Welcome to the 4th AMS Clinic

March 25-28, 2012
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Logistics Etc.
• Starting all days @ 9 am, should end ~5:30 pm
• Breakfast and 2 breaks every day. Lunch provided ONLY on Monday.
• Proposed Schedule:
  – 9-10:30 am: session
  – 10:30-11 am: coffee break
  – 11 am-12:30 am: session
  – 12:30-1:30 pm: lunch break
  – 1:30-3:00 pm: session
  – 3:00-3:30 pm: coffee break
  – 3:30-5:30 pm: session
• Clickers: 20 today, will have more tomorrow
  – Leave them in the room every day, box by the entrance
• Does schedule sound OK
  – A: yes  B: no, we should discuss
Hardware Day Topics

• What should we start with?
  A. Going over the AMS diagram and the physical parts as last year
  B. Discussing the most frequent troubleshooting cases
  C. Other

Clicker Question

• How large is the gas phase interference in CO2+, when sampling raw engine exhaust w/ 10% CO2(g) and 1 mg m⁻³ of organic aerosol?
  A. Equal to the aerosol CO2+ signal
  B. 10% of the aerosol CO2+ signal
  C. 1% of the aerosol CO2+ signal
  D. 0.1% of the aerosol CO2+ signal
  E. 0.01% of the aerosol CO2+ signal
  F. I am not paying attention
Clicker Question

• How large is the gas phase interference due to changes in CO2(g) for measuring particle phase CO2+, when sampling ambient air at a remote site w/ 3 ug m⁻³?
  A. 10 times the particle signal
  B. About equal to the particle signal
  C. 10% of the particle signal
  D. 1% of the particle signal
  E. 0.1 millisieverts

Clicker Question

• How large is the gas phase interference in at the benzene molecular ion, when doing a chamber experiment with 100 ppm of benzene?
  A. ~2 ug m⁻³
  B. 20 ng m⁻³
  C. 2 ng m⁻³
  D. 0.001 ng m⁻³
  E. 20 inches of mercury
Clicker Question

• Your O/C ratio depends on
  A. The O/C cal factor
  B. The CO+ and H2O+ assumed fragmentation
  C. The UMR frag table
  D. A, B, and C
  E. A, and B

Clicker Question

• One of the following methods does NOT work for improving your PToF size resolution
  A. Spin your chopper faster
  B. Reduce your m/z range and increase the MS pulsing frequency
  C. Reduce the number of co-adds in your PToF acquisition
  D. Replace your chopper with one with a smaller opening
  E. Use channel 2 in the Acquiris card
  F. I want to call my mom to ask for her opinion
Clicker Question

• What is the official and Doug-approved spelling for particle time-of-flight mode?
  A. pTOF
  B. PToF
  C. pTOF
  D. PTOF
  E. I don’t use this mode anyway

Clicker Question

• How close can two ions be in PIKA, and still be OK to fit?
  A. 1 amu
  B. 0.01 amu
  C. 1 full-width at half maximum
  D. 1 half-width at half maximum
  E. I don’t know