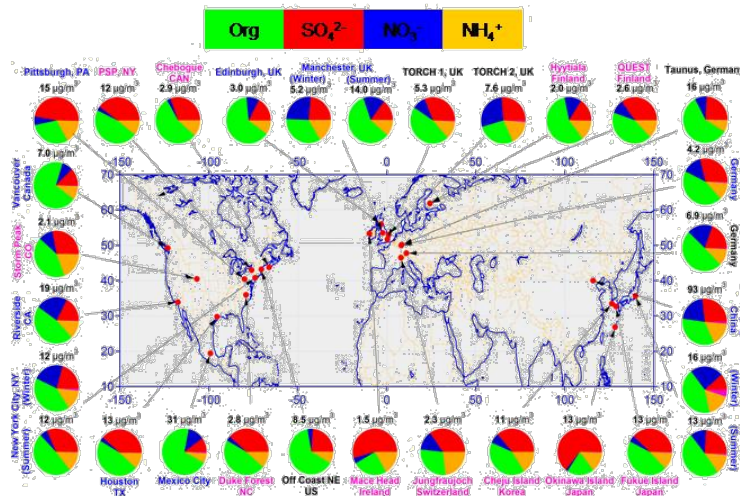


Navy SBIR/STTR Success



Title: Aerosol Mass Spectrometer (AMS) for Sampling of Aerosol Particles in Real-time



Ubiquity and dominance of organic species in atmospheric aerosol measured using the AMS

"In the US and Europe, the AMS has become the standard for most major field measurement campaigns centered around air quality and atmospheric chemistry issues."

About the Technology:

- The purpose of this project was to improve on the Aerosol Mass Spectrometer (AMS) so that it could measure the size and chemical composition of submicron aerosol particles in real-time from an aircraft.
- The image above depicts how organic species are identified using the AMS system. The AMS system can be used for ambient pollution monitoring, chemical and biological warfare agent identification, and explosives/buried munitions detection for both assessment and enforcement, among other uses.
- The capability to quickly measure aerosol size and chemical properties is required to develop proper control and/or avoidance strategies and provides a data source to validate atmospheric models involving aerosol components.
- The AMS is currently being used by the Navy on the Twin Otter research aircraft platform operated by the Center for Interdisciplinary Remotely Piloted Aircraft Studies (CIRPAS). Flight worthy aircraft versions of this instrument (also developed with ONR SBIR support) have been flown on research aircraft owned by NOAA, NASA, DoE and the Navy.
- The SBIR/STTR programs have helped transform Aerodyne Research from a service company to a technology company and have spawned 17 US patents since 1985.

► Firm:
Aerodyne
Research, Inc.
45 Manning Road
Billerica, MA 01821-
3976

► Topic:
N03-227

► SBIR
Investment:
\$849K

► Project
Revenue:
\$7.5M

► SYSCOM:
ONR

► Published:
2011

