

Secondary Organic Aerosol Formation from Healthy and Aphid-Stressed Scots Pine Emissions

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1. Particle Wall Loss

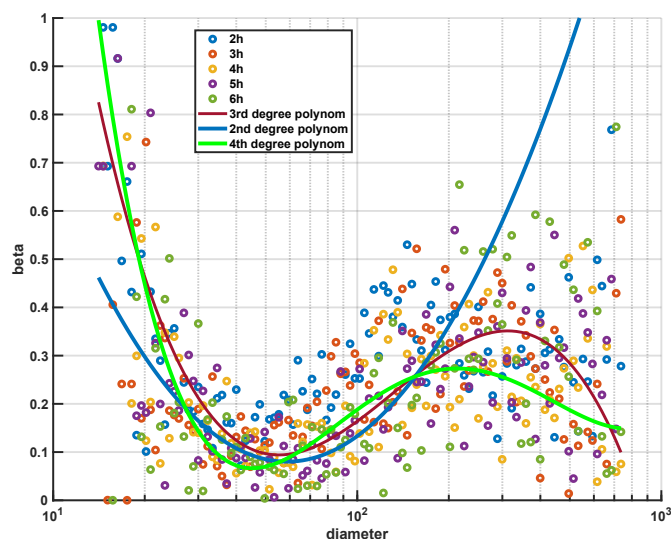


Figure S1: Particle wall loss coefficient as a function of particle diameter with 2nd, 3rd, and 4th degree polynomial fits.

Graph showing the size-dependent particle wall loss coefficient (beta, s⁻¹) from polydisperse ammonium sulfate particles after 2 hours, 3 hours, 4 hours, 5 hours, and 6 hours. The 2nd, 3rd, and 4th order polynomials fit to the 5 hour data points are shown with the blue, purple, and green lines, respectively. The 4th degree polynomial was used to correct the data: $f(x)=1.13x^4-10.38x^3+34.8x^2-50.44x+26.78$.

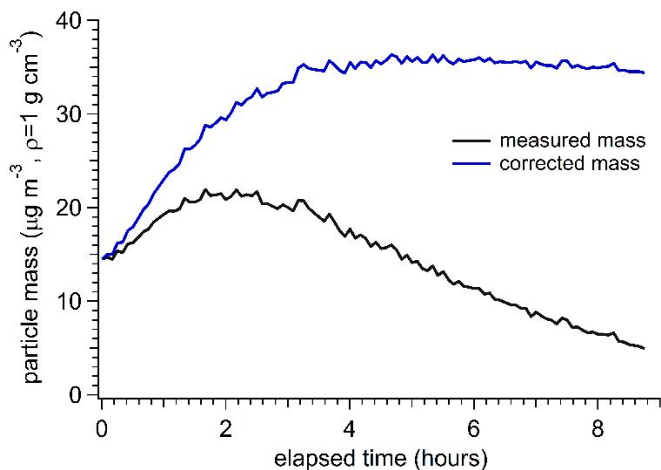


Figure S2: Sample of a wall loss corrected time series.

An example of a particle time-series from experiment H-OH-2 showing the measured mass calculated from SMPS data and the corrected mass after adding in the particle mass lost to the chamber walls.

2. Comparison of monoterpene oxidation by OH and ozone

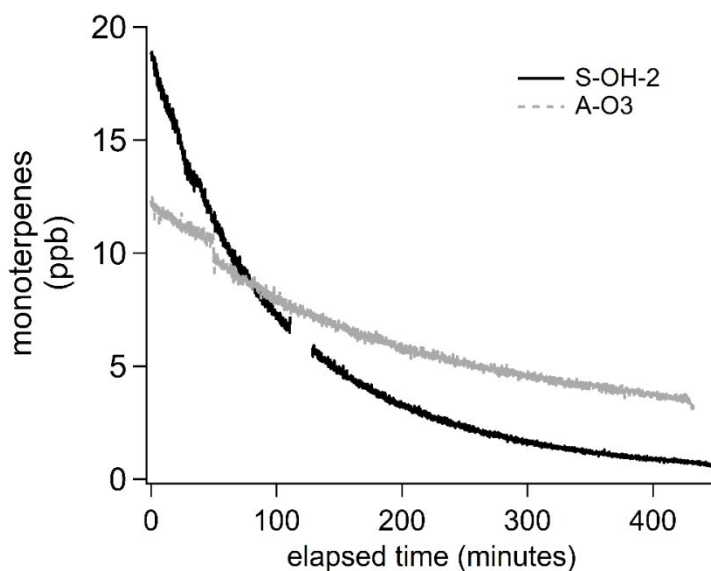


Figure S3: monoterpene mixing ratio in the chamber as a function of elapsed experiment time.

Time series of monoterpene mixing ratios in an example ozonolysis and photooxidation experiment. Monoterpenes reacted more quickly in the photooxidation experiment.