

Team: J.L Jimenez (PI), P. Campuzano-Jost (co-PI), Ben Nault, Doug Day, Jason Schroder

Data Products:

Submicron aerosol mass concentrations:
Organic aerosol (OA), SO_4 , NO_3 , NH_4 , Chl
OA Chemical Markers: f_{44} (Secondary OA),
 f_{57} (hydrocarbon-like OA), f_{60} (biomass
burning OA), f_{82} (isoprene epoxide-SOA)
Above products are available in real-time

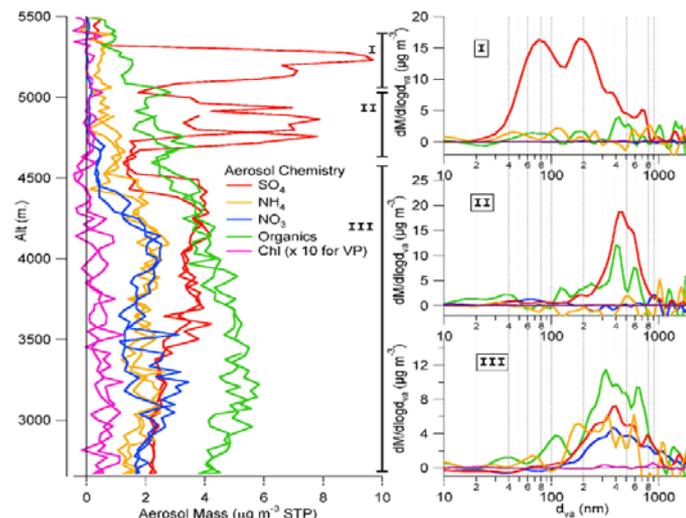
More advanced products:

- O/C, H/C, OA/OC
- Chemically speciated size distributions
- Particulate organic nitrates (pRONO₂)
- Ammonium Balance, estimated pH
- OA source apportionment by PMF
- Single particle composition (sel. periods)

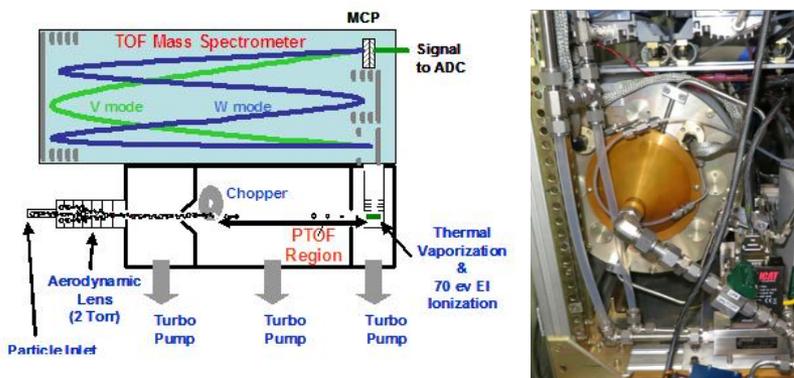
Detection Limits (1s, ng sm⁻³):

Sulfate:	30
Nitrate:	60
Ammonium:	10
Chloride	70
OA:	700

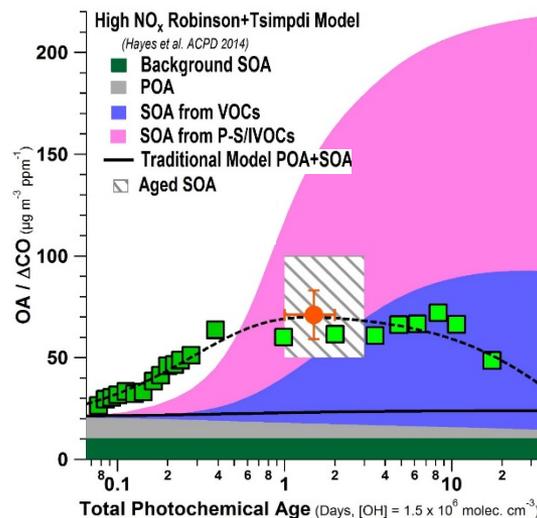
For detailed OA analysis,
longer averaging (3-30 s,
depending on OA conc.) is
needed. A 1-min product is
hence available as well.



Example of speciated altitude profiles and size distributions at different altitudes (MILAGRO)



AMS Schematic (left) and oxidative inlet (OFR) (right)



- **Ambient Data** (7%)
(Hayes et al. 2013)
- **Reactor** (12%)
Vapor Loss Corrected
- **Ambient + Reactor Fit**
Vapor Loss Corrected
- **LA Basin Outflow**
NOAA WP-3D data

SOA and POA aging in the LA basin (CalNex), as measured near-source with AMS and OFR as well as downwind by aircraft, compared to current SOA models