

**Southern California Section
Spring Section Meeting – May 2nd**

The Spring Meeting of the Southern California Section was held Saturday, May 2 at California State University Channel Islands, Camarillo, California. Attendees were welcomed to the meeting by the local host, Geoff Dougherty, California State University, Channel Islands Physics Department. Special thanks are due to Geoff for arranging the meeting site. Approximately 65 people attended.

The meeting began with a choice of two workshops:

"Get Updated with Vernier" Clarence Bakken, Vernier Software & Technology, led the workshop and highlighted new Vernier products.

"The Sound of Music–Teaching the Physics of Sound and Musical Instruments" Jerry Clifford, CSU Channel Islands, led the workshop, described the course offered by the Physics Department, and presented some of the activities used in it.

Dr. Rene Ong from the University of California, Los Angeles gave the morning invited talk: **"Viewing the Universe at Very High Energies"** Dr. Ong described how the field of very high energy astrophysics has developed rapidly during the last few years as a result of new instruments and exciting new discoveries. Ground-based telescopes, such as VERITAS (Very Energetic Radiation Imaging Telescope Array System) in southern Arizona, have made great progress in understanding processes in the cosmos that produce tera-electron Volt (TeV) particles. Currently more than seventy TeV sources have been found. These include supernova remnants, pulsar wind nebula, x-ray binaries, active galactic nuclei, and some sources not yet identified. It is hoped that their study will shed light on the origin of cosmic rays, produce tests of Lorentz invariance, and contribute to the search for cold dark matter. For more information, please visit <http://www.astro.ucla.edu/~rene/research.html> and <http://www.astro.ucla.edu/~rene/research.html>.

Dr. Brian Rasnow from California State University, Channel Islands gave the afternoon invited talk: **"Do-it-Yourself Electronics Laboratory"** Dr. Rasnow described a university level electronics course he has developed. The students design and build a very compact and simple "open" electronics workbench with adjustable DC power supplies, a versatile function generator, an audio amplifier, and a solderless breadboard. They are able to construct all of this on a small-perforated circuit board for about \$25. Along with a digital multimeter (about \$10), they are able to build, troubleshoot, and study a wide variety of circuits without an oscilloscope or other apparatus. The goals of the course were for students to be able to understand basic concepts, learn the art of measurement, identify simple circuits, and learn to parse schematics. Dr. Rasnow presented the results and lessons learned from this experimental curriculum.

The ever-popular Show 'n' Tell featured demonstrations by James Lincoln, Tim Heumier, Ralph F. Wuerker, David Chandler, Fred Carrington, and Jeff Phillips.

The following contributed talks were presented:

"Example Harmonic and Anharmonic Oscillators Demonstrated" Bernard Cleyet, University of California, Santa Cruz

"Physics of Music Online at CSUN "David R. Bach and Henning Ottsen, California State University, Northridge

"Where are my lot lines? Precedent and Intention in land survey" Donald Krotser, California State University, Northridge

"Engineering Innovation: A summer program for high school students" Jerry Clifford, California State University, Channel Islands

"Living And Teaching With A GEMe2 Electric Car" Ralph F. Wuerker, UCLA, retired

"Video Frame Analysis of 9/11 Building Collapses" David Chandler, Eleanor Roosevelt CLC

Two contributed talks "Measurement of Edge Plasma Rotation" and "Measurement of Plasma Parameters in the LAPTAG Plasma Device" were presented by high school students: Amy Lee, Gabriela Rosales, Robin Wong, Roland Hwang, Max Praglin, Ali Lodge, Rachel Biniyaz, Jason Novak. They participate in a Saturday research program at UCLA directed by Dr. Walter Gekelman. Joe Wise, New Roads School and Bob Baker, University High School also work with the program and sponsored the talk.

The business meeting featured a PowerPoint highlighting AAPT Programs and describing Associate Membership, the new membership class available to section members. There was also a call for officer nominations and a request for sites for future meetings.

The meeting ended with our World Famous "Order of Magnitude Contest." This meeting's question was: *"How long would it take a properly-applied net force equal to your hardest push to stop the continental drift of the North American plate?"* The answers ranged from 10^6 s to 10^{15} years. Peanut McCoy submitted the median answer of 30,000 years and selected *Teaching Introductory Physics* by Aarons. Door prizes were won by Edward Steever (Cenco Inertial Balance), Larry Friedrich (Hydrocar), Peter Krumbein (Vernier Lab Quest), Jean-Luc Gauvreau (Light Sanitizer), Jim Broderick (Ranking Task Exercises in Physics), Don Krotser (AAPT tee shirt), Claudio Egalon (AAPT tee shirt), Richard Moore (AAPT tee shirt), James Lincoln (Cenco Sweatshirt), Gregory Wood (The Physical Universe), John Currie (Cenco Particle in a Box), Steve Cooperman (Teaching Physics with Physics Suite), Michelle Meyer (Physics by Giambattista), Katsuya Yamada (Teaching Physics for the First Time), and Ralph Wuerker (Physics Physlets). We thank our corporate sponsors – Vernier Software & Technology, John Wiley & Sons, McGraw-Hill Science, AAPT, and Cenco-Sargent/Welch – for their support and donation of door prizes.

The Southern California Section will hold its Fall Meeting in late October or early November. Please bookmark the SCAAPT URL <http://www.scaapt.org/> and check for the date in early Fall.

Mary Mogge, Section Representative
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