



Health Research and Atmospheric Science Interactions

Ron Wyzga, Sc.D.

EPRI

April 11, 2005

Health Study – Monitoring Interactions

- What we know
 - Health responses at current levels
 - PM is best indicator
 - Gases also appear to be important

What we need to know?

- Which components are most important
- What exposures are most important
- Temporal issues

Components vs. Sources?

- Sources can emit several species
- One component can be associated with several species
- Components can be markers for a source, other components
- Constancy of relationships over time, geography

What do we need?

- Consistent monitoring at least daily for a 2-year period
- Monitors that are near population centers
- Ideally some measurements at other locations to test for spatial heterogeneity
- Continuous monitors
- Special microenvironments
- Measurements in several cities

What to measure?

- Usual suspects
- Metals
 - Solubility may be important
- Organics
 - Which ones?
 - Multicollinearity problem
 - Indices are they constant across areas
 - Sources; primary vs. secondary

Better Measurement Methods

- Organics
- Personal samplers
- Continuous monitors