Supplementary material

The observed average ratio for area II [N-CEC, 5.3 ± 2.1 (1σ) ng m^{-3} ppb^{-1}] was smaller than that for area III (S-CEC, 6.4 ± 2.2 ng m^{-3} ppb^{-1}), as discussed in Sect. 3.2.1.2. Figure S1 shows the difference between the frequency distributions of the observed ΔBC/ΔCO ratios for the two air mass types (black and red lines). A significant difference between the distributions is observed, particularly for the data with a ΔBC/ΔCO ratio smaller than 4 ng m^{-3} ppb^{-1}. The difference was therefore statistically significant ($p < 0.01$) when Welch's t-test was applied to the two data sets. Similarly, the distribution for type V' (Korea only), shown in blue, was different from that for type II, with a statistical significance ($p < 0.01$), mainly because the fraction of data with a ΔBC/ΔCO ratio higher than 8 ng m^{-3} ppb^{-1} was larger.

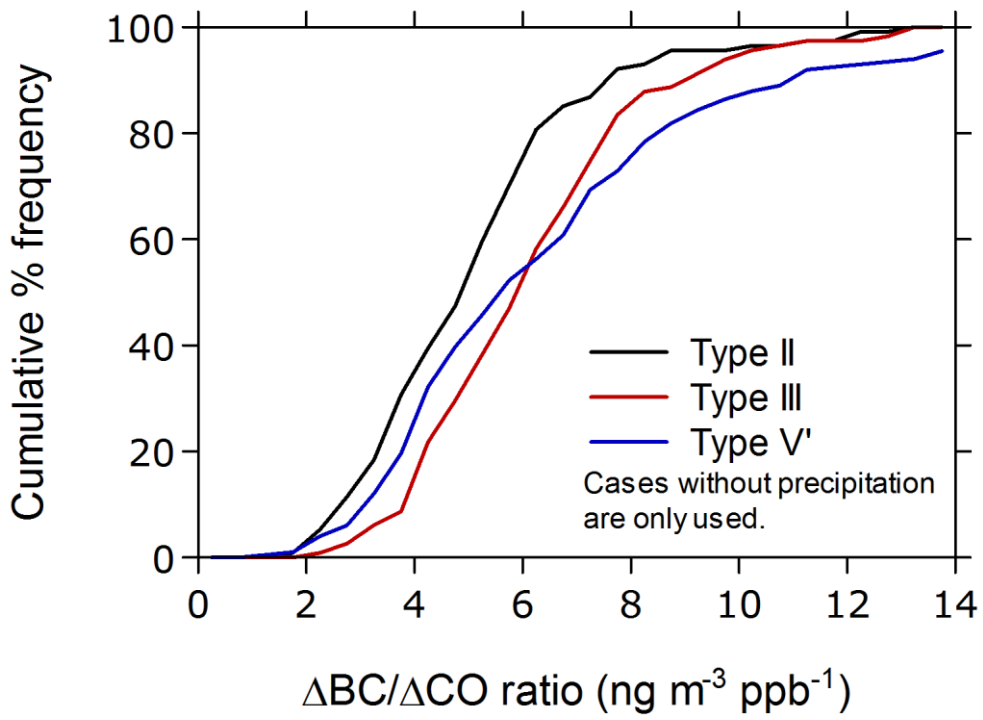

Figure S1: Cumulative frequency (%) of observed ΔBC/ΔCO ratios for selected air mass types (II, III, and V'). Only cases without precipitation are used.