

**NEW**

NEW LOOK  
FOR 2013!

**Special points of interest:**

- He Leak Detection Dinner Meeting February 5th, 2013
- SEW Held in Long Beach for 2013-Calling all teachers!!!
- Bi-Annual Mt. Wilson Observatory field trip announced for August 10, 2013-60-Inch Telescope nighttime viewing!!!

**Contact Us:**

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Science and Technology  
of Materials, Interfaces, and Processing

Southern California Chapter

January 2013

Happy New Year from your Local Chapter!

**Cutting Edge Leak Detection Dinner Meeting February 5th**

*Jim Garner*

Join us at the Holiday Inn, Santa Ana at 6:30pm on February 5th, 2013 for a dinner and presentation sponsored by the Southern California Chapter of the AVS. Mr. Markel will be speaking to the AVS community on the topic of, **“Cutting Edge Leak Detection.”** The most successful leak detection technologies and strategies will be discussed for a variety of applications. Anyone concerned with leaks in both vacuum and non-vacuum systems will benefit.

Topics will include:

Overview of Technologies - Helium, dye, rate-of-rise, and halogen sniffers.

Test Strategies - Examples ranging from large chambers and pressure vessels to small, hermetically sealed electronic modules

Test Standards - Official and generally-accepted practices

Test Design - for accuracy, response time, and cost

Practical Challenges – Virtual leaks, Porosity, Background Contamination, etc.

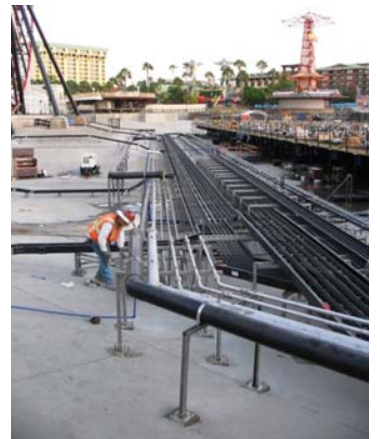


**Jeff L. Markel is President & CEO of Helium Leak Testing in Northridge, CA**

Jeffrey L. Markel, President and CEO of Helium Leak Testing, Inc. is the driving force behind one of America's oldest and most successful leak testing companies. He has extensive engineering experience, in all aspects and methods of non-destructive leak testing. In prior roles at Rockwell and CHA he specialized in process development and statistical process control of thin film deposition, reactive ion etching, and ion beam implantation.



The cost of attendance is \$30 (\$15 students) and includes a 3-course dinner and the presentation. Dinner choice of meat or vegetarian lasagna. Dinner starts at 6:30pm followed by the presentation at 8:00pm.



Due to the high level of interest in the topic, we suggest you register early to save your spot. **REGISTRATION DEADLINE IS FEBRUARY 1st.**

**Registration form and more information is available on the web at:**

[www.sccavs.org](http://www.sccavs.org)



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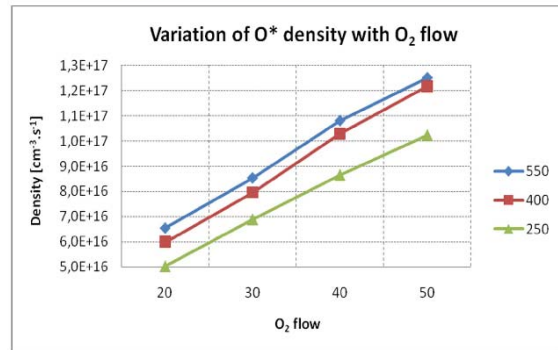
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**SOUTHERN CALIFORNIA  
CHAPTER OF THE AVS :  
THE SCIENCE &  
TECHNOLOGY OF  
MATERIALS,  
INTERFACES, AND  
PROCESSING**

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**We're on the web!**  
[www.sccavs.org](http://www.sccavs.org)

**Upcoming Events**

NCCAUS 34th Annual  
Vacuum Equipment  
Exhibition  
February 21, 2013  
Holiday Inn  
San Jose, CA

SVC TechCon 2013  
April 20-25, 2013  
Rhode Island  
Convention Center  
Providence, RI

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



**Local Chapter Activities**

**AVS Science Educators' Workshop  
October 28-29, 2013  
Long Beach, California**

The AVS Science and Technology Society is seeking applications for 8-10 high school and middle school science teachers to receive, FREE OF CHARGE, complete vacuum apparatus and training to understand and demonstrate:

- Expanding Balloon under vacuum
- Feather falling without air resistance
- Transmission of sound
- Exponential Decline of Pressure
- Pressure/Force/Weight Relationship
- Altitude/Pressure Relationship
- Boyle's Law (Pressure x Volume/Temperature is constant)
- Measurement of polytropic exponent
- Latent Heat of Vaporization
- Adiabatic Expansion of Moist Air
- Sublimation of Ice (Freeze Drying)
- Buoyancy of Air



(And many other phenomena)

This Science Educators Workshop will be held in conjunction with the AVS 60<sup>th</sup> International Symposium & Equipment Exhibition, attended by thousands of chemists, physicists, and materials scientists from around the world. Workshop attendees will also be able to attend conference sessions and meet the scientists.

**Date:** October 28 – 29, 2013

**Location:** Long Beach Convention Center (travel expenses reimbursable)

**Credit:** 1.5 CEUs or 150 hours from the University of Dayton

**For more information:**

Workshop URL: <http://www.avs.org/education-science-educators-workshop.aspx>  
AVS Homepage: [www.avs.org](http://www.avs.org)

**Application:** Before August 30, 2013, apply online at the above Workshop URL or contact anna-corinne@sccavs.org to request email application to be submitted via fax or email

**Photos Above From Left to Right: Science Educator's Workshop attendees explore the equipment exhibition; Teachers at 2010 S.E.W. in Albuquerque,**

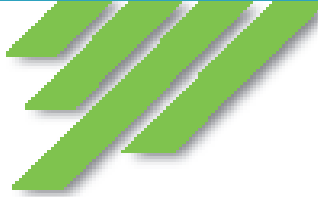


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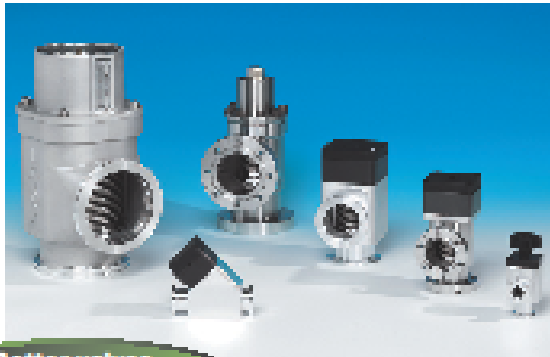


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*Science and Technology  
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*Bi-Annual SCCAVS Field Trip to Mount Wilson Observatory Announced for August 10th, 2013*

In the first half of the 20<sup>th</sup> Century, eminent astronomers such as Harlow Shapley and Edwin Hubble used the incomparable facilities of Mount Wilson Observatory to forever alter humankind's view of our place in a vast and expanding Universe. Today, Mount Wilson's original solar and night-time telescopes, the world's largest for two generations of astronomers, have been joined by new facilities achieving unprecedented high-resolution views of the stars.

For the first time, the SCCAVS is sponsoring a nighttime event complete with Observatory private tour starting at 6:00pm, followed by dinner on the observation deck of the 60-Inch Telescope, and hours of **private nighttime viewing through the telescope!** Join your local Chapter on Saturday, August 10, 2013 for this one-of-a-kind experience!

Ticket prices are \$60 (no children under the age of 12 permitted), and include tour, dinner, and private viewing session **until 1:00AM**. Parking is an additional fee of \$5 per car and passes must be purchased in advance. Due to the nature and duration of the tour, children under age 12 are not permitted. The approximately 2-hour tour involves about a mile of walking and climbing some stairs. Please contact [annacorinne@sccavs.org](mailto:annacorinne@sccavs.org) for more information. Early registration is recommended as there are only 25 spaces available and this event sells out fast!



From Left to Right: 60-Inch Telescope and 100-Inch Telescope.  
Photo credit: Dave Jurasevich

## January 2013

| Sun | Mon | Tue  | Wed | Thu | Fri | Sat |
|-----|-----|--|-----|-----|-----|-----|
| 6   | 7   | 8 <i>Chapter Meeting<br/>Renato's, Westminster</i> | 9   | 10  | 11  | 12  |
| 13  | 14  | 15   | 16  | 17  | 18  | 19  |
| 20  | 21  | 22   | 23  | 24  | 25  | 26  |
| 27  | 28  | 29   | 30  | 31  | 1   | 2   |
| 3   | 4   | 5 <i>He Leak Testing<br/>Speaker/Dinner</i>        | 6   | 7   | 8   | 9   |