A Brief History of the AMS

- NSF STTR Project 1996 to demonstrate the method for use as laboratory aerosol detector. S/N 000
- ONR SBIR 1998. Deliver a flight worthy system to CIRPAS/Caltech for Twin Otter. S/N 001
- ONR system, 1st deployment to Southern Oxidant Study (SOS) 1999.
- Met the Manchester gang in Scotland 1998 IAC.
1998
Hugh Coe visits Aerodyne and asks…

“Can you build one for me?”

SN 002
Delivered June 2000

SN 000
The Rube Goldberg AMS - 1996

Diffusion pumps with LN2 cooling – Awesome!
December 1997

![Graph showing signal average over time of flight](TOF_Shell.png)

\[ (\text{NH}_4)_2\text{SO}_4 \]

**pTOF works!**

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**Early Caltech System SN 001**

Established basic chamber design and differential pumping

September 10, 1999
1st field deployment of the Caltech AMS.  
Atlanta SOS 1999

Two people who had no idea of what they were getting into

Small QAMS 2001

SN 001 to 004

Let's invite everyone over and talk about stuff….

Large QAMS Dec 2002
Lets build two at a time. Jan 2003

SN 016 and 017

Feb 2004

1st cTOF Delivery - Mainz
HTOF Demonstration at ARI
Jan 2005
Marc Gonin (Katrin Fuhrer)-Tofwerk

1st HTOF July 2005
Manchester Group
Almost 90 Instruments delivered to date with a growing community

AMS Users Community
Annual Meeting Attendance

Over 200 Published Articles
10th Users Meeting 2010

- Diversification of technology and efforts
- Continued innovation
- Continued dedicated (hard) work

This is the AMS Community…

Development Activities

- SP-AMS: Li⁺ Ionization
- TAG-AMS: Cryotrap-LS
- ACSM: Aerodynamic Lens
- API-TOF: Thermal Denuder
- MAB-TOF
- CIMS-ToF
Doug’s Group at Aerodyne

- John Jayne
- Wade Robinson
- Bill Brooks
- Ed Fortner
- Achim Trimborn
- Joel Kimmel
  - Eben Cross
  - Brent Williams
  - Andy Lambe
- Donna Sueper
- Manjula Canagaratna
- Tim Onasch
- Sally Ng
- Leah Williams
- Paola Massoli
- Jesse Kroll
- Cameron Martin

END