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Supplement of

Size-dependent wet removal of black carbon in Canadian biomass burning plumes

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Table S1. Plume locations and sampling times on 20 July 2011. Plumes 2 and 3 were sampled continuously during the time periods listed, whereas Plume 1 was encountered on 4 straight and level runs, totalling 40 minutes, during the time period listed.

Plume name	Altitude (m)	Latitude (°N)	Longitude (°W)	Time (UTC)
Plume 1	1570 – 1990	47.70 – 48.04	69.08 – 78.62	16:00:00 – 18:01:10
Plume 2	4700 – 4790	46.57 – 46.59	72.83 – 73.81	18:40:40 – 18:48:40
Plume 3	7540 – 7580	46.42 – 47.54	65.82 – 67.80	15:25:00 – 15:46:20

Table S2. Calculated MAC in $\text{m}^2 \text{g}^{-1}$ using different n_{core} in the range recommended by Bond and Bergstrom (2006), and the measured relative and absolute coating thickness distributions.

n_{core}	Plume 1		Plume 2		Plume 3	
	Relative	Absolute	Relative	Absolute	Relative	Absolute
(1.75 – 0.63 <i>i</i>)	9.78	8.37	10.04	8.53	9.33	8.05
(1.80 – 0.67 <i>i</i>)	10.22	8.75	10.51	8.92	9.80	8.43
(1.85 – 0.71 <i>i</i>)	10.64	9.10	10.95	9.27	10.24	8.79
(1.90 – 0.75 <i>i</i>)	11.03	9.42	11.36	9.61	10.65	9.13
(1.95 – 0.79 <i>i</i>)	11.40	9.72	11.75	9.92	11.05	9.45

References

Bond, T. C. and Bergstrom, R. W.: Light absorption by carbonaceous particles: An investigative review, *Aerosol Science and Technology*, 40, 27–67, doi:10.1080/02786820500421521, 2006.