Supplementary Material

Changes in Organic Aerosol Composition with Aging Inferred from Aerosol Mass Spectra

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Figure S1:

Ratio of estimated H:C/observed H:C vs. f_{44} for ambient HR-AMS data (where H:C can be determined directly). The solid circles are OOA components and the open circles are HOA, other primary OA components (local OA LOA, biomass burning OA BBOA, and cooking OA COA). It is clear that for $f_{44} > 0.05$, the parameterization shown in Fig. 2 in the manuscript can reproduce the observed H:C of the OOA components to within ± 10%.

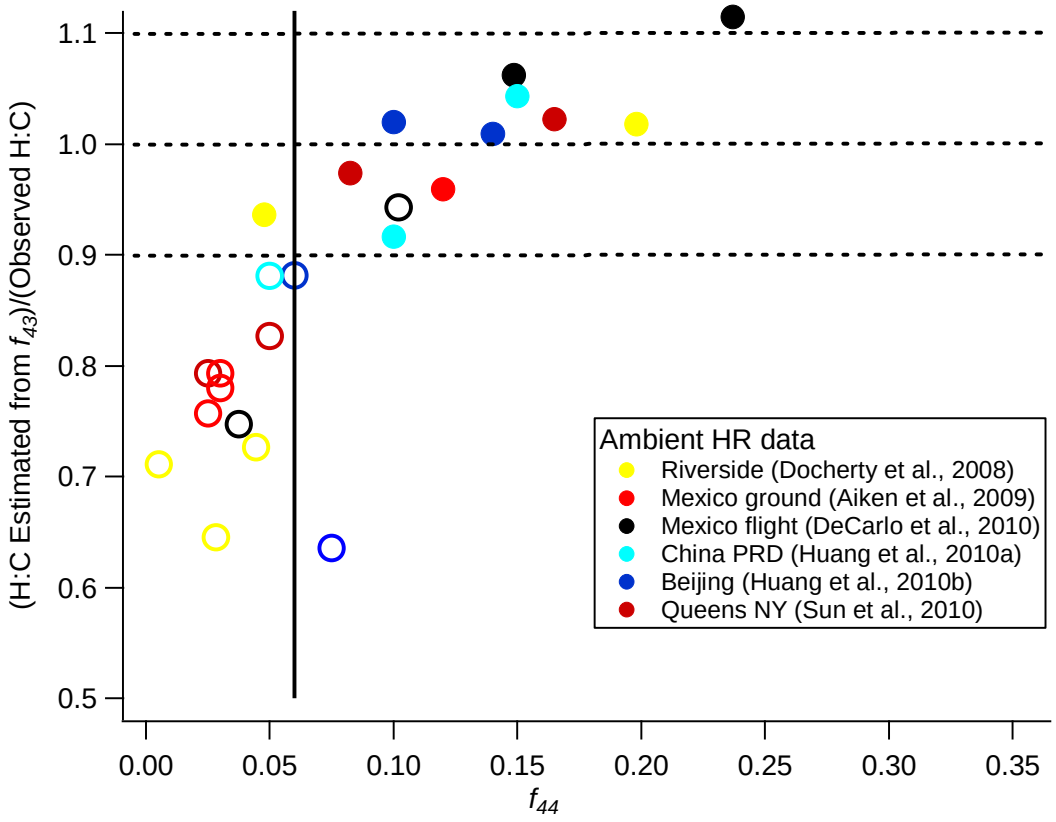

Figure S2:

Parameterization of H:C in terms of f_{43} (Fig. 2 in the manuscript) for SOA/OOA, using OOA components obtained from PMF analysis of HR-AMS ambient datasets and SOA formed in laboratory studies. The dotted gray lines are ± 10% from the fitted line. The solid circles are OOA components and the open circles are HOA, other primary OA components (local OA LOA, biomass burning OA BBOA, and cooking OA COA). It appears that these HOA and other primary OA components where $C_3H_7^+$ contributes > ~ 20% of *m/z* 43 may require a separate parameterization and warrants future investigation.