Supplemental material

Ratios of aerosol (Total and Organic) to CO as a function of photochemical age presented in Fig. 9 were determined by regressions of aerosol concentration vs. CO. Here we show the 20 graphs used for that purpose. Regression slopes from these graphs constitute the data points in Figs 9a and b. Slopes, determined from the reduced major axis method are calculated independent of any assumptions on background conditions. Regression intercepts are determined from:

$$\text{Intercept} = [\text{Aerosol}]_{\text{average}} - \text{Slope} \times [\text{CO}]_{\text{average}}. \qquad (S1)$$

Figure captions

Figure 1S. Scatter plots of total non-refractory aerosol concentration from the AMS vs. CO concentration. Data set has been split into 10 bins, each spanning 0.1 unit of photochemical age ($-\text{Log}_{10}[\text{NO}_x]/[\text{NO}_y]$) as indicated on plots. Each data point represents a 10s measurement period satisfying the urban plume criteria in Table 4. Blue lines are linear least squares regression fits to data points. Red line shows value and one sigma uncertainty in [Aerosol] at CO = 100 ppb.

Figure 2S. Scatter plots of organic aerosol concentration from the AMS vs. CO concentration. Format is the same as Fig. 1S.