

1. Supplementary material

1.1. Representation of the interface tabs

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

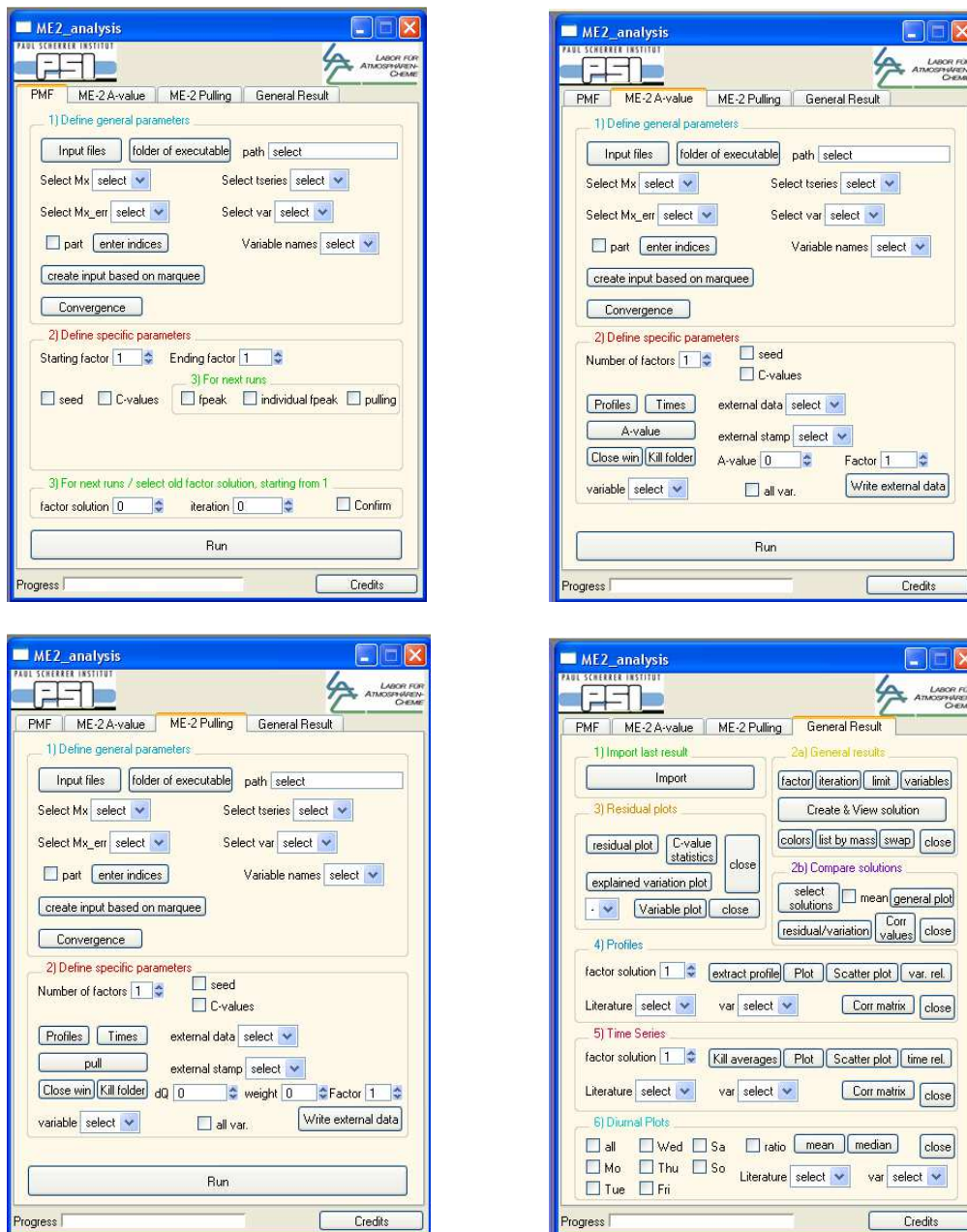
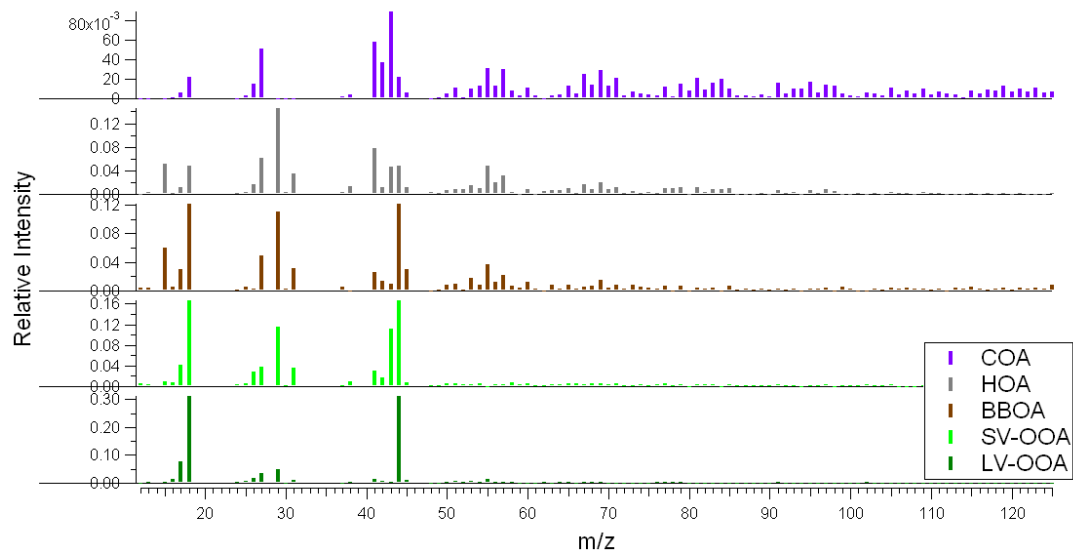


Figure S.1 The tabs of the ME-2 interface in Igor Pro. Status: version 4.0.

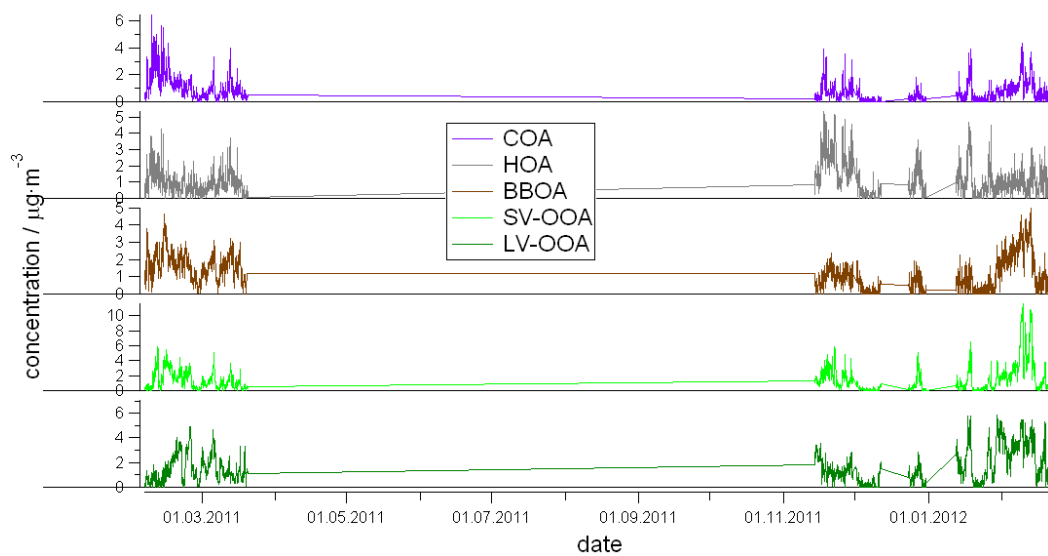
9 1.2. PMF solution

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



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



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

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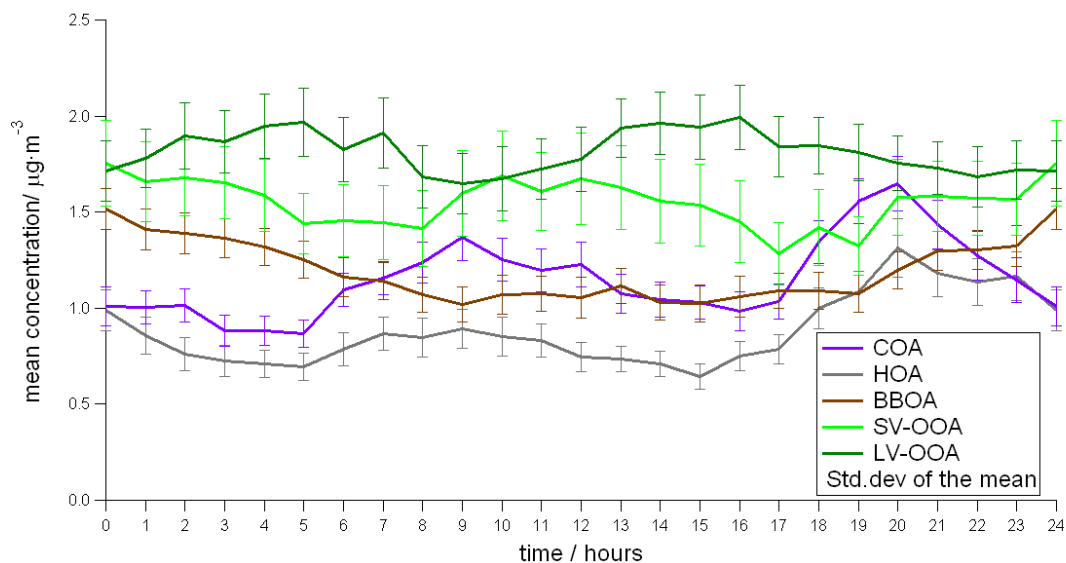


Figure S.4 Mean hourly mass concentrations for the five factors retrieved from the PMF analysis.

1.3. CMB solution

This section contains the CMB solution for five factors.

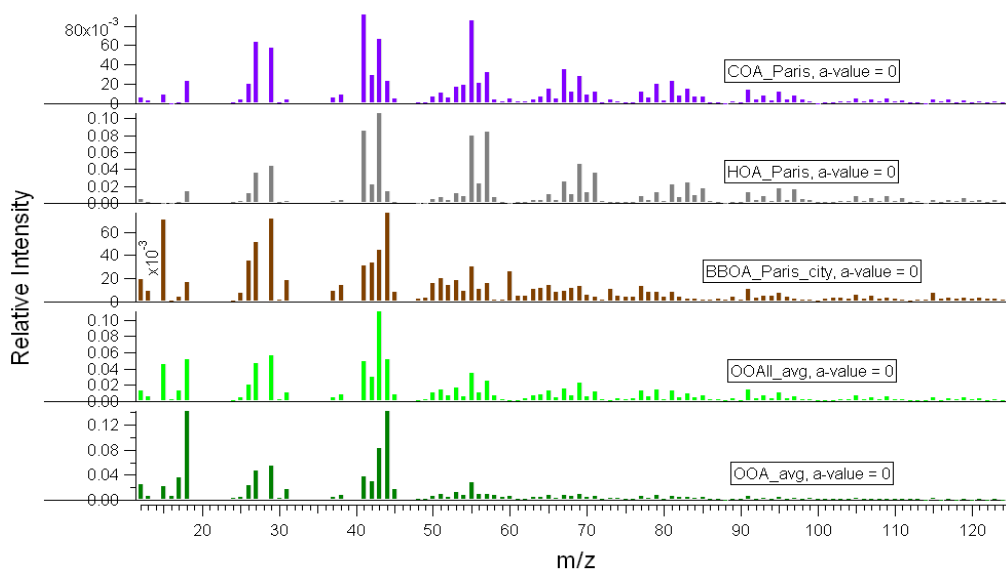


Figure S.5 The factor profiles for the CMB solution.

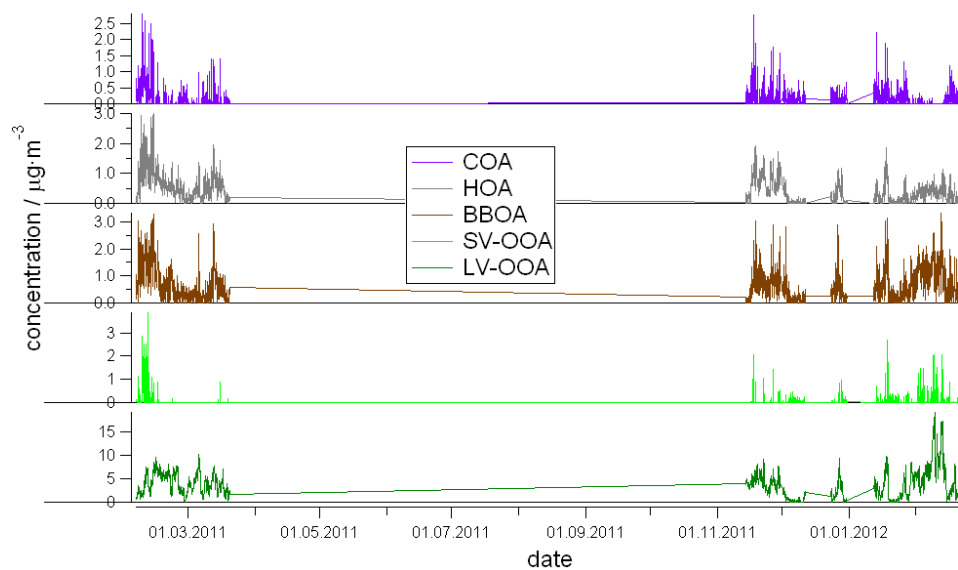


Figure S.6 The factor time series for the CMB solution.

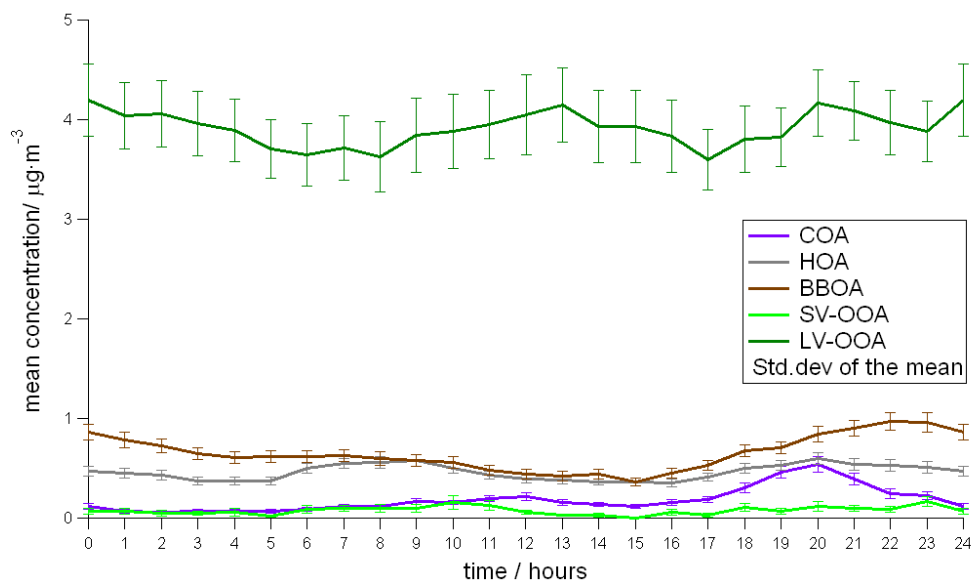


Figure S.7 Mean hourly mass concentrations for the five factors retrieved from the CMB analysis.

1.4. Diurnal cycles

1.4.1. Diurnal cycle of HOA

The diurnal cycle for the hypothetical primary factor HOA over all runs is presented in Figure S.8. The gray line in all plots represents the diurnal cycle of HOA, the black line represents NO_x and the red line represents $\text{BC}_{\text{traffic}}$.

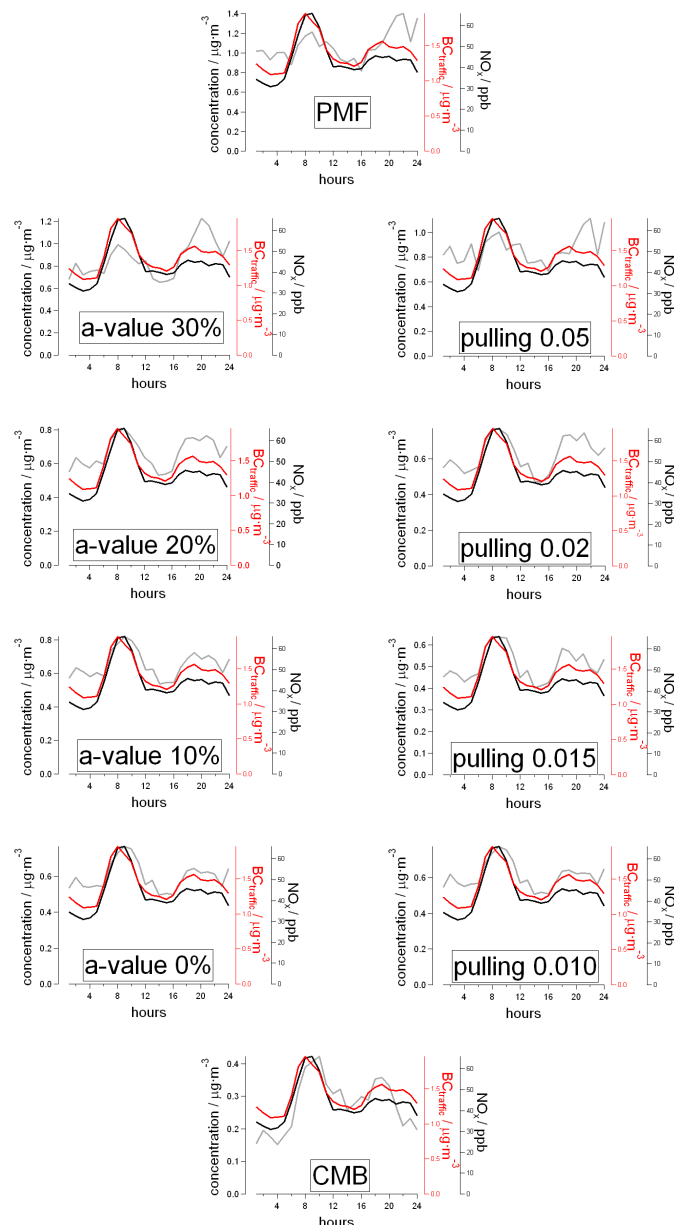


Figure S.8 Comparison of the diurnal cycle of the HOA factors in all model runs with those of NO_x and $\text{BC}_{\text{traffic}}$. All values are means.

1.4.2. Diurnal cycle of COA

The diurnal cycle for the hypothetical primary factor COA over all runs is contained in Figure S.9.

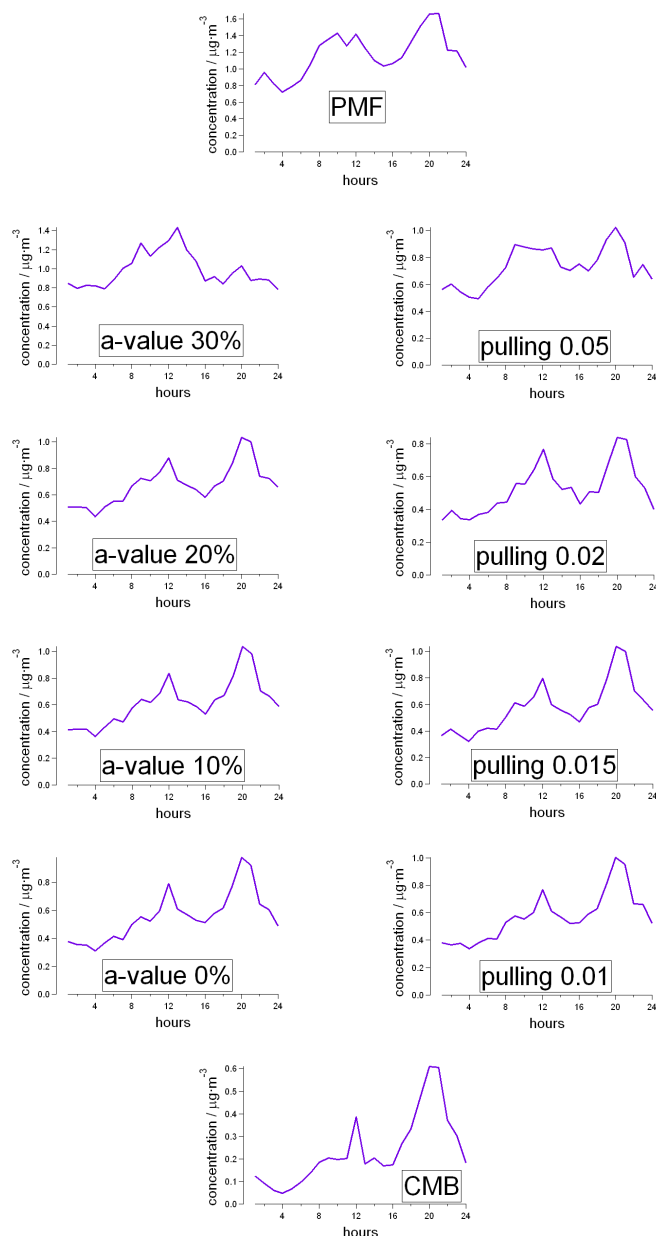


Figure S.9 The diurnal cycle of the COA factors in all model runs. All the values are means.