NO$_2$: New Insights on an Old Pollutant

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**NO$_2/x$ Emissions and Trends**

- Emissions have gone down
  - Mobile
  - Electrical generation
  - Industrial processes
- Reductions in mobile and EGU emissions expected to continue

Atmospheric concentrations going down similar to mobile source NO$_x$:

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NO$_2$: What are the Issues?

- **Potential health impacts:**
  - A marker and/or an agent?
    - Jennifer Peel

- **Controls, trends and other concerns:**
  - Evolution and future of controls
    - Sougato Chatterjee
  - Impacts of controls and atmospheric response
    - Robert Harley
    - David Carslaw

- **U.S. Near-road monitoring network**
  - Wealth of new exposure information coming

- **NO$_x$-control is motivated by other concerns as well**
  - O$_3$ and PM
NO$_x$ Impacts on O$_3$ and PM$_{2.5}$

O$_3$ sensitivity to Mobile source NO$_x$
(July 20, 2011, 16:00)

PM$_{2.5}$ sensitivity to mobile source NO$_x$
(January 1, 2011, 03:00)

NO$_x$ emissions contribute to O$_3$ formation during higher O$_3$ periods

NO$_x$ emissions contribute to PM
NO$_x$ Impacts on O$_3$: Goes Both Ways