

Southern California Section
Fall Section Meeting – November 3rd

The Fall Meeting of the Southern California Section (SCAAPT) was held Saturday, November 3rd at California State University, Northridge. Attendees were welcomed to the meeting by SCAAPT president James Lincoln. Special thanks are due to local hosts Norman Herr and Say-Peng Lin for arranging the meeting site. About 60 people attended.

Dr. Damian Christian (California State University, Northridge) <damian.christian@csun.edu> gave the first morning invited talk “Our Star, the Sun, and the Discovery of Earths Outside our Solar System”

His abstract: We live in an exciting time in which Astronomers are discovering over 100 new planets orbiting nearby stars (exoplanets) each year. NASA's Kepler mission is finding Earth-sized planets. I will review several of the search methods for exoplanets and present recent results. There are education materials available from several exoplanet surveys and the Kepler mission (<http://kepler.nasa.gov/education/>). The understanding and characterization of new planets also requires us to have better measurements of many of their host star's properties. Understanding the activity of nearby stars leads us back to our own star, the Sun. CSUN has studied solar activity for almost 40 year and I will review these results and new results from NASA's Solar Dynamics Observatory (<http://sdo.gsfc.nasa.gov/>).

Dr. John Louis Callas <http://www.nasa.gov/mission_pages/mer/070628/callas.html> (Jet Propulsion Laboratory) gave an invited talk titled “Curiosity and The Robotic Exploration of Mars”

His abstract: For many years now, robotic explorers have been conducting field geology day after day on Mars at different locations on the surface. These rovers have traversed great plains, climbed mountains, descended into deep craters and survived rover-killing dust storms and frigid winters. As the rovers move, each day becomes a brand new mission with new sights and new geology to explore, making significant discoveries in understanding the Red Planet and finding evidence of past habitable environments that could possibly have supported life. The surface robotic enterprise has just been joined by another, larger, more capable rover, the Mars Science Laboratory, Curiosity. In addition to extending the geologic exploration at a third location on Mars, Gale Crater, Curiosity begins the next phase of exploration with the ability to search for the chemical building blocks of life, organic molecules, moving closer to answering the questions, was there life on Mars, is there life on Mars?

Robert Cousins (University of California, Los Angeles) <cousins@physics.ucla.edu> gave the afternoon invited talk “Observation of a New Particle at CERN -- The Long-sought Higgs Boson?”

His abstract: The Higgs Boson was postulated nearly five decades ago as a crucial element of the modern theory of the forces of nature, and has been the subject of worldwide searches ever since. On July 4, two huge collaborations, working at the Large Hadron Collider outside Geneva, announced independent observations of a Higgs-like boson. I will describe the motivation, the experiments, the data, and the interpretation.

A brief business meeting was held before lunch. Items discussed were:

- A report on SCAAPT's application for 501 c. 3 non-profit status was presented. SCAAPT already has an EIN and is waiting for the final letter of acknowledgement from the government. A vote to amend the section constitution to add "SCAAPT is a Non-Profit" passed unanimously.

- This year's student video contest was announced and details were presented.
- The next New Physics Teacher Workshop will be held December 1 at CSU Long Beach. It will focus on E&M. Attendees were asked to invite any new high school teachers to attend.
- Participants were encouraged to attend the AAPT Winter Meeting in New Orleans and Summer Meeting in Portland.
- There was a discussion about continuing the postcard notification. Most received the card and some decided to come because of it. SCAAPT will be continuing the discussion at a future meeting.
- It was suggested that SCAAPT start a Facebook page. SCAAPT plans to act on the suggestion.
- At the end of the business meeting, a group photo was taken.

The ever-popular Show 'n' Tell featured demonstrations by: Claudio Egalon, James Lincoln, and Bernard Cleyet.

In the afternoon participants were treated to a Planetarium show presented by Jan Dobias (CSUN)

The following contributed talks were presented:

“Water-Powered Rockets with collaborative, computer-supported approach” Matthew D'Alessio, Loraine Lundquist (CSU Northridge)

“The use of collaborative web-based documents to create scientific research communities in physics classrooms” Norm Herr & Brian Foley (CSU Northridge).

“Transformer basics, wall warts and vampires” Bill Layton (UCLA)

“Techniques for Developing the Undergraduates' Identity in the Physics Community” Sissi Li (CSU Fullerton)

“Techniques for Successful Student Films” James Lincoln (Tarbut V' Torah HS)

“Grants Available for Robotics Programs” Nancy McIntyre (Robotics Education and Competition Foundation)

“Kepler's second law and conservation of angular momentum” Pari Spolter (Orb Publishing)-

The meeting ended with our World Famous "Order of Magnitude Contest." This meeting's question was: *What fraction of the local atmosphere passes through an internal combustion engine on a typical weekday?* (Contributed by Myron Mann) Jim Broderick received a \$100 gift certificate from Cenco/Sergent-Welch for having the answer closest to the median, 10^{-6} . Alan Hanson won an autographed copy of a book by Nobel Laureate Hannes Alfvén. John Altounji, Bernard Cleyet, Harry Manos, Gary Reynolds, Al Siger, and Greg Wood won door prizes of dissectible lasers donated by UC Irvine.

We thank our corporate sponsors – Cenco/Seregent-Welch <http://www.cencophysics.com/> and UC Irvine for their support and donation of door prizes.

The Southern California Section will hold its Spring Meeting at Santa Monica College. Please bookmark the SCAAPT URL <http://www.scaapt.org/> and check for more information in late winter.

Mary Mogge, Past Section Representative
Southern California Section