



# Air Quality Summary

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Air Resources Laboratory Review

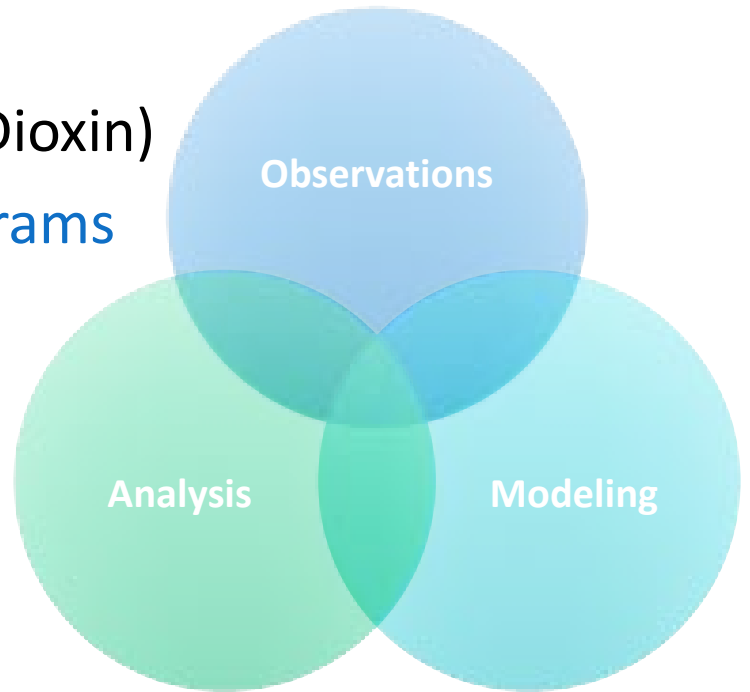
Silver Spring, MD

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# Scope and Goals of ARL's Air Quality Program

- Air Quality Forecasting and Air Toxics Models
  - Ozone and Fine Particulate Matter
  - Dust and Smoke
  - Mercury and other Air Toxics (e.g., Dioxin)
- Measurement and Monitoring Programs
  - Mercury
  - Nitrogen
  - Precipitation Chemistry





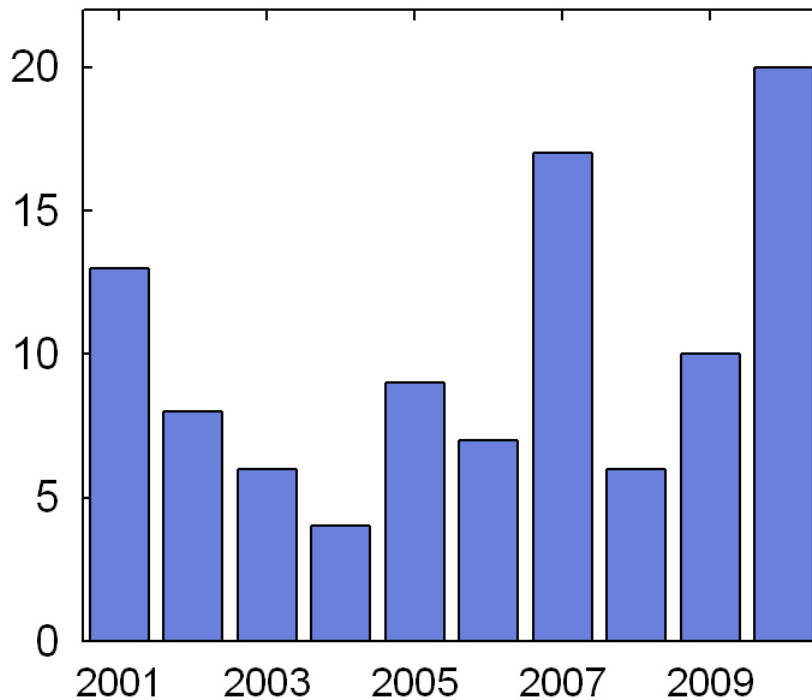
# Indicators of Preeminence

- Strong publication record, including several highly-cited papers
- Leadership in national and international air quality activities
- Establishment of modeling products used operationally by NOAA and globally
- Enduring top quality research monitoring networks
- NOAA Research Outstanding Scientific Paper (Cohen, Draxler & Artz, 2003)
- DOC Gold Medal for HYSPLIT model development (Draxler, 2009)
- EPA 2009 Level 1 Scientific and Tech Achievement Award (Byun and Schere, 2009)
- NOAA Distinguished Career Award (Dale Gillette, 2006)
- Presidential Rank Award for Meritorious Senior Professionals (Bruce Hicks, 2003)
  - ... a myriad of applications involving a broad suite of atmospheric pollutants.

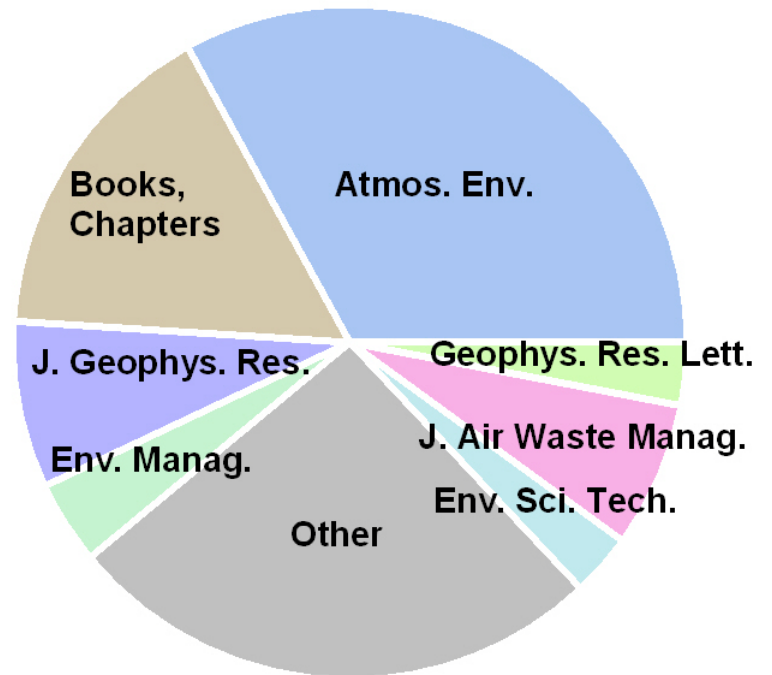


# ARL Air Quality Publications 2001-2010

Total = 100; Average = 10/year



## Journals





# Future Plans

- Air Quality Forecast Models

- Improve emissions estimates for fires and dust
- Develop tighter linkages with meteorological models
- Develop chemical data assimilation capability

- Air Quality Toxics Models

- Improve treatment of natural sources, surface exchange, and re-emissions
- Capitalize on unique model evaluation opportunities

- Mercury, Nitrogen, and Precipitation Chemistry Measurements

- Optimize existing and develop new measurement methods
- Determine suitability of real-time sensors for long-term air-surface exchange research (nitrogen)
- Develop protocols for global monitoring of mercury and dry deposition

- Assessments

- Complete WMO global precipitation chemistry assessment



*Thank You!*