



*Supplement of*

## **Volatility of organic aerosol and its components in the Megacity of Paris**

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22      **Table S1.** Estimated volatility distributions for the OA and the PMF factors.<sup>a</sup>

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OA Type	$C^*$								
	$10^{-7}$	$10^{-6}$	$10^{-5}$	$10^{-4}$	$10^{-3}$	$10^{-2}$	$10^{-1}$	1	10
<b>Summer 2009</b>									
HOA	-	-	-	0.13	0.14	0.08	0.02	0.06	0.57
COA	-	-	0.13	0.15	0.07	0.2	0.08	0.37	-
MOA	-	-	-	0.03	0.03	0.05	0.28	0.42	0.19
SV-OOA	-	-	-	0.06	0.14	0.15	0.13	0.18	0.34
LV-OOA	0.2	0.24	0.28	0.25	0.03	-	-	-	-
<b>Winter 2010</b>									
HOA	-	-	-	0.11	0.09	0.07	0.12	0.11	0.5
COA	-	0.12	0.11	0.14	0.42	0.11	0.1	-	-
BBOA	-	-	-	0.2	0.09	0.08	0.13	0.09	0.41
OOA	-	-	-	0.3	0.09	0.07	0.09	0.1	0.35

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27      <sup>a</sup>Expressed as fractions of the OA with  $C^* \leq 10 \mu\text{g m}^{-3}$ .

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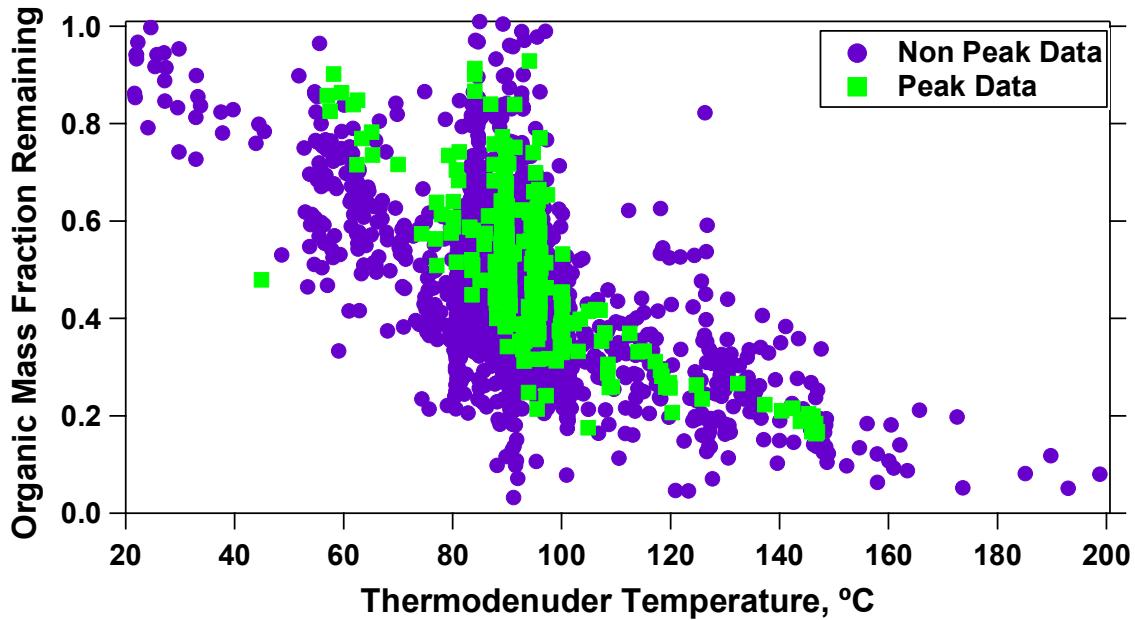
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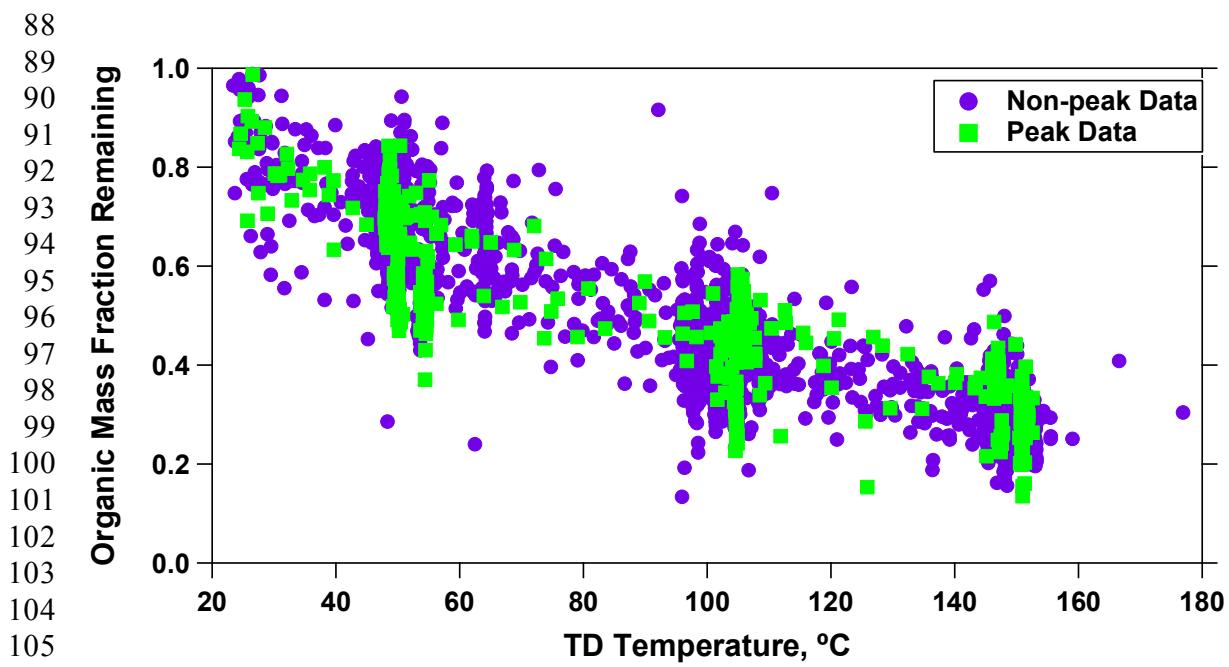
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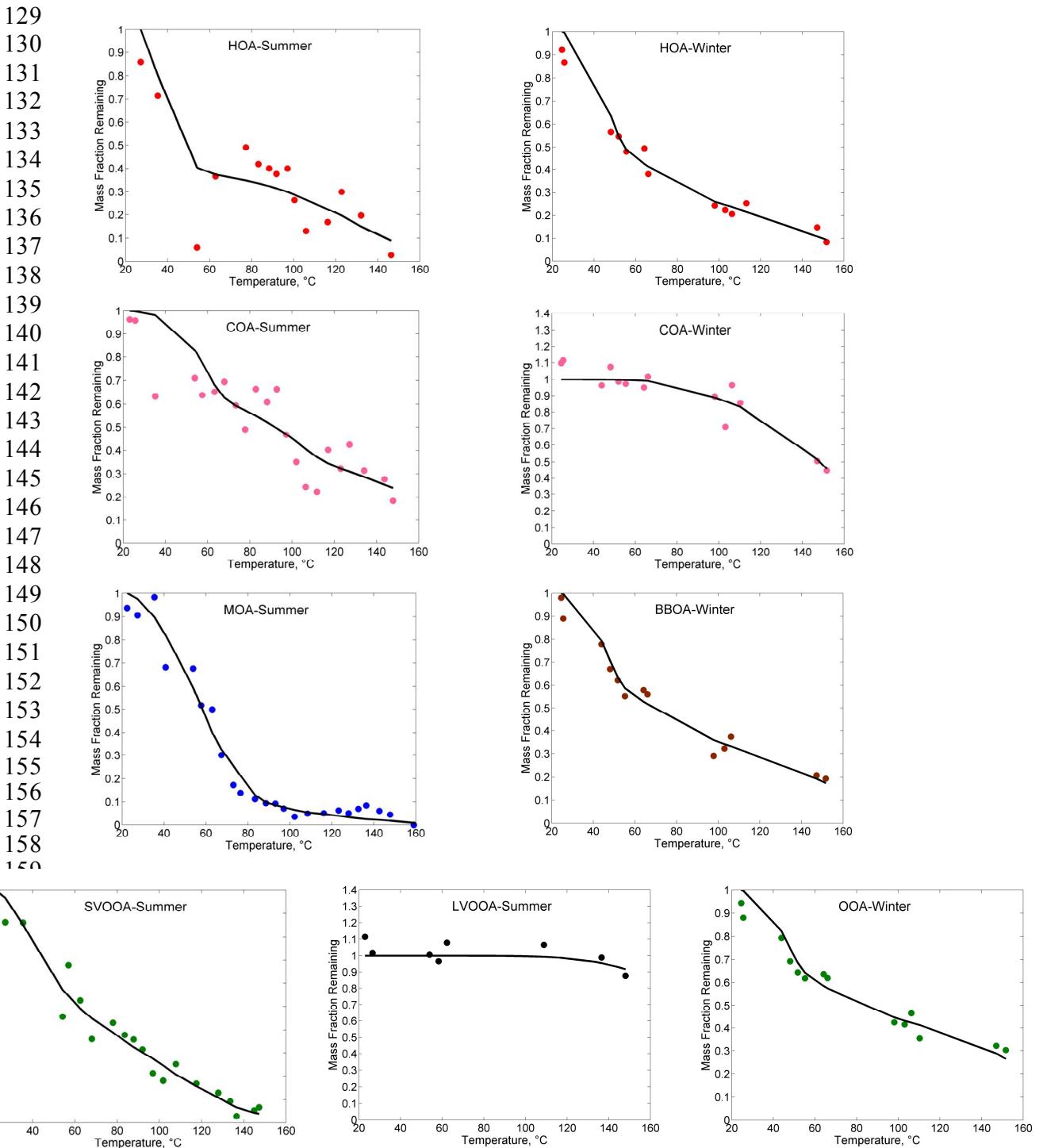


72 **Figure S1.** Organic mass fraction remaining (MFR) as a function of TD temperature for  
 73 ambient concentration greater than  $1.5 \mu\text{g m}^{-3}$  (peak data – green squares) and  
 74 concentrations lower than  $1.5 \mu\text{g m}^{-3}$  (non peak data – purple circles) for the summer  
 75 2009 campaign.

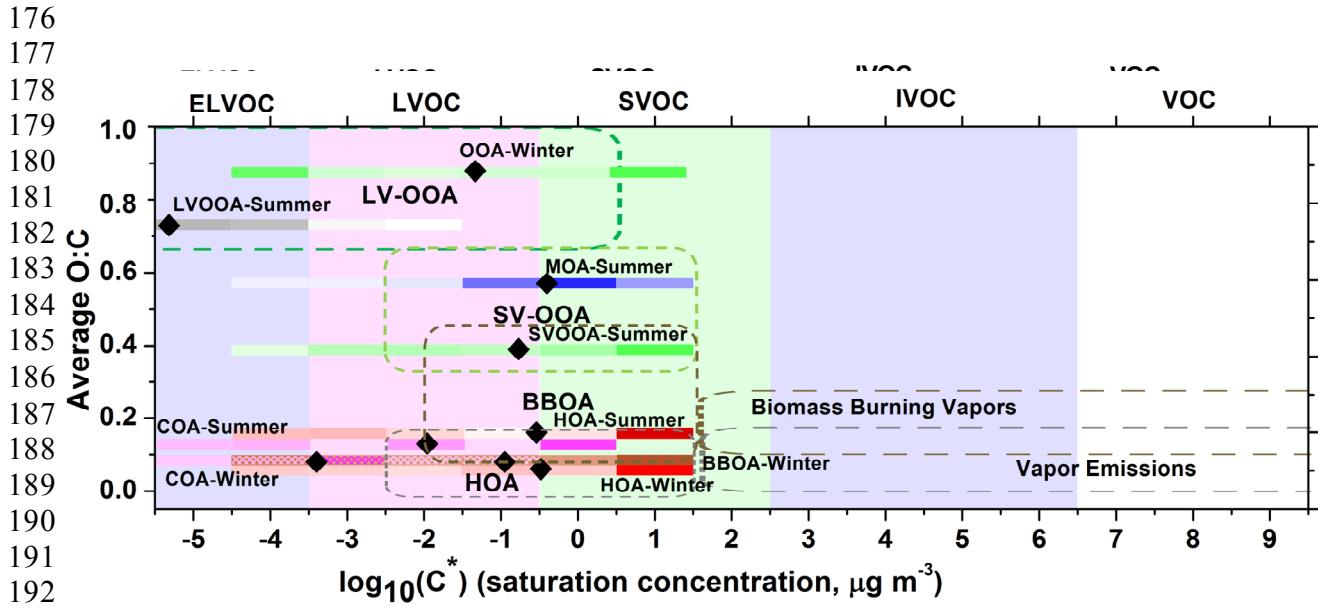
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**Figure S2.** Organic mass fraction remaining as a function of TD temperature for ambient concentration greater than  $4.5 \mu\text{g m}^{-3}$  (peak data – green squares) and concentrations lower than  $4.5 \mu\text{g m}^{-3}$  (non peak data – purple circles) for the winter 2010 campaign.



**Figure S3.** Corrected thermograms (points) with best-fit volatility distributions (solid line) for PMF factors.



**Figure S4.**  $\log_{10}(C^*)$  saturation concentration and approximate O:C (oxidation state on the left y-axis) for classes of organic species as shown in Donahue et al. (2012) along with estimated factors from the summer and winter campaigns discussed in this work. The shaded areas indicate the locations of the various factors proposed by Donahue et al. (2012) while the colored horizontal bars the estimated locations of the factors in this study. The darker shading of the colored bars denotes a larger mass fraction for a given  $C^*$  bin. The diamond represents the average  $\log_{10}(C^*)$  value for a given PMF factor.

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