

Supplementary material

Biomass burning impact on PM_{2.5} over the southeastern U.S. during 2007: Integrating chemically speciated FRM filter measurements, MODIS fire counts and PMF analysis

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Table S1. Seasonal and annual source contributions of each PMF factor to PM_{2.5} mass (% of PM_{2.5} mass) based on FRM and Speciation datasets. Winter (J, F, D), Spring (M, A, M), Summer (J, J, A) and Fall (S, O, N).

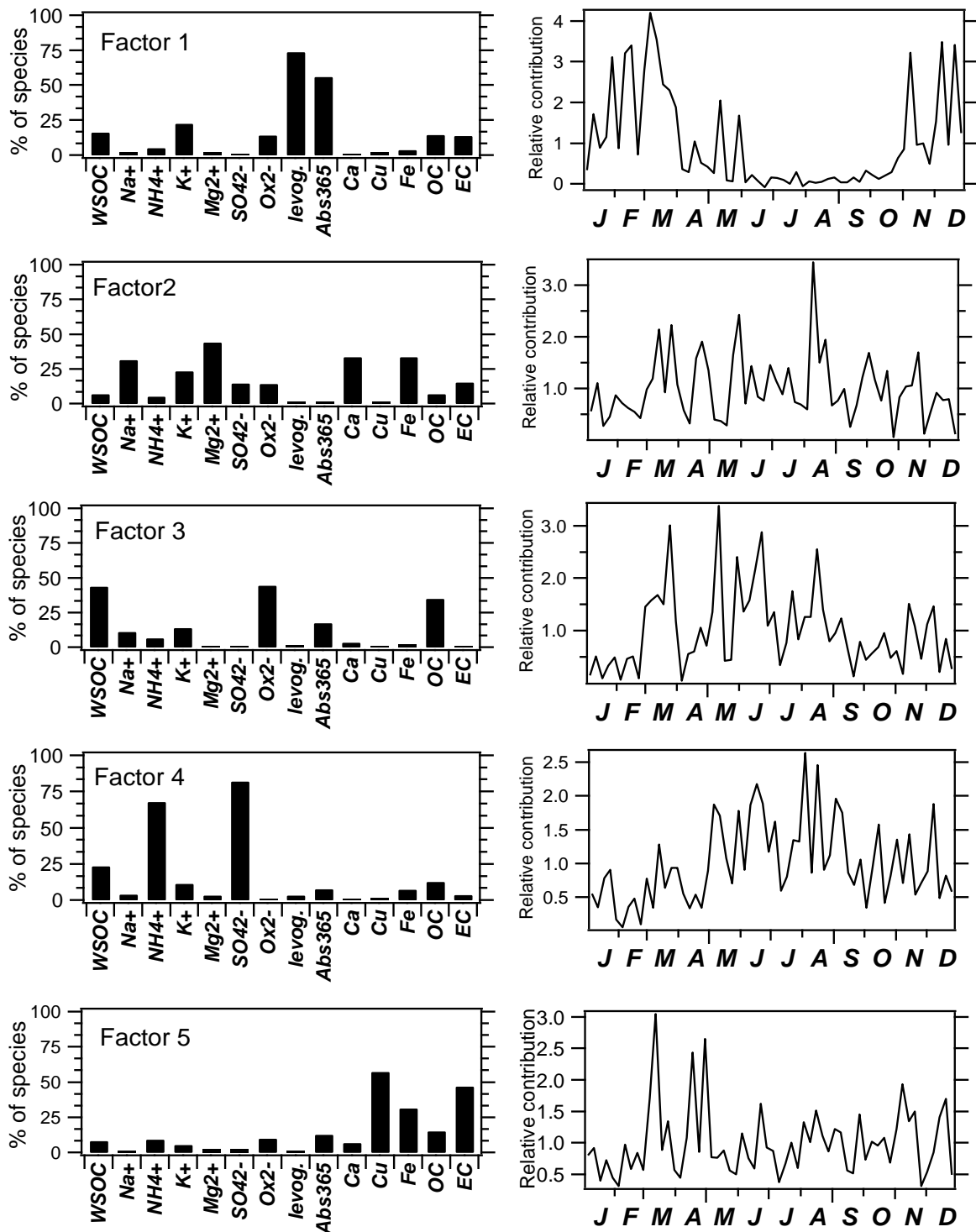
Figure S1. Composition profiles (% of total of each species) for the five factors resolved by PMF based on FRM and Speciation datasets for the whole year (2007) at 7 EPA (urban) FRM/Speciation sites (left panel), and the time series of relative contribution of each factor (right panel). Factors 1 through 4 are similar to those in Fig. 9. Factor 5 has characteristics of a mobile source emission profile.

Figure S2. PMF results based on FRM and Speciation datasets showing annually averaged source contributions of the five factors to PM_{2.5} mass, WSOC, levoglucosan, and water-soluble K⁺ for 7 EPA (urban) FRM/Speciation sites.

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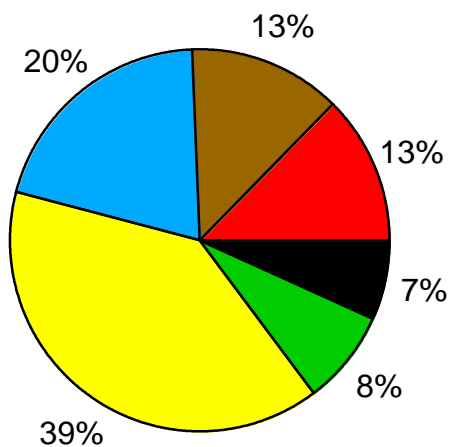
	Winter	Spring	Summer	Fall	Annual
Biomass Burning (F1)	29	15	1	8	13
Refractory (F2)	11	15	14	14	13
Secondary Light Abs WSOC (F3)	10	22	24	17	20
Secondary Sulfate/WSOC (F4)	29	34	47	45	39
Mobile source emission (F5)	9	9	7	9	8
Residual	12	5	7	7	7

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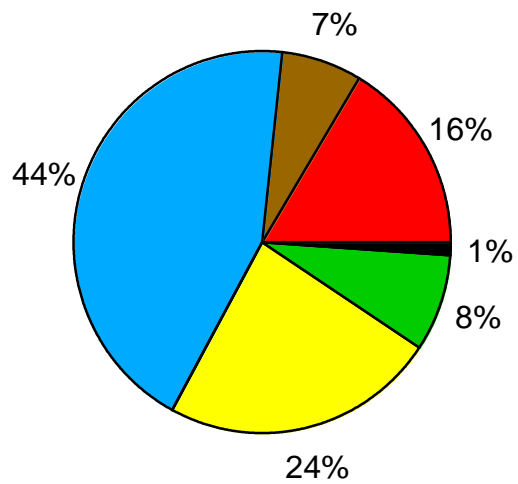


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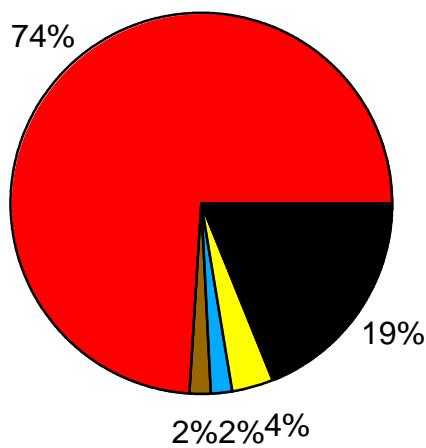
PM2.5 mass



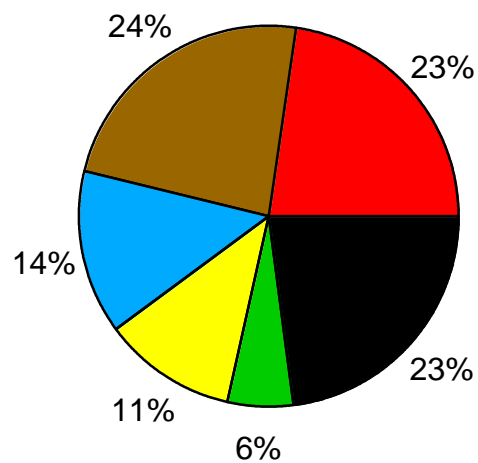
WSOC



levoglucosan



water-soluble K⁺



- F1 - biomass burning ■ F2 - refractory material
- F3 - secondary light absorbing WSOC
- F4 - secondary sulfate/WSOC
- F5 - mobile source emission ■ residual

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