Seasonal variations in fire conditions are important drivers to the trend of aerosol optical properties over the south-eastern Atlantic

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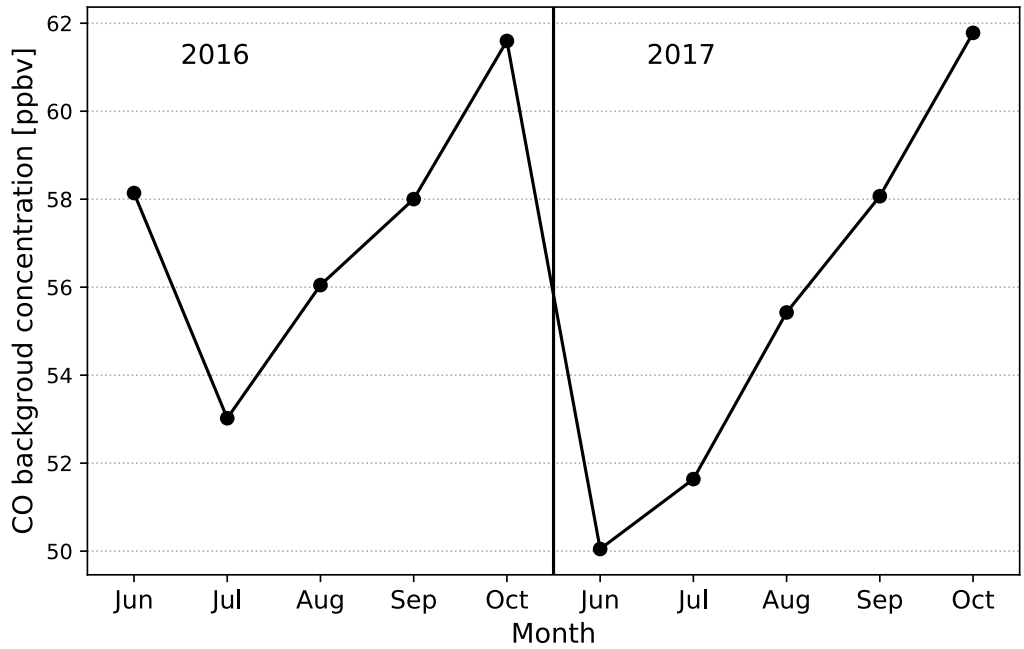

Figure S1. Background concentration of CO spanning the fire season in 2016 and 2017.

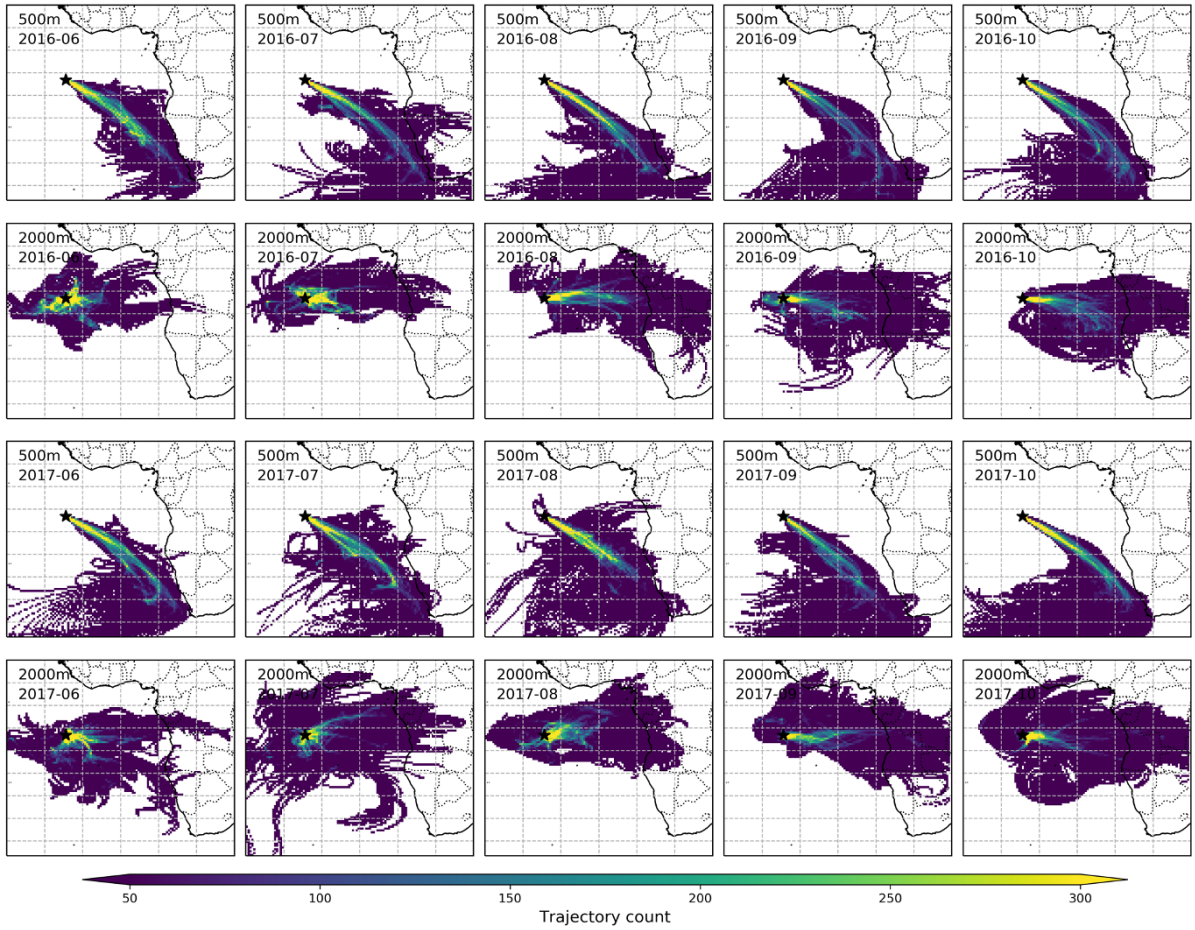

Figure S2. 7-day back trajectories initialled at ASI at altitude of 500 and 2000 m spanning the fire season in 2016 and 2017.

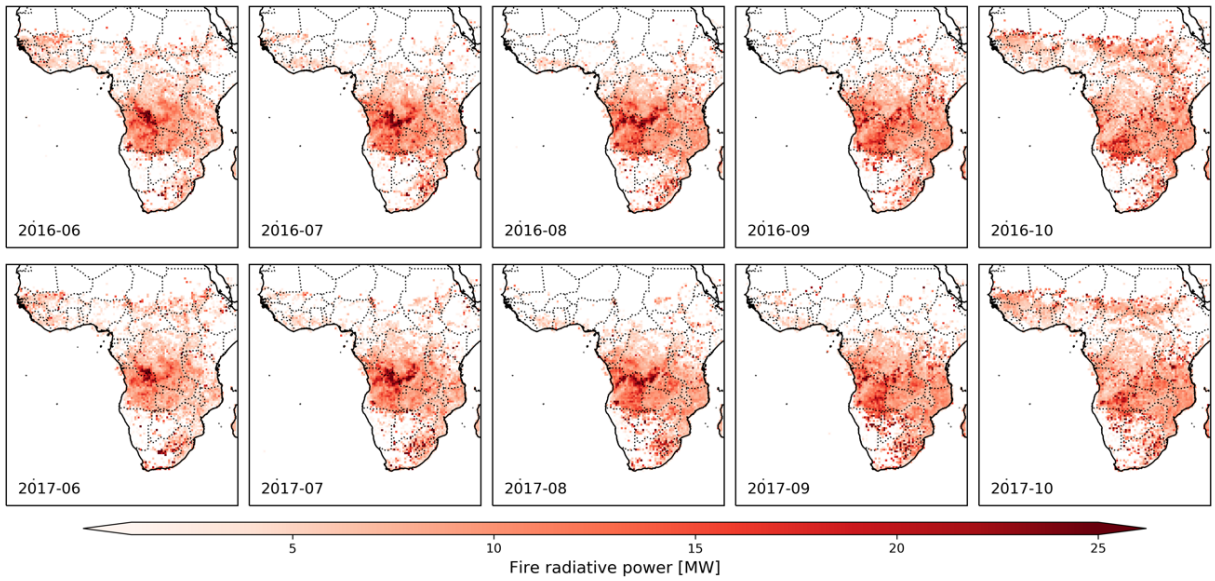

Figure S3. Mean wildfire fire radiative power (FRP) in each month during the biomass burning season in 2016 and 2017. Data are from the MODIS collection 6.1.

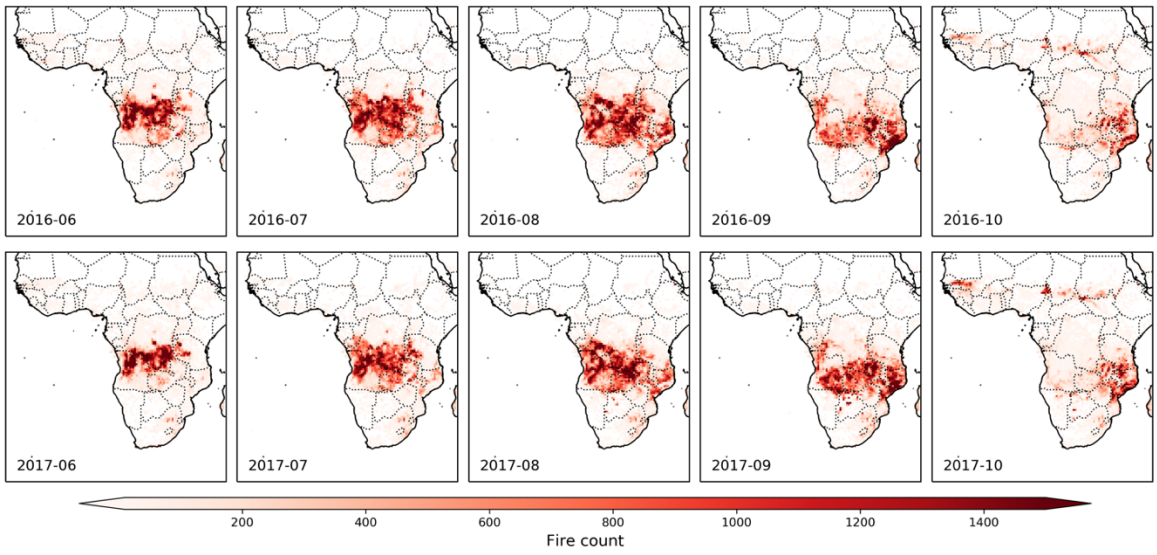

Figure. S4. Accumulated wildfire counts in each month during the biomass burning season in 2016 and 2017. Data are from the MODIS collection 6.1.

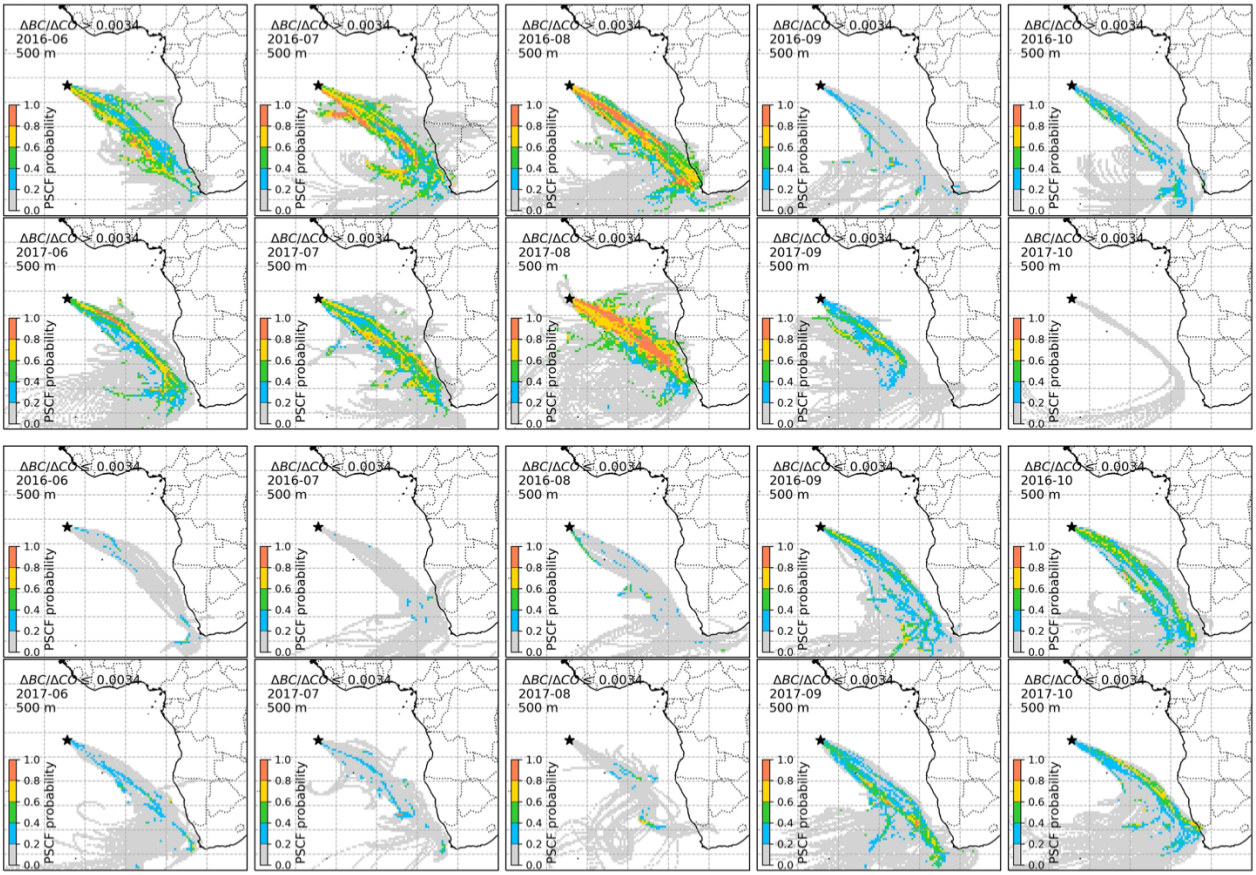

Figure S5. The spatial distribution of potential source contribution function (PSCF) during the Africa fire season in 2016 and 2017. The 7-day backward trajectories in the upper blue and lower orange rectangles indicate air mass flow when BC/ΔCO > or ≤ 0.0034, respectively. Different colours indicate the probability of different transport paths of the plumes. Note the trajectories are initiated at an altitude of 500 m at the sampling site (marked as the black star) on ASI. The land cover data is from the MODIS collection 6 product MCD12Q1 (https://doi.org/10.5067/MODIS/MCD12Q1.006)