1 **Prominent role of organics in aerosol liquid water content over the south-**

2 **eastern Atlantic during biomass burning season**

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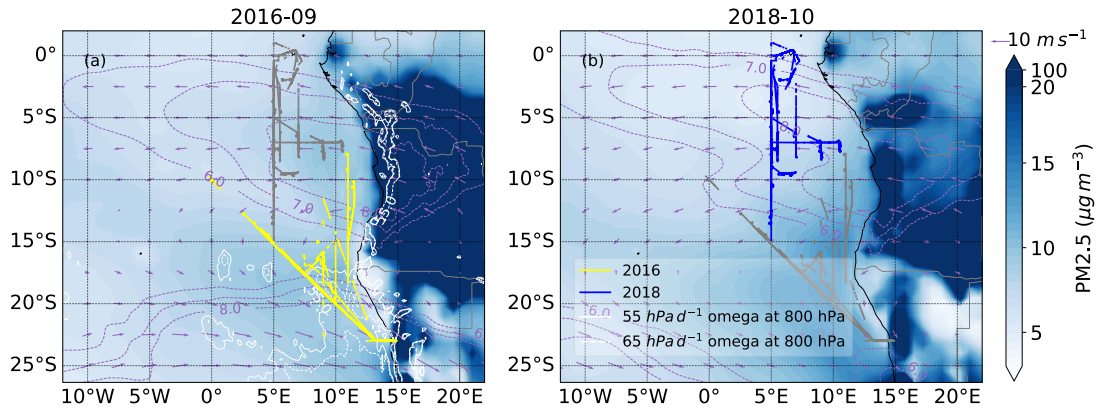
Figure S1. Maps of the (a) September mean and (b) October mean of CAMS (Copernicus Atmosphere Monitoring Service) PM$_{2.5}$ overlaid by the 600 hPa zonal wind (purple contours; 6, 7, and 8 m s^{-1}), 600 hPa horizontal wind vector (purple arrows; m s^{-1}), and ORACLES flight tracks in 2016 (yellow) and 2018 (blue), respectively. White contours in (a) are the September mean vertical velocity, omega, at 800 hPa. Solid and dashed lines represent the subsidence of 55 and 65 hectopascals per day (hPa d^{-1}). Flight tracks in grey are drawn for reference.

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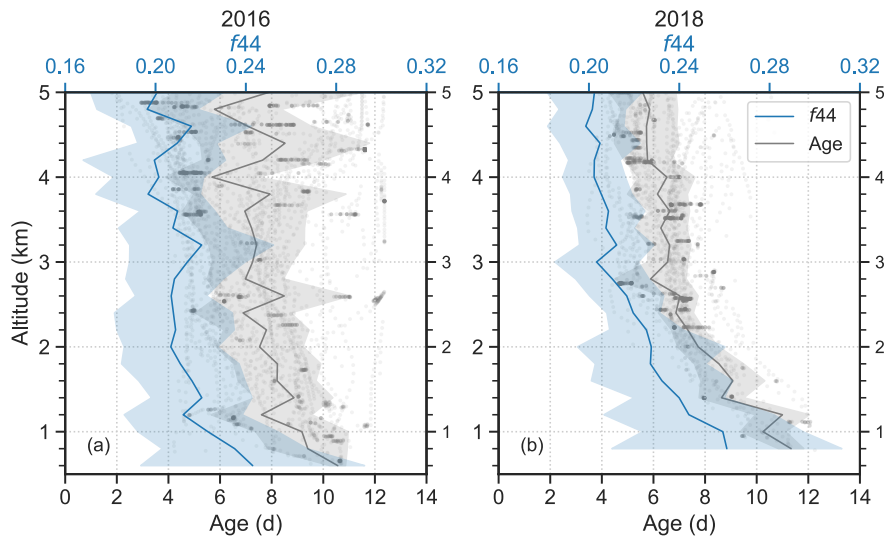
Figure S2. (a, b) Variation of f_{44} (blue) and aerosol age (black) with altitude in 2016 and 2018 ORACLES campaigns, respectively. The lines and shades represent the mean value and standard

28 deviation in every 400 m bin, respectively. Grey dots show the distribution of plume age with the

29 altitude.