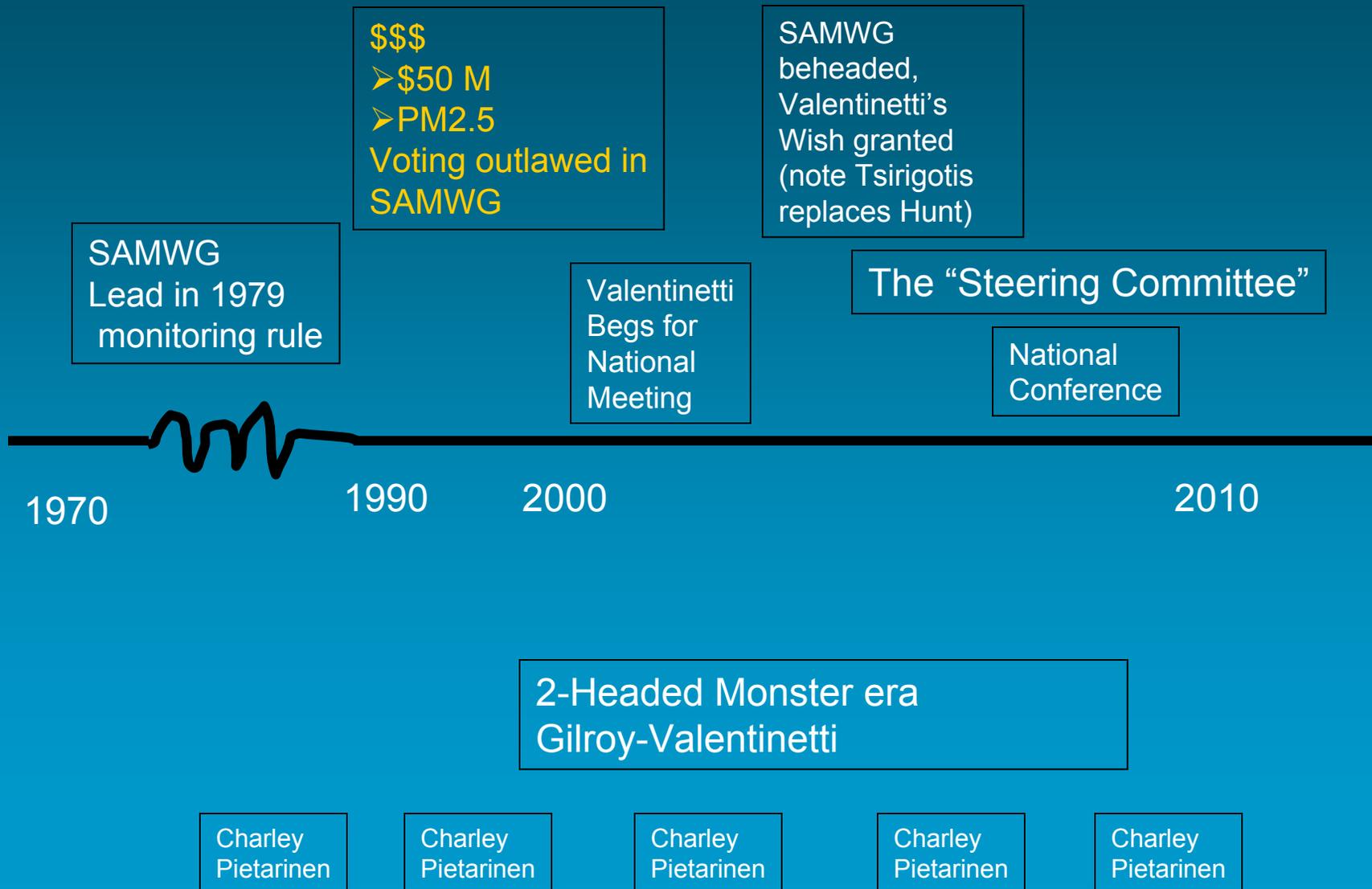


2006 National Air Monitoring Conference

November 6-9, 2006
Las Vegas, Nevada

Rich Scheffe
Office of Air Quality Planning and Standards
United States EPA

How did we get here?



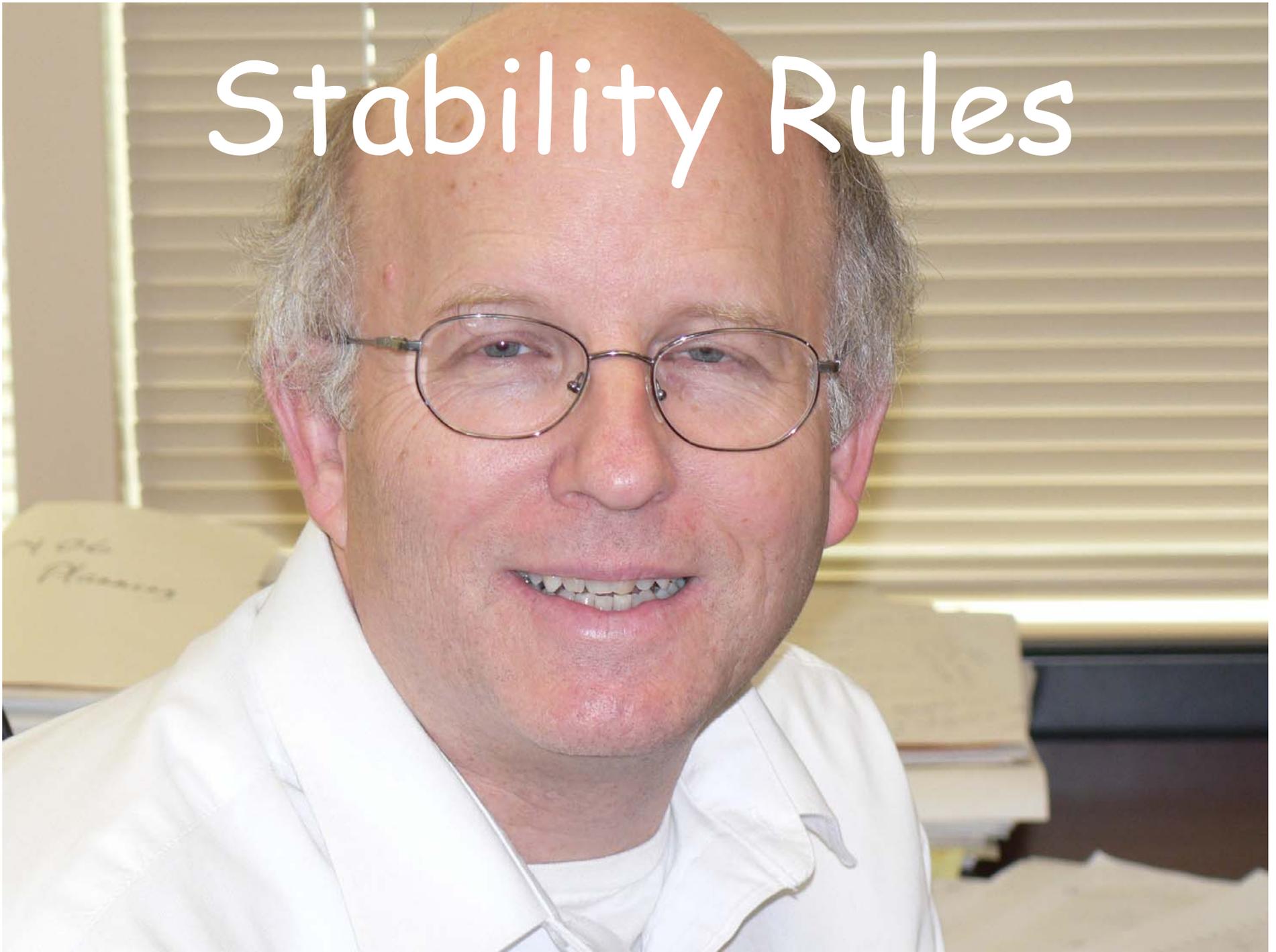
On a personal note.....

2005-2006

Unstable element removed

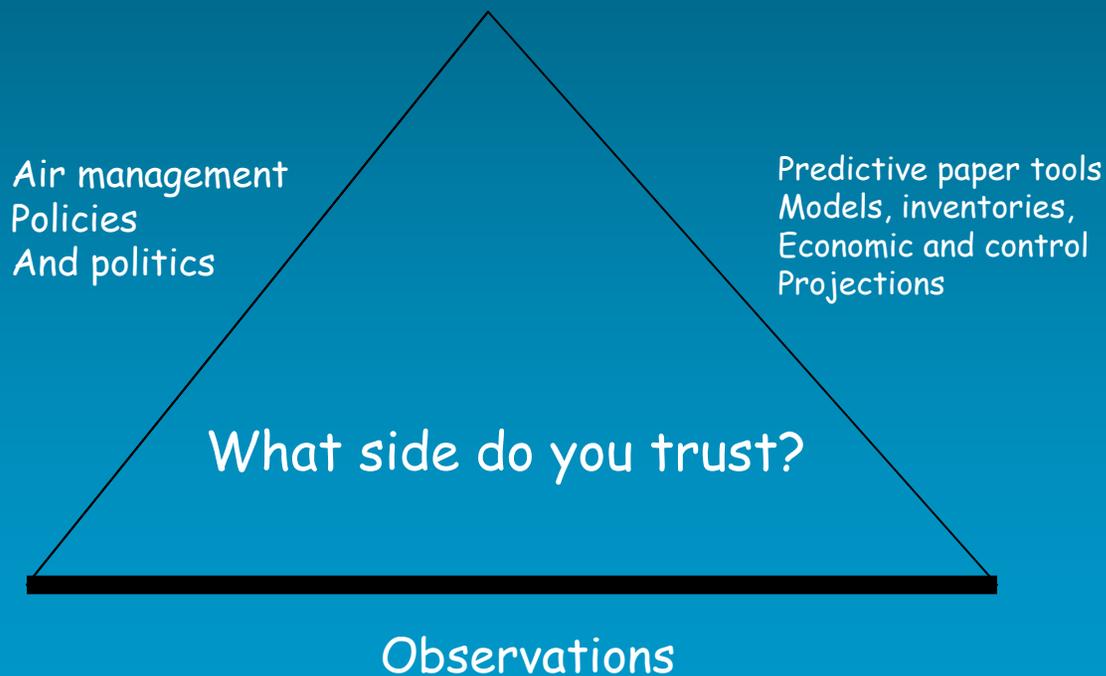


Stability Rules

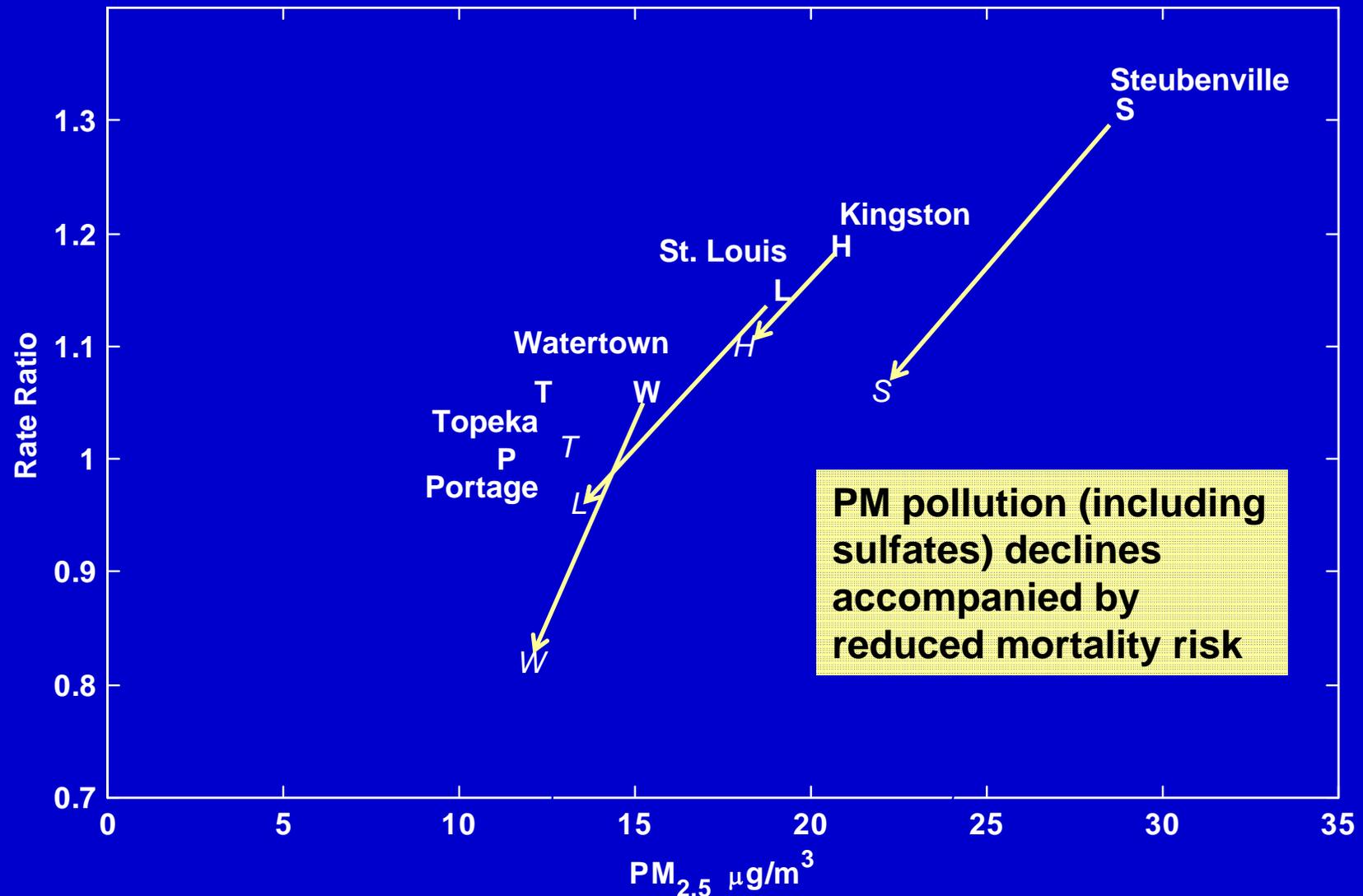


This body represents the foundation for air program management and environmental progress

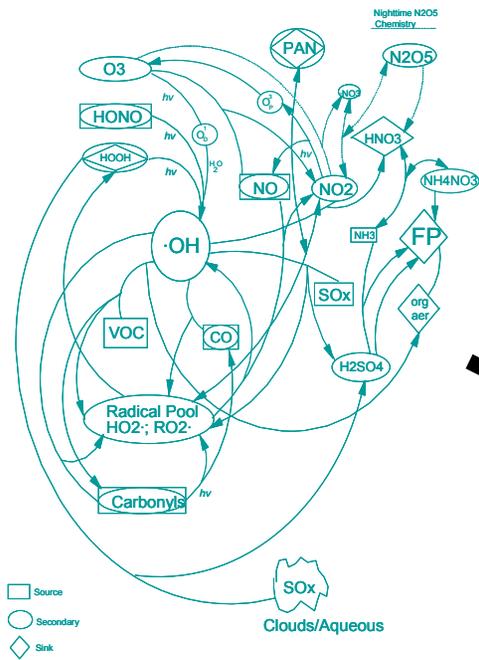
If not for monitoring operations,
we would be in some pretty shaky hands



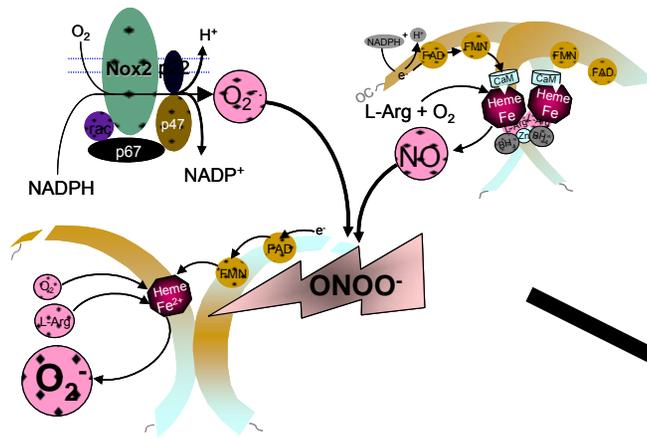
Fine Particle Reductions Work



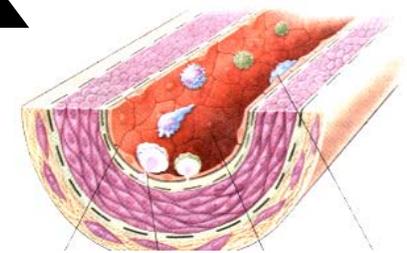
Health Effects: Symmetries in atmospheric and cellular level chemistries



Atmospheric Pathways



Reactive Oxidant Cell Chemistry Processes



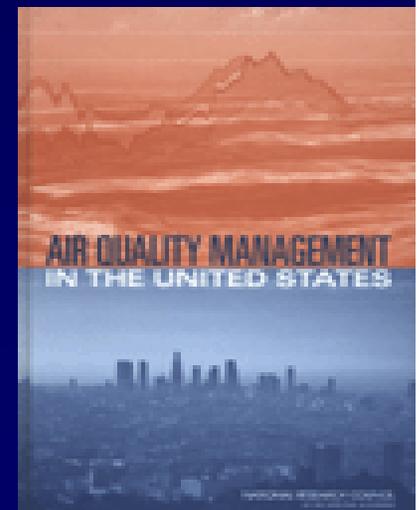
Hypothesized effect

Emerging Challenges for Air Monitoring

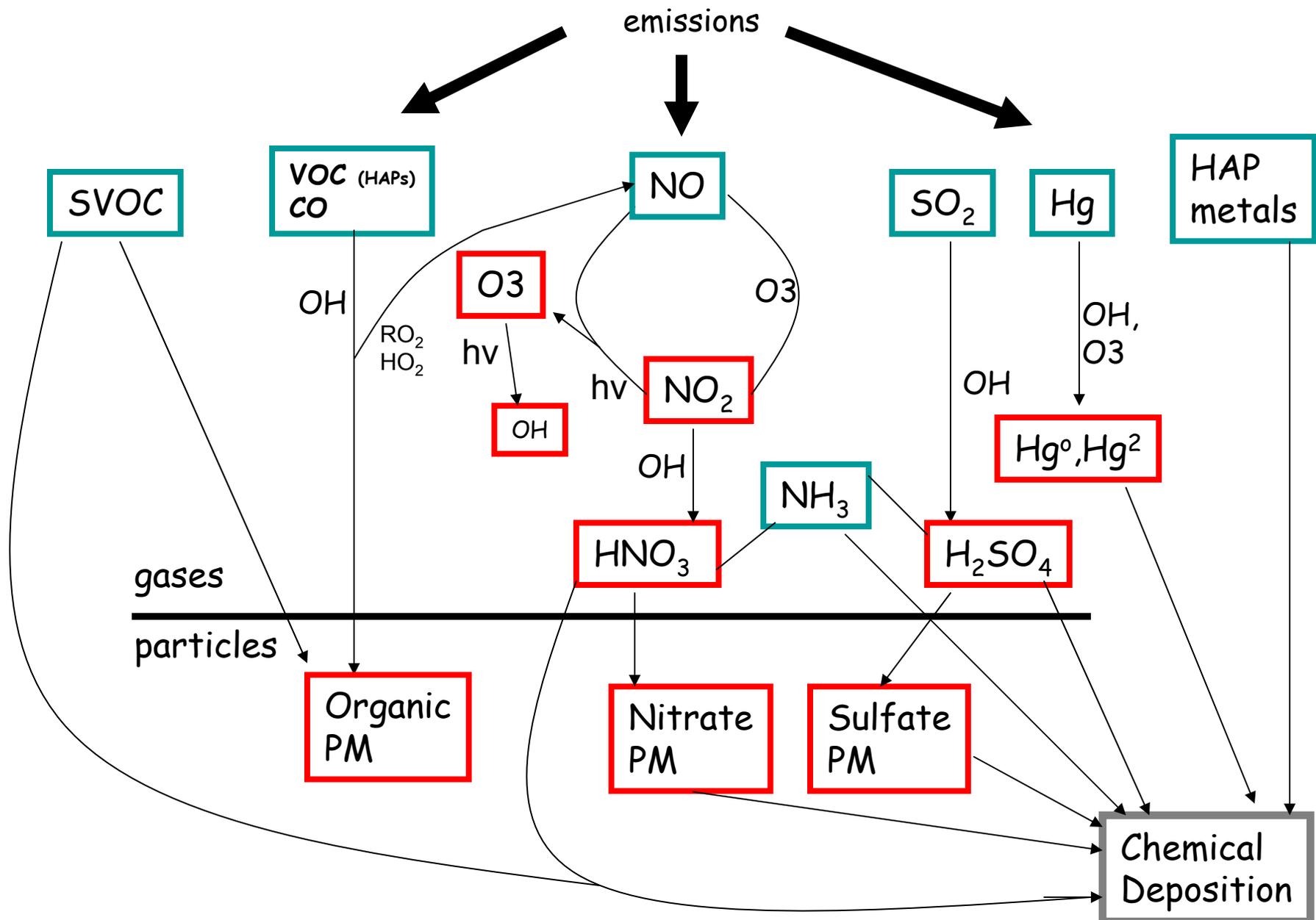
Ongoing: Meeting NAAQS for O₃ and PM_{2.5} and Reducing Regional Haze

- Integrating strategies for Hazardous Air Pollutants and Criteria Air Pollutants
- Assessing and Protecting Ecosystem Health
- Building accountability principles into our air quality management framework
- Intercontinental and Cross-Border Transport
- Maintaining AQM System Efficiency in the face of Changing Climate

Themes advanced by the
2004 NAS Report on Air Quality Management:

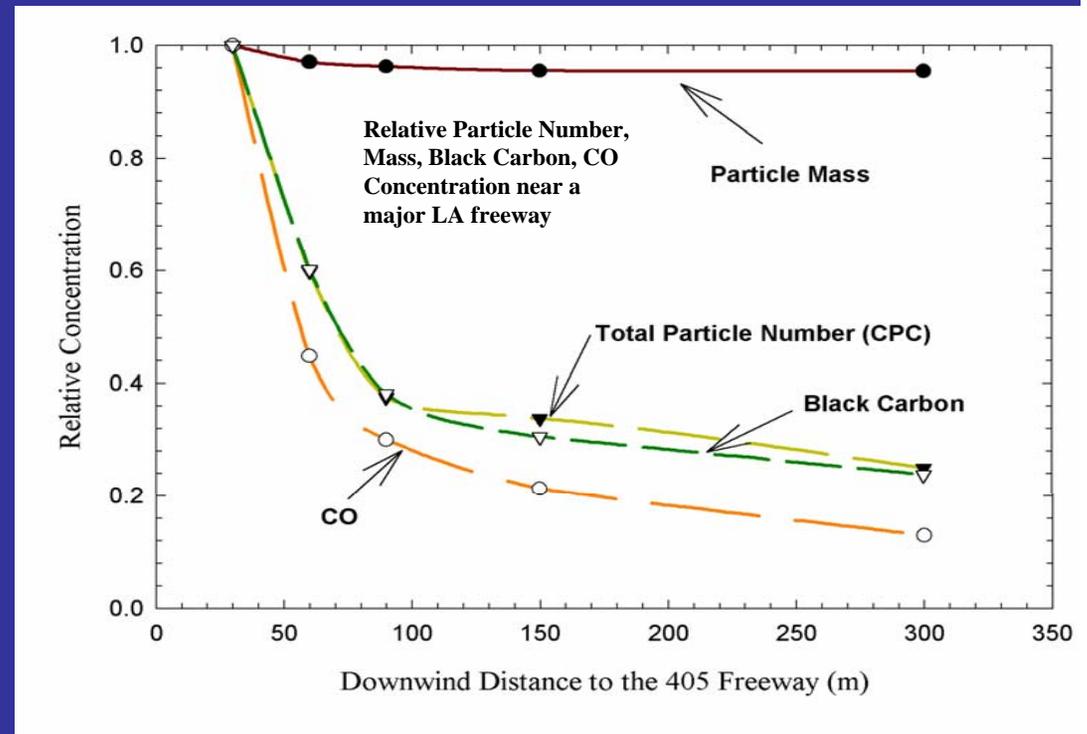


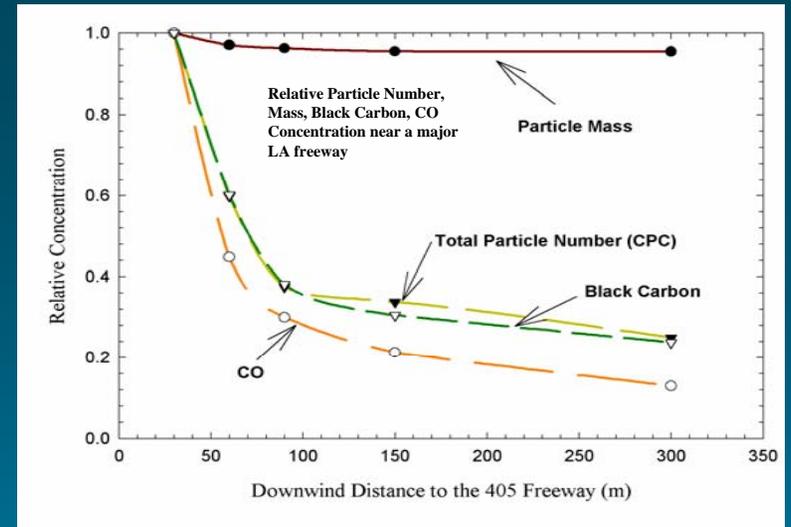
Chemical Linkages in the atmosphere and across media



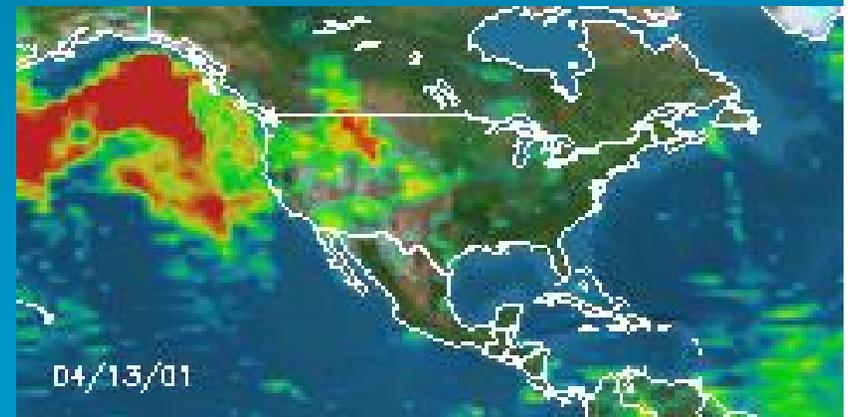
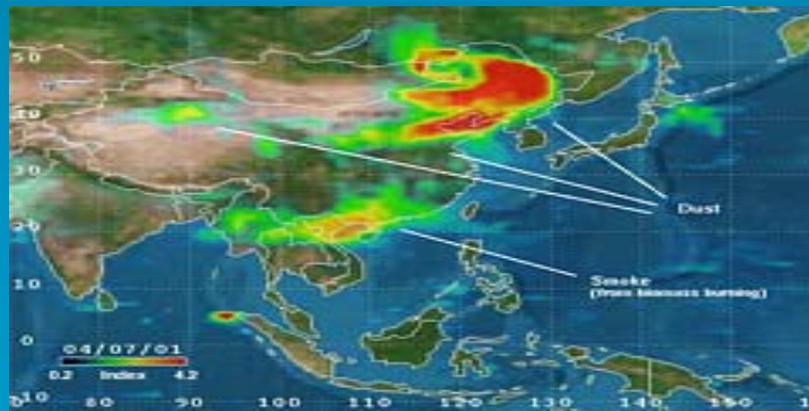
New findings on roadway pollution

High exposure to ultrafine particles, CO, other pollution near roadway
Increased risk near and on roadways

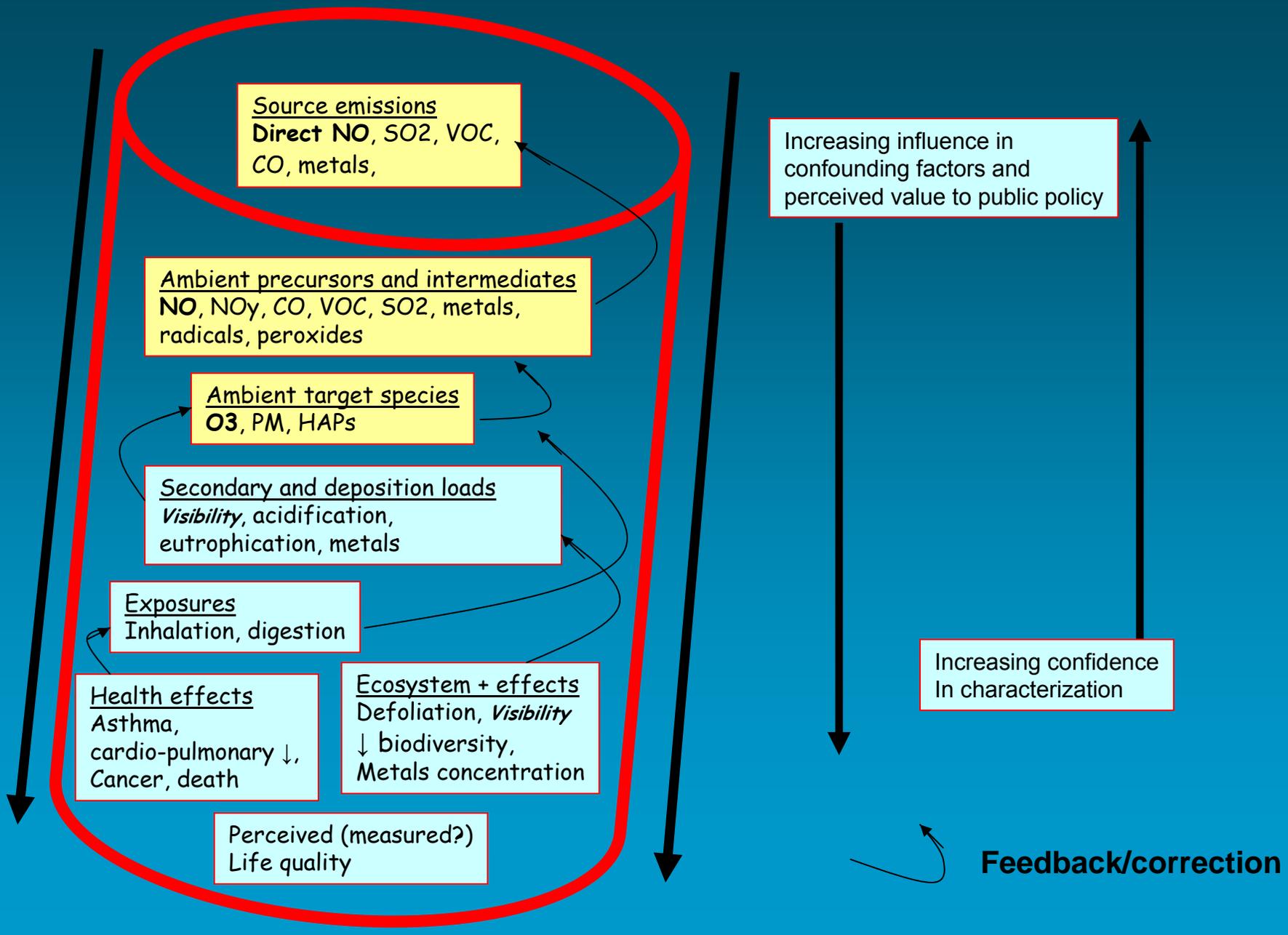


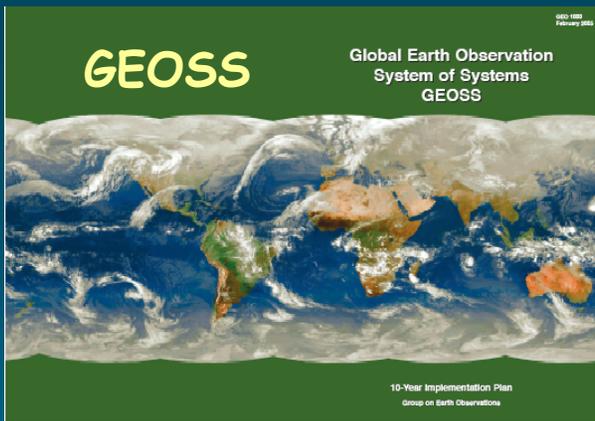


Challenge of multiple scales



Accountability and Indicators Pipeline



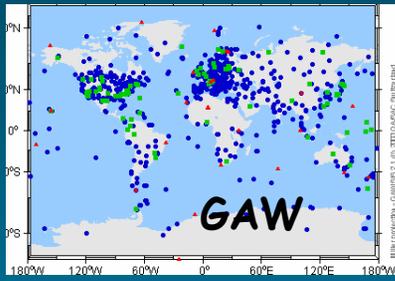


<http://earthobservations.org/>

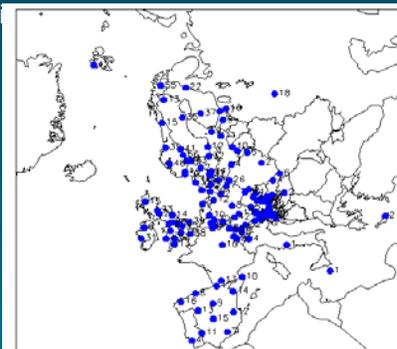
National Ambient Air Monitoring Strategy

Office of Air Quality Planning and Standards
 Research Triangle Park, NC
 December 2005

<http://www.epa.gov/ttn/amt/>



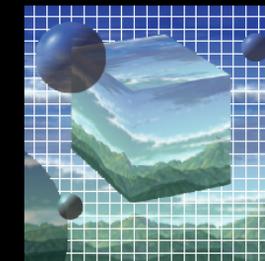
<http://www.empa.ch/gaw/gawsis/>



<http://www.emep.int/>

CENR/AQRS

The Role of Monitoring Networks in the Management of the Nation's Air Quality



National Science and Technology Council
 Committee on Environment and Natural Resources
 Air Quality Research Subcommittee

<http://www.al.noaa.gov/AQRS/reports/monitoring.html>

IGOS Integrated Global Observing Strategy

IGACO THE INTEGRATED GLOBAL ATMOSPHERIC CHEMISTRY OBSERVATIONS THEME

For the Monitoring of our Environment from Space and from Earth

September 2004
 An international partnership for cooperation in Earth observations



<http://www.fz-juelich.de/icg/icg-ii/mozaic/home>



<http://www.fz-juelich.de/icg/icg-ii/iagos/>



NOAA NESDIS

<http://www.nesdis.noaa.gov/>



Barrow



Trinidad Head



Mauna Loa



A. Samoa



S. Pole

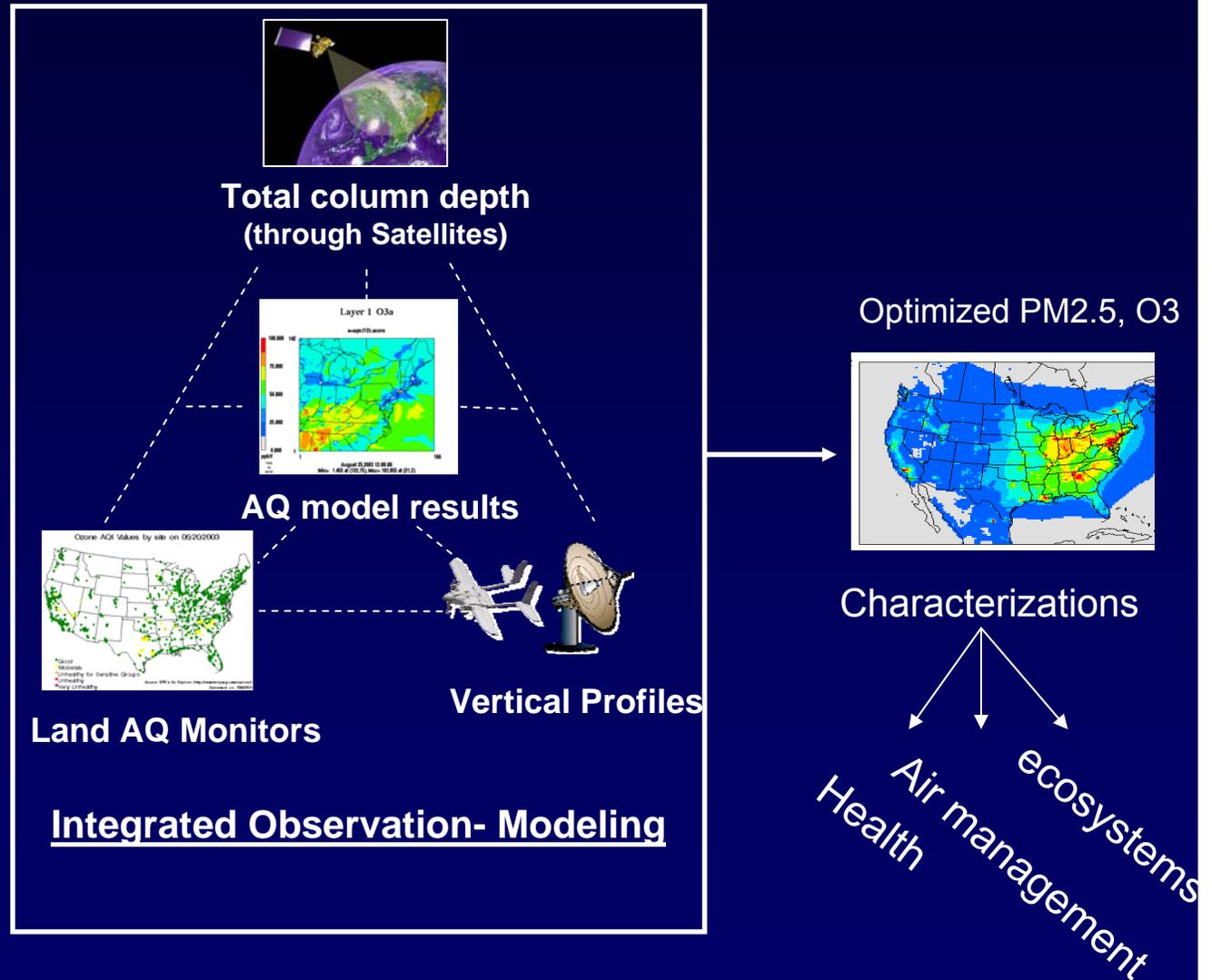
<http://www.cmdl.noaa.gov/>

NOAA CMDL

<http://www.igospartners.org/>

Merging Measurement Systems and Numerical Predictive Models

- Assimilation of data to improve
 - air quality models for forecast
 - Current and
 - Retrospective assessments
- Global-Regional Air Quality Connections
- Climate-AQ connections



Leave you with a lasting, albeit
disturbing, image

The Dick Valentinetti Tribute Conference



November 6-9, 2006
Las Vegas, Nevada

Unique and critical role of Monitoring