Fig. S1. Averaged mass spectra of different types of BC-containing particles. (a) EC; (b) NaKEC; (c) ECOC; (d) KEC; (e) Others.
Fig. S2. (a) Correlation between EC & NaKEC (0 to 400 nm) measured by SPAMS and BC particles with core size (60 to 80 nm) and CT (40 to 60 nm); (b) The diurnal variation of BC particles with core (60 to 80 nm) and CT (40 to 60 nm).
Fig. S3. Correlation between ECOC (0 to 700 nm) measured by SPAMS and BC particles with core size (60 to 80 nm) and CT (100 to 160 nm).
Fig. S4. (a) Correlation between KEC (0 to 1200 nm) particle number measured by SPAMS and BC particles with core size (80 to 130 nm) and CT (160 to 300 nm); (b) Correlation between K⁺ mass concentration measured by MARGA and number concentration of BC particles with core size (80 to 130 nm) and CT (160 to 300 nm).
**Fig. S5.** Correlation between EC & NaKEC (400 to 800 nm) particle number measured by SPAMS and the number concentration of BC particles with core size (150 to 200 nm) and CT (40 to 80 nm).