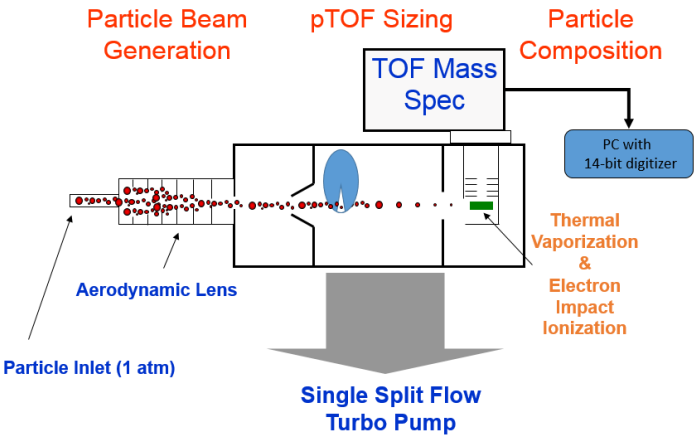
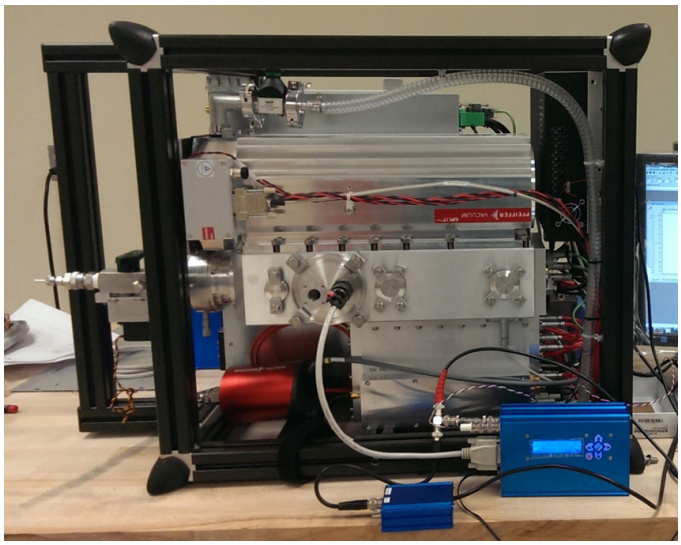
AERODYNE RESEARCH, Inc.

Mini-AMS System

Measure real-time, non-refractory aerosol particle mass and chemical composition.





APPLICATIONS

- Continuous on-line measurement of ambient aerosol mass concentrations.
- Size resolved composition analysis for particulate ammonium, nitrate, sulfate, chloride, and organic species.
- Field measurements of aerosol chemical composition from high-pollution at urban sites to pristine background at remote locations.
- Routine air quality monitoring.
- Aerosol chamber studies.
- Source characterization.
- Optical/CCN closure.
- Industrial process monitoring.

ADVANTAGES

- Aerodynamic particle lens for efficient gas-particle separation.
- Linear universal detection through two-step thermal vaporization (~600 C) and electron impact ionization process.
- Mass spectrometric analysis (0-400 amu).
- ePTOF sizing module.
- Compact vacuum system, minimal maintenance.
- Remote control ready.
- Separation and quantification of organic aerosol species including HOA (hydrocarbon-like organic aerosol, linked to primary combustion sources) and OOA (oxygenated organic aerosol, linked to

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SPECIFICATIONS:

Sensitivity (ng m^{-3}, 10 minute, 3σ):	Organic LOD:	50
	Sulfate LOD:	2
	Nitrate:	7
	Ammonium:	60
	Chloride:	3
	Resolution:	(M/ΔM) 900
Size Range:	40 -1000 nm aerodynamic diameter standard or PM 2.5 option	
Data Rate:	Adjustable, 10 minutes is typical	
Sample Flow:	85 cc min^{-1} (volumetric flow)	
Operating Pressure:	Ambient	
DAQ Control:	Hi-speed USB 14 bit acquisition card, PC embedded in instrument rack.	
Size/Weight:	Bench top, 25.6” x 20.1” x 23.6”, 165 lbs [65 cm x 51 cm x 60 cm , 75 kg]	
Electric Power:	600 W Max; 350 W typical, 90-260 VAC, 50-60 Hz	
Software:	Custom acquisition and analysis routines. Specialized routines for PMF analysis of the organic fraction.	
Available Options:	Sample flow line controller, aerosol dryer, PM 2.5 lens, efficient particle time-of-flight (ePTOF)	