



# PHASE

## *A Newsletter of Skaggs Center Internships*

Vol. 3, Issue #7

July 2010

### 2010 SUMMER INTERNS REACH THE MIDWAY POINT



The fourth of July marked the midway point for the 2010 ESRL Summer Intern program. Student events designed to supplement their work assignments were arranged weekly so that students who could get away for an hour could take advantage of the programmed activities. The following is a sample of programs that were offered to students:

The NOAA National Ocean Survey (NOS) invited the ESRL Student Program (Ann Thorne) and the Outreach program (Carol Knight) to distribute their literature on June 29th and help answer questions at the NOS booth during the ISTE (International Society for Technology in Education) teacher's conference. Eric Hackathorn and

Brandon Lyngé also attended and shared their work on educational games that focus on NOAA's mission.

On June 30th, NOAA interns participated in the NIST poster session. Please see page # 3 for pictures.

Ryan Neely's presentation on the use of Lidars on July 1st provided tips on choosing a career and to be flexible on where their career choices may take them.

On July 5th, NOAA Interns attended the UCAR/NCAR sponsored student picnic at the Bear Creek apartment complex. Please see pages # 4 and 5.

The UCAR/NCAR High School Intern program reception and orientation took place on July 6th at the Green Center #1. NCAR Director, Dr. Roger Wakimoto, addressed the interns and encouraged them to pursue their interests and to not be afraid to change their plans on what career to follow. He encouraged them to make the most of their summer internship.

Dr. Eric Thaler, NWS, gave a spirited presentation on July 14th on the "Application of Mathematics in Weather Prediction." The discussion stressed the

importance of mathematics in the pursuit of a science career.

Carol Knight, ESRL Outreach, conducted a very informative tour of the Skaggs Research Center on July 15th. She also had the interns view the Science on a Sphere presentation with Dr. Russ Schnell and his guests from India.

Eric Hackathorn, gave his 2nd Life presentation on July 16th and asked for input into the development of a virtual game he is working on to provide information on NOAA through a different medium.

Bob Glancy, NWS, provided a workshop on careers with the NWS and covered the various National Centers and their mission. He stated that the Boulder office was one of 38 offices in the Central Region. In addition to describing a typical day as a NWS employee he also covered career paths and salary expectations. After his workshop, he gave the interns a tour of the NWS Center and showed how he typically issues a forecast on severe weather. (See page #8.)

On July 21st, ESRL Interns traveled to Fort Collins to tour the CSU Department of Atmospheric Science. After arriving, Dr. Sonia Kreidenweiz, presented an overview of the graduate programs. She covered the admission process which is based on individual qualifications as opposed to quota numbers for admission. She explained the typical curriculum and how the program developed to where today there are 17 faculty and 90 graduate students.

Graduate student Katie Boyd then gave the ESRL Interns a tour of the offices and buildings of the department complex.

A highlight for ESRL, NIST, NTIA, NGDC and SWPC Interns on July 23rd was Dr. Susan Solomon's presentation titled, "Going to Work for the Planet: A Life of Joy in Science." (Dr. Solomon was a leader of the National Ozone Expedition at McMurdo Station, Antarctica (1986-7) and co-chair, Intergovernmental Panel on the Climate Change Science Report (2007).

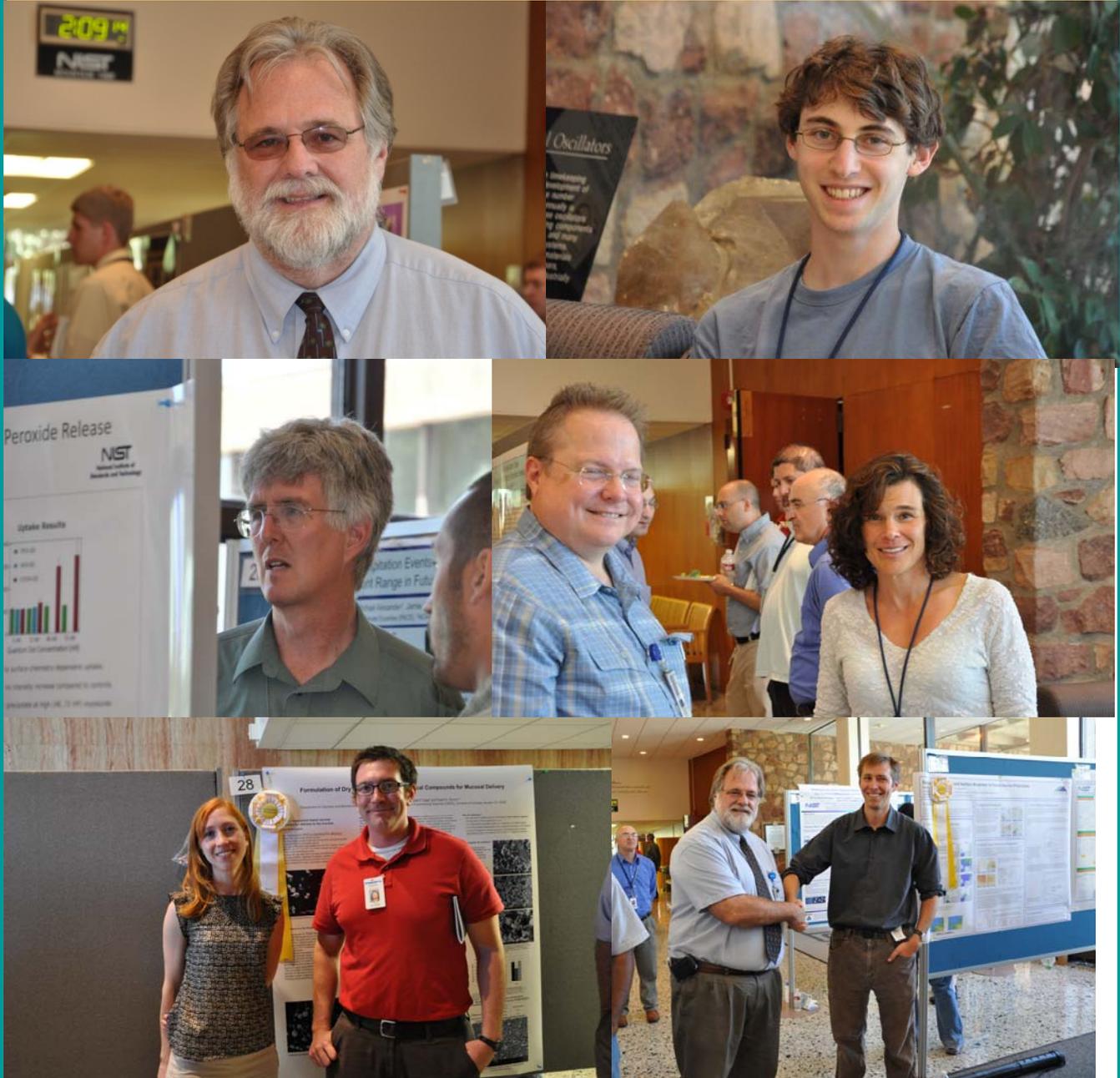
Dr. Solomon described the beauty of Antarctica as a crystalline palace with no human intervention. She traced the development of her research where in 1987 the Montréal Protocol called for a freeze and a phase out of CFCs because of concern about ozone depletion.

Dr. Solomon described her early research at the NCAR library where she went over balloon data and graphed profiles by hand. She discovered a problem with the British data at 12 to 25 kilometers and developed her rationale for the chemistry going on at the stratosphere. This led to her discovery of the cause of ozone depletion.

In 2000, she received the National Medal of Science, and in 2007 the Nobel Peace Prize. (See pages # 8 and 9.)

Dr. Solomon encouraged interns to pursue what they enjoyed and to not be afraid. She said hard work was key and to not be afraid to think out of the box.

## A SAMPLING OF NOAA PARTICIPANTS AT THE NIST POST DOC POSTER SESSION ON JUNE 30TH



Top row left: Dr. Chris Fox, NOAA/NGDC Director; at right, Justin Schaffer, ESRL Intern. Middle left: Don Mock, ESRL Deputy Director for Administration; at right, Dr. Joe Magee and Ann Thorne. Bottom left: NOAA ribbon winners J'aime Manion and David McAdams; Bottom right: Dr. Fox with NOAA ribbon winner Matthew Higgins.

**Education, Science, Careers**

## A SAMPLING OF RECENT PHASE PROGRAM ACTIVITIES



At left: On July 1st, Ryan Neely, prior to his trip to Russia, gave summer students a presentation on the use of Lidars. At right, after Dr. Solomon's talk, the Boulder County Chapter of Blacks In Government (BIG) held a special meeting on July 23rd and invited students to attend.

Below: Scenes from the UCAR/NCAR, NOAA joint student picnic on July 5th. at the Bear Creek.



## Education, Science, Careers

## MORE SCENES FROM THE UCAR/NCAR AND NOAA PICNIC



After the picnic dinner, it was time to burn off those new calories with friendly games of basketball and volleyball. Bottom row at right: Graduate student, Yi-Chih, from Taiwan.

### Education, Science, Careers

## SCENES FROM THE ESRL ORAL/POSTER PRESENTATIONS



Top row: Andrea Thorstensen, Chris Slocum, Mark Berguson and Logan Smith. Middle row: Robin Betz with her mother and her mentor Dr. Cecile Penland, Mathieu Carriere, visiting French student. Bottom row: Jessica Lucas, Justin Schaffer, Natasha Whitney, and Delonté Duff, without dreadlocks.

## Education, Science, Careers

## SCENES FROM THE NCAR/NOAA HIGH SCHOOL ORIENTATION



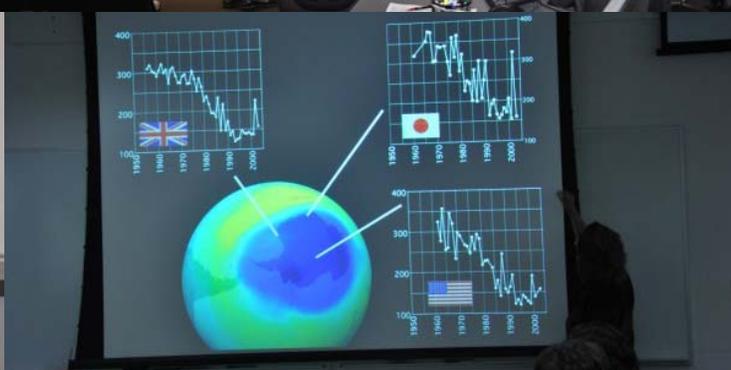
The 2010 NCAR/NOAA High School Intern program orientation was held on July 6th at the UCAR Center Green. Top left: David Long, NOAA High School Intern with Ann Thorne and Justin Schaffer; Top right Kristen McCormack, NOAA High School Intern; Center left: Santiago Arredondo and Esteban Gonzalez, NCAR High School Interns; Center right, Kyle Ham, NCAR Education Specialist; Bottom left: Nancy Wade, UCAR Employment Administrator with Dr. Roger Wakimoto, NCAR Director, Bottom right: High School Intern Lauren Hartsough and Dr. Lynette Laffea, an Intern mentor who works with the NCAR Earth Observing Laboratory .

**Education, Science, Careers**

## SCENES FROM STUDENT LECTURE ACTIVITIES

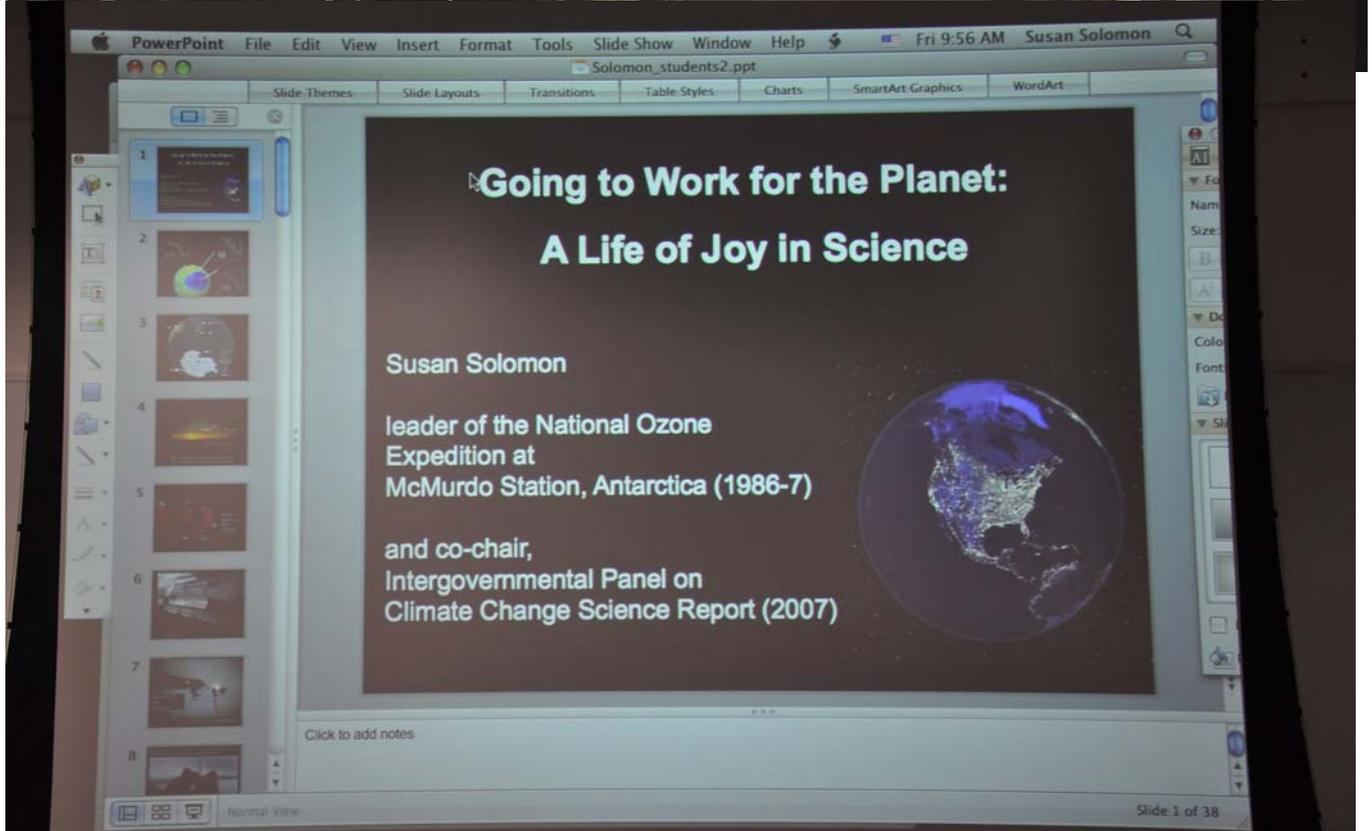


Above left: Dr. Eric Thaler, gave a spirited presentation on the application of mathematics to weather prediction. The presentation generated the most discussion among students and clarified the need to take math courses to be successful in a science career. Middle left: Bob Glancy, NWS, gave an overview of the National Weather Service nation-wide. He stressed careers and later gave a tour of the NWS office and gave examples of what is involved in issuing an official NWS forecast. Bottom left: Dr. Susan Solomon, Nobel Peace Prize winner, shared her work history that led to her discovery of explaining the triggers for the ozone hole.



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## MORE SCENES FROM SUSAN SOLOMON'S TALK



## Education, Science, Careers

## SCENES FROM ISTE CONFERENCE AND CSU VISIT ON JULY 21ST



From left, representing NOAA at the ISTE teacher conference were Carol Knight, Peg Stetten, Molly Harrison, and Eric Hackathorn at the NOAA NOS booth on June 29th. There were over 17,500 educators and exhibit personnel attending the conference in Denver.



Above, Dr. Sonia Kreidenweiz briefs students on graduate programs in the Department of Atmospheric Science. Later, Katie Boyd, student, provided a tour.

## Education, Science, Careers

## MORE SCENES FROM THE ORAL/POSTER PRESENTATIONS ON JULY 20TH



Top left: Jackie Topp, “What’s in the Air: Informing the Public of NOAA’s Efforts Monitoring Green House Gases in Our Atmosphere.”

Top middle: Justin Krosschell, “Intercalibration of the GOES Energetic Particle Sensor (EPS) Solar Proton Measurements During Solar Cycle 23.”

Top right: David Etim, “Creating GIS Data Sets to Display with Weather Hazards.”

Bottom left: Lauren Shoemaker, “Fingerprints of Emissions and the Carbon Cycle: An Educational Website Describing Stable and Radiocarbon Isotopes of Carbon Dioxide.”

Bottom middle: Owen Shieh, “HWRF Simulation of Hurricane Ike (2008) and the UAS-OSSE Project.

Bottom right: Wesley Smith, “TopoGrabber: Obtaining High Resolution Datasets for Ingest by WRF, LAPS, and STMAS.”

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## Key Advisory Board Functions

The key functions performed by the PHASE Advisory Board include: **Advocacy on Employment and Education Issues**, **Membership and Outreach**, and **Consultation with Students and Supervisors**. The following is a brief description of each function:

### **Advocacy on Employment and Education Issues**

The advocacy function is performed when advisory board members take a pro-active role in seeing that an employment related issue is addressed by the appropriate community, education or government organization. This function typically involves the following: assisting students and parents with local school issues, e.g. summer jobs, internships, grades and course requirements; informing the local community on student internship opportunities; and researching employment opportunities and various employment related topics such as housing, travel, and community demographics.

### **Membership and Outreach**

The membership committee is charged with an ongoing program of recruiting and retaining members of the Advisory Board. This involves coordinating a yearly membership drive for new members. The outreach function is performed by going out into the community to explain NOAA internship programs and communicating the assistance that can be provided. Typically, this function involves attending meetings and briefings, networking with NOAA agency representatives, providing orientation briefings to newcomers, attending training sessions and education workshops - both as participants and presenters.

### **Consultation**

Consultation services are typically private and are provided to students, parents and teachers who need explanations related to PHASE documents and procedures. This function typically involves mediating an issue at the lowest level before it escalates and assisting the ESRL Student Coordinator with employee issues.



***PHASE* is a publication  
of the ESRL Student  
Coordinator**

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*PHASE* seeks to inform  
employees and students on  
employment programs and  
Internships.

Editors: Tony Tafoya and  
Ann Thorne

## **MISSION**

*The mission of the Practical Hands on Application to Science Education (PHASE) program is to have students benefit from a science intern program at a Federal facility.*

*The objectives of the program are (1) for laboratories to identify student projects that provide a learning environment and focus on practical hands-on activities; (2) to provide laboratories with profiles of students who have an interest in considering NOAA and science in general as a positive career choice; and (3) to inform students of career opportunities in NOAA.*

*For more information visit: [PHASE@noaa.gov](mailto:PHASE@noaa.gov) and [esrl.noaa.gov/outreach/student\\_programs](http://esrl.noaa.gov/outreach/student_programs)*

## **MARK THE DATE**

Thursday, August 5th—Reception and public viewing of High School Intern poster session for parents and general public. Green Center, 3:30–6:30 p.m.

2010 Summer Interns should return their Program Evaluation forms to Ann Thorne before they leave their internship.

For Interns driving back to their home state, please take your time and drive safely.

For last minute details and unanswered questions please contact Ann Thorne at 303.497.4600 or [ann.thorne@noaa.gov](mailto:ann.thorne@noaa.gov)

### **COLLABORATING ORGANIZATIONS**

#### **GOVERNMENT AGENCIES:**

NOAA/OAR/ESRL,  
NWS/SWPC, NESDIS/NGDC  
NIST  
NTIA  
Workforce Boulder County

#### **HIGHER EDUCATION:**

University of Colorado/CIRES  
CU SORCE Program  
UCAR/NCAR

#### **COMMUNITY:**

SACNAS  
MESA  
AISES  
National Image, Inc.  
Blacks-In-Government (BIG)

#### **SCHOOL DISTRICTS:**

Boulder Valley (BVSD)  
St. Vrain Valley (SVVSD)

## The Objectives of the ESRL Intern Program

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- A. To seek a broad development and expansion of internship opportunities for high school, college and graduate students and high school teachers.
- B. To assist and encourage NOAA organizations in establishing goals and identifying the best possible sources for the recruitment, employment, training and advancement of student Interns.
- C. To encourage and actively support the promotion and advancement of Interns already employed.
- D. To analyze and determine the educational and professional needs of students seeking entry and advancement in employment; and, whenever possible, provide appropriate training and counseling services to meet these needs.
- E. To establish and continually upgrade a broad range of contact with supervisors and Interns across the country via personal visits, telephone calls, e-mails, and periodic newsletters.
- F. To respond to the reasonable requests from non-NOAA groups for student referrals when their objectives are supportable and similar to the ESRL PHASE program.
- G. To enhance the promotion of student excellence, pride, and camaraderie through organized and regularly scheduled social and scientific gatherings which will serve to bind students together.
- H. To provide a forum for major research issues of local and national significance so that students may be better informed and may express their views through seminar presentations before their peers and supervisors.
- I. Seek to expand the program to include other organizations.

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## *A Newsletter of Skaggs Center Internships*

**Please add me to newsletter mailing list. (Please print or type.) Issue #7, 2010**

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E-mail Address

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