

Southern California Section Fall Section Meeting – November 6th

The Fall Meeting of the Southern California Section was held Saturday, November 6th at Azusa Pacific University. Attendees were welcomed to the meeting by the local host, Bradley “Peanut” McCoy, and Azusa Pacific’s Associate Dean, Don Isaak. They also heard from AAPT’s incoming Executive Officer Beth Cunningham via Skype. Special thanks are due to Peanut McCoy for arranging the meeting site. Approximately 50 people attended.

The meeting began with a special session **"What I Did Over Summer Vacation."** The presentations were:
"Report on Outreach Workshop in Portland" Beth Stoeckly <stoeckly@silcom.com>, CSU Channel Islands
"LabVIEW Workshop at AAPT Summer 2010" Tim Huemier <theumier@apu.edu>, Azusa Pacific University
"PhysTEC at CSULB" Rod Ziolkowski <rodziolkow@aol.com>, (TIR) CSU Long Beach
"Quarknet Boot-Camp" Deborah Lilly <lilly@cdlilly.com>, Lakeside High School
"The QuarkNet Collaboration: Opportunities for Professional Development in High Energy Physics"
Kris Whelan <kkwhelan@lbl.gov>, Lawrence Berkeley Laboratory

Dr. Michael Loverude <mloverude@fullerton.edu> from California State University Fullerton gave the morning invited talk **"Research on the Teaching and Learning of Thermal Physics."** Mike described his experiences as a member of a collaborative project to perform research on student learning and develop instructional materials in the context of upper-division courses in thermal physics. As part of this project, he has developed a sequence of tutorials in which students apply statistical methods to systems including the ideal gas and the Einstein solid. The sequence begins with simple probability and ends with descriptions of entropy and the second law of thermodynamics in both macroscopic and statistical terms. The talk provided a brief overview of the project and selected results, with special attention to research on student reasoning about probability as it relates to the materials described above.

Dr. Leslie Wickman <LWickman@apu.edu> from Azusa Pacific University presented the afternoon invited talk **"What Makes Earth So Special?"** Leslie described how scientists have discovered a long and growing list of numerical parameters describing our universe which appear to have been finely tuned to support the existence of life. She stated that this phenomenon is known variously as the Anthropic Principle, the Fine-Tuning Principle, or the Goldilocks Principle, due to the fact that if any one of these numerical values were just a little bit bigger or smaller, life could not exist. Leslie described how the Earth’s location and size determine gravity, atmosphere and climate – and the narrow range of values for life as we know it.

During the business meeting, the members present voted to do away with the \$10 per year dues and institute a \$10 per meeting fee. They also voted to pursue non-profit status for SCAAPT. The president announced that SCAAPT is establishing mini-grants to form "Local Area Networks" (LANs) to encourage ongoing discussion and collaboration among physics teachers. These LANs may be either geographic or interest aligned. To support these communities, SCAAPT will begin accepting applications for competitive awards that can be used to form and support these communities. There was also a discussion of new teacher workshops and how to best provide them to local teachers. Any SCAAPT members who were interested were encouraged to assist with the effort.

The ever-popular Show ‘n’ Tell featured demonstrations by Gary Reynolds “A Cheap High-Tech Lab in Diffraction for High School”, Wen Zhang “Sensorstick”, Claudio Egalon “Apparent Weight Demonstration”, Myron Mann “Current Divider/Voltage Divider”, Lucian Carter “two Devices to Locate and Identify Sky Objects”, James Lincoln "UCLA Physics Video."

The meeting featured an inaugural poster session during the lunch break. The idea was well received and better scheduled poster sessions will be a feature of future meetings. Presenting at this first poster session were:

James Lincoln <ihatephysics@gmail.com>, *The California Standards and 8th Grade Physical Science: What Does It Mean for Your High School Physics Class*

Melissa S. Taylor <lisataylorlmu@gmail.com>, *Loyola Marymount University, A Survey of Southern California Physics Teachers' Characteristics and Classroom Practice*

Simon Huss <shuss@windwardschool.org>, *Windward School, Active Learning Studio Physics Classroom Design for Secondary Education*

Homeyra Sadaghiani <hrsadaghiani@csupomona.edu>, *Cal Poly Pomona, Critical and Scientific Thinking for Preservice Elementary Teachers*

Homeyra Sadaghiani <hrsadaghiani@csupomona.edu>, *Cal Poly Pomona, The Impact of the History of Physics on Student Attitude and Conceptual Understanding of Physics*

Vincent Coletta <vcoletta@lmu.edu>, *Loyola Marymount University, Improving Students' Thinking Skills with Explicit Instruction*

Edward Price <eprice@csusm.edu>, *CSU San Marcos, Development and Evaluation of Large-Enrollment, Active-Learning Physical Science Curriculum*

Eric Page <epage@sandiego.edu>, *University of San Diego, Wikis in the Physics Classroom*

Charles De Leone <cdeleone@csusm.edu>, *CSU San Marcos, Assessing the Impact of Digital Whiteboards in an Active Learning Physics Course*

During the afternoon the following contributed talks were presented:

"Using Modern Inexpensive Cameras for Fun and Learning" Bob Rumer <rrumer@callutheran.edu>, California Lutheran University

"How Noyce Scholarships are Changing Physics Teacher Preparation at USD" Eric Page <epage@sandiego.edu>, University of San Diego

"Undergraduate Research: Of What Benefit?" Donald G. Isaak <disaak@apu.edu>, Azusa Pacific University

"Light Bulb Mystery" Timothy Heumier <theumier@apu.edu>, Azusa Pacific University

The meeting ended with our World Famous "Order of Magnitude Contest." This meeting's question was: *"These days, how many in a 'ton of pictures'?"* Cliff Gerstzman and Bob Baker both submitted the median answer of 300,000. Cliff selected a CorEx System fur Schuleversuche Kalorik from American 3B Scientific and Bob picked a Pascar from PASCO. Door prizes donated by Physics Curriculum & Instruction were won by Sandra Costello (Electrostatics 3D), Lee Loveridge (Physics of Sports), and Eric Page (Exploration of Physics, Volume 1).

We thank our corporate sponsors – PASCO <http://www.pasco.com/>, Physics Curriculum & Instruction <http://www.physicscurriculum.com/>, American 3B Scientific <http://www.a3bs.com/>, and McGraw-Hill <http://www.mcgraw-hill.com/> – for their support and donation of door prizes.

The Southern California Section will hold its Spring Meeting May 14 at Pierce College, Woodland Hills, California. Please bookmark the SCAAPT URL <http://www.scaapt.org/> and check for more information in early Spring.

Mary Mogge, Section Representative
Southern California Section