

## The outflow of Asian biomass burning carbonaceous aerosol into the UTLS in spring:

### Radiative effects seen in a global model

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### Supplementary Figures

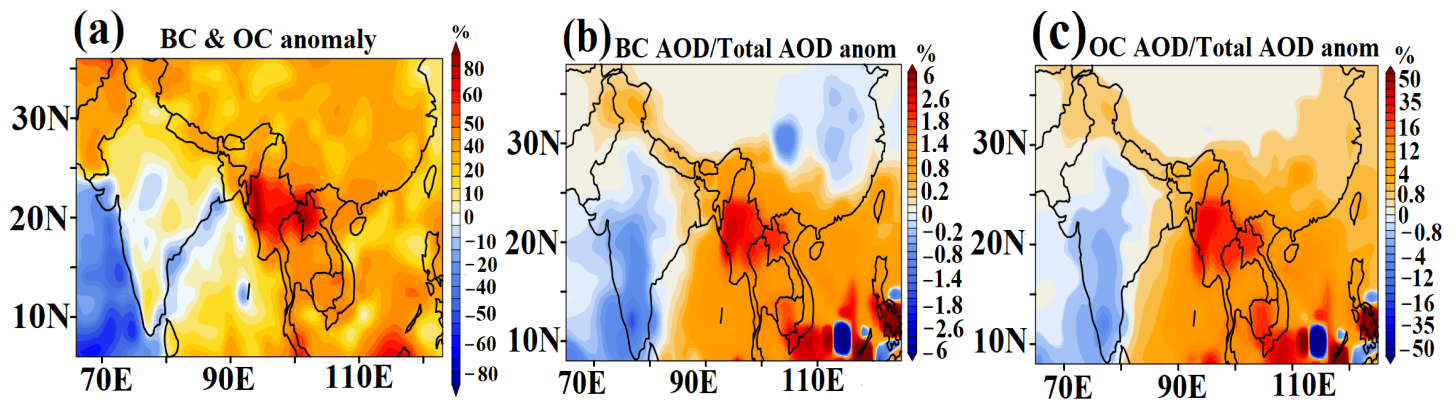


Figure S1: Distribution of anomalies (BMAeroon - BMAerooff) for spring 2013 (a) atmospheric column concentration of BC and OC together (%), (b) ratio of BC-AOD to the total AOD (%), (c) ratio of OC-AOD to total AOD (%).

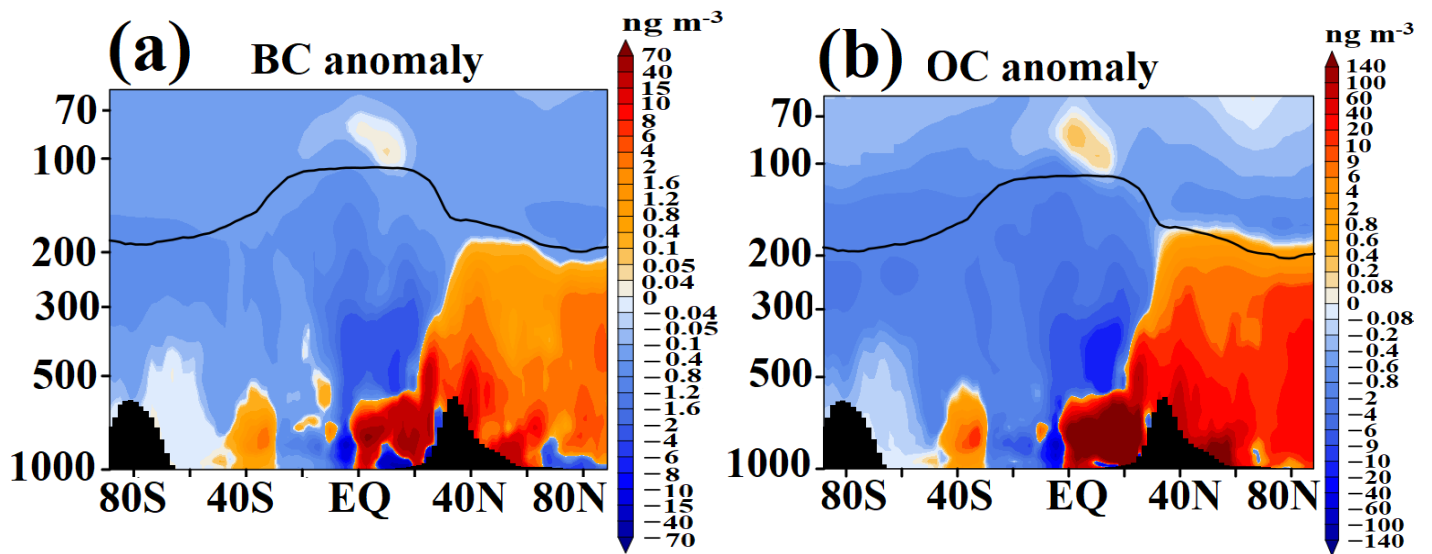


Figure S2: Vertical section of anomalies of BC ( $\text{ng m}^{-3}$ ) for spring 2013 from ECHAM6-HAMMOZ simulations (BMaeroon – Bmaerooff) (a) latitude-pressure section over South Asia (averaged for  $70^{\circ}\text{E}$ - $95^{\circ}\text{E}$ ); (b) same as (a) but for OC.

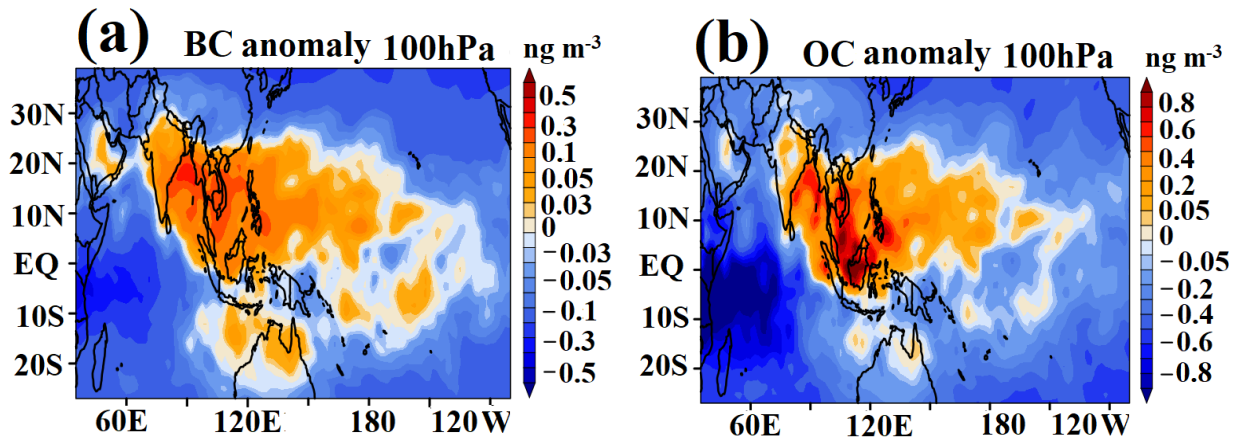


Figure S3: Horizontal distribution of anomalies of (a) BC ( $\text{ng m}^{-3}$ ), (b) OC ( $\text{ng m}^{-3}$ ) at 100 hPa from ECHAM6-HAMMOZ simulation (BMaeroon - BMaerooff).

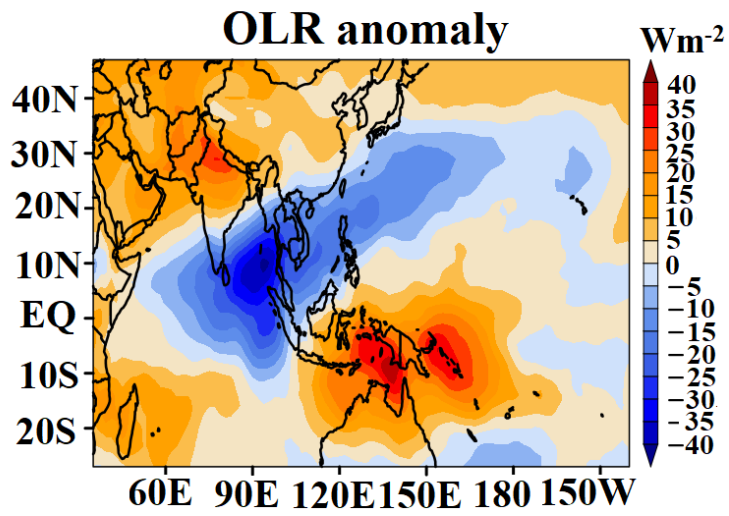


Figure S4. Distribution of anomalies in OLR ( $\text{Wm}^{-2}$ ) from the ECHAM6-HAMMOZ simulations (BMAeroon - BMAerooff) averaged for spring 2013.