

*Supplement of*

**Impact of size distribution of chemical compositions on particle's  
mass scattering efficiency at urban Guangzhou, Pearl River  
Delta region of China**

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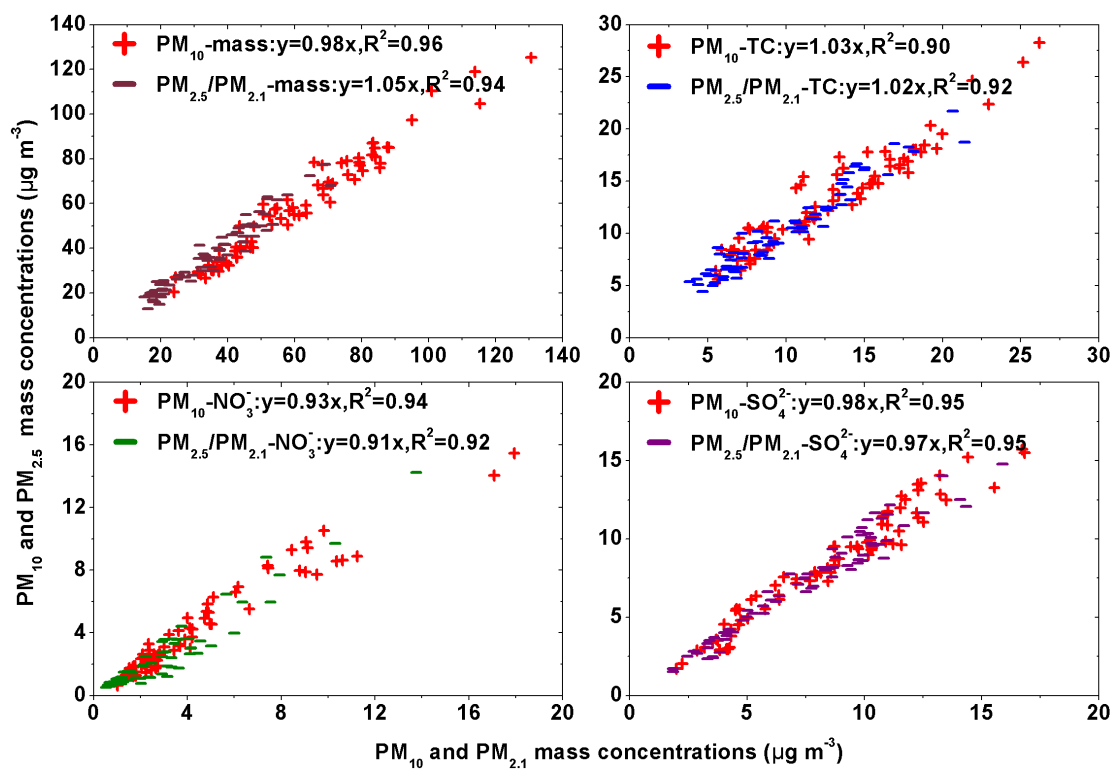


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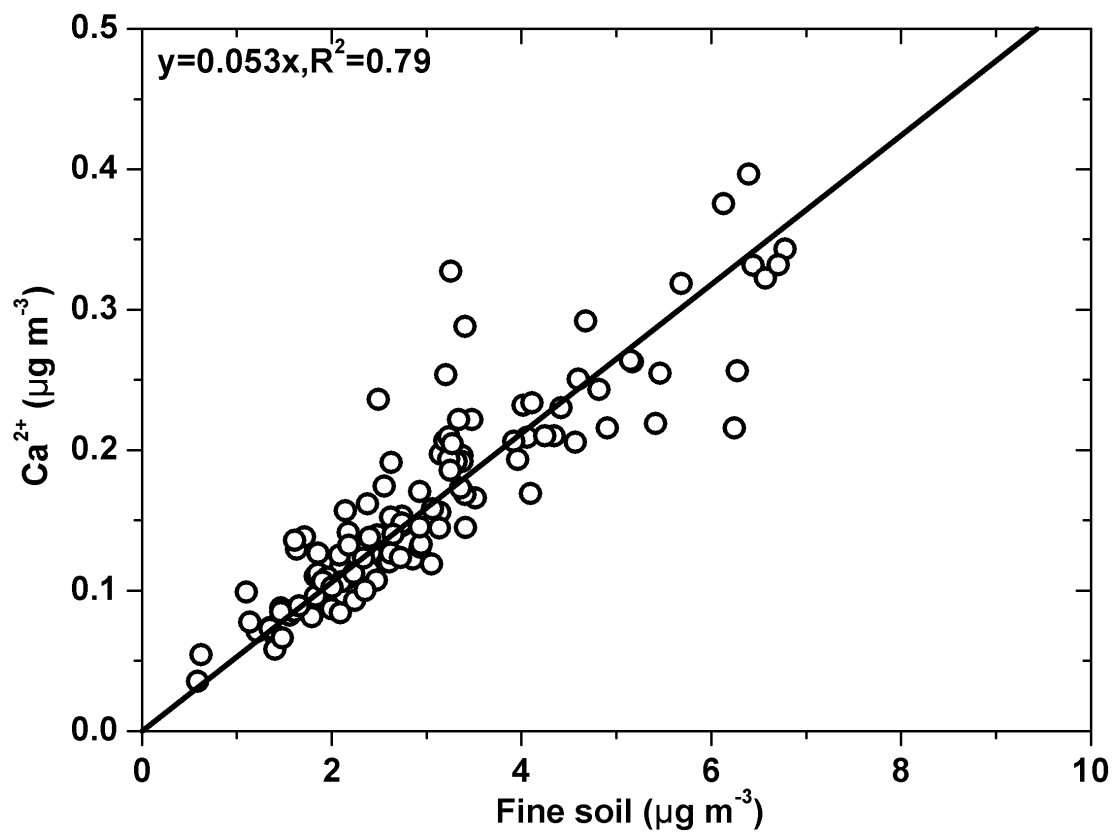


Fig. S2: Correlations between Ca<sup>2+</sup> and fine soil concentrations  $(2.20[\text{Al}]+2.49[\text{Si}]+1.63[\text{Ca}]+2.42[\text{Fe}]+1.94[\text{Ti}])$  in four seasons in 2014.

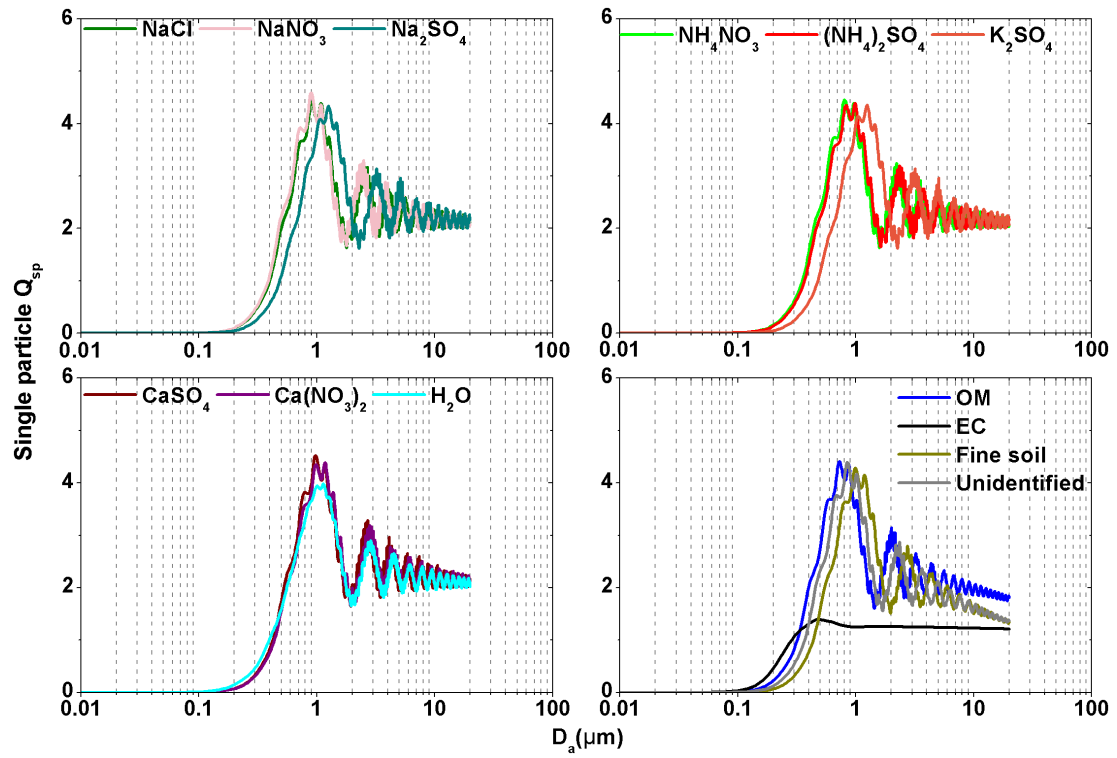


Fig. S3: Single particle scattering efficiencies of the dominant chemical species.

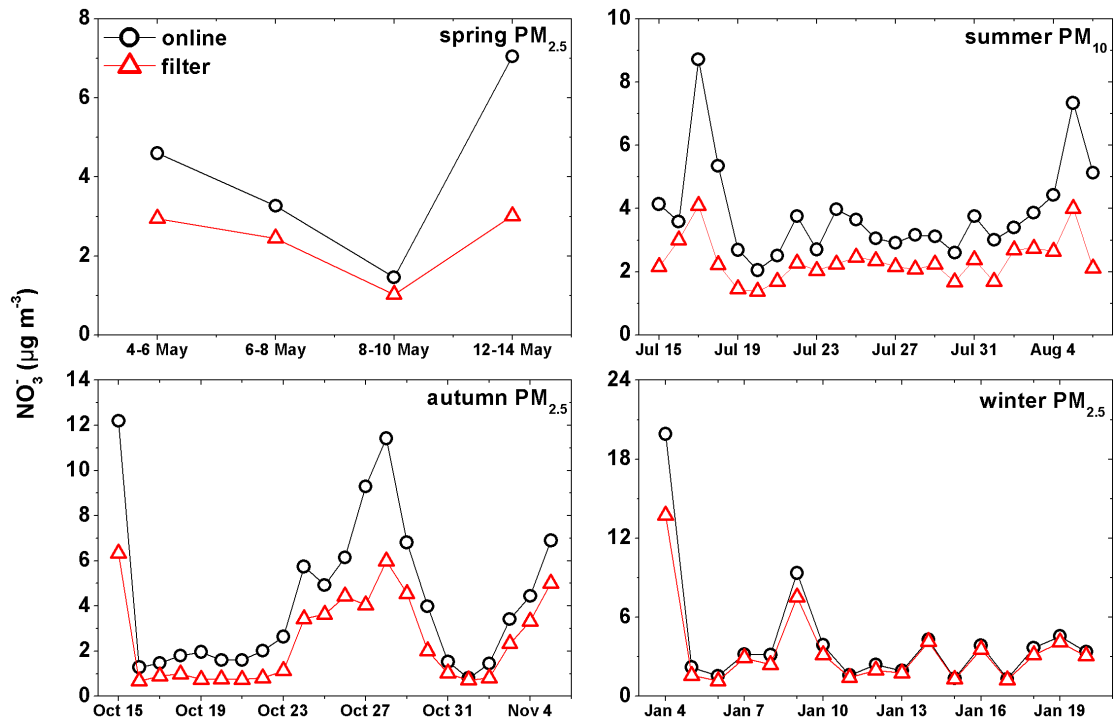


Fig. S4: Correlations between filter-base and online  $\text{NO}_3^-$  concentrations in four seasons.