



Science and Technology
of Materials, Interfaces, and Processing

Southern California Chapter

SUMMER 2013

Special points of interest:

- Elmer Carvey Scholarship Winner Announced
- AVS 60th International Symposium & Exhibition and Short Course Program Information
- Fall Tour at UCLA's own Tokamak Reactor & Large Area Plasma Device plus Pizza Dinner!

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Elmer Carvey Scholarship 2013 Winner Announced

Jeff Lince, Ph.D.

The winner of the 2013 Elmer Carvey Scholarship is Tyler Jones, who just graduated from William S. Hart High School in Santa Clarita, CA. Mr. Jones maintained a commendable academic record while studying there. He excelled at a two year AP Physics course under the renowned teacher Martin Kirby, who is on the AP Physics Exam Development Committee and was the Siemens AP Science Teacher of the Year in 2000.

Mr. Jones will attend California Polytechnic University at San Luis Obispo in the fall, where he will major in Physics. He plans to become a research and development physicist, and eventually give back to the community as a college- or high school-level teacher.

Tyler tells us that he loves “solving puzzles, and physics is, in essence, solving puzzles and then finding the math that explains the solution in real world terms.”

The Elmer Carvey Memorial Scholarship was established in honor of Elmer Carvey, an active member of the SCCAVS from 1964 until 1982. The Scholarship is awarded to undergraduate students

attending public, four-year colleges in California who are planning careers in areas of interest to the society, which include vacuum science and vacuum-related technologies that include surface and thin film science, nanotechnology, the understanding of materials properties, and the development of new materials. The stipend is \$1,500.00 for one year.



Tyler Jones is the 2013 Elmer Carvey Scholarship Winner. He is a graduating high school senior with plans to study Physics at Cal Poly at San Luis Obispo in the fall.

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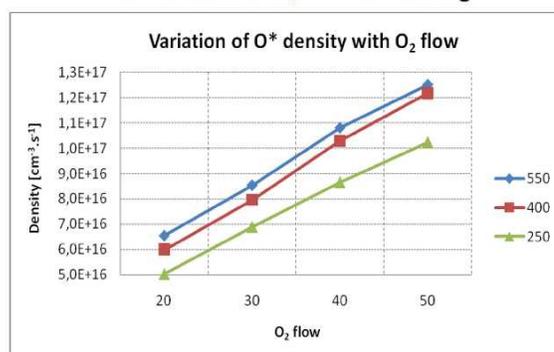
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**SOUTHERN CALIFORNIA
CHAPTER OF THE AVS :
THE SCIENCE &
TECHNOLOGY OF
MATERIALS,
INTERFACES, AND
PROCESSING**

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**We're on the web!
www.sccavs.org**

Upcoming Events

AVS 60th International
Symposium &
Exhibition
Oct 27-Nov 1, 2013
Long Beach
Convention Center
Long Beach, CA



Local Chapter Activities

Dinner & Tour of the Basic Plasma Science Facility at UCLA

Source: <http://www.physics.ucla.edu/psti/research.html>

Did you know there is a fusion reactor in Los Angeles? The Electric Tokamak (ET) housed at UCLA is an innovative concept aimed at achieving a compact, economic fusion reactor. Poor plasma energy confinement and very limited plasma beta (the ratio of plasma thermal energy to magnetic field energy) have compromised conventional tokamaks. The main purpose of the Electric Tokamak experiment is to generate unity beta plasmas with greatly improved energy confinement at low magnetic field (.25 Tesla) and explore the implications for future fusion plasma research. With a major radius of 5 m, a minor radius of 1 meter and a height of 3 meters, it is the world's largest tokamak vacuum chamber in volume.

Housed alongside (or more accurately, underneath) the ET is a second generation large area plasma device dubbed the LAPD-U. The magnitude and extraordinary experimental capabilities provided by this new device are such that it has become a national user facility known as the "Basic Plasma Science Facility" (BASPF). The facility provides a place in which research from institutions around the country as well as abroad can come to perform frontier-level experiments that require physical conditions not suitable for small devices.

The SCCAVS will be hosting a tour of the Electric Tokamak as well as the adjacent Basic Plasma Science Facility (BASPF) the evening of October 8, 2013. This tour will include a guided tour and talk focusing on the Tokamak device as well as the state-of-the-art plasma device dubbed LAPD-U. A pizza dinner will be provided on-site and the cost to attend is \$15 (\$10 students). A formal announcement with speaker information will be sent to all SCCAVS mailing list members in the following weeks.

To be placed on an early interest list please email chair@sccavs.org.

TOP: ET at UCLA's Plasma Science & Technology Institute is the largest volume vacuum chamber of its kind

BOTTOM: LAPD-U large area plasma device is part of an external user facility shared by UCLA



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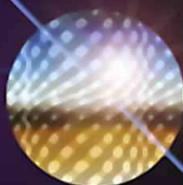


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AVS 60

Science & Technology of Materials, Interfaces, & Processing

If you are not already an AVS member, take advantage of special anniversary rates and benefits in honor of the AVS 60th Anniversary!

2013 dues (now through December 31st, 2013) for both new and renewing members will be just \$60.

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- Physics Today Subscription
- Technical Meetings

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for a comprehensive list of web based sites related to vacuum technology, including vacuum related calculators, history of vacuum technology, tutorials in basic vacuum science, as well as vacuum- and coating-related periodicals.

We're on the web!
www.sccavs.org

The AVS 60th International Symposium & Exhibition is in Southern California this year!

Sunday, October 27, 2013 - Friday, November 01, 2013
Long Beach Convention Center, Long Beach, California

The AVS International Symposium and Exhibition addresses cutting-edge issues associated with materials, processing, and interfaces in both the research and manufacturing communities. The weeklong Symposium fosters a multidisciplinary environment that cuts across traditional boundaries between disciplines, featuring papers from AVS technical divisions, technology groups, and focus topics on emerging technologies. The equipment exhibition is one of the largest in the world and provides an excellent opportunity to view the latest products and services offered by over 200 participating companies. More than 2,000 scientists and engineers gather from around the world to attend.

Short courses are offered in conjunction with the International Symposium providing specialized training in specific areas of vacuum science and related technologies. The Symposium also provides a career center available to all attendees. The Career Center covers such topics as résumé preparation, job search skills, networking, interviewing skills, and more. The Career Center provides the opportunity for job seekers to submit their résumés and meet with potential employers. Other symposia features include Tutorials, Professional Leadership opportunities and several related workshops.

Registered AVS attendees are invited to visit the exhibit which comprises an extensive display of tools, equipment, services and consulting for film deposition, surface and interface measurements and analysis, materials, chemicals, supplies, vacuum production and measurement, and related instrumentation for surface, interface and film measurements, as well as professional literature and publications in these topics.

In addition, consultants, engineers, biologists, chemists, physicists, purchasing professionals, scientists, students, technicians, and exhibitor staff working or studying in the fields of applied surface science, biomaterial interfaces, electronic materials and processing, magnetic interfaces, manufacturing science, MEMS/NEMS, nanoscience, thin film, plasma science, surface science, or vacuum technology are welcome to register for FREE.



August 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10 <i>Mount Wilson Observatory Tour</i>
11	12	13	14	15	16	17
18	19	20 <i>SCCAVS Meeting at Renato's</i>	21  <i>Full Moon</i>	22	23	24
25	26	27	28	29	30	31