18 August Preview
Rapid Science Synthesis*

Questions A, C, D, E - Emissions:
• Emission Inventory Targets
• Early Ronald Brown Data
  • Ship Channel Industrial Emissions
  • Ship Channel Mercury Plume
  • Vehicle Emission Signature

Questions G, H - Regional Background O$_3$ and aerosol:
• Early Twin Otter Data (Bob Banta, Christoph Senff, et al.)
• MISR Aerosol Products (Ralph Kahn)

Questions I - Regional Background O$_3$ and aerosol:
• SAPRC vs. CB-IV chemical mechanisms (Dave Allen)

*http://esrl.noaa.gov/csd/2006/rss/
18 August Preview
Rapid Science Synthesis*

Questions A, C, D, E - Emissions: (David Parrish)
- Emission Inventory Targets
- Early Ronald Brown Data
  - Ship Channel Industrial Emissions
  - Ship Channel Mercury Plume
  - Vehicle emission signature

Questions G, H - Regional Background O₃ and aerosol:
- Early Twin Otter Data (Christoph Senff)
- MISR Aerosol Products (Ralph Kahn)

Questions I - Regional Background O₃ and aerosol:
- SAPRC vs. CB-IV chemical mechanisms
  (Dave Allen)

*http://esrl.noaa.gov/csd/2006/rss/
Questions A, C, D, E - Emissions:

- **Emission Inventory Targets**
  
  (Stu McKeen, Greg Frost, Dave Allen)
Questions A, C, D, E - Emissions:

- Emission Inventory Targets
  (Stu McKeen, Greg Frost, Dave Allen)

NEI 1999 = EPA NET-99 Version Point Emissions

NEI 2005 = EPA NET-99 Version Point Emissions modified where possible with 2005 CEMS data

TCEQ 1999 = TCEQ Point Emissions used in 2000

TCEQ 2005 = TCEQ 2004 Point Emissions modified where possible with 2005 CEMS data

UT = 13:00-14:00 CST emissions from elevated point source file
Questions A, C, D, E - Emissions:

- **Emission Inventory Targets**
  
  (Stu McKeen, Greg Frost, Dave Allen)

![Graphs showing NOx emissions over time for different locations and years.](image)
Questions A, C, D, E - Emissions:

- Emission Inventory Targets
  (Stu McKeen, Greg Frost, Dave Allen)

Choc. Bayou
Texas City
Questions A, C, D, E - Emissions: Early RHB Data

- Ship Channel Industrial Emissions
  (Eric Williams, Bill Kuster, et al.)

RHB Data: Fri, Aug 11, 2006 05:57 to Fri, Aug 11, 2006 03:47

Ozone (ppb)
Questions A, C, D, E - Emissions: Early RHB Data

- **Ship Channel Industrial Emissions**
  (Eric Williams, Bill Kuster, et al.)

- Many plumes with different emission ratios
- At least some are rich in HRVOC
Questions A, C, D, E - Emissions: Early RHB Data

- **Ship Channel Mercury Plume** (Tara Fortin)

2 August up the ship channel
Questions A, C, D, E - Emissions: Early RHB Data

- Ship Channel Mercury Plume (Tara Fortin)

3 August down the ship channel

Also observed on 11, 12 August transects
Questions A, C, D, E - Emissions: Early RHB Data

- Vehicle Emission Signature
  (Eric Williams)

Very low CO/NOx emission ratio
Questions A, C, D, E - Emissions: Early RHB Data

• Vehicle Emission Signature
  (Eric Williams)

Very low CO/NOx emission ratio
Questions A, C, D, E - Emissions: Early RHB Data

Vehicle Emission Signature (Eric Williams)

Very low CO/NOx emission ratio

Do Not Cite or Distribute!!!!
G, H - Regional Background O$_3$ and aerosol:

- **Early Twin Otter Data**
  (Bob Banta, Christoph Senff, et al.)

Plume of 100 ppbv O$_3$ leaving Houston area on day surface network observed $\approx$ 50 ppbv maximum
G, H - Regional Background \(O_3\) and aerosol:

- **MISR Aerosol Products** (Ralph Kahn)
MISR GoMACCS Composite
August 15, 2006 Orbit 35421  Path 024  Blocks 65-69  V20
Distinct Regional Aerosol Air Mass Types Identified
Dust + Pollution -- UAE-2 Campaign  MISR Data
September 01, 2004 Orbit 25032  Path 162  Blocks 68-72  V16
MISR Participation: GoMACCS/TexAQS Campaign
Ralph Kahn - Jet Propulsion Lab / Caltech
With Contributions from: The MISR, GoMACCS, TexAQS Teams

• Validate MISR Land & Water Urban Aerosol Pollution Retrievals
  -- Accuracy, Minimum AOT Sensitivity, Particle Property Information
• Learn what MISR can contribute to aerosol-cloud interaction studies
• Provide Regional AOT & Aerosol Type Maps/Analyze w/Sub-Orbital Data & Models
• Test AEGIS multi-angle-spectral + Lidar Mission Concept

MISR-GoMACCS Web Site: http://eosweb.larc.nasa.gov/PRODOCS/misr/gomaccs/table_gomaccs.html
18 August Preview
Rapid Science Synthesis*

Questions A, C, D, E - Emissions:
- Emission Inventory Targets
- Early Ronald Brown Data
  - Ship Channel Industrial Emissions
  - Ship Channel Mercury Plume
  - Vehicle Emission Signature

Questions G, H - Regional Background O₃ and aerosol:
- Early Twin Otter Data (Christoph Senff)
- MISR Aerosol Products (Ralph Kahn)

Questions I - Regional Background O₃ and aerosol:
- SAPRC vs. CB-IV chemical mechanisms
  (Dave Allen)

*http://esrl.noaa.gov/csd/2006/rss/