## 1 Supplementary Information for Huang et al.

	Mean	1σ	Minimum	Median	Maximum
Sulfate	11.2	5.0	0.58	10.6	31.4
Ammonium	4.6	2.5	0.01	4.1	16.8
Nitrate	3.5	3.9	0.09	2.1	28.0
Chloride	0.38	0.50	<d.l.< th=""><th>0.21</th><th>6.2</th></d.l.<>	0.21	6.2
Organics	11.2	8.4	0.05	8.9	115
BC	2.2	1.4	0.05	2.0	9.8
PM <sub>1</sub>	33.1	18.1	2.4	29.0	150

## 2 Table S-1. Summarization of $PM_1$ species concentrations during the campaign.

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#	Fpeak	Seed	Q/Q <sub>expected</sub>	Solution Description	
Fpeak See Factors		Jeeu	w expected	Solution Description	
1 0	0	0	8.0	Too few factors. Large residuals at ke	
	0	8.0	m/z's and time periods.		
2 0	0	6.5	Too few factors. Large residuals at ke		
			m/z's and time periods.		
30	0	5.16	Optimum number of factors (BBOA		
			LV-OOA and SV-OOA). Factor M		
			features compare well with th		
			database MS. Good correlation wit		
			tracer species. Distinctive diurna		
			cycles for factors.		
4 to 8 0	0	4.8-4.0	Factor splitting, particularly in the OOA		
			without new factors of O/C<0.2. Whe		
			factors split unrealistic zeros are observe		
	Ū	0	4.0-4.0	in factor time series. Some of the sp	
				factors have time series and MS th	
			appear mixed.		
3 3 to -3			In Fpeak range -1<0<1, factor MS ar		
	2 to 2	0	5.19-5.16	time series are almost identical. For large	
	0	5.19-5.10	Fpeak range, unreasonable zero		
			observed in time series and mass spectra		
3 0	0 to				
	0	250 in	5.16	Factors trends and MS are almost identic	
	U	steps		for the entire seed range.	
		of 10			

Table S-2. Description of PMF solutions obtained for the AMS dataset.

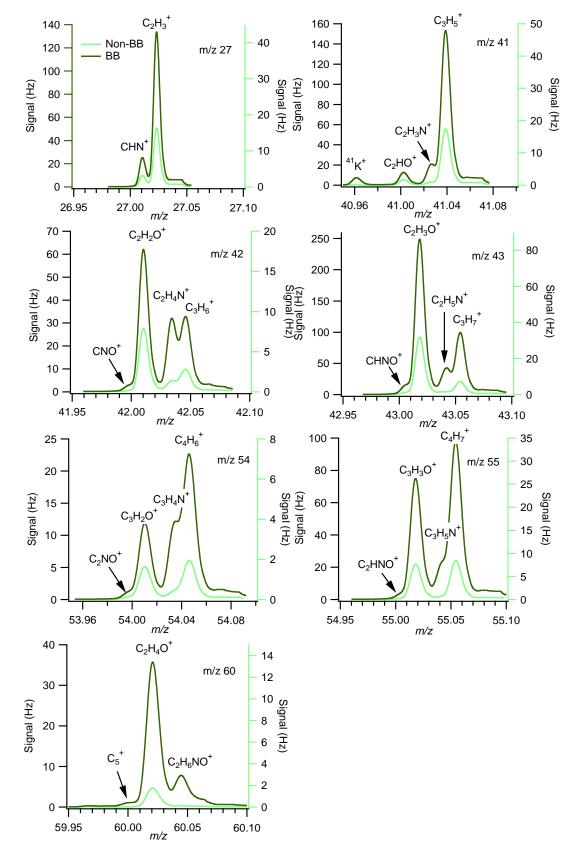


Fig. S-1. Comparison of HR-MS for some N-containing m/z's between at a typical
non-biomass burning time and at a typical biomass burning time during the campaign.