Supplement of

A switchable reagent ion high resolution time-of-flight chemical ionization mass spectrometer for real-time measurement of gas phase oxidized species: characterization from the 2013 Southern Oxidant and Aerosol Study

P. Brophy and D. K. Farmer

Correspondence to: D. K. Farmer (delphine.farmer@colostate.edu)
S1: Schematic diagram showing the setup for reagent switching with selectable flow path for automatic switching driven by solenoid valves or manual control.
S2: Glass inlet design (a) aerosol and gas inlet; (b) zero air overflow port; (c) calibration port (not used in this study); (d) critical orifice; (e) glass particle skimmer and flow director; (f) gas sampling port at reduced pressure; (g) bypass line at reduced pressure
S3: Diagnostic inlet performance showing the pressure stability, the total flow through the gas sampling line, and the total flow to the pump during SOAS.
S4: Mass defect plot showing all HR ion fits. Each ion fit is colored by the correlation coefficient with formic acid and sized by S/N ratio. Ions with a S/N<3 are marked with a black circle outline.
S5: Mass defect enhancement plot showing all species with S/N>3 and colored by oxygen:carbon ratio as determined from the HR ion fits.