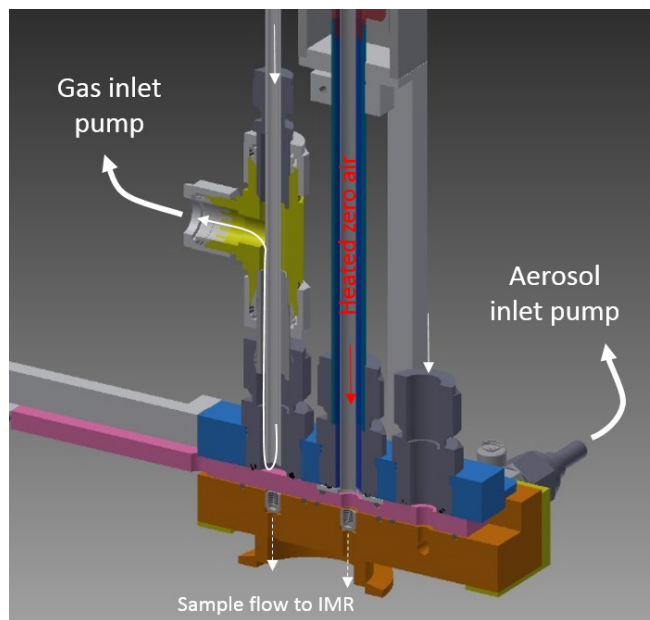
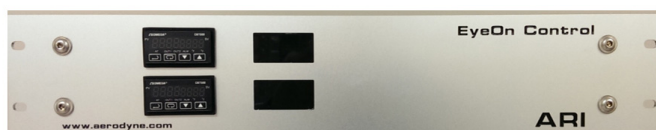




## FIGAERO Filter Inlet for Gas and Aerosols

*Custom inlet for the Aerodyne ToF-CIMS  
enabling simultaneous real-time chemical  
analysis of trace gases and aerosols.*

EyeOn Control System



### APPLICATIONS

#### Inlet Hardware

- For direct mounting on ToF-CIMS.

#### EyeON Controller Box and Software

- Automated control of sampling valves and flows
- Programmable temperature ramp
- Synchronization with ToF-CIMS Data Acquisition
- Chemical characterization of gas and particle composition
- Laboratory or ambient sampling
- Characterization of SOA generated by smog chambers

### ADVANTAGES

#### Aerosol Collection Efficiency

- Filter collects > 99.99% of aerosol particles, 0.1mm and larger

#### Limits of Detection

- Gas: <10 ppt for organic acids
- Aerosol:  $\sim 1 \text{ ng}\cdot\text{m}^{-3}$

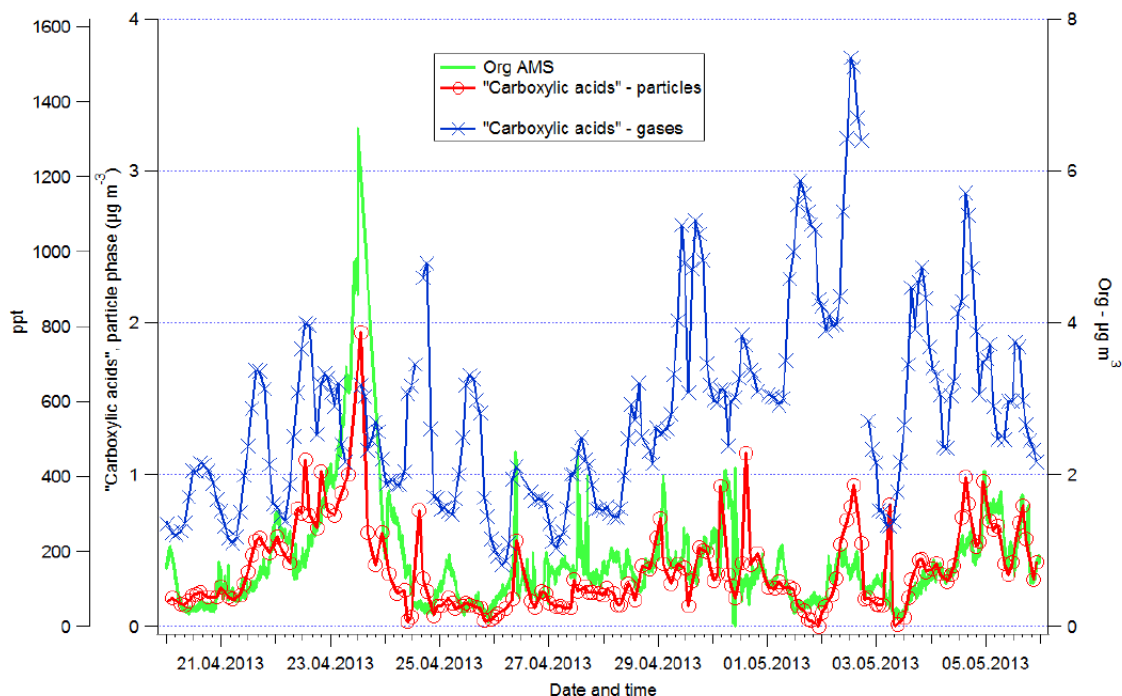
#### Time Resolution

- Up to 10 mass spectra/s
- No limit on aerosol collection time
- Temperature ramps >5 minutes

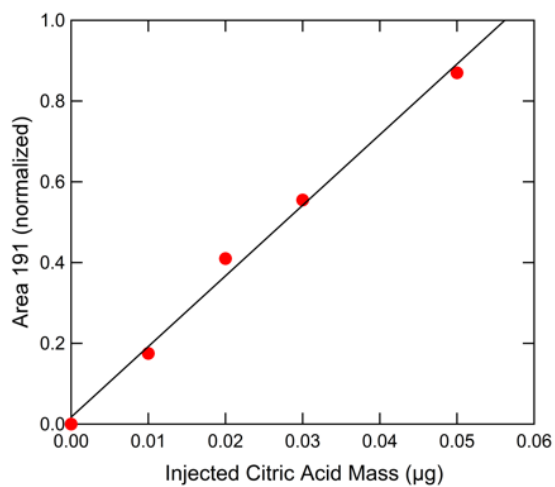
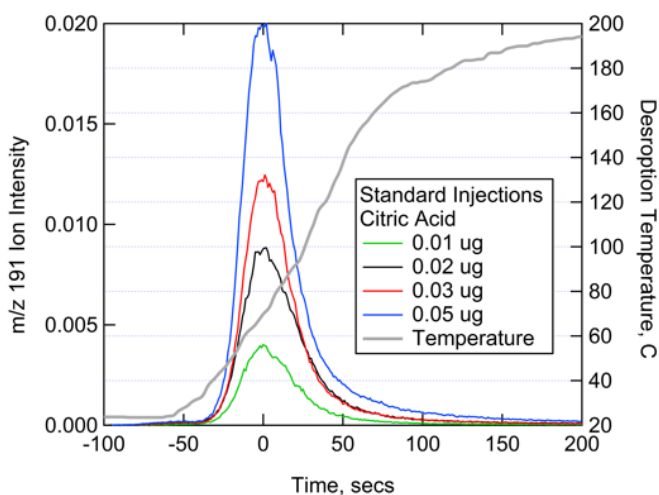
Lopez-Hilfiker, F. D., Mohr, C., Ehn, M., Rubach, F., Kleist, E., Wildt, J., Mentel, Th. F., Lutz, A., Hallquist, M., Worsnop, D., Thornton, J. A. A novel method for online analysis of gas and particle composition: description and evaluation of a Filter Inlet for Gases and AEROsols (FIGAERO), *Atmos. Meas. Tech.*, 7(4), 983 - 1001, 2014.



## FILTER INLET For GAS AND AEROSOLS



Comparison of gas particles measured with FIGAERO - CIMS and AMS.



Calibration with standard injections of citric acid. Acetate ion chemistry.