# 1 1. Supplementary material

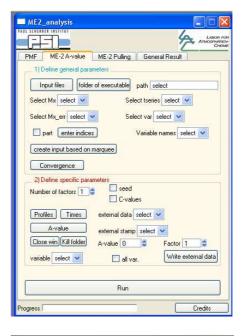
### 2 1.1. Representation of the interface tabs

- 3 All tabs of the ME-2 interface are presented in Figure S.1. The first three tabs show
- 4 the different parameters for the model runs, whereas in the fourth tab the results
- 5 from all model runs can be evaluated.



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ME2\_analysis PMF ME-2 A-value ME-2 Pulling General Result 1) Define general parameters Input files | folder of executable | path | select Select Mx select Select tseries select 💌 Select Mx\_err select 💌 Select var select 💌 part enter indices create input based on marquee Convergence Profiles Times external data select pull external stamp select 💌 Write external data variable select 💌 all var.



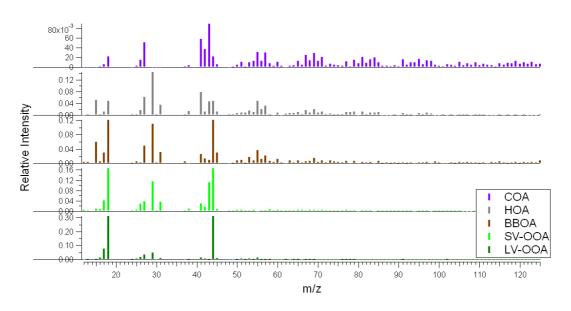
8 **Figure S.1** The tabs of the ME-2 interface in Igor Pro. Status: version 4.0.

#### 1.2. PMF solution

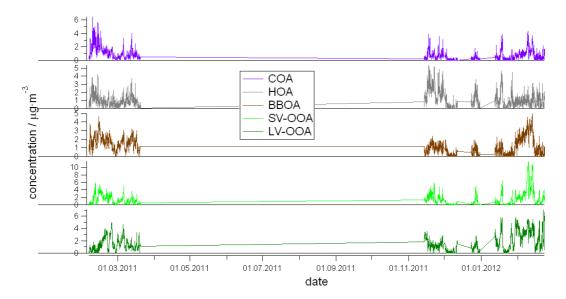
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- 10 This section contains the PMF solution for five factors with the global rotational
- 11 parameter fpeak with the default value zero.



13 **Figure S.2** The factor profiles for the five-factor PMF solution.

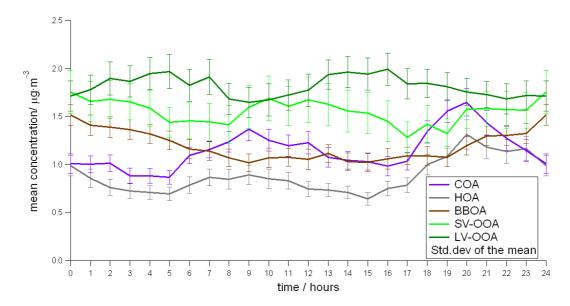


**Figure S.3** The factor time series for the five-factor PMF solution.

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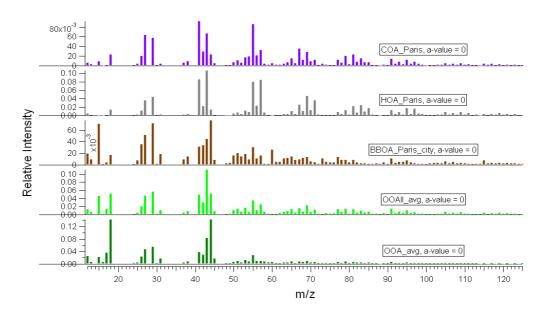
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**Figure S.4** Mean hourly mass concentrations for the five factors retrieved from the PMF analysis.

#### 1.3. CMB solution

#### 22 This section contains the CMB solution for five factors.



**Figure S.5** The factor profiles for the CMB solution.

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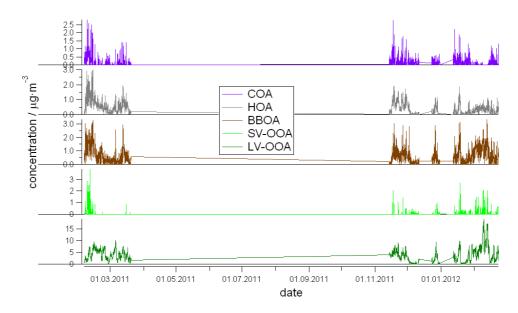
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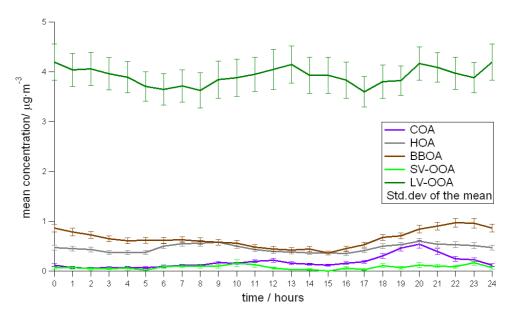
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**Figure S.6** The factor time series for the CMB solution.



**Figure S.7** Mean hourly mass concentrations for the five factors retrieved from the CMB analysis.

### 1.4. Diurnal cycles

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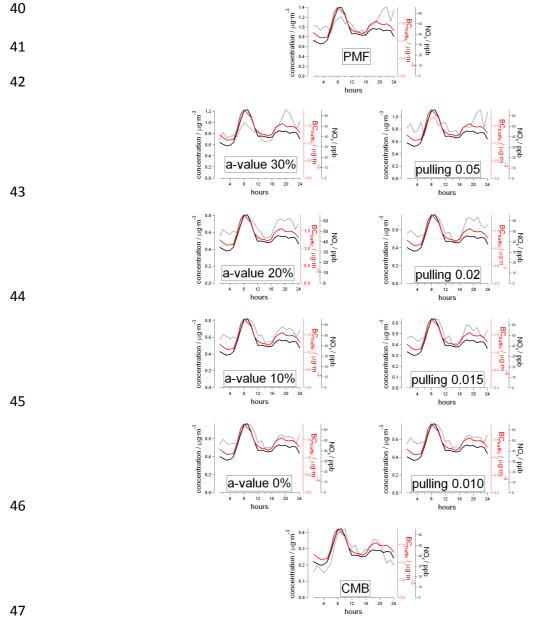
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### 1.4.1. Diurnal cycle of HOA

- 37 The diurnal cycle for the hypothetical primary factor HOA over all runs is present-
- ed in Figure S.8. The gray line in all plots represents the diurnal cycle of HOA, the
- 39 black line represents NO<sub>x</sub> and the red line represents BC<sub>traffic</sub>.



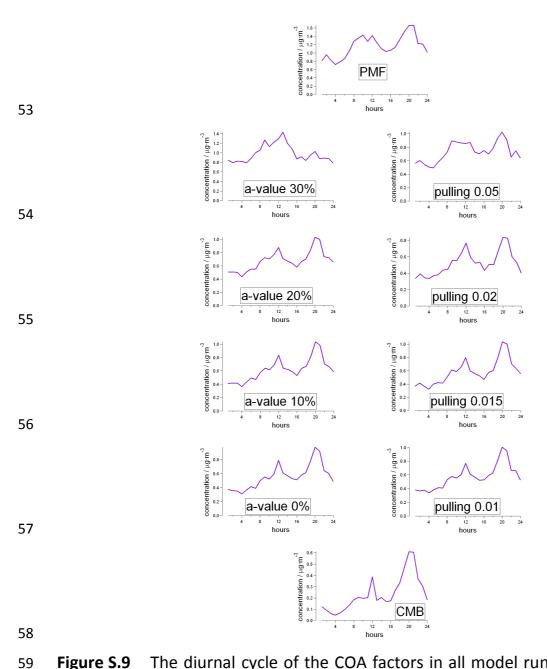
**Figure S.8** Comparison of the diurnal cycle of the HOA factors in all model runs with those of  $NO_x$  and  $BC_{traffic}$ . All values are means.

## 1.4.2. Diurnal cycle of COA

51 The diurnal cycle for the hypothetical primary factor COA over all runs is contained

in Figure S.9.

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**Figure S.9** The diurnal cycle of the COA factors in all model runs. All the values are means.

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