



Atmospheric Turbulence and Diffusion Division

Air Resources Laboratory - NOAA

[Home](#) [Personnel](#) [Contact Us](#) [Search](#)

Air Quality Programs

- [ADAM](#)
- [AIRMoN](#)
- [CalNex 2010](#)

Climate Programs

- [Oak Ridge Climate Data](#)
- [SEBN](#)
- [US CRN/HCNM](#)

Dispersion Programs

- [DCNet](#)
- [WRF Model](#)

Research Collaborations

- [Canaan Valley Institute](#)
- [Jackson State University](#)
- [Joint NOAA/ARL JSU Meteorological Field Study Summer 2009](#)
- [Oak Ridge Associated Universities](#)

Special Projects

- [ATDD Energy Balance Test Site](#)
- [Camp Creek Mountain Waves](#)
- [Radiosonde Upper Air Soundings](#)
- [Real-Time Mesoscale Analysis](#)

NOAA Links



CalNex 2010

Overview

The California Air Resources Board (CARB), the National Oceanic and Atmospheric Administration (NOAA) and the California Energy Commission (CEC) are proposing a joint field study of atmospheric processes over California and the eastern Pacific coastal region in 2010. This study will particularly emphasize the interactions between air quality and climate change issues, including those affecting the hydrologic cycle. It will constitute one of a series of comprehensive regional air quality and climate assessments conducted by NOAA and an expansion of CARB's leadership of California air quality studies. It will complement the ongoing CEC regional climate change studies, and cooperate fully with that program. This multi-agency study will bring together specialized, complementary resources such that the outcome will be able to answer important scientific questions that have an impact on environmental policy.

A Unique Opportunity

The timing of this study and the availability of unprecedented resources for atmospheric research in California reflects the conjunction of interests among NOAA, CARB, and CEC in developing a unified understanding of the issues at the heart of coupled air quality and climate change problems. NOAA's research program embodies a "one atmosphere" perspective that addresses both air quality and climate change issues. This program utilizes state-of-the-art airborne, ship- and ground-based instrument packages, and is effected through regional assessments conducted throughout the U.S. This impels NOAA to seek out regional government and academic researchers to complement its own national-scale research efforts with local understanding of specific problems. California's evolving regulatory posture, including CARB's new initiatives focused on climate change and goods movement, demands much greater understanding of processes aloft and offshore to relate California conditions to continental and global processes and trends. CEC, through its Public Interest Energy Research (PIER) program, is charged with developing greater understanding of the effects of global pollution and climate change on California, with special emphasis on the impacts on air quality and water resources. A full investigation of these impacts requires a continental-to-hemispheric perspective. Thus NOAA's larger-scale perspective, capabilities and experience are an ideal complement to CARB's and CEC's deep understanding of local atmospheric issues in California.

This opportunity will not reoccur. NOAA field programs, conducted every second year, follow a rotation to provide support to regions across the U.S. Thus their participation cannot be postponed. CARB is embarking on new regulatory activities that arise from Assembly Bill 32—Global Warming Solutions Act of 2006. These activities require scientific support. The timeline of this work makes a 2010 field study much more valuable than deferring to the distant future. The impacts of climate change are growing. CEC has a pressing need to understand these impacts. Together, these participants can generate a uniquely integrated view of atmospheric processes along the western boundary of North America. The cost for any one agency to undertake a field project of this scale would be prohibitive.

ARL/ATDD Supported Measurement

1. [Urban Surface Energy Budget: LA Supersite](#)
2. [Air-Surface Exchange of Ammonia in the San Joaquin Valley](#)

What's New

- [Arctic Research](#)
- [UTSI Project](#)
- [Communicating Science Workshop](#)

[more](#)

Our Current Weather

TN - Oak Ridge



Few clouds
 Temperature: 66.2 °F
 Wind: Calm
 Pressure: 101.1 kPa
 Rel. Humidity: 35 %
 Visibility: 10 mi
 Reported on:
 Wed, 04/21/2010 - 17:53
 by the NWS METAR Data

MesoNets

- [DCNet](#)
- [RAMAN](#)

Technologies

- ["Best" Aircraft Turbulence \(BAT\) Probe](#)
- [Fast Response Ozone Monitor](#)
- [Sky Arrow](#)

Publications

- [2009 Q4 Activity Report](#)
- [2009 Q3 Activity Report](#)
- [2009 Q2 Activity Report](#)
- [2009 Publications](#)
- [2008 Publications](#)
- [2007 Publications](#)
- [2006 Publications](#)
- [2005 Publications](#)

[NOAA](#) | [OAR](#) | [ARL](#) | [DOC](#) | [Info Quality](#) | [Privacy](#) | [CSS](#) | [XHTML](#) | [508](#) | [WCAG](#) | [Login](#)