

# Collaboration and Resources for CalNex

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Sonoma Technology, Inc.  
*Air Quality Research and Innovative Solutions*

# Collaboration and Resources for CalNex

- U.S. Forest Service / STI Field Study
- Blue Sky Gateway – A National Air Quality Model
- Daily Air Quality Forecasts
- Instruments

# U.S. Forest Service / STI Field Study (1 of 2)

**Overview:** U.S. Forest Service (USFS) and STI propose to conduct a field study in the summer of 2010

**Objective:** To quantify impacts of wildland fires on regional air quality and haze

**Study Area:** Southern and central Sierra Nevada



# U.S. Forest Service / STI Field Study (2 of 2)

## Measurements

- Base network
  - O<sub>3</sub>, NO<sub>2</sub>, NH<sub>3</sub>, and HNO<sub>3</sub>; ~50 passive samplers
  - PM; ~17 E-BAMS
- Two or three super sites
  - PM; BAMS and Filters
  - O<sub>3</sub> and NO/NO<sub>x</sub>; continuous
  - VOCs; cans and possibly an auto-GC
  - Backscatter; nephelometers
  - Surface meteorology
- Light aircraft
  - Total light scatter; nephelometer
  - O<sub>3</sub> and NO/NO<sub>x</sub>; continuous
  - VOCs; canisters
  - PM including SOA; filters
  - Position, temperature, and dew point temperature

## Benefits to CalNex –

Data can help address transport and chemical transformation related science questions.

**Funding** – Likely from the USFS

# Blue Sky Gateway Real-time Model

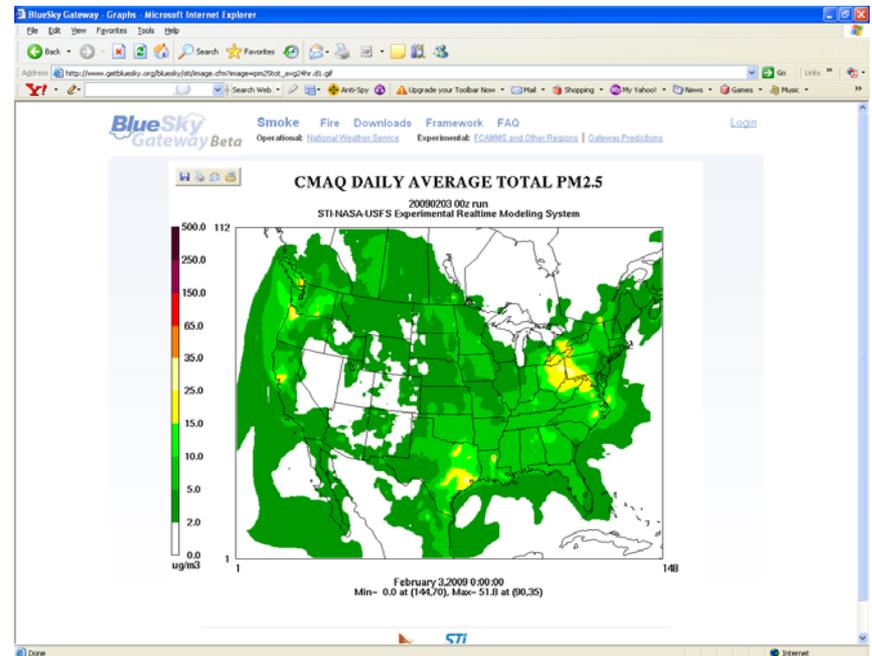
## Overview

- Provides PM<sub>2.5</sub> and ozone predictions (out 72 hours)
- Includes wildfire emissions
- Has been run daily since June 2007
- Provides daily archive of emissions, meteorology, and resulting air quality

## Benefits to CalNex

- Use to assist planning IOPs and aircraft flights
- Help answer transport questions
- Possibly use to evaluate various prognostic models

**Funding** – In the works for summer 2009



# Daily Air Quality Forecasts

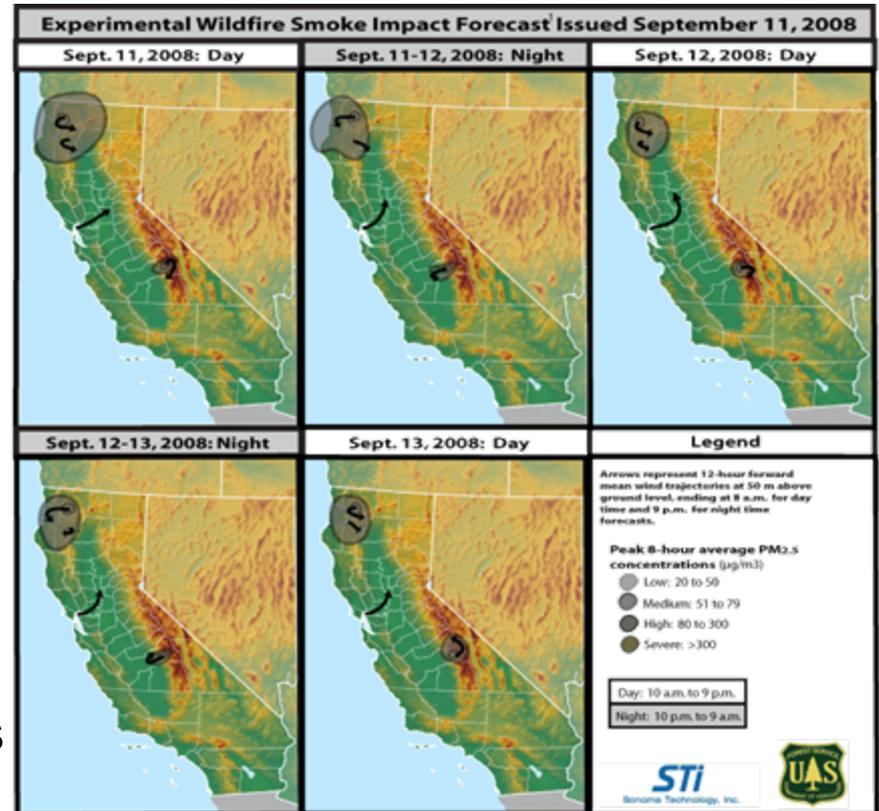
## Overview

- Daily forecasts of PM generated by wildfire in California
- Experimental product introduced in 2008
- Separate day and night forecasts with discussions and forecast maps included

## Benefits to CalNex

- Assist planning IOPs and aircraft flights
- Use in data analysis to address transport and dispersion questions

**Funding** – Possibly from USFS



This product only includes predicted air quality impacts due to wildfires. For official air quality forecasts, go to [airnow.gov](http://airnow.gov) or check your local air quality district website.

# Instruments

STI has two RWPs, a mini-Sodar, an auto-GC, and three trailers outfitted with criteria pollutant and meteorological instruments.

