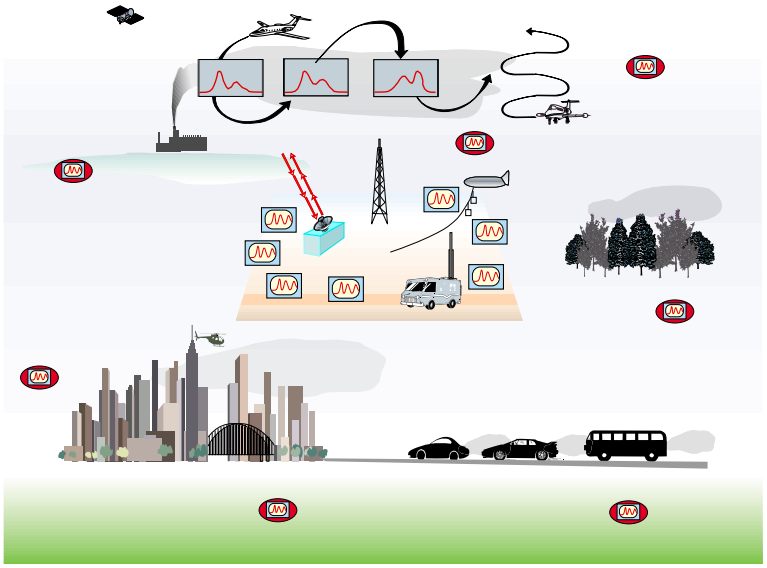
THE DEPARTMENT OF ENERGY'S

TROPOSPHERIC AEROSOL PROGRAM - TAP

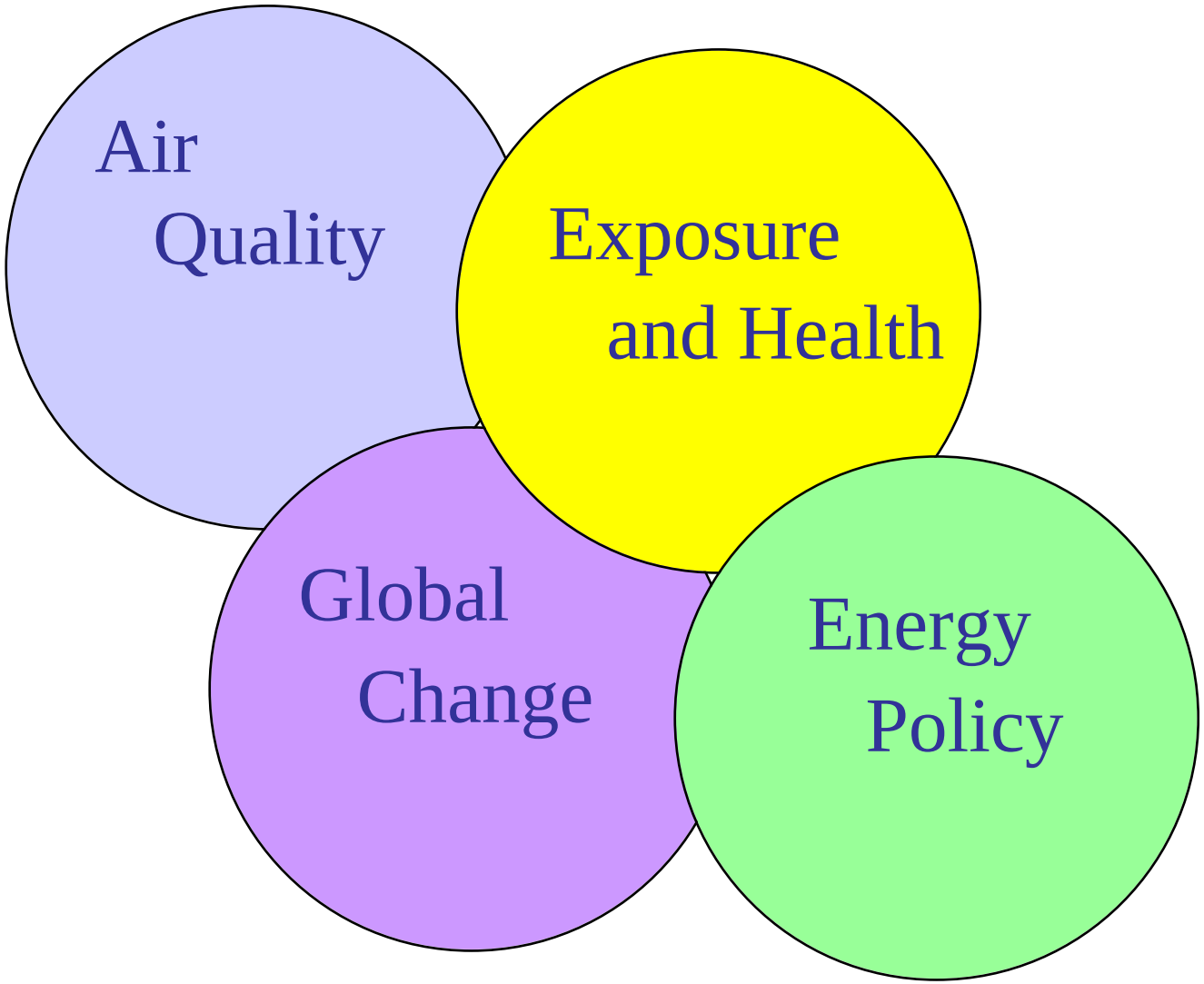
STATUS UPDATE



Stephen E. Schwartz
Environmental Chemistry Division
Brookhaven National Laboratory
Upton NY 11973
ses@bnl.gov

DOE Atmospheric Sciences Program Meeting
13-15 February 2001
Raleigh, NC

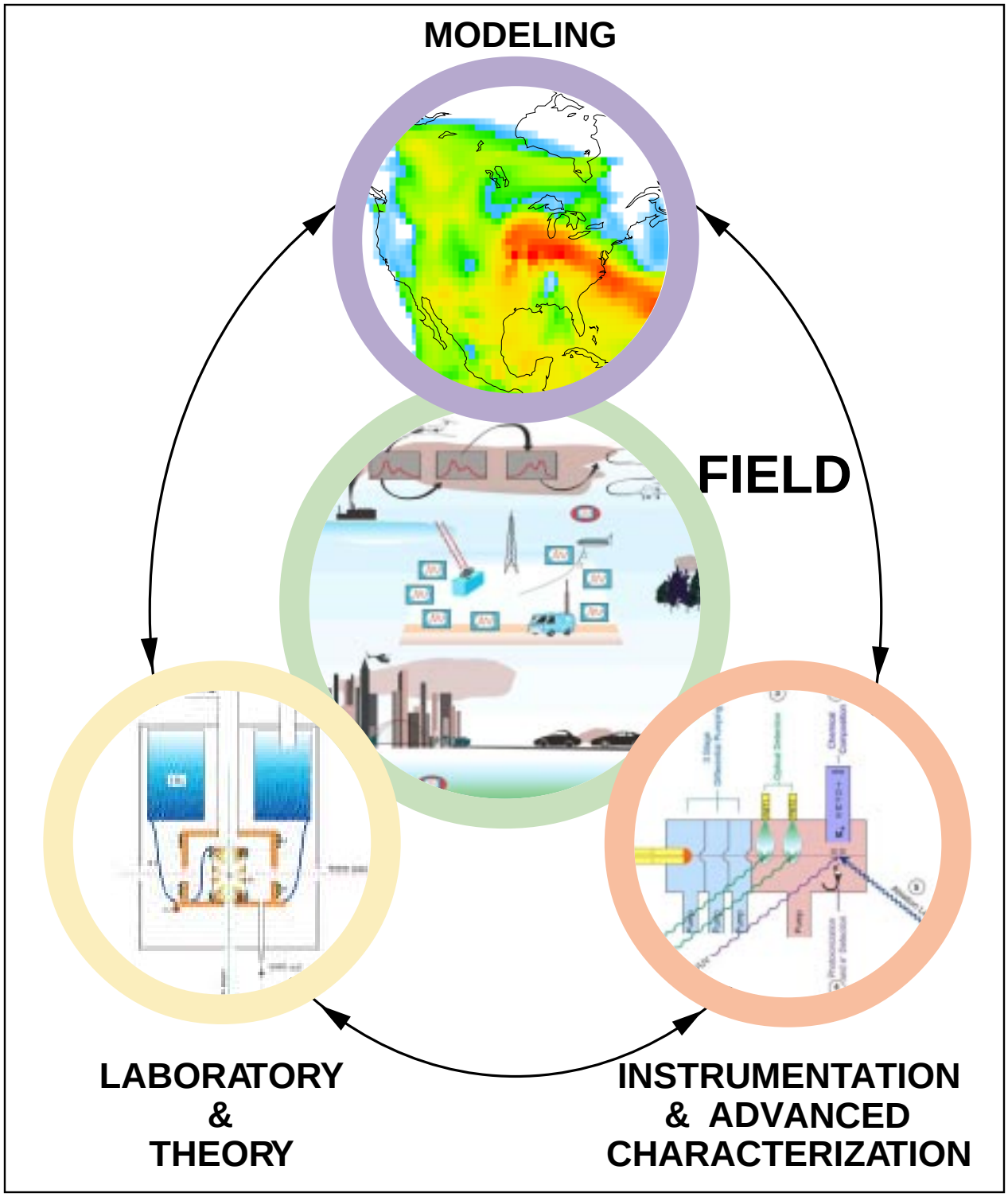
POLICY DRIVERS FOR TAP



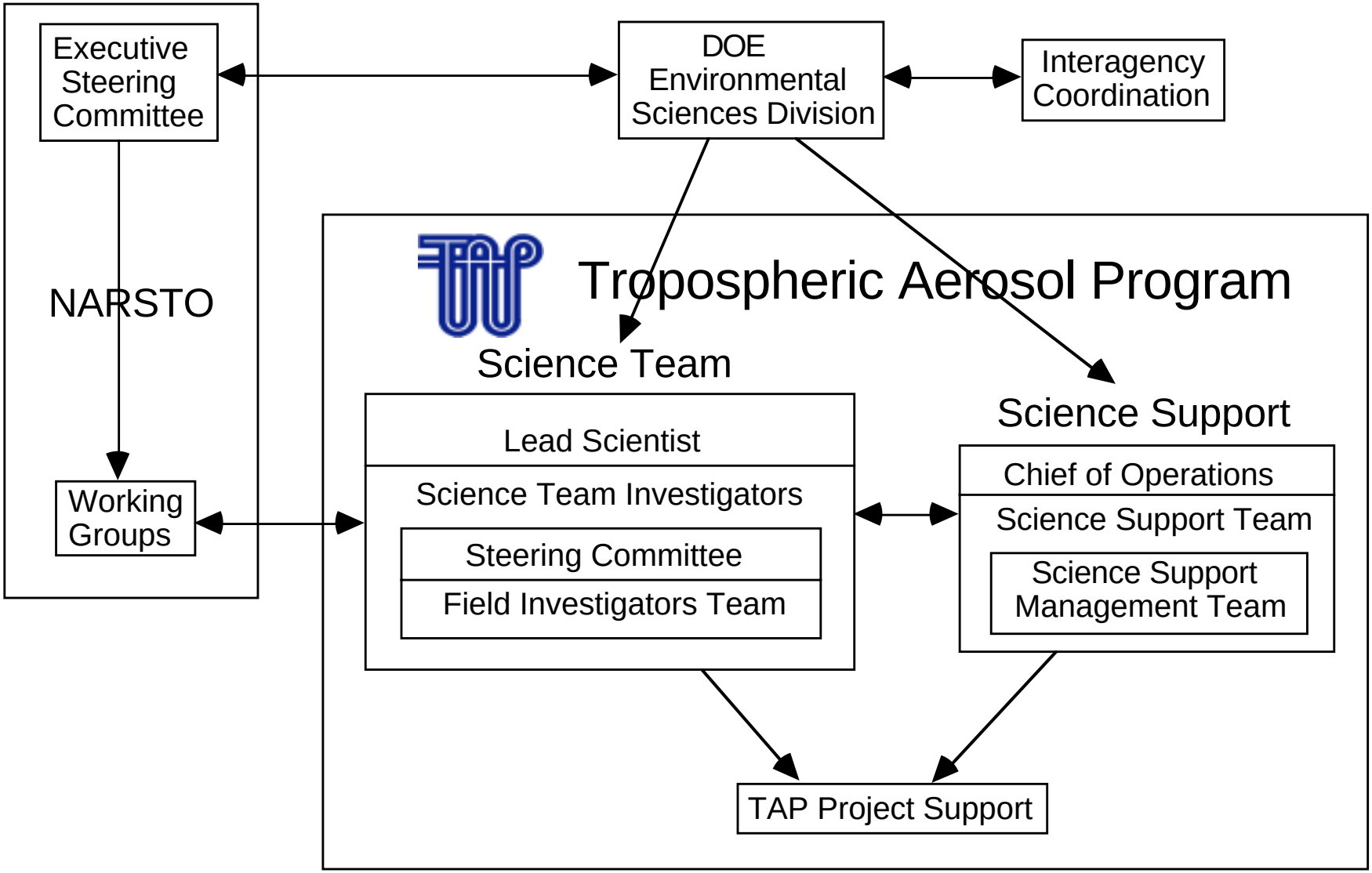
KEY SCIENCE ISSUES FOR TAP

- Number/surface/mass-particle size distribution.
- Chemical composition-size distribution (internal and external mixtures).
- Particle morphology .
- Production of aerosol mass; coupling to free-radical and oxidant chemistry; interactions with other substances influencing air quality.
- Aerosol microphysical properties and dynamics.
- Optical properties.
- Macrophysical and meteorological processes.
- Response of particle loading to change in emissions.
- **Other??**

SCIENCE ELEMENTS OF TAP



ORGANIZATIONAL STRUCTURE OF TAP



TAP SCIENCE SUPPORT ACTIVITIES

- Establish and Maintain Supersite: Facilitate PI measurements. Deploy non-PI Instruments.
- Establish and Maintain Satellite sites.
- Provide Meteorological Support.
- Conduct Meteorological Measurements.
- Conduct Aircraft Operations: In-situ measurements, Remote sensing. Facilitate PI measurements. Deploy non-PI instruments.
- Conduct or Arrange QC and Audits.
- Data Management: Ingest Data. Facilitate data exchange during and after campaigns.
- **Other??**

SOME ISSUES FACING TAP DESIGN AND INITIAL IMPLEMENTATION

- Fewer, larger science team projects *vs.* more smaller projects.
- More science team projects *vs.* more science support.
- Utility of a “Pre-TAP” aerosol characterization study in conjunction with ARM at SGP site.
- Utility of full-blown TAP field project in conjunction with ACP Northeast study Summer 2003.
- Utility and feasibility of a rapid response field measurement capability to take advantage of rare but important events.
- How to reach informed consensus on these issues.

VISIT TAP ON THE WEB

www.tap.bnl.gov

TAP Preliminary Program Plan

TAP Concept Paper

Tropospheric Aerosol Program - A Vision

The Department of Energy's Tropospheric Aerosol Program - TAP: An Examination of Aerosol Processes and Properties. S. E. Schwartz and P. Lunn. American Geophysical Union, Fall Meeting, San Francisco, December 12- 17, 1999.

The Department of Energy's Tropospheric Aerosol Program - TAP: Status Update. DOE Atmospheric Sciences Program Meeting, Raleigh NC, February 13-15, 2001.

COMING SOON: TAP PROGRAM PLAN