atmosphere

Analysis of the Influencing Factors and Sources of Brown Carbon Light Absorption in a Typical Megacity of the Yangtze River Delta, China

Shanshu Xu [1], Junfeng Wang [1,*], Yue'e Li [2], Ning Zhang [1], Xinlei Ge [1], and Eleonora Aruffo [3]

Table S1. MAC for BC corresponding to AE31 has been provided by the manufacturer. The compensation parameter (f) as a function of wavelength for aethalometer AE31 obtained using:

Wavelength (nm)	MAC (m^2 g^{-1})	f
370	39.5	1.322
470	31.1	1.292
520	28.1	1.254
590	24.8	1.233
660	22.2	1.230
880	16.6	1.212
950	15.4	1.210

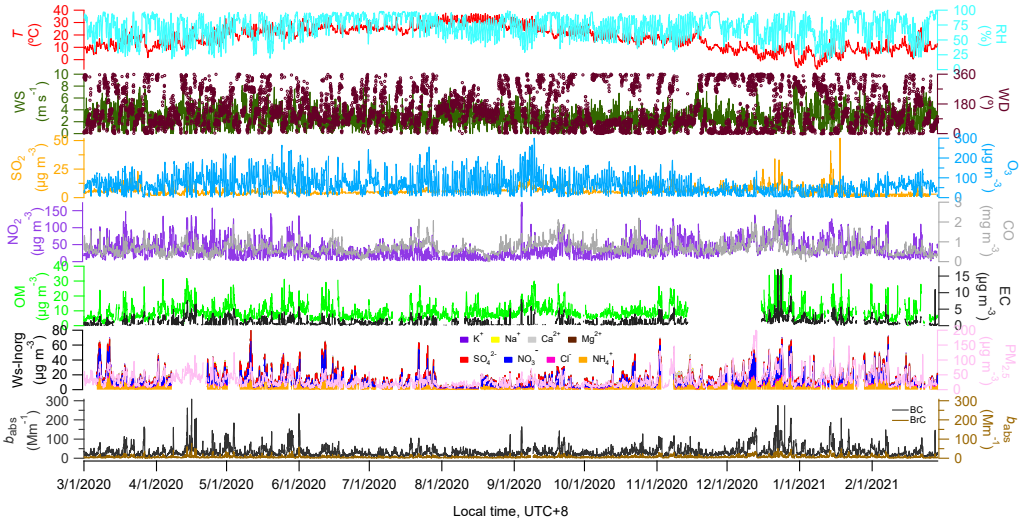


Fig. S1. Temporal variations of meteorological parameters, hourly averaged concentrations of gas and major $PM_{2.5}$ species and absorption coefficients of BrC and BC at 370 nm.

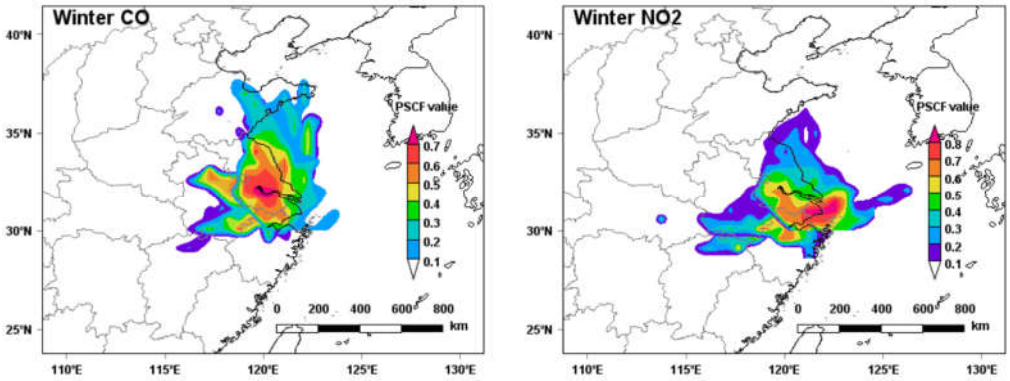


Fig. S2. Potential source areas for CO and NO_2 in winter. The color code denotes the PSCF probability.

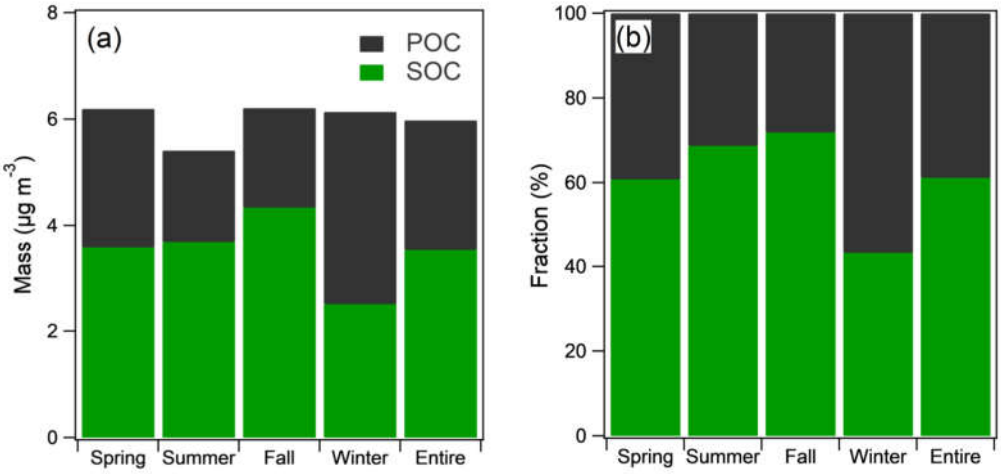


Fig. S3. Seasonal variations of mass concentrations and mass fractions of POC and SOC.

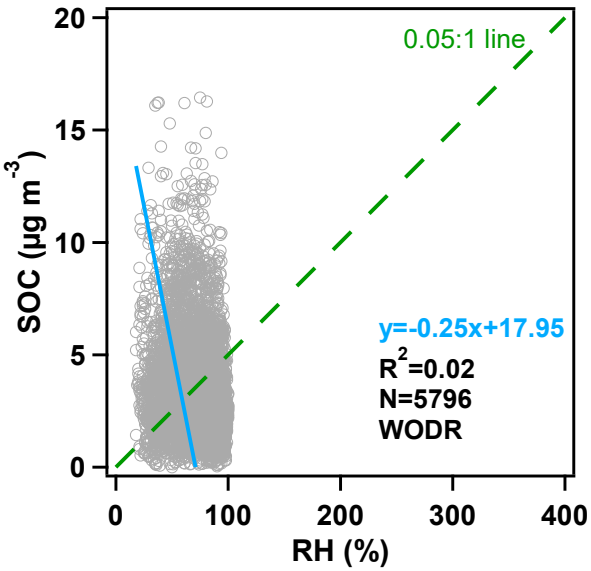


Fig. S4. Scatter plot of SOC and RH all the year round.

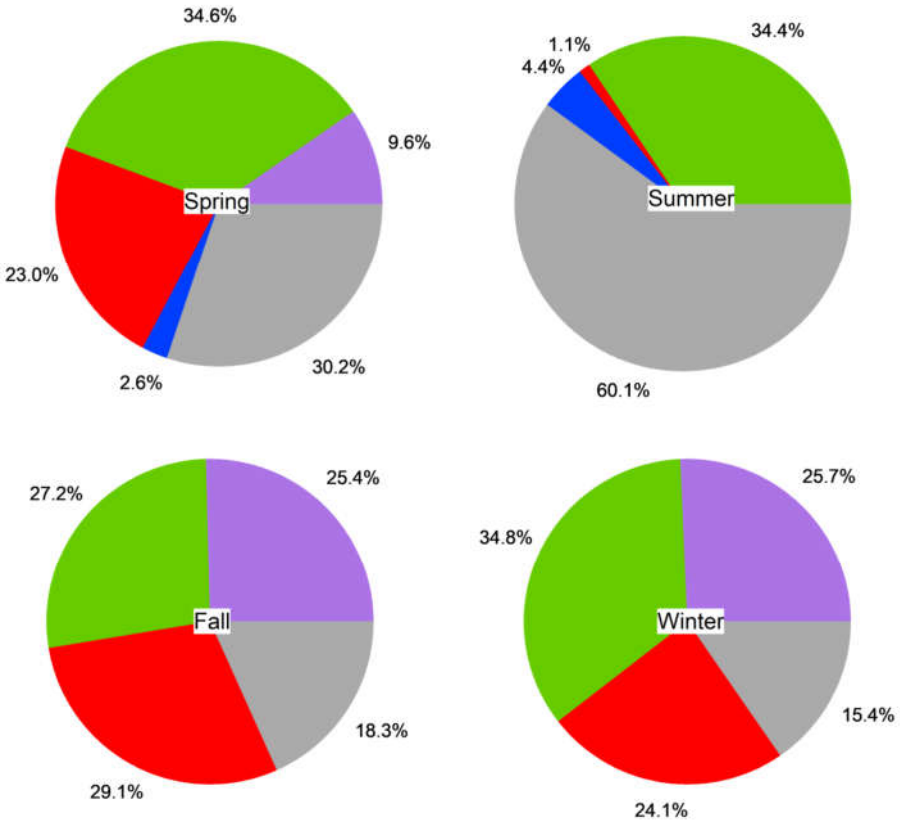


Fig. S5. The proportion of BrC in five factors.

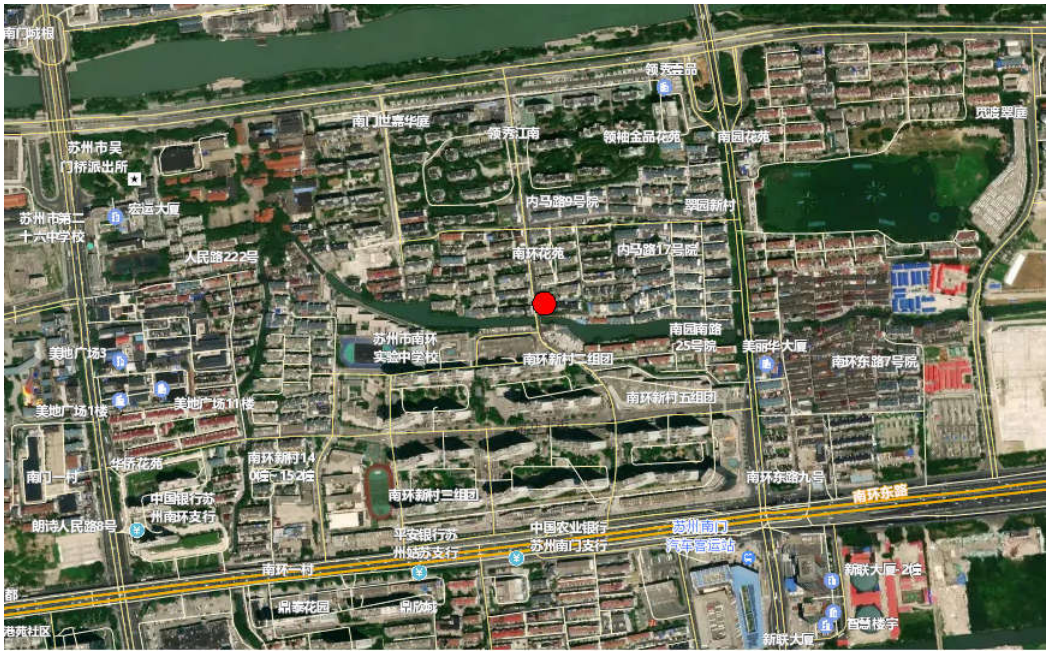
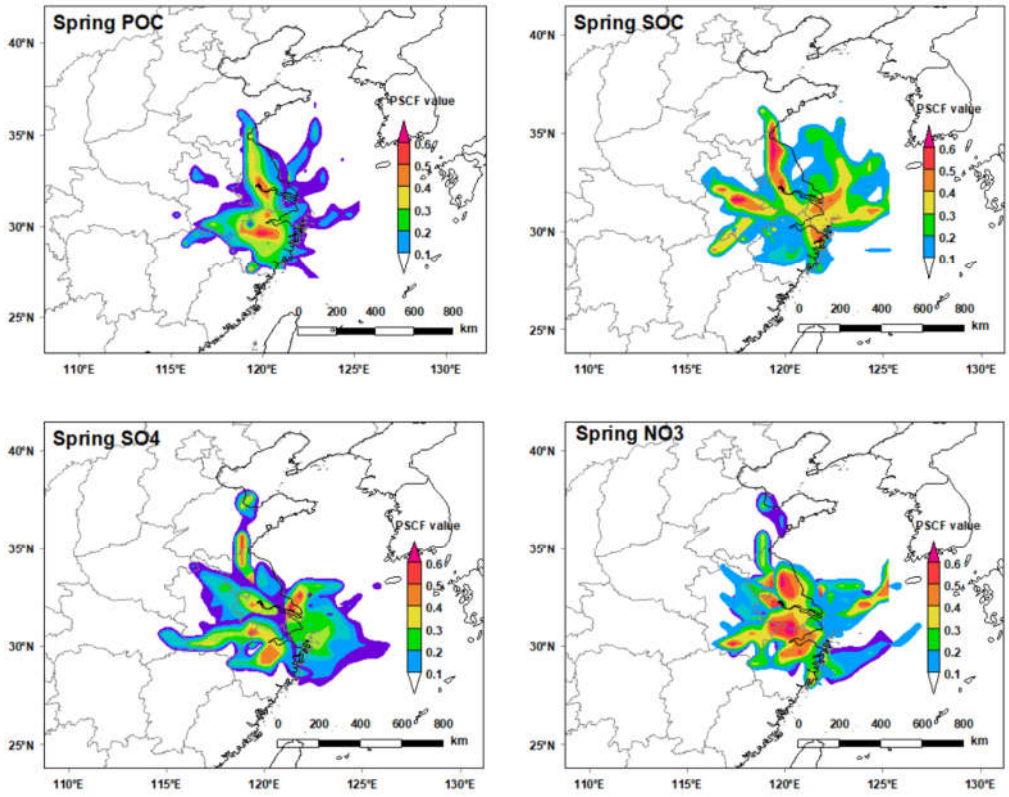
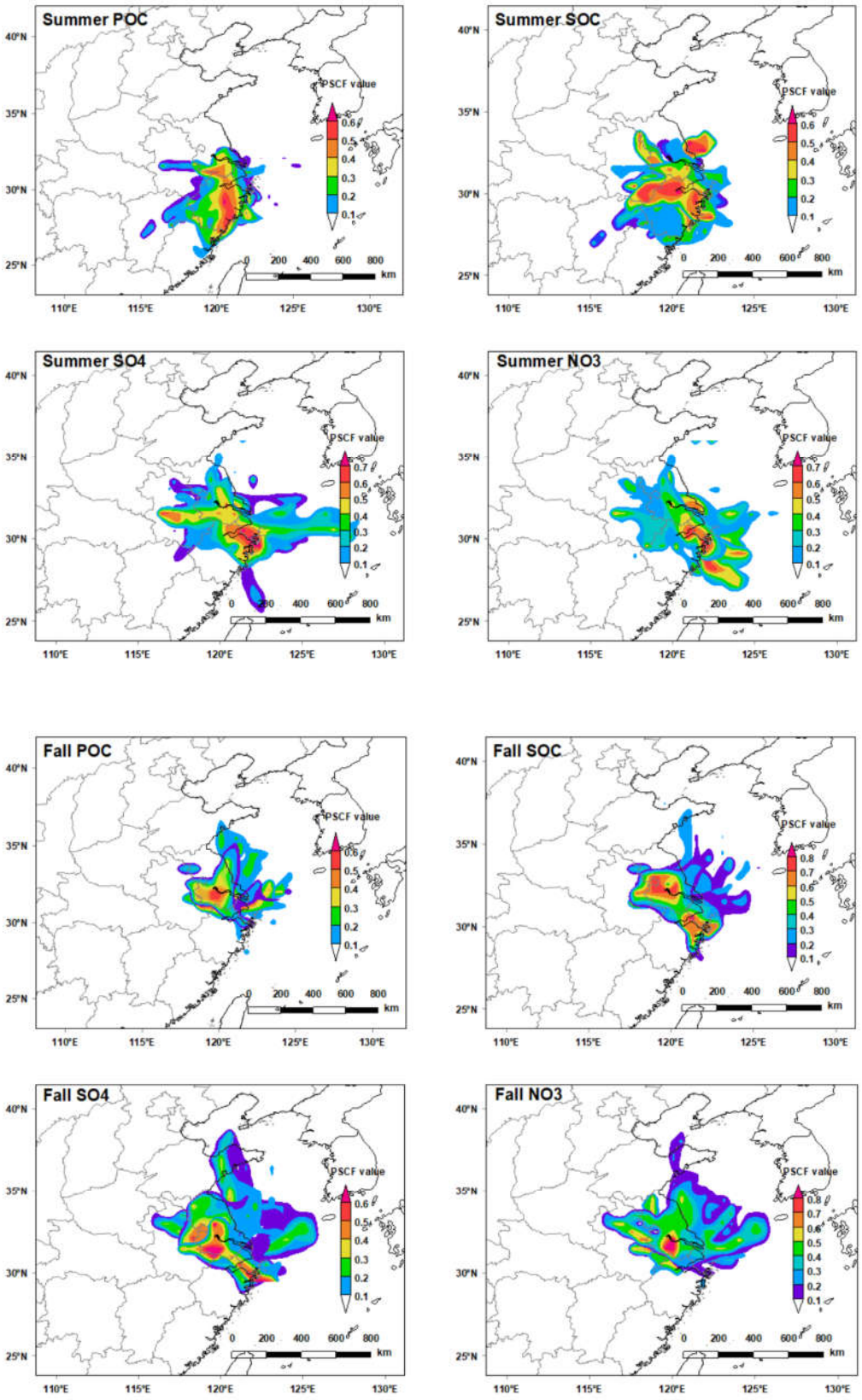


Fig. S6. Location of the sampling site and surrounding region.




Summer POC
Summer SOC
Summer SO4
Summer NO3
Fall POC
Fall SOC
Fall SO4
Fall NO3
PSCF value
0 200 400 600 800 km
110°E 115°E 120°E 125°E 130°E
40°N 35°N 30°N 25°N

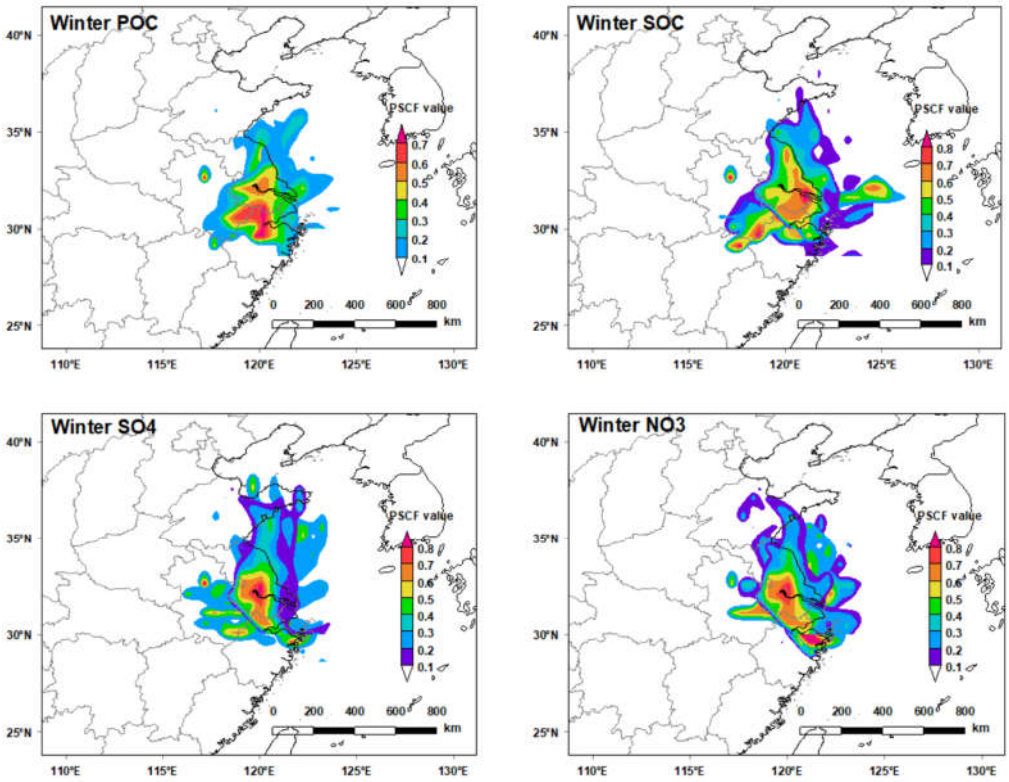


Fig. S7. Potential source areas for POC, SOC, SO_4^{2-} and NO_3^- in four seasons. The color code denotes the PSCF probability.