Supporting Information for

Understanding Absorption by Black Versus Brown Carbon in Biomass Burning Plumes from the WE-CAN Campaign

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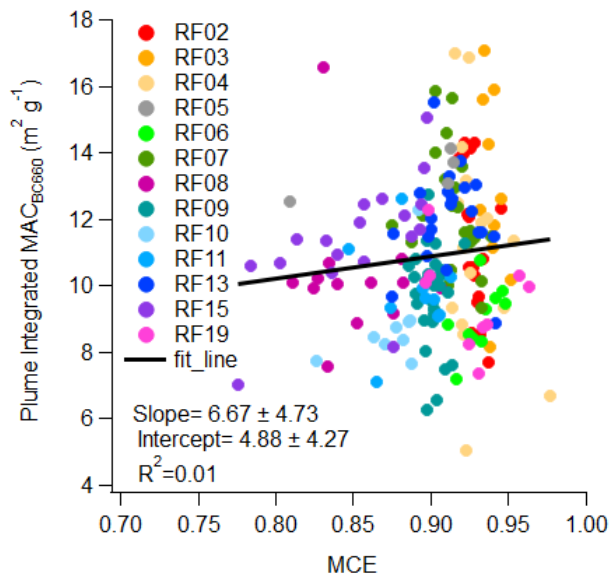
Figure S1: Plume integrated MAC$_{BC660}$ variations with MCE. Different colors indicate different research flights (RF) and, accordingly, different fires.
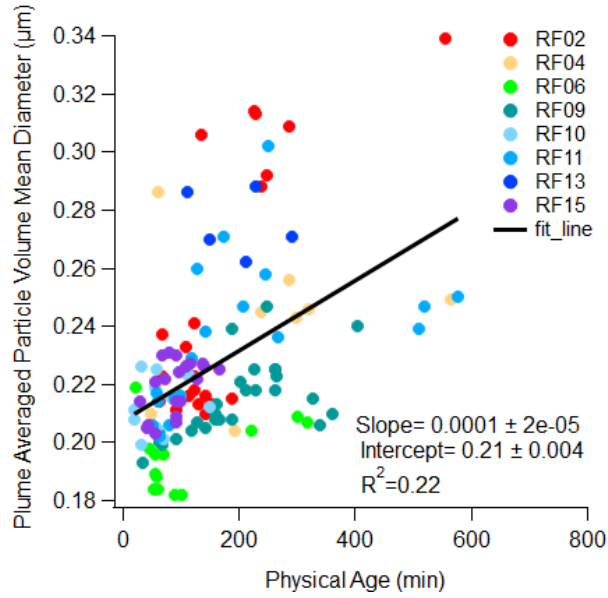
Figure S2: Time evolution of plume integrated particle volume mean diameter.
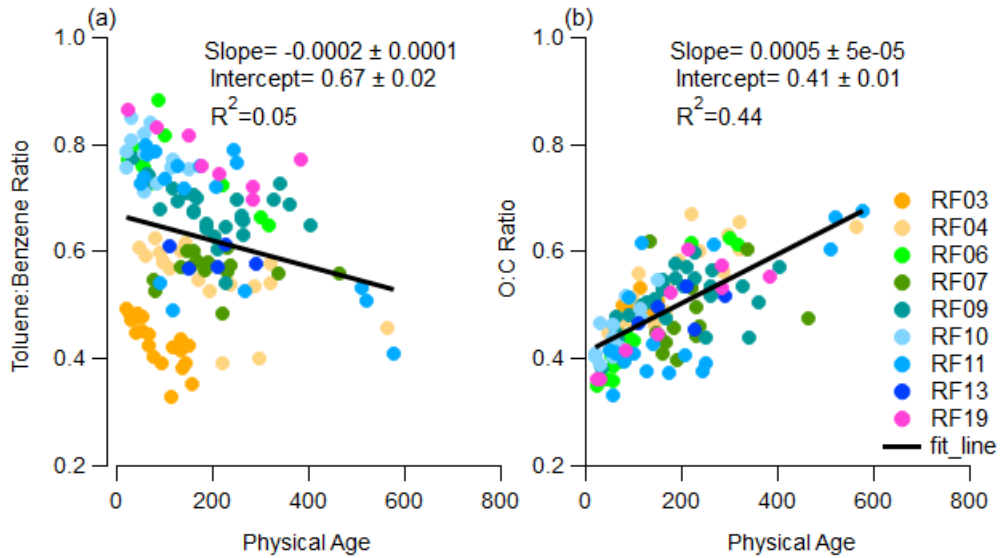
Figure S3: Time evolution of (a) plume integrated toluene:benzene ratio and (b) plume integrated O:C ratio
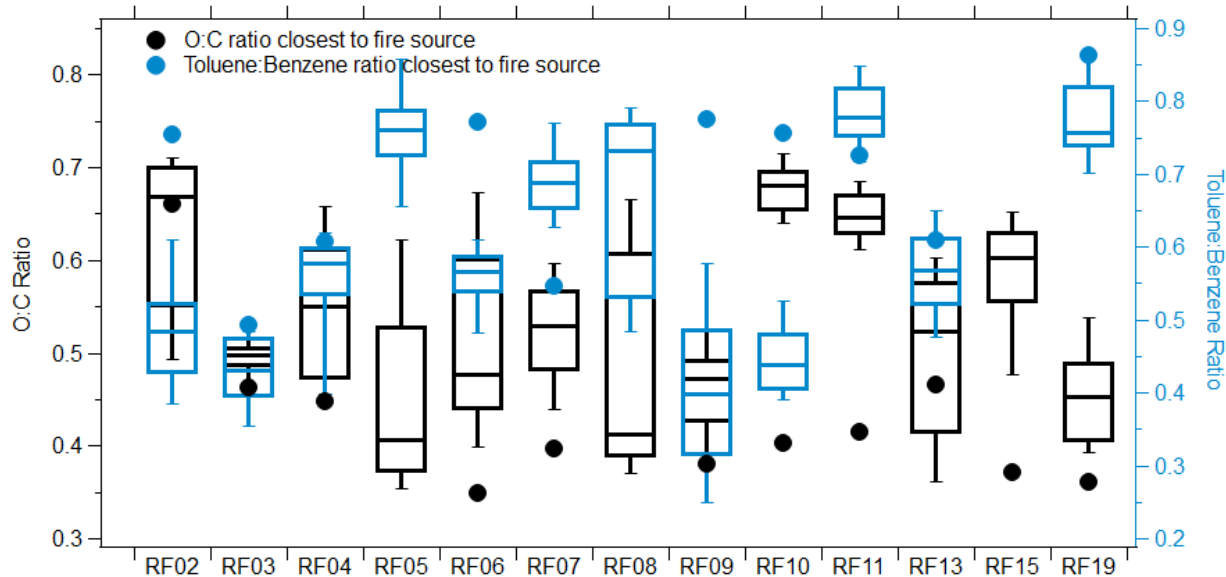
Figure S4: Box plots of plume integrated toluene:benzene ratio (blue box) and O:C ratio (black box) for each flight. On each box the central line represents the median, the top and bottom edge represents 75% and 25%, the top and bottom whisker represents 90% and 10%. The round dot shows the value which is the closest to the fire source (with smallest physical age).

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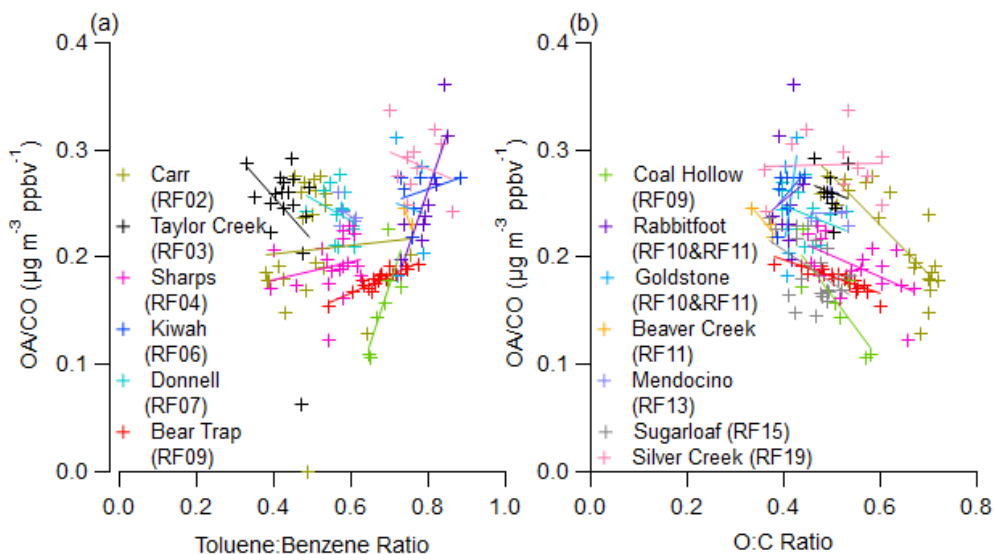
Figure S5: Plume integrated normalized OA variation with (a) toluene:benzene ratio and (b) O:C ratio. Different colors were used to distinguish plumes from different fire sources. Plumes from uncertain fire sources (especially plumes from RF05, RF08 and RF13) were not included in this plot.

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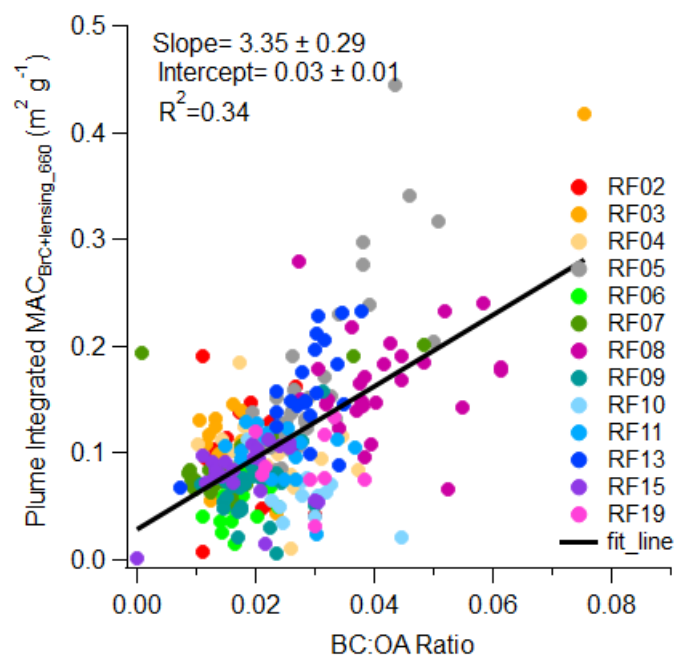
Figure S6: Plume integrated MAC$_{BrC+lensing\_660}$ variations with BC:OA ratio

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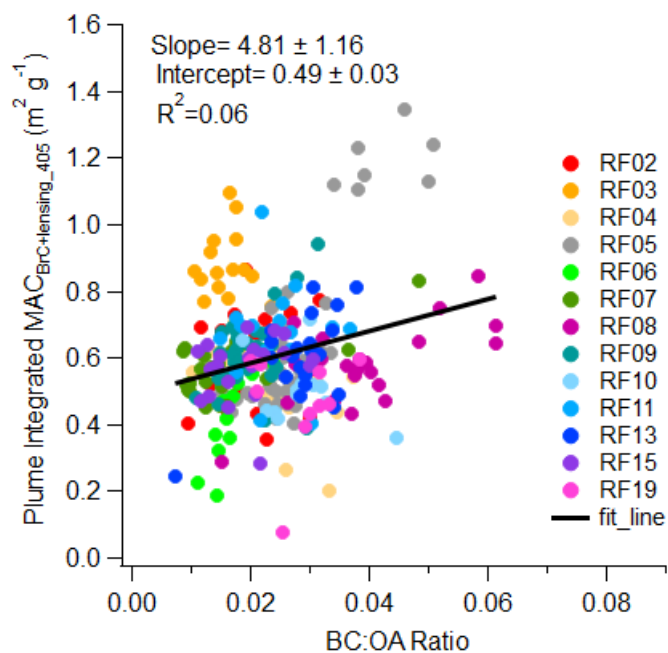
Figure S7: Plume integrated MAC$_{BrC+lensing\_405}$ variations with BC:OA ratio

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