

**TITLE**

CMMAP Highlights

**DIRECTOR**

CMMAP Education & Diversity

**CAMERA**

**DATE**

1.17.2013

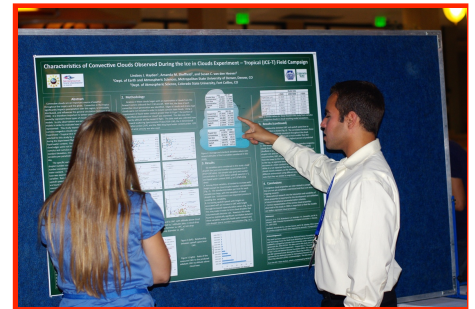
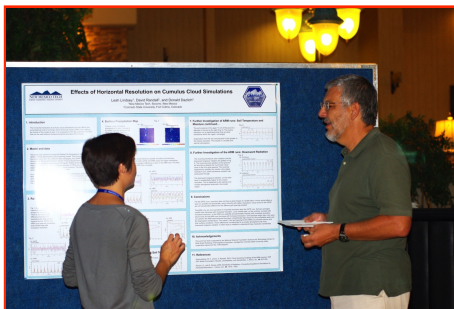
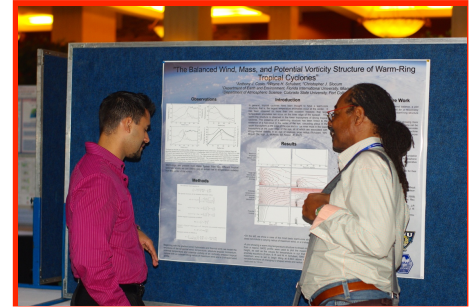
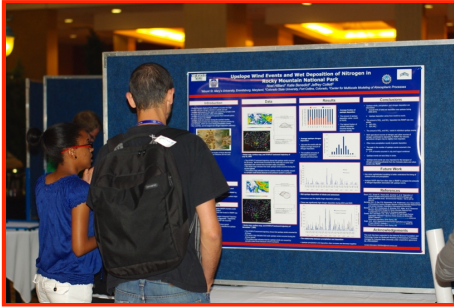
**SCENE**

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**TAKE**

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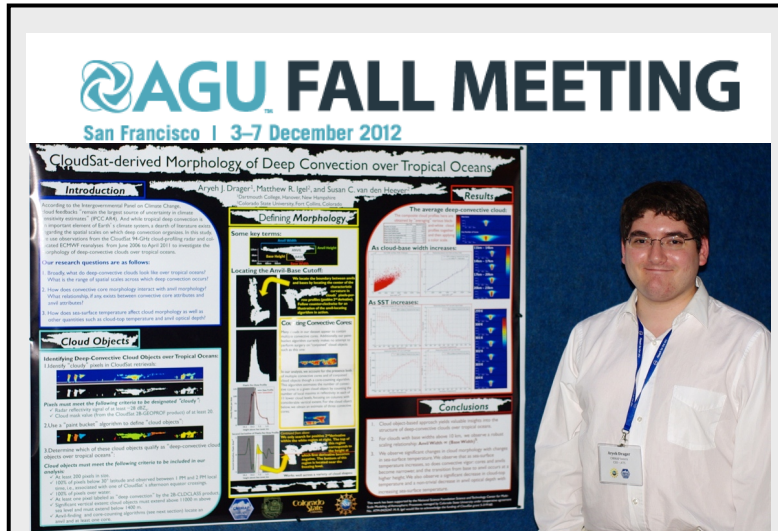
# Summer Undergraduate Internship



Presented their research projects at the CMMAP Team Meeting



# Interns Present at National Conferences



**American Geophysical Union Fall Meeting  
San Francisco, CA**

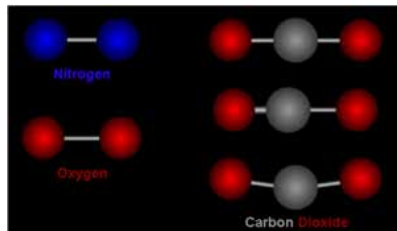
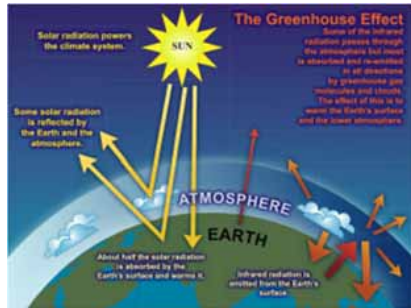
**93rd American Meteorological Society Meeting  
San Francisco, CA**

11 interns presented their summer research as oral or poster presentations

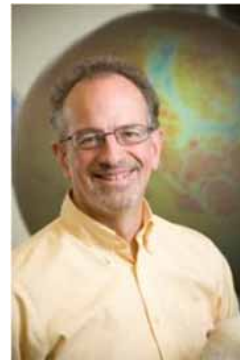
Aryeh Drager  
AGU Outstanding Student Paper Award



# NSTA Webinar: Teaching Climate with Models



## Heating and Warming: Sensitivity of Earth's Climate to Atmospheric CO<sub>2</sub>



Scott Denning

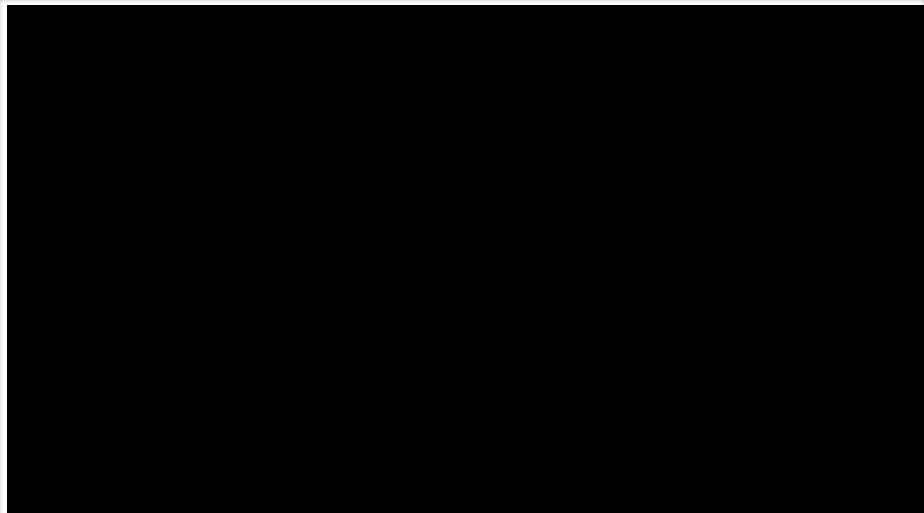


Randy Russell



1. **Breathing of the Earth (June 11, 2012)**
2. **Heating and Warming: Sensitivity of Earth's Climate to Atmospheric CO<sub>2</sub> (Sept 24, 2012)**
3. **Future Climate Projections (Feb 28, 2013)**





Video courtesy of HESTEC

## **Educator Day**

*“Ten Things Everyone Should Know About the Atmosphere”*  
2 workshops and 75 teachers!

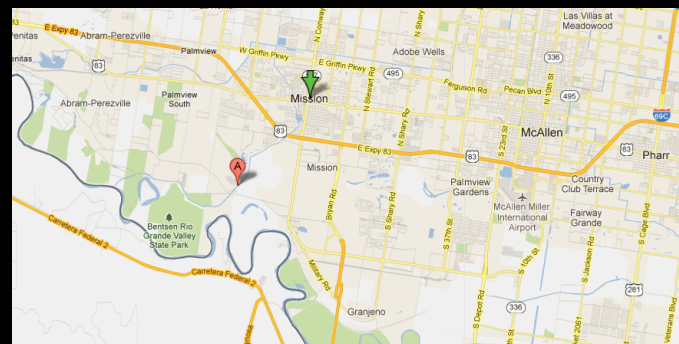
## **Middle School Challenge**

4 days of hands on activities  
~ 4,000 kids

## **Community Day**

open to the public  
~ 6,000 attendees

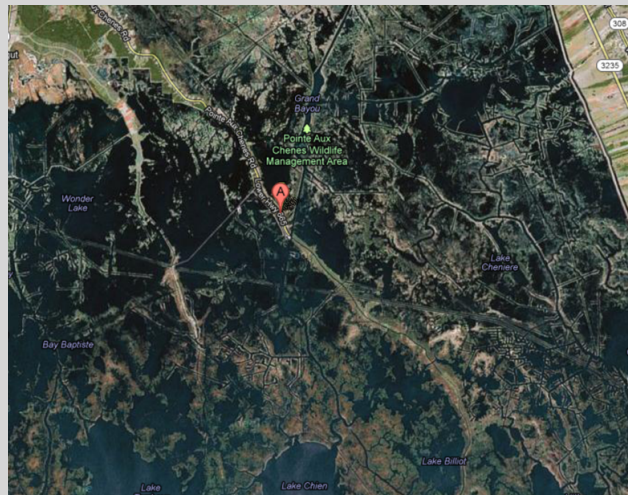
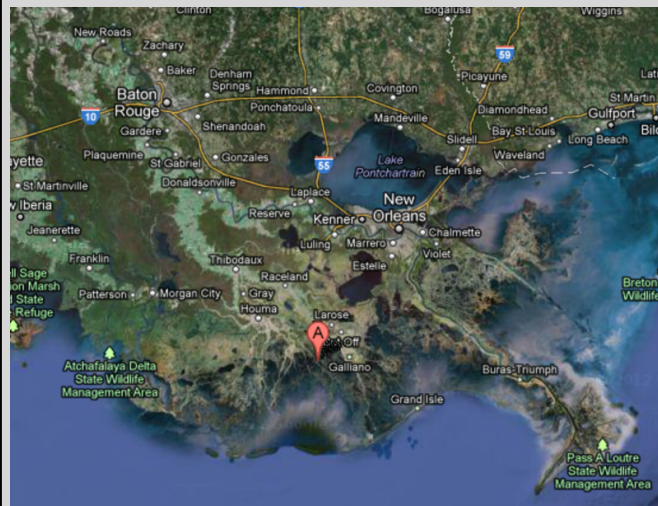
## **El Rocio Retreat**





# Follow-up trip to Pointe Aux Chenes

October 16-19, 2012



Frances Roberts-Gregory, SOARS



Jordan Allan, RESESS



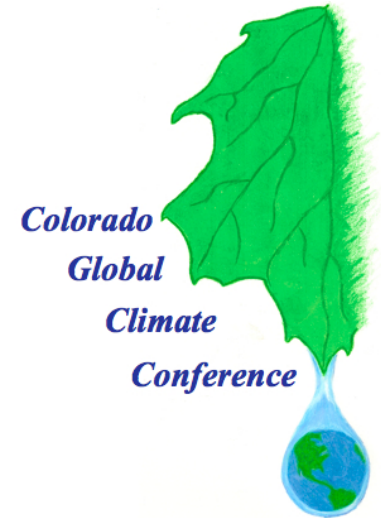
Sandra Maina, SOARS



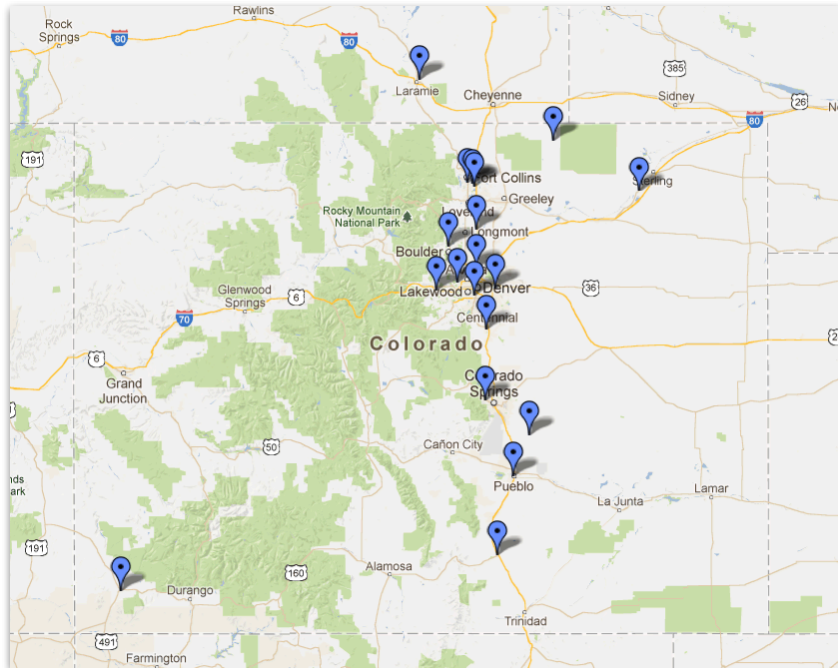
# Colorado Global Climate Conference

October 29, 2012

Lory Student Center  
Colorado State University



- Keynote presentation on climate change
- 400 participants
- 19 schools around the state of Colorado and southern Wyoming
- 4 CSU Alliance Partnership Schools





# New CGCC Breakout Sessions

**"Atmospheric Profiling: How Scientists use Weather Balloons to Study the Atmosphere,"** with a live weather balloon launch by NCAR scientist, Kate Young.

**"Fire and Poop: How We're Trying to Help BILLIONS of People,"** a session about innovative energy solutions prioritizing human health, presented by the Engines and Energy Conversion Lab (EECL) at CSU.

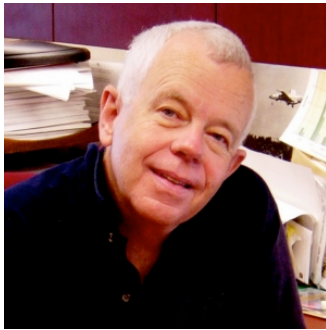
**"Universe at Your Fingertips with Google Liquid Galaxy,"** a session using CSU's new Google Liquid Galaxy wide-screen projection resource to explore Geographic Information Systems, hosted by the Geospatial Centroid at CSU.

**"Teaching About Climate and Energy Topics - For Teacher's Only,"** a session just for high school teachers in attendance to learn about available resources and networks supporting climate science and climate change education, presented by Dr. Anne Gold from the Education and Outreach Group at CIRES in Boulder.



# Building relationships with Minority Serving Institutions (MSIs)

## Florida International University



Dr. Hugh Willoughby  
Department of Earth Science

- Special Seminar on CMMAP Program
- Heather and Tony (Summer 2012 interns) gave presentations on their experience



## St. Augustine's University



Dr. Yvonne Coston



Dr. Mark Melton

Department of Mathematics and Engineering

- Meetings with the Science Faculty
- Discussed Summer Internship Program
- One-on-one meetings with undergraduate students
- CSU/St. Augustine's research collaborations
- Graduate student recruitment



# Making Diversity a Priority

## **CMMAP Diversity Goal:**

Increase the number of diverse students pursuing graduate degrees in atmospheric science

## **Strategy:**

Recruit, retain, and mentor students from underrepresented groups

## **What we've done**

- Targeted recruitment at minority serving institutions
- Network with programs with like interests and goals
- Focus on multiple academic disciplines
- Attend professional societies annual meetings

## **2012 Recruiting Visits**

UT Arlington

Tulane University

University of New Orleans

St. Augustine's University

Florida International University

## **What's next?**

### **2013 CMMAP Internship**

Application Deadline: February 1

Intern Selection: February 25

Program dates: June 3-August 9, 2013

# **Reporting Season is Upon Us**

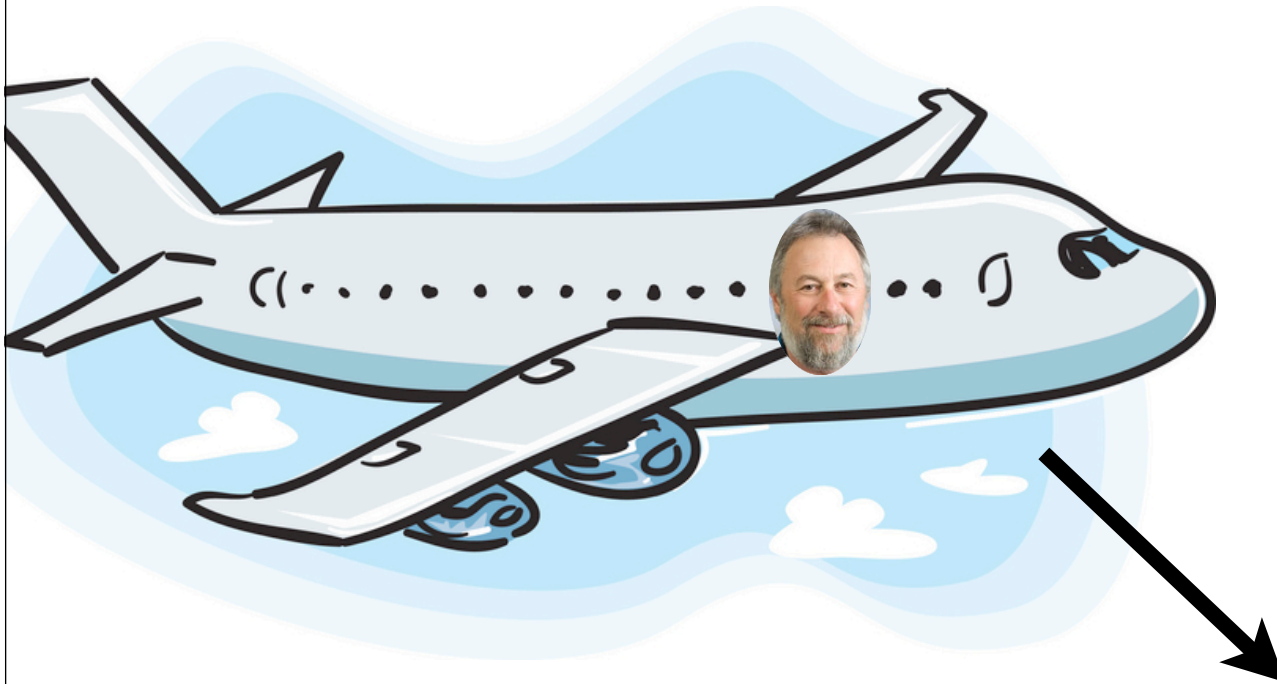
**General Reporting:** January 18 - February 13, 2013

**Team leads:** February 14 - March 6, 2013

**Due to NSF:** April 1, 2013

**CMMAP Site Review will be held in Fort Collins May 21-22, 2013.**

# Where in the world is John Calderazzo?







# Statement from John Calderazzo

I came to extreme **south Florida to write about** and possibly take part in **the state's first Burmese python hunt**. This is a **public bounty** which most wildlife managers and biologists think is an **unfortunate but needed method** to **reduce the population of thousands of pythons breeding** independently and prolifically in Everglades National Park and adjacent Wildlife Management Areas.

**The pythons--the longest reaching 17 feet now and pregnant females containing up to 85 eggs---are the most visible and notorious** of the 350 or so **non-native** or invasive species of plants and **animals** being tracked here. Along with necropsies, a recent survey of roadkilled animals along park roads has been compared to the historical record and suggests that the pythons have been eating their way through the ecosystem.

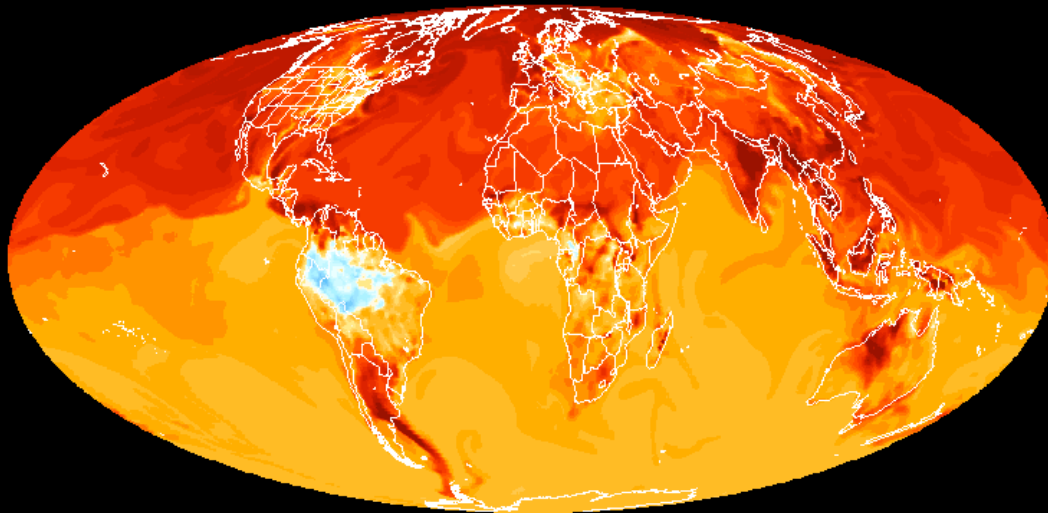
In addition, a **2008 study by the National Park Service showing IPCC climate projections for 2100** suggests that, based on just the factors of **average monthly temperatures and rainfall**, this very **adaptive species could spread to one-third of the area of the continental U.S.**, including every southern state and west through Texas, and southern parts of New Mexico, Arizona, and California. It's hoped that during the three weeks of the hunt, the 750-plus hunters will provide GPS data on the snakes they see or kill. Also, all the killed or captured pythons will be necropsied for diet and other information.

# The Breathing of the Earth

**Scott Denning**

3-Hourly [CO<sub>2</sub>] 500m AGL

Month=Jun, Day=1, Year=2004



Popular book  
Topic: Carbon Cycle

