Dave Worton

Berkeley
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1999 - *B.Sc Chemistry – University of Nottingham, UK*
2001 - *M.Sc Environmental Geochemistry – University of Leeds, UK*
2006 - *Ph.D. Atmospheric Chemistry – University of East Anglia, Norwich, UK*

Goldstein Biogeochemistry Laboratory

General Research Interests

- atmospheric photochemistry,
- organic composition of aerosol particles,
- role of anthropogenic and biogenic trace
- gases in the formation of SOA,
- gas/particle partitioning of semi-volatile VOC's
- GC/MS instrument development

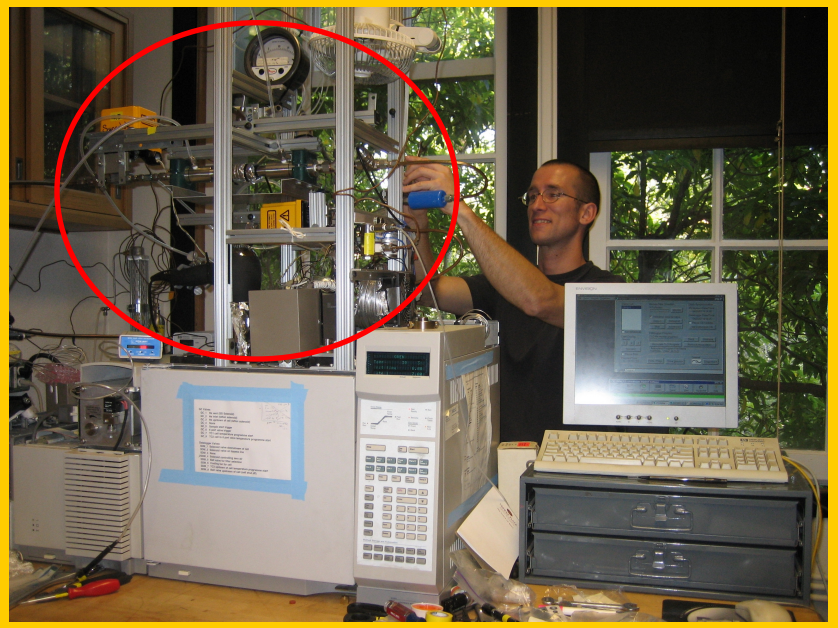
Current Research

- **T**hermal desorption **A**erosol **G**C/MS (TAG)
- Hourly insitu speciated measurements of organics in aerosol ($PM_{2.5}$)
- Development and incorporation of GCxGC chromatographic separation capability (2D-TAG) → *improved resolution, separation + detection limits*

humidification and inertial impaction

↓

thermal desorption and analysis by GC/MS



Future Goals

Field Deployment 2007 – 2008:
Biosphere **E**ffects on **A**e**R**osols and **P**hotochemistry **EX**periment (BEARPEX)

Blodgett Forest Research Station, Sierra Nevada Mtns, CA.

From BEARPEX data, interested in:

(i) speciated organic composition of SOA

(ii) gas/particle partitioning of sesquiterpenes,

(iii) extracting information on the volatility distribution of SOA components from GCxGC chromatograms

Workshop Goals

From workshops hoping for:

- Information sharing/collaborations on instrumentation / experimental aspects of measuring the organic speciation of aerosols

- Learn more about how measurements of the speciated organic composition information can be utilized to improve the representation of SOA in models