Figures for

Diurnal variations of ambient residential particulate wood burning emissions and their contribution to the concentration of Polycyclic Aromatic Hydrocarbons (PAHs)

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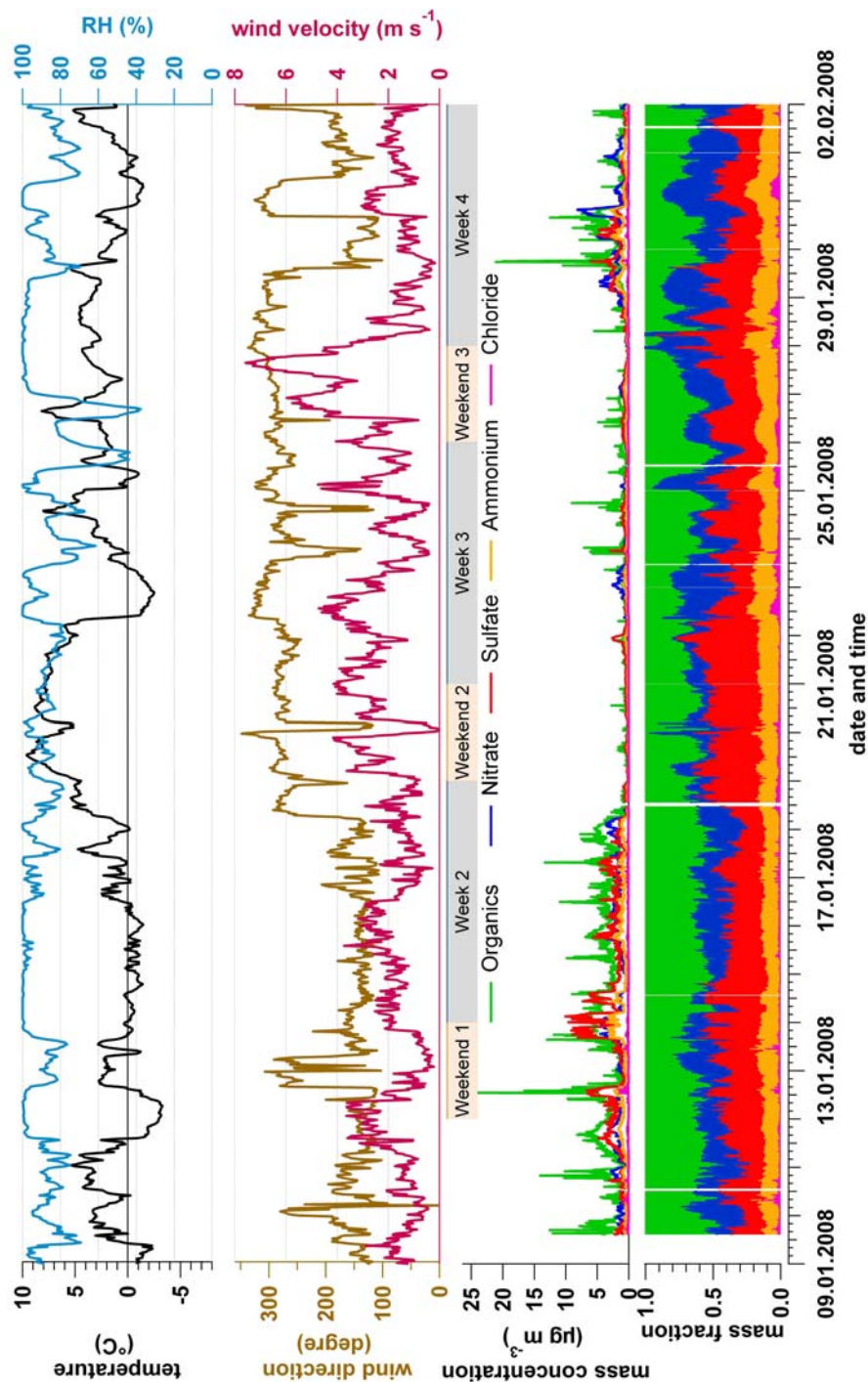Correspondence to: H. Herrmann (herrmann@tropos.de)

Figure 1. Campaign overview including local meteorological variables (relative humidity (RH), temperature, wind direction and wind velocity according to a time resolution of 30 mn), and time series (5 min time resolution) mass concentration and mass fraction of the main NR-PM$_1$ aerosol components during the AMS campaign. The number of week and weekend referred to the one used for the diurnal pattern comparison.
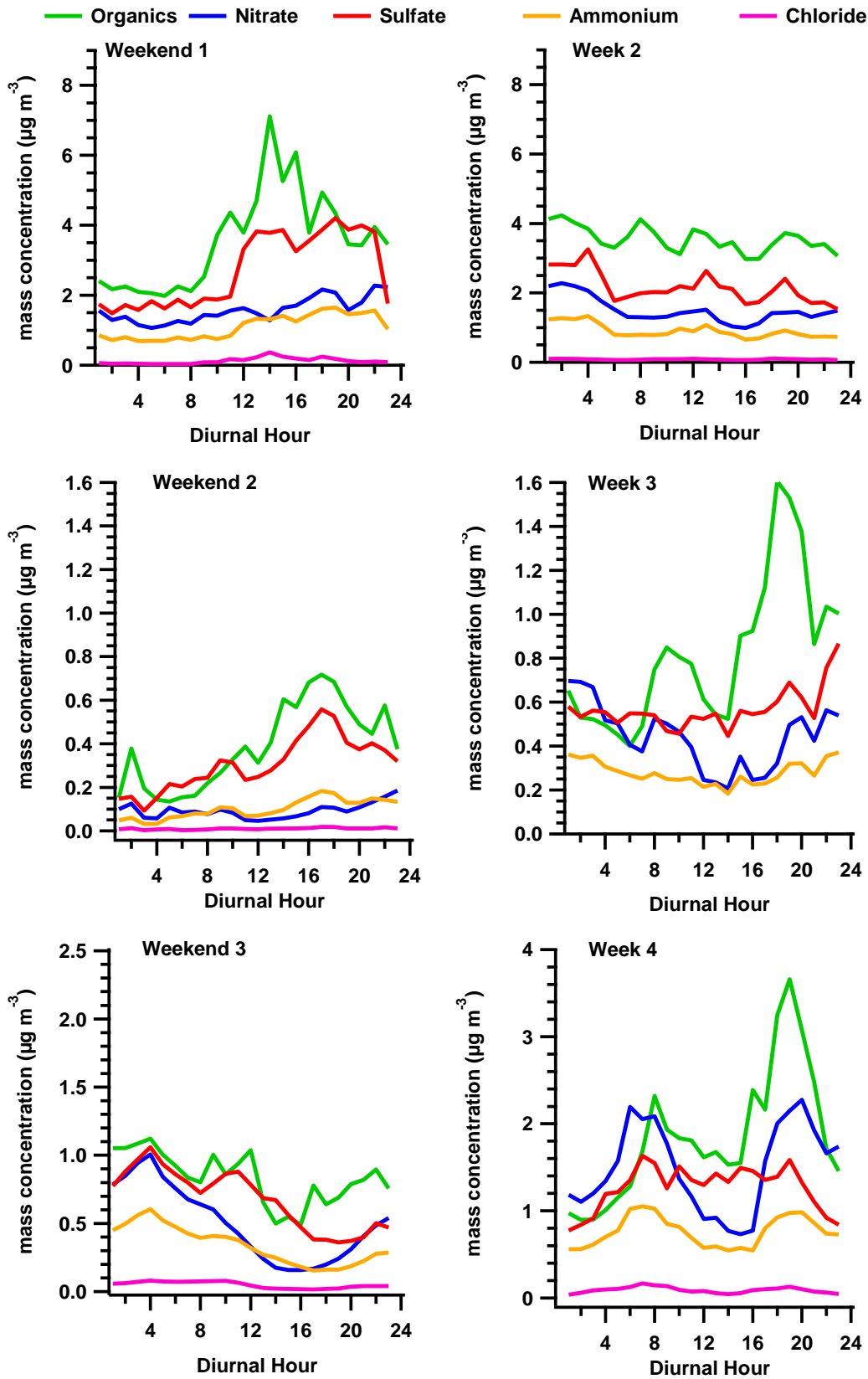
Figure 2. Diurnal variations of the aerosol composition during weekends (left) and workdays (right). Week and weekend number referred to time periods described in Fig. 1.
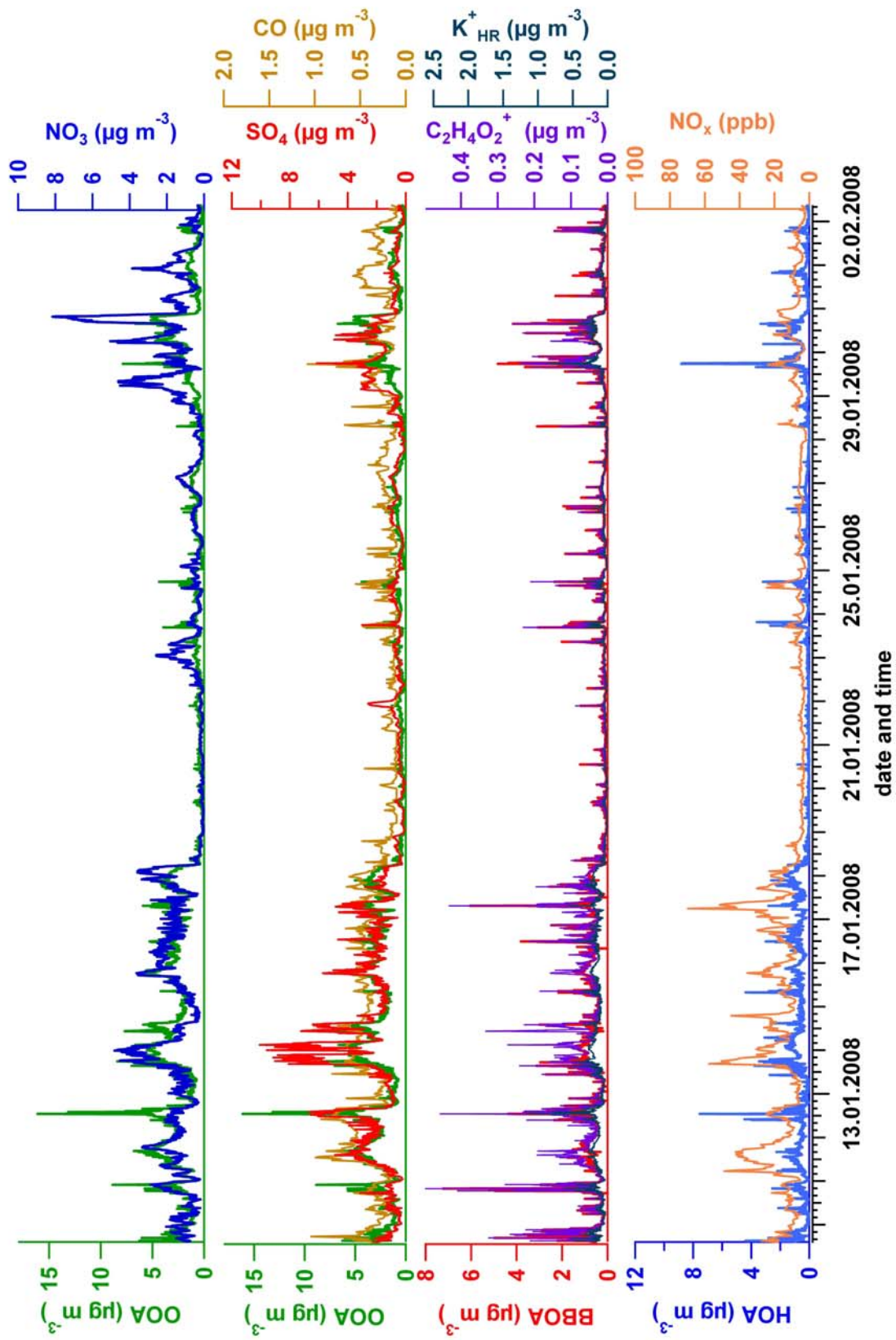
Figure 3. Time series of the 3 factors and their selected tracer species (AMS time resolution 5 min, gas tracers time resolution 30 min).
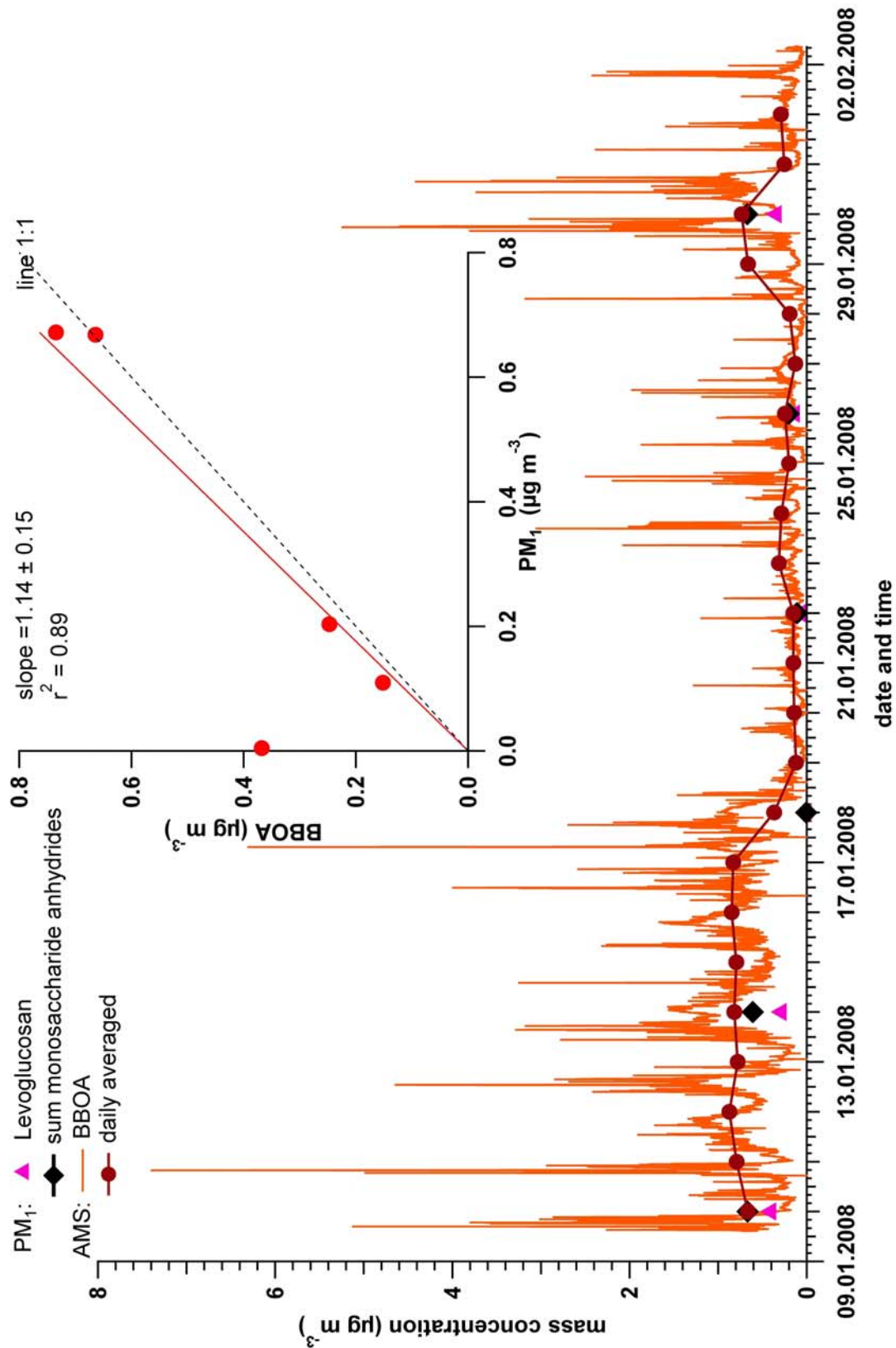
Figure 4. Time series of BBAO factor and comparison with the sum of PM₁ MA identified (levoglucosan, arabitol, mannosan, mannitol, mannose, galactosan, glucose and sucrose).
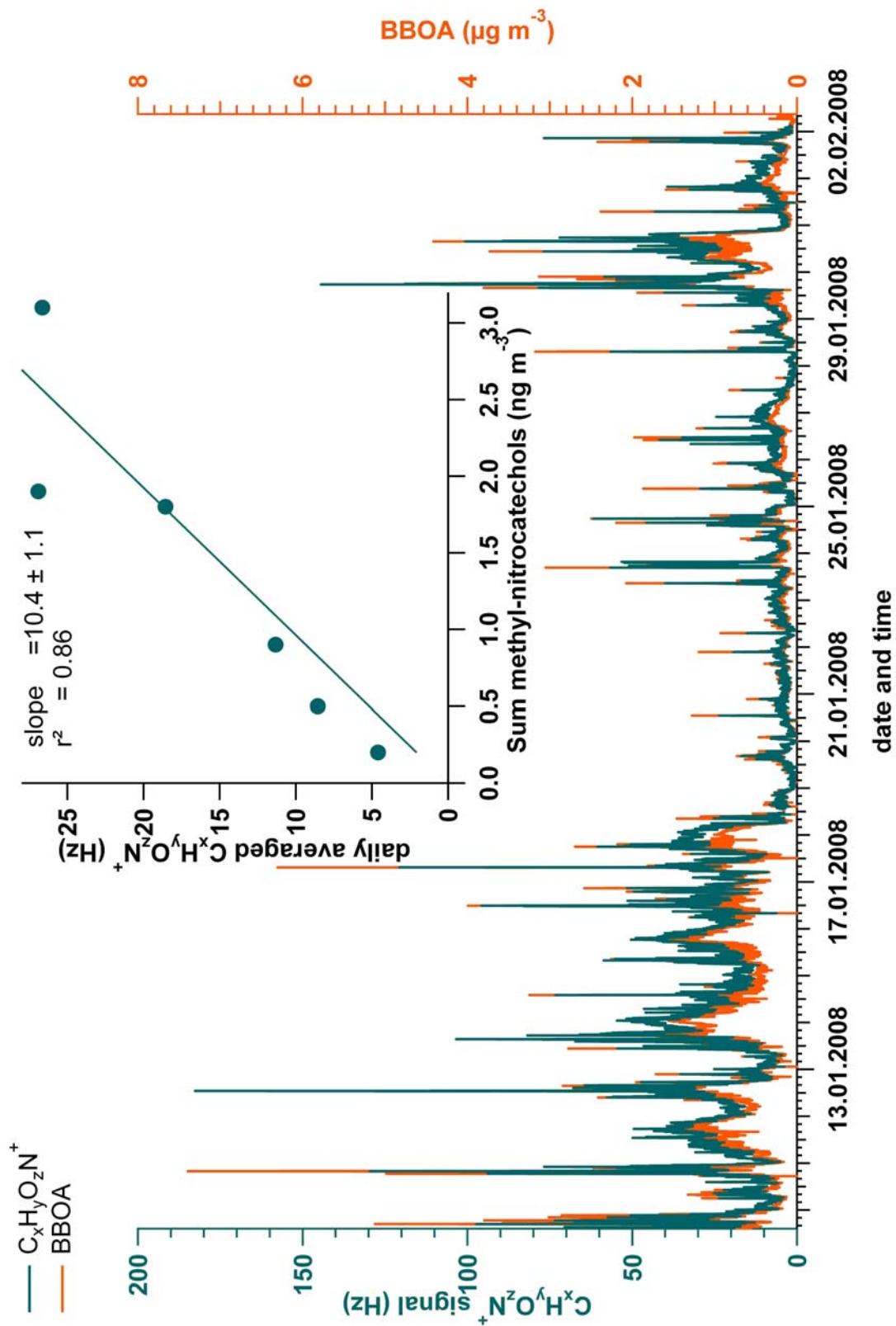
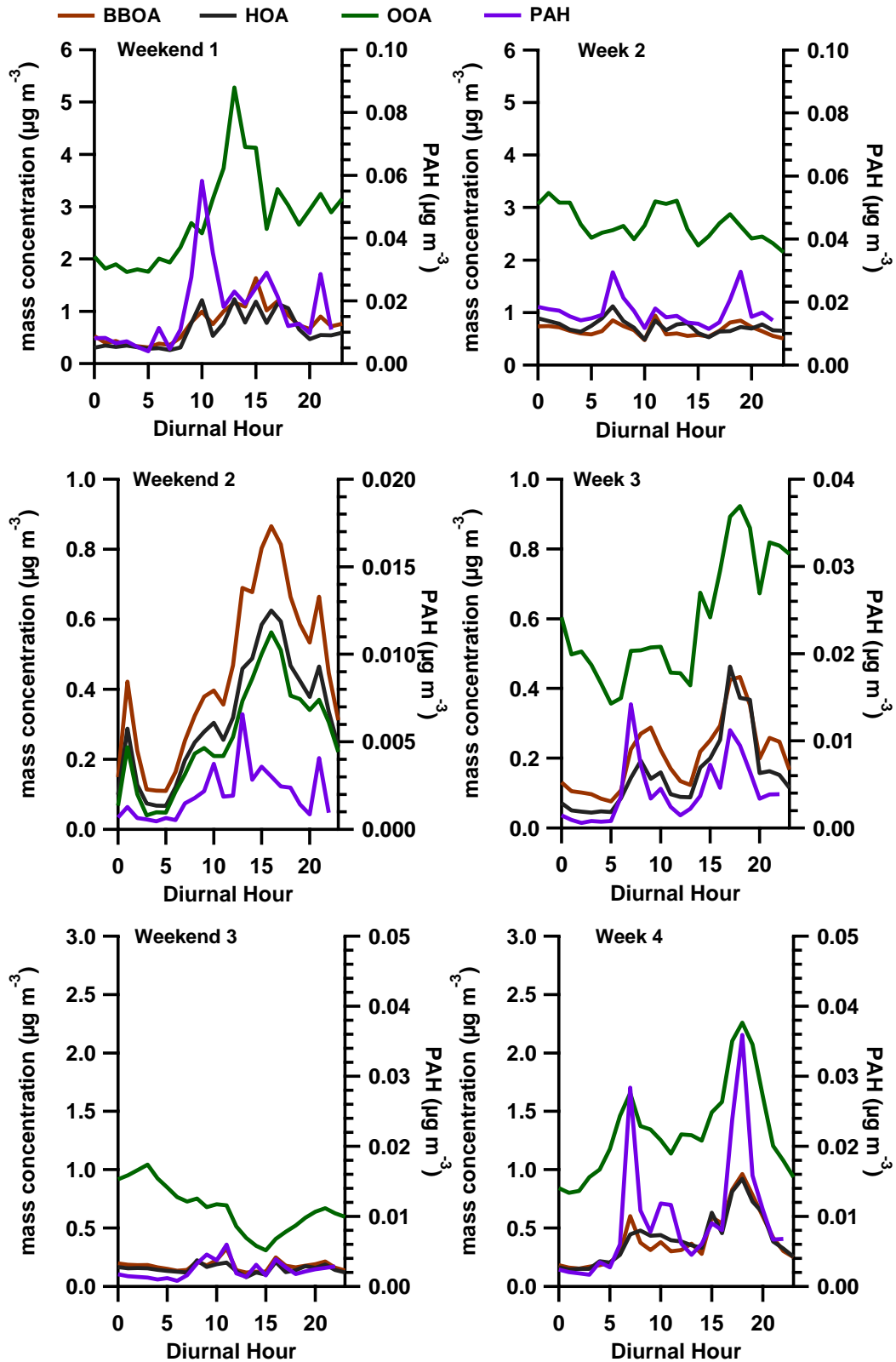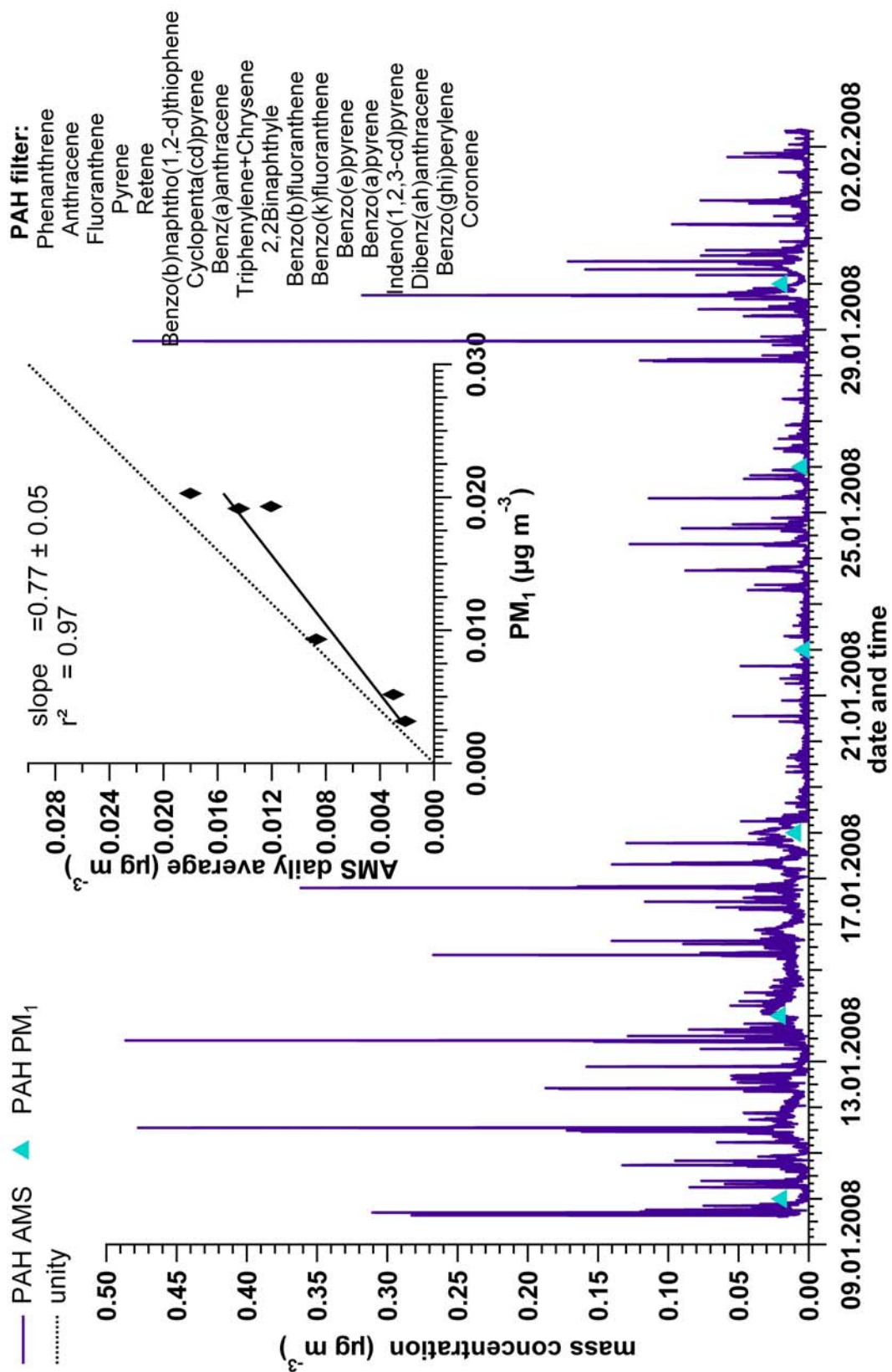Figure 5. Comparison of the $C_xH_yO_zN_w$ fragments with BBOA factor and daily PM$_1$ methy-nitrocatechols.

Figure 6. Diurnal variations of the organic factors (BBOA, HOA and OOA) and PAH concentrations during weekends (left) and workdays (right). Week and weekend number referred to time periods described in Fig. 1.

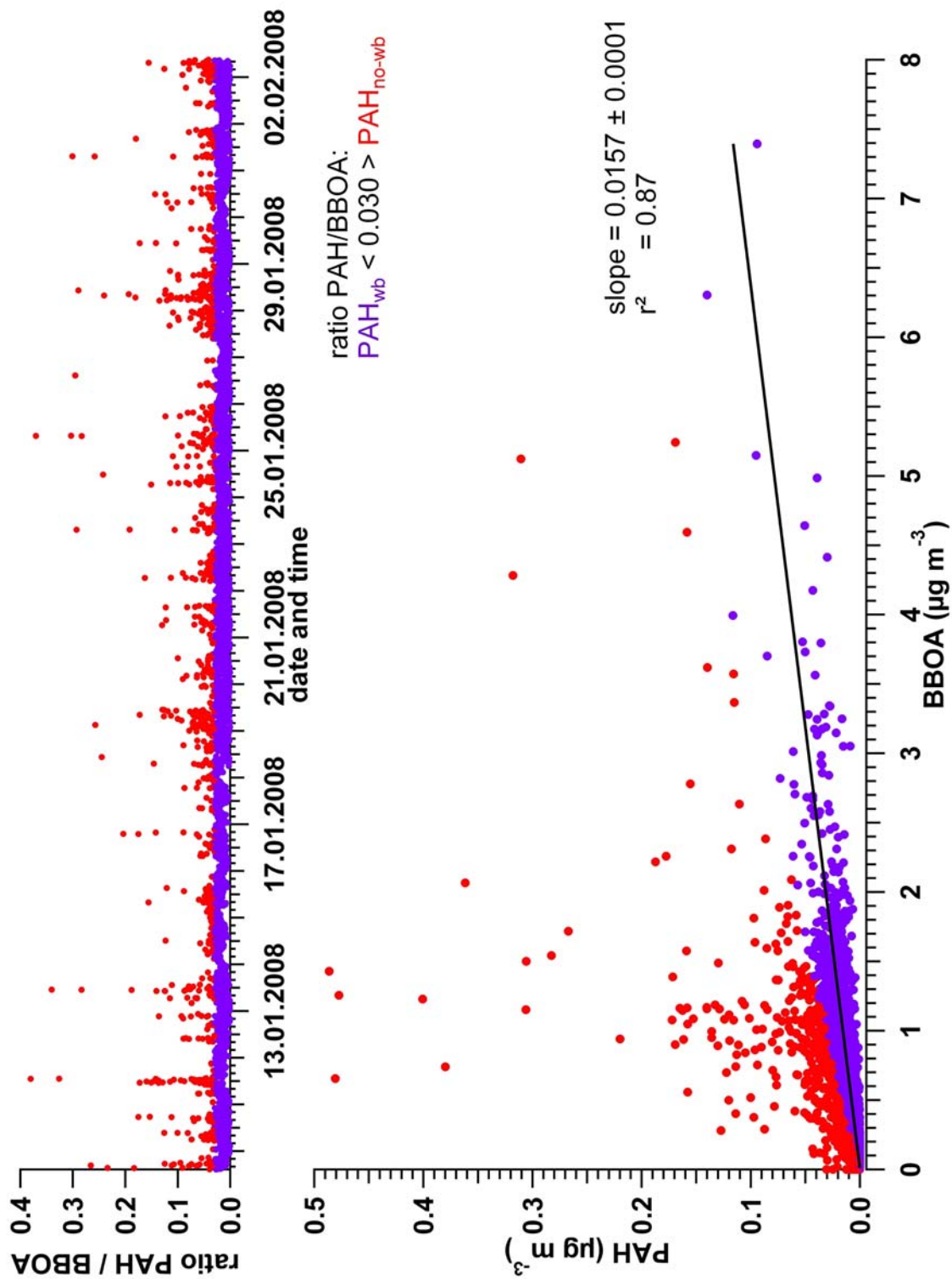Figure 7. AMS-PAH time series and comparison with daily PM$_1$ filters.

Figure 8. Estimation of the biomass burning contribution to total PAH concentration. The upper panel represents the time series of the ratio PAH / BBOA and the bottom panel shows the correlation between PAH and BBOA. Colors correspond to the differentiation between PAH correlated to wood combustion (purple) and not correlated to wood combustion (red).
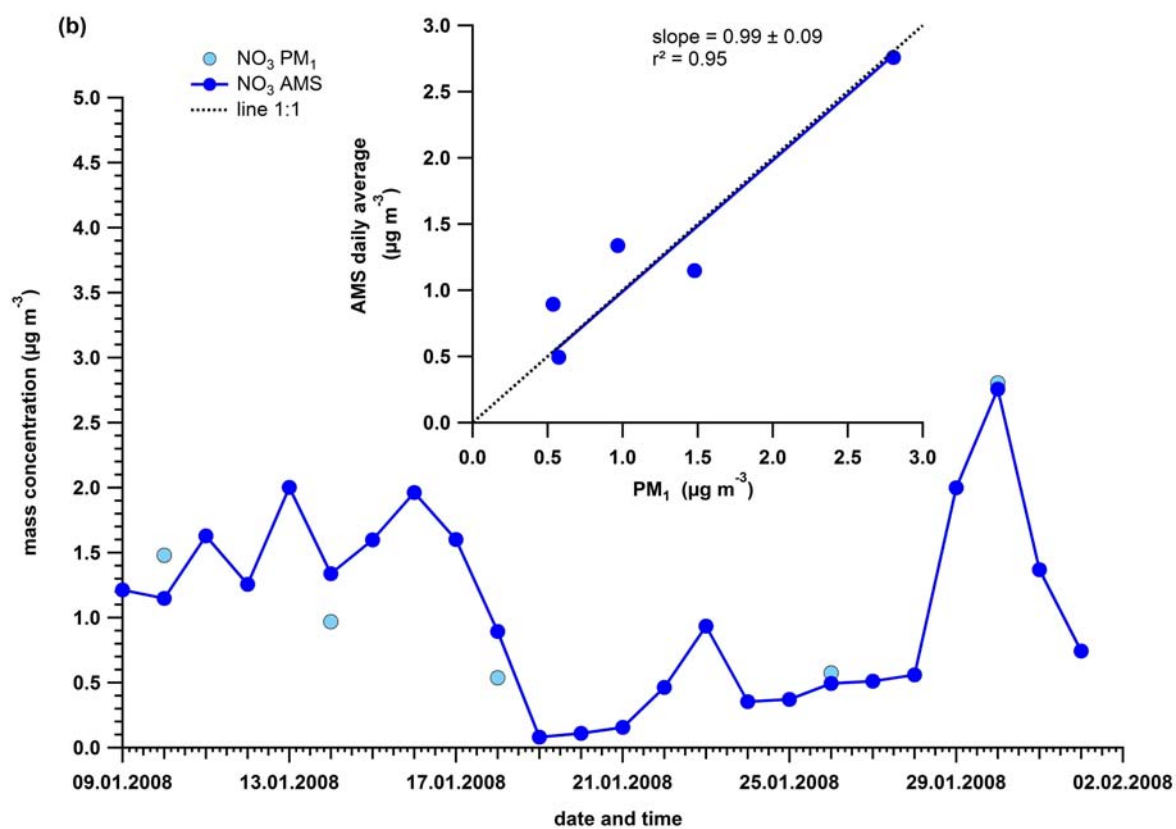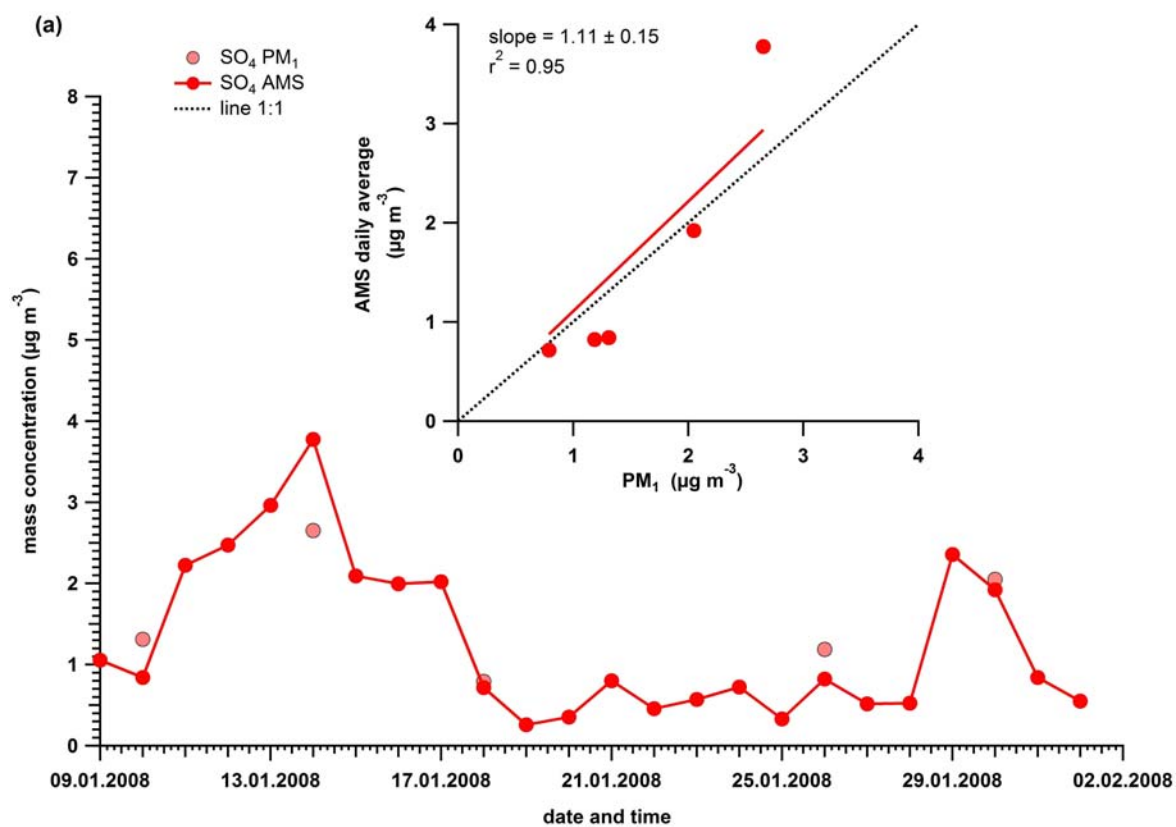
Figure SI-1. Comparison of the AMS daily average concentration to PM$_1$ filter samples for sulfate (a), nitrate (b) and ammonium (c) assuming an AMS CE of 1.
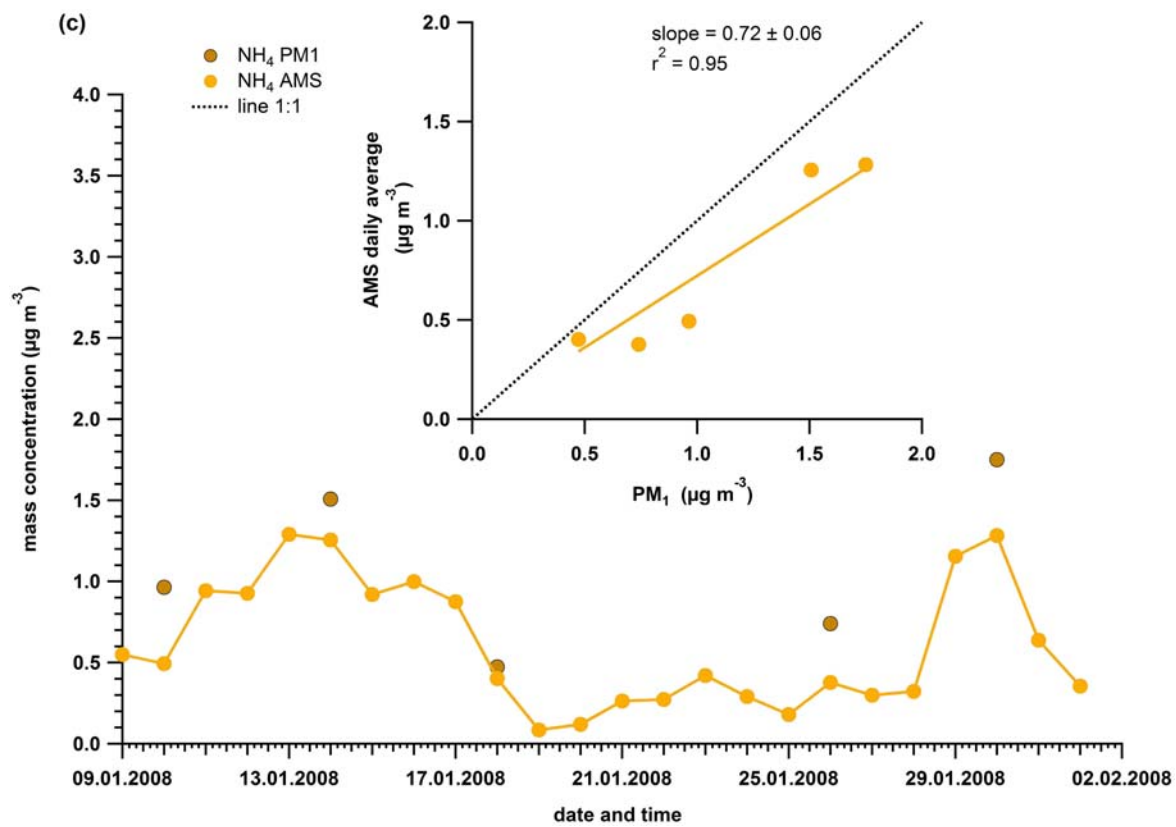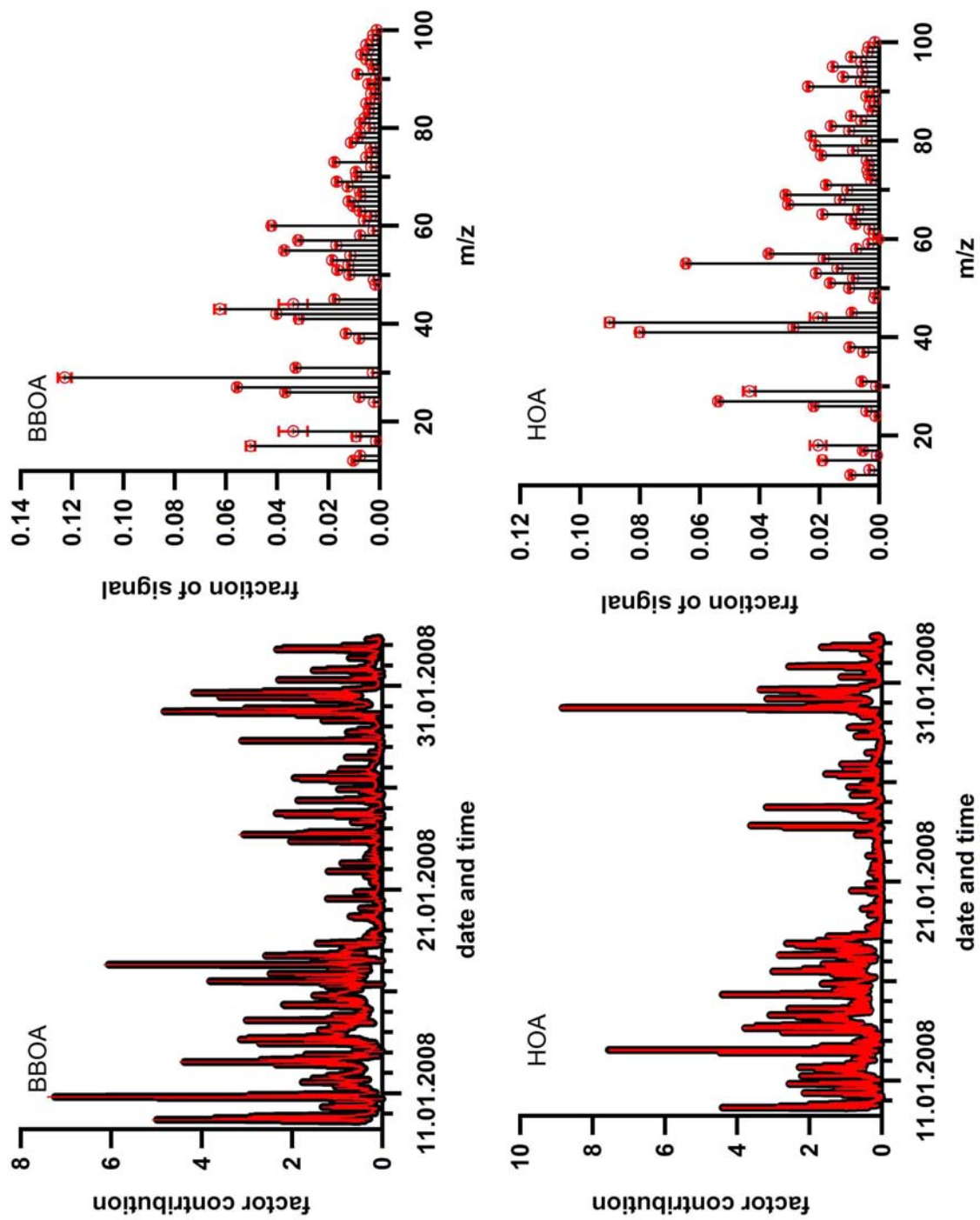
Figure SI-1. (continued)

Figure SI-2. Results from bootstrapping analysis. Average (black) and standard error (red) on mass spectra and time series are shown for each factor.
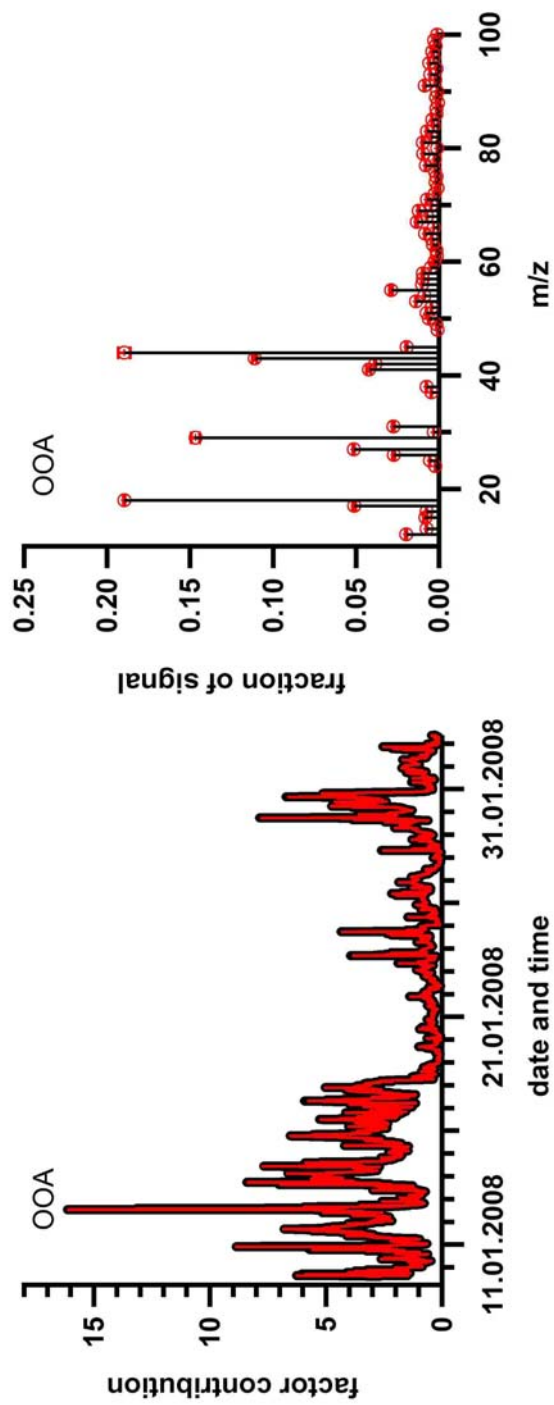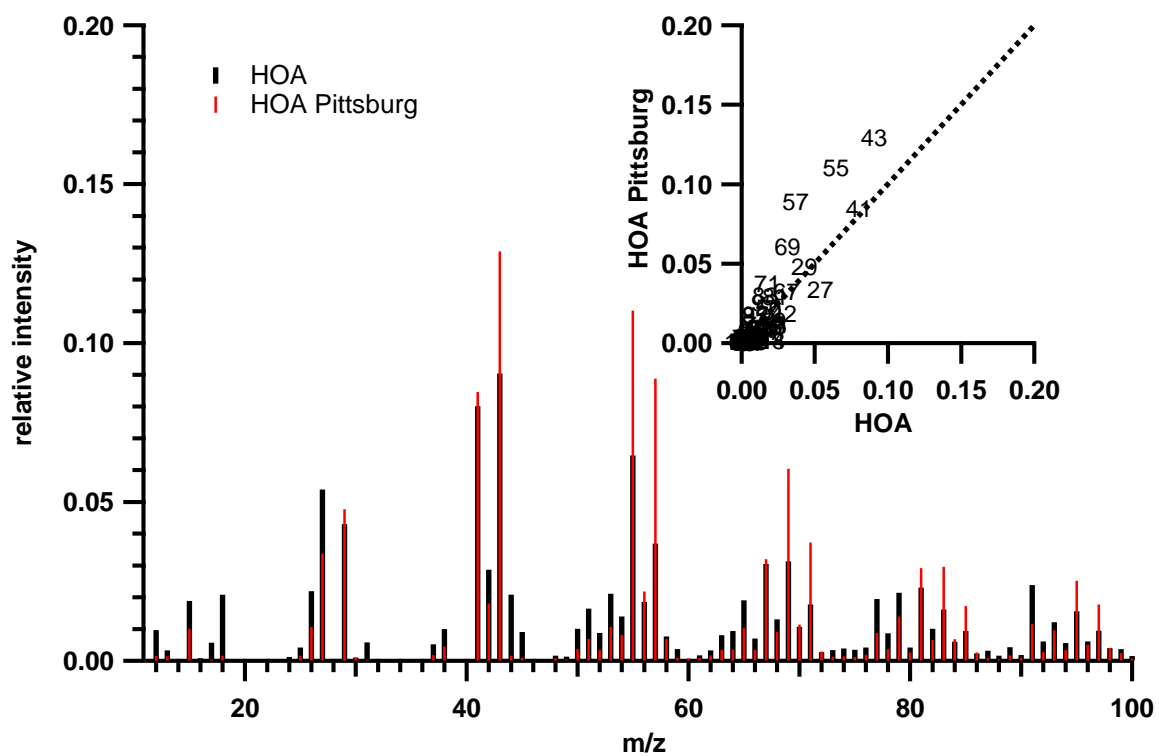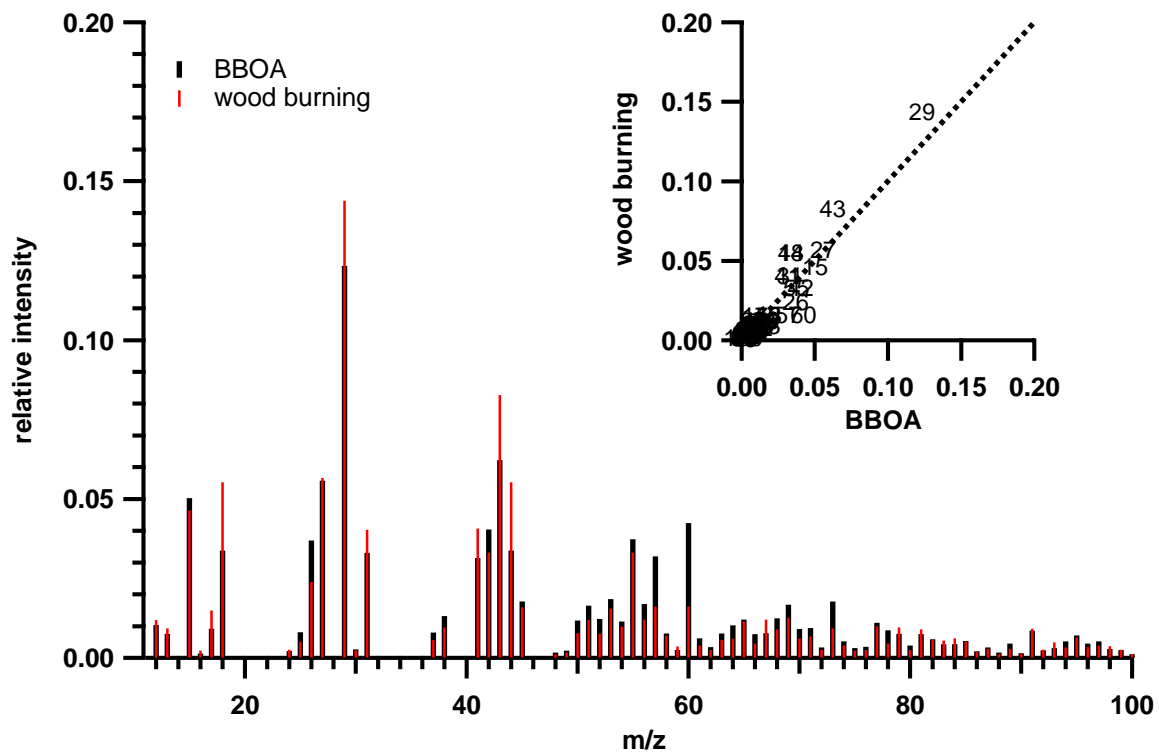
Figure SI-2. (continued)

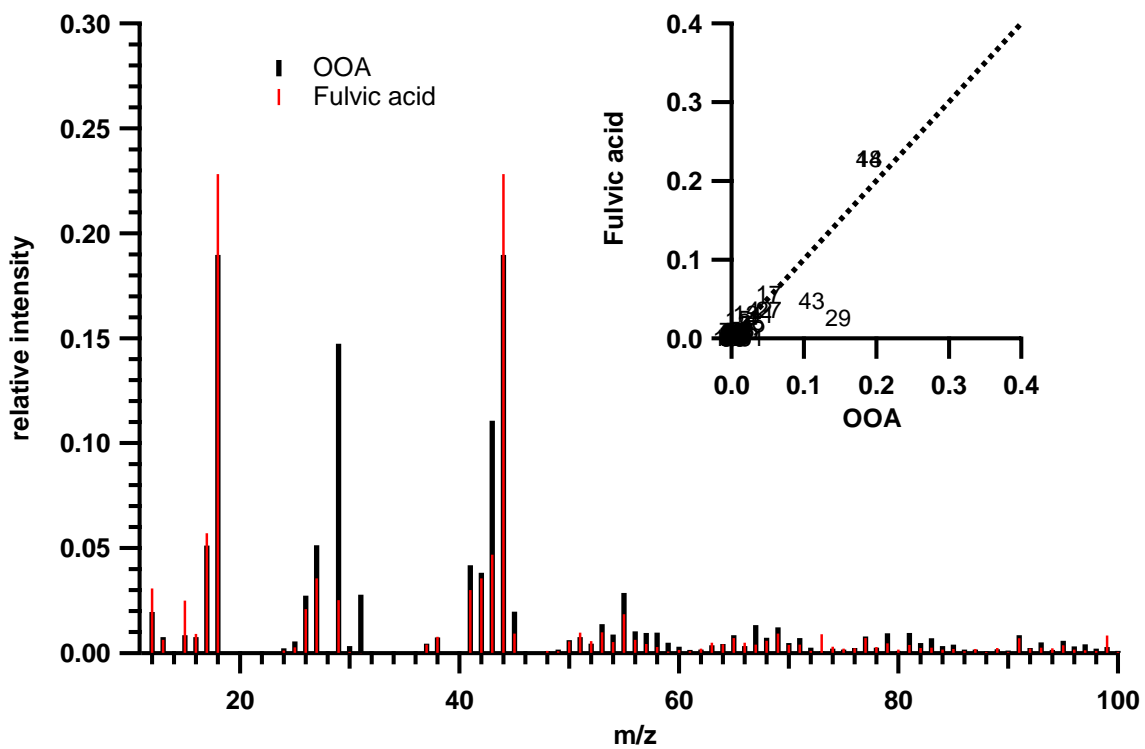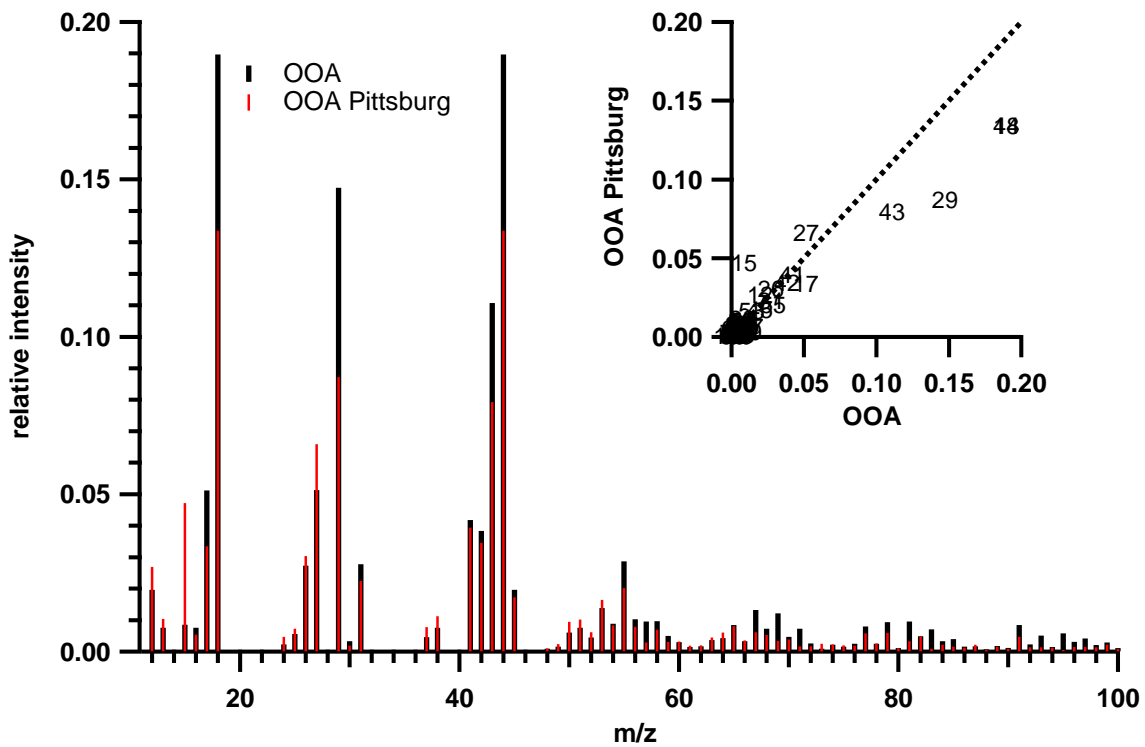Figure SI-3. Factor mass spectra and their reference mass spectra.
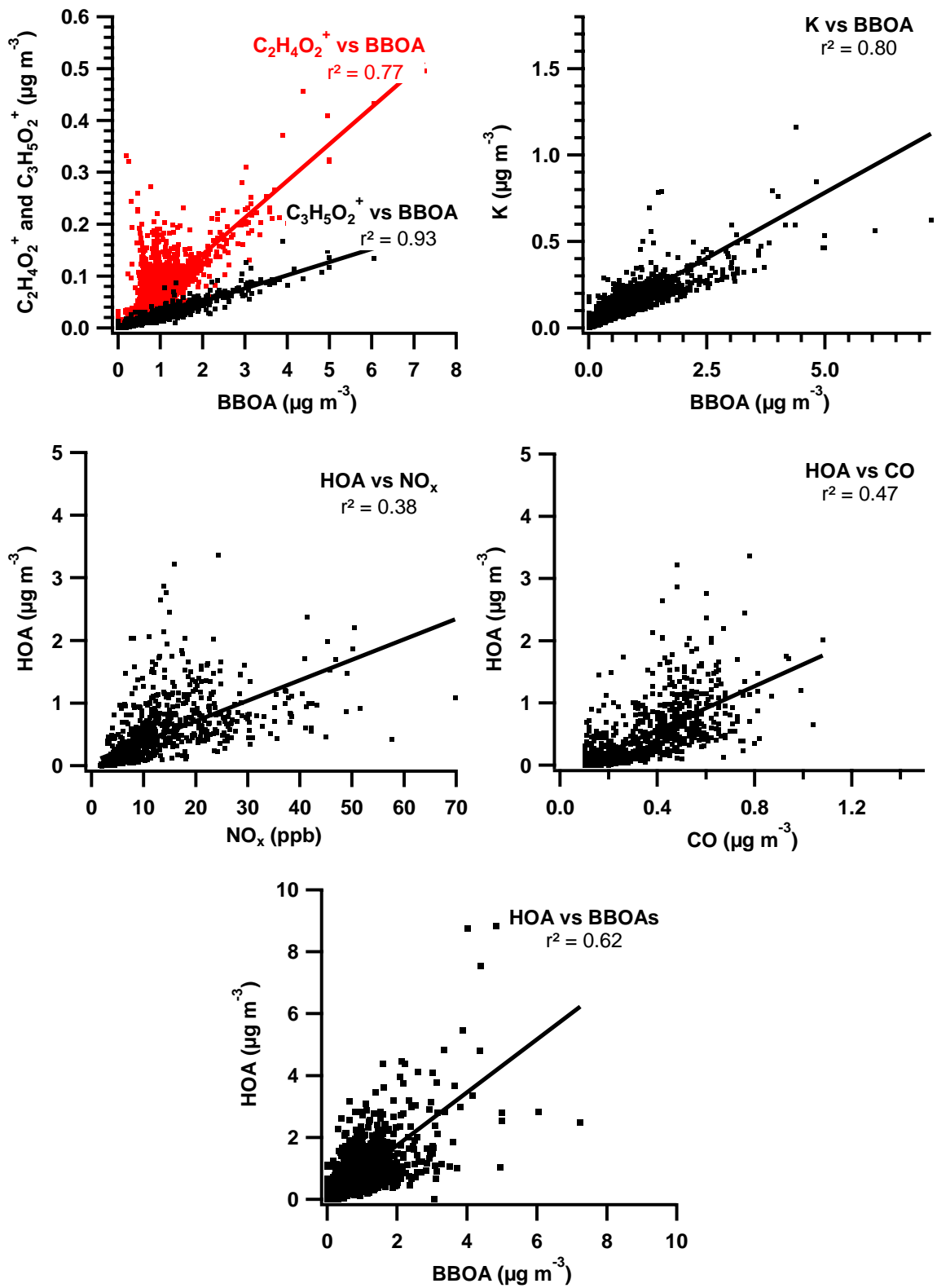
Figure SI-3. (continued)

Figure SI-4. Correlation plots between PMF factors (BBOA and HOA) and different tracers.
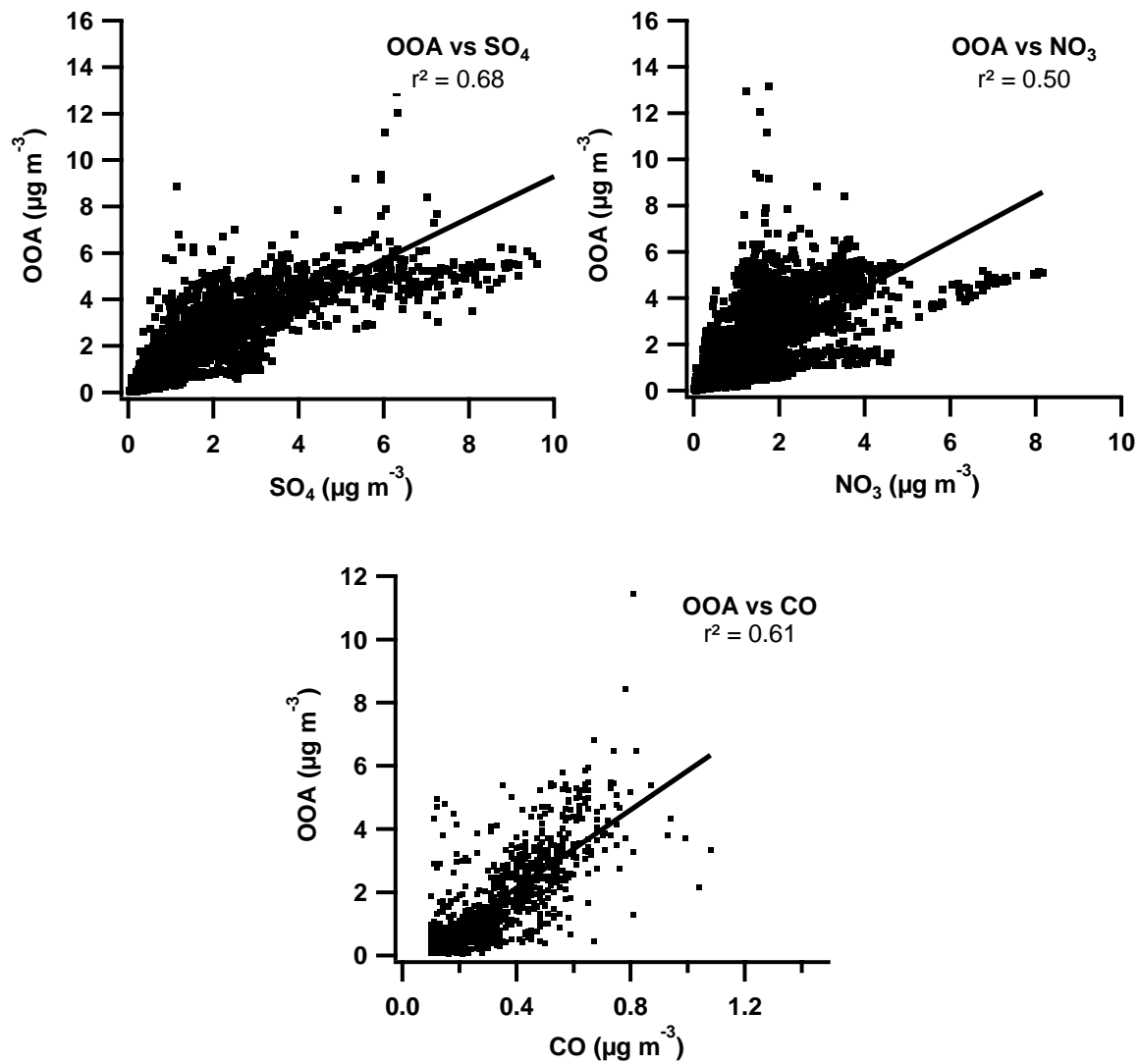
Figure SI-5. Correlation plots between PMF factors OOA and different tracers.