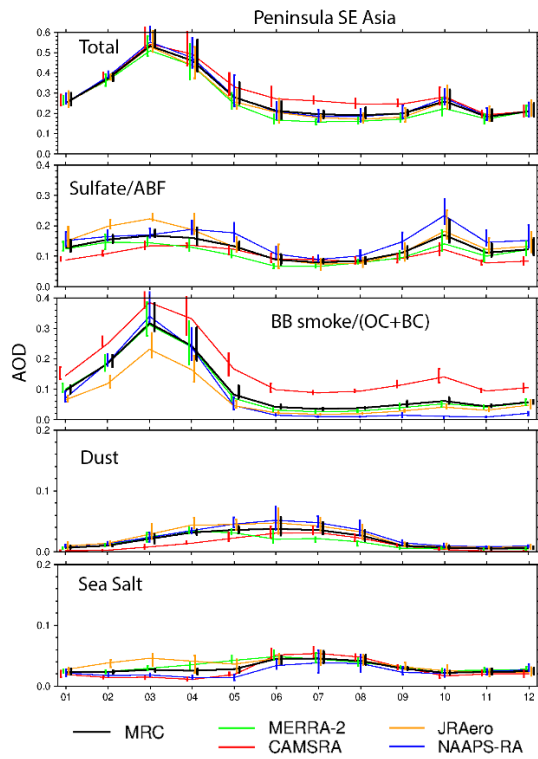


Figure S4. Same as Fig. S2, except for AOD coefficient of determination (r^2).









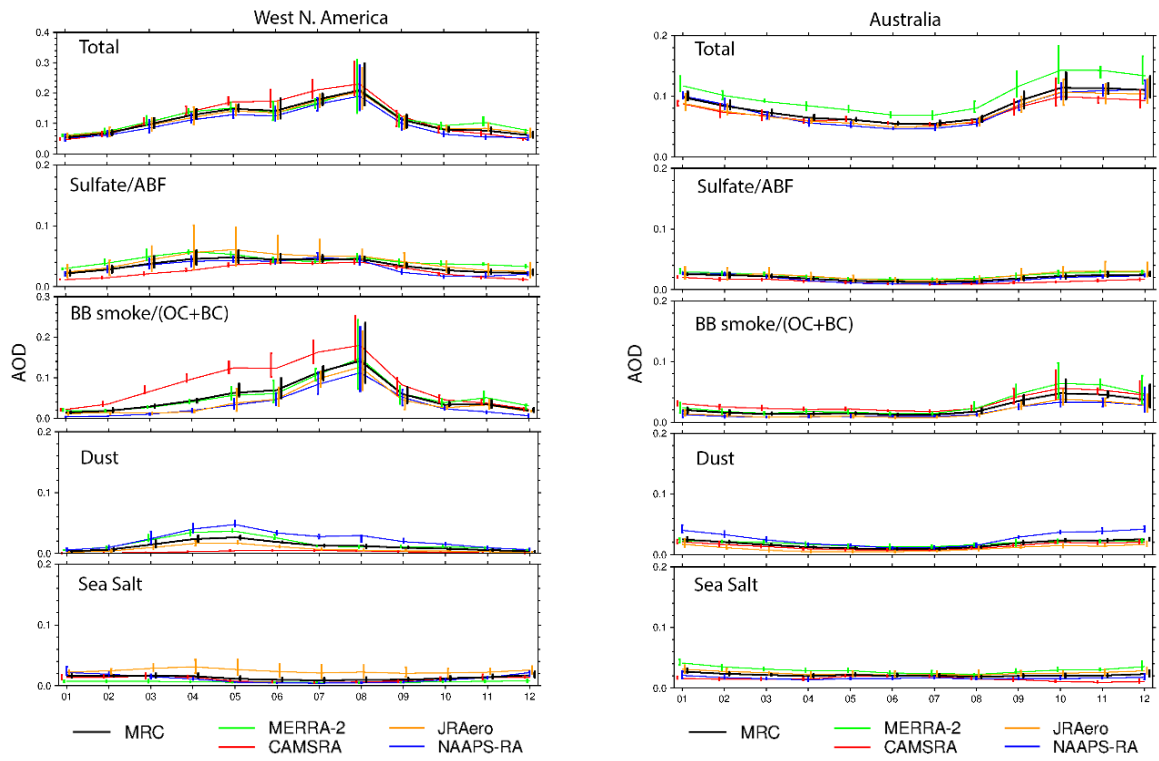


Figure S5. Climatological seasonal cycle of regional mean total and speciated AODs for the 16 regions from the four RAs and the MRC. Bars represent the interquartile range of monthly-mean AOD for 2011-2019.