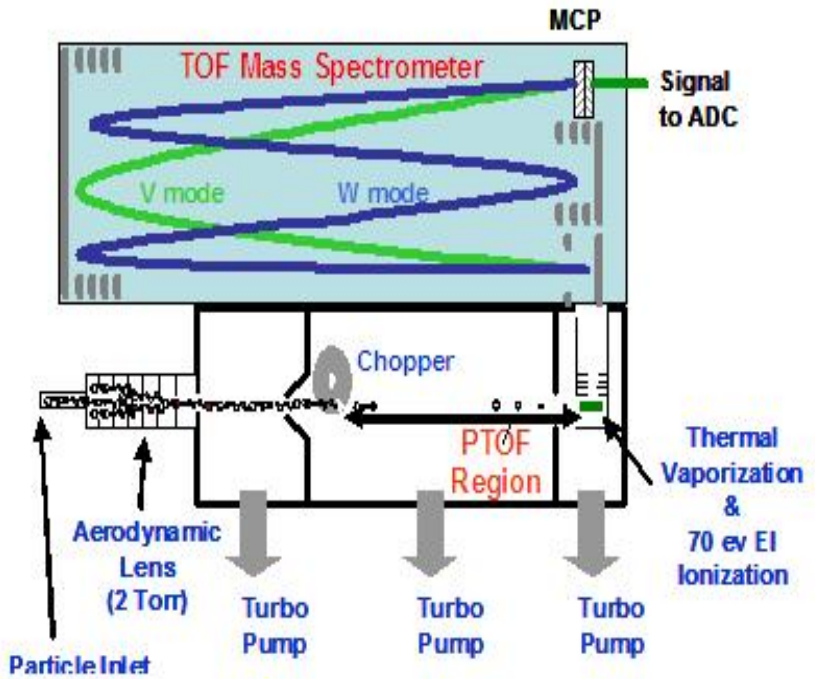
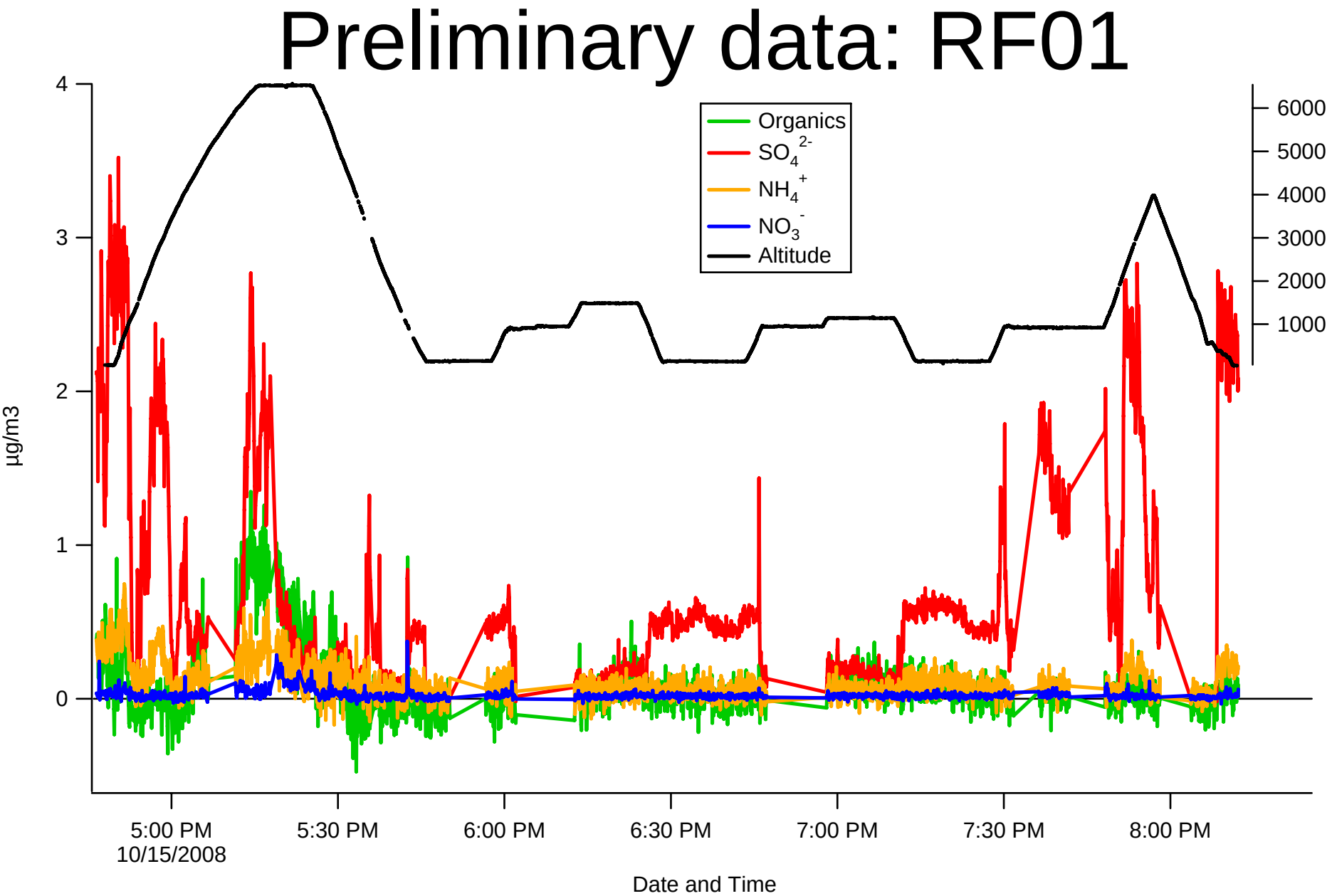
HR-ToF AMS measurements from the C-130

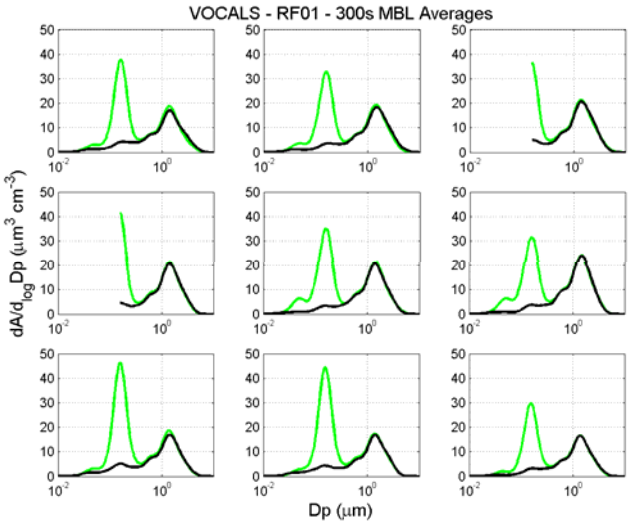


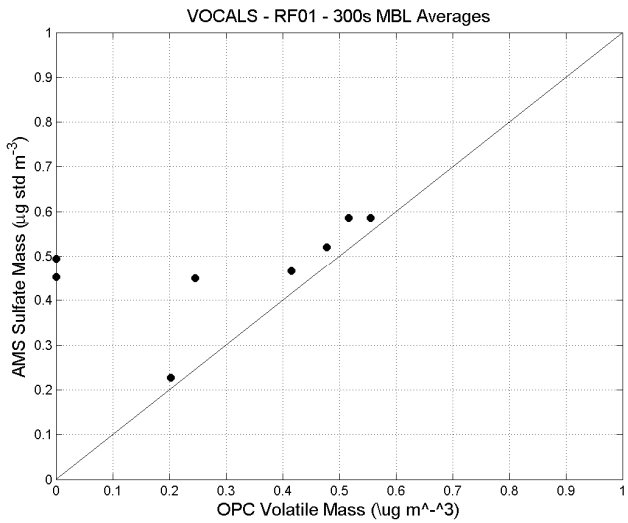
- University of Hawaii
  - Steven Howell
  - Lindsey Shank
  - Antony Clarke
  - Cameron McNaughton
  - Steffen Freitag
  - Vladimir Kapustin
  - Vera Brekhovskikh

Image from
http://cires.colorado.edu/jimenez-group/ToFAMSResources/


Preliminary data: RF01
Organics
SO4 2-
NH4 +
NO3 -
Altitude
µg/m3
4
3
2
1
0
6000
5000
4000
3000
2000
1000
5:00 PM
10/15/2008
5:30 PM
6:00 PM
6:30 PM
7:00 PM
7:30 PM
8:00 PM
Date and Time

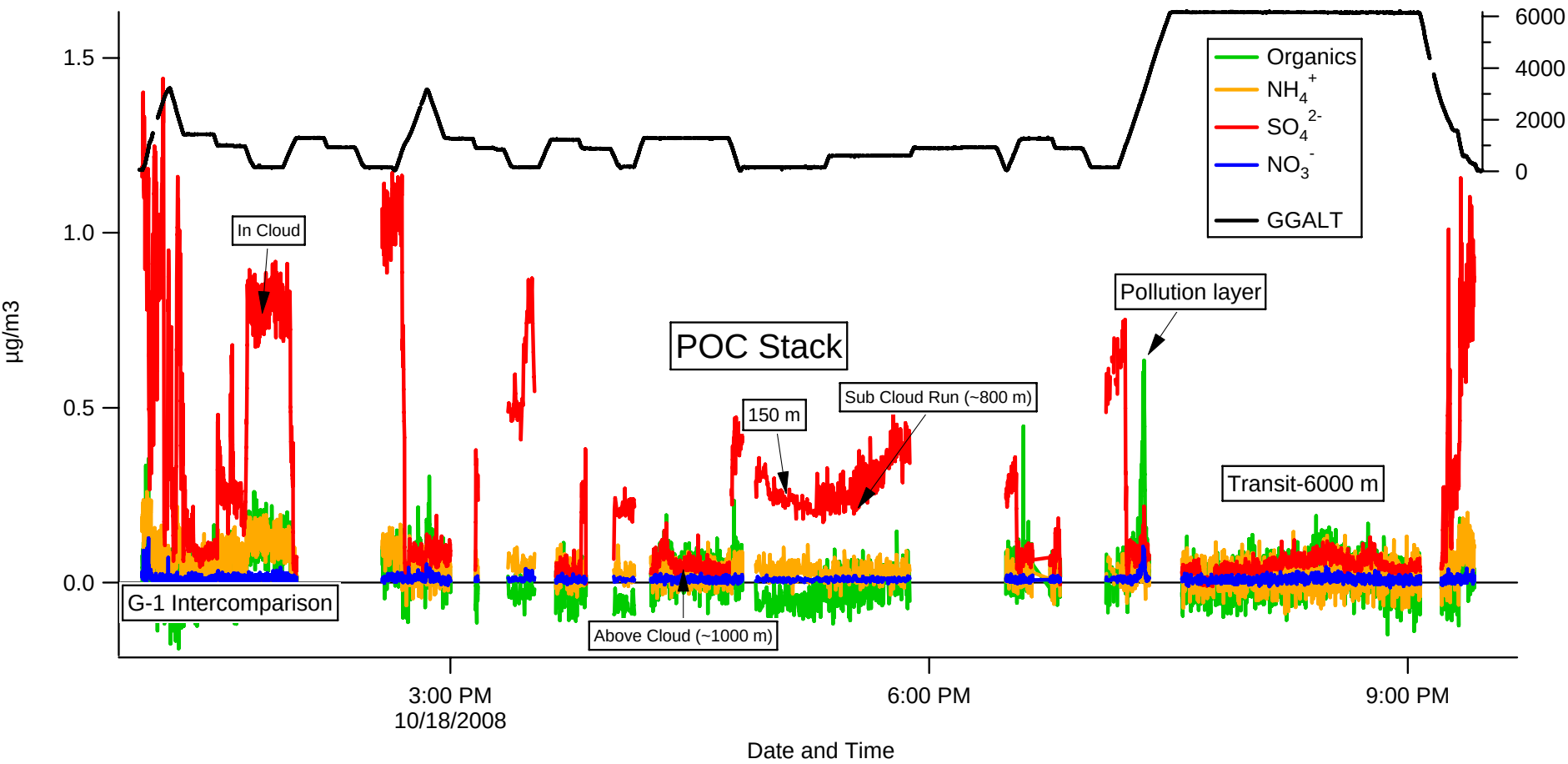
Sanity check: Volatile volume



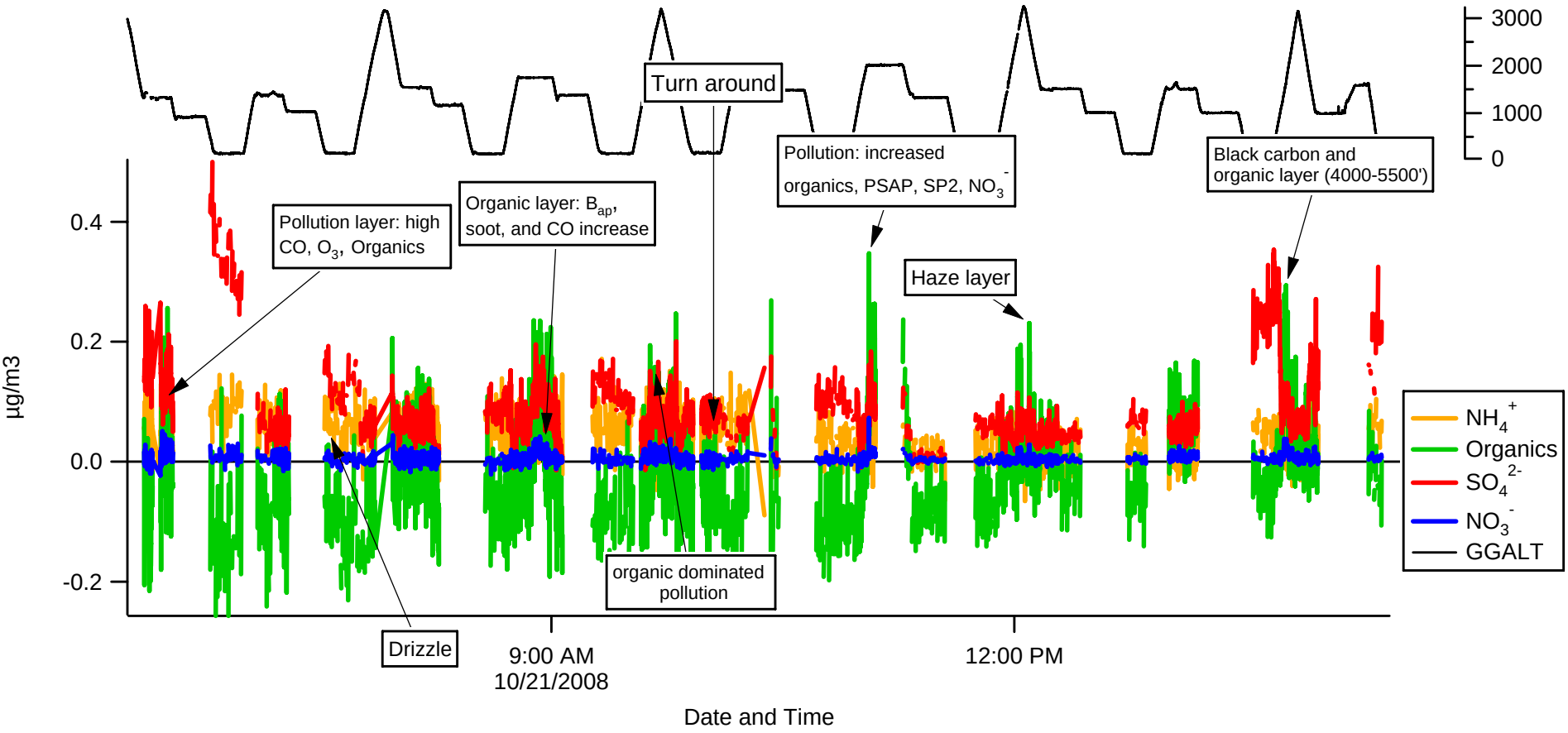


- RF01 (15 Oct)
- OPC+DMA unheated-300^o/400^o.
- AMS ~600^o.
- Broad agreement, but needs more analysis.

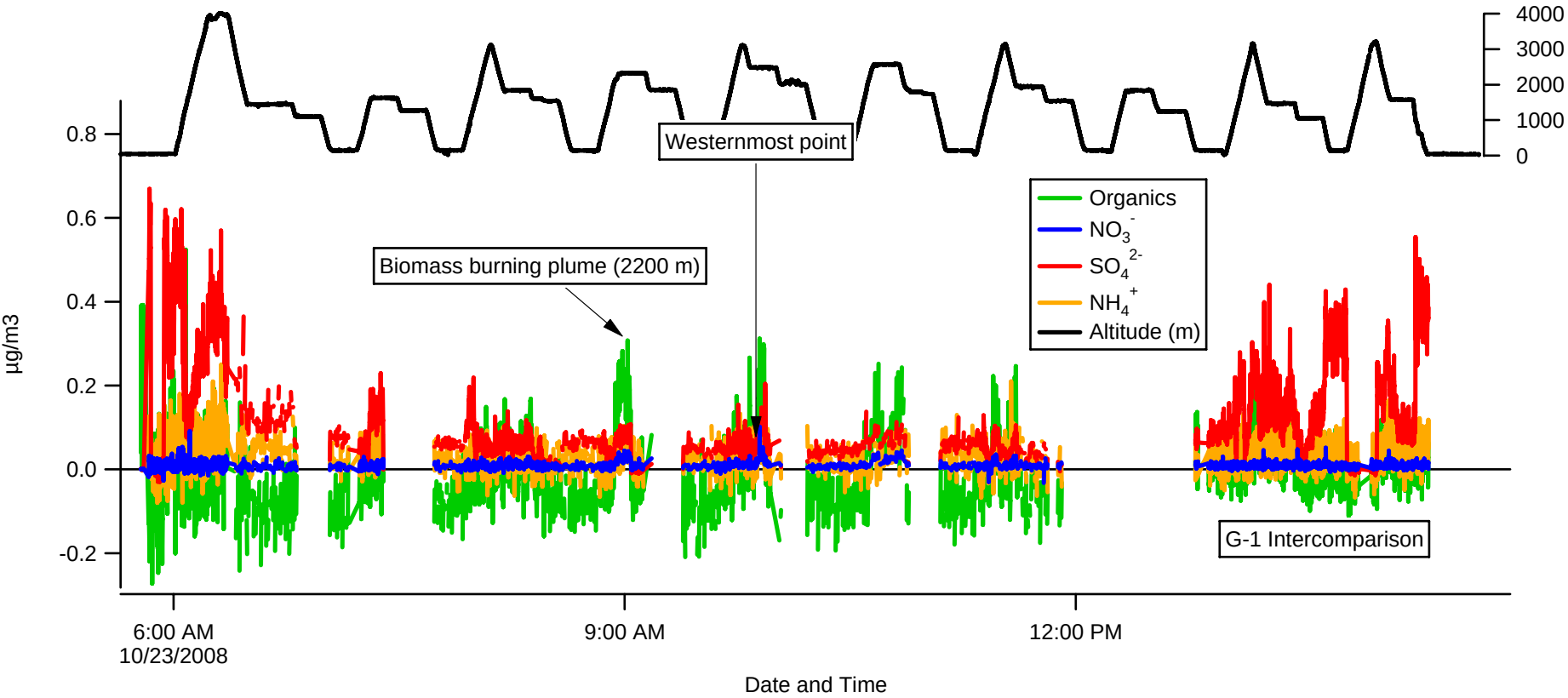
Preliminary data: RF02



Preliminary data: RF03



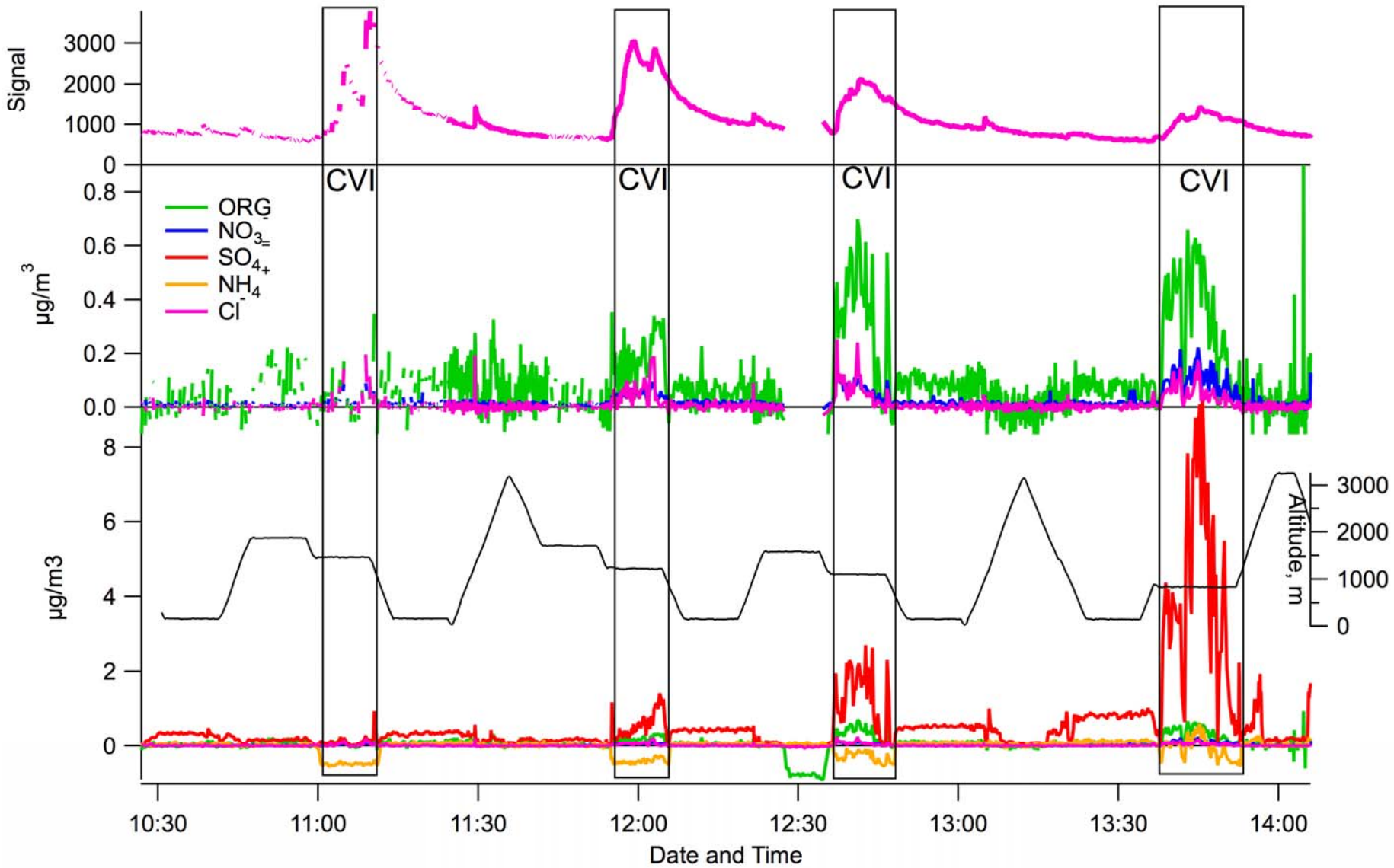
Preliminary data: RF04



RF10 first look at AMS data

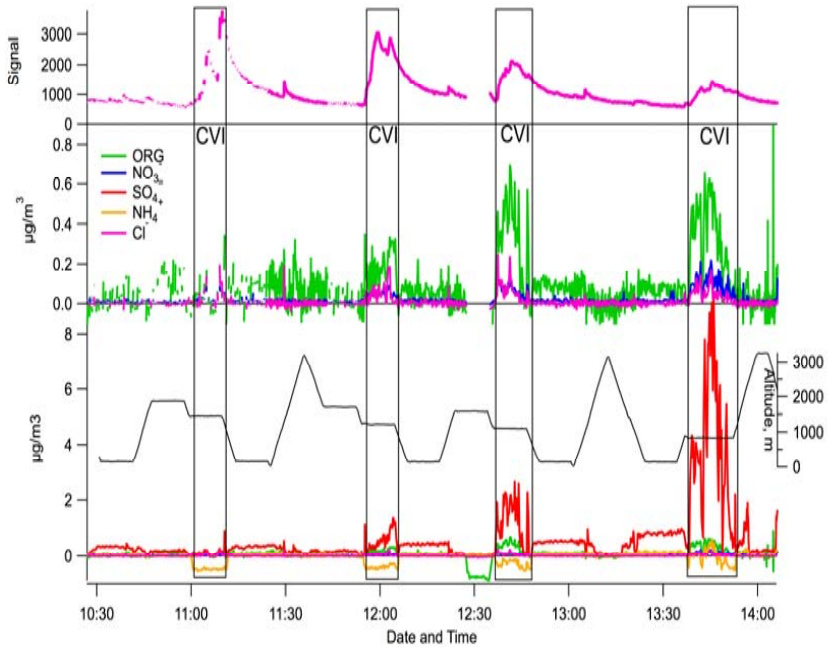
West (85°W)

East (72°W)



RF10 first look at AMS data

- Chloride detectable!
  - Not with default processing
  - Wind speed dependent
- Cleaner offshore
- CVI shows:
  - Up to 50% $SO_4^=$ in droplets (near shore)
  - (SP2 shows soot fraction smaller)



VERY preliminary CVI processing!
Much analysis remains.

Thanks:

- NCAR RAF
  - Air crew
  - Cindy Twohy for the CVI feed
  - Logistics
- NSF Atmospheric Chemistry