

Workshop Announcement

"Seeing Radiation: Nuclear Science Experiments"

A Teacher Workshop for High School Science Educators

Friday, April 3, 2009

8:00 am to 5:00 pm

at

University of California, Berkeley

This workshop will focus on using cloud chambers and Geiger counters to help teach the principles of radioactivity and radiation. Participants will receive a wealth of materials - a cloud chamber kit and Geiger counter, workbooks, and classroom activities. This workshop will include a tour to the Advanced Light Source and lectures by leading scientists. The educational material is targeted for high school science teachers, grades 9-12.

A review of the workshop is available online:

http://www.nuc.berkeley.edu/news/Sci_teachers_workshop/index.htm

Preliminary Topics

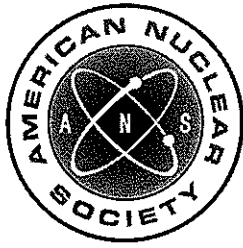
- What is radiation?
- How is it measured?
- Where does it come from?
- What experiments can you do in your school?

Sponsors: The American Nuclear Society (ANS) and the Northern California Chapter of the Health Physics Society are proud to sponsor this workshop. Scientists and engineers from the Northern California Section of both professional societies (ANS-NCS and NCCHPS) are presenting the material. The UC Berkeley, Nuclear Engineering Department, is generously providing facilities for the event.

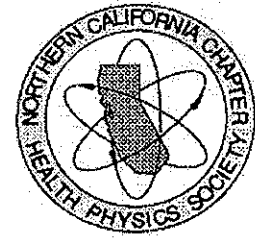
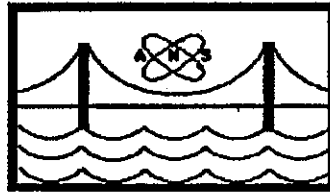
Funding for the workshop is provided in part by the Northern California Section of the American Nuclear Society, in part by the Northern California Chapter of the Health Physics Society, and through individual and organizational contributions to the American Nuclear Society (ANS).

Educational Opportunities for Your Students

See the box on page four for information about a **nuclear science and engineering summer camp** for juniors and seniors and **science and engineering scholarships** for graduating high school seniors.



American Nuclear Society
Northern California Section



January 2009

Northern California Chapter
of the Health Physics Society

Dear Science Teacher:

We are pleased to invite you to a special one-day workshop on nuclear science for high school science teachers. The workshop will be held on **Friday, April 3, 2009**, in Berkeley.

The purpose of the workshop is to enhance your understanding of basic nuclear science and leave you with information and activities that you can use in your own classroom. The workshop will feature presentations and demonstrations by scientists and engineers on the following topics:

- **Radiation** We build a cloud chamber to view alpha, beta and gamma radiation.
- **Isotopes** These are used as radio-tracers in medicine, research and industry.
- **Geiger counters** How do they work? Government surplus counters will be demonstrated and handed out.

We will also provide attendees with various handouts and teaching aids. These will include: cloud chamber kits, science and engineering career brochures for students, and resources for obtaining additional information. Geiger counters will be provided (subject to availability).

A tentative schedule is as follows:

- 8:00 a.m. Registration - Coffee and Donuts
- 8:30 a.m. Welcome, introduction (by Prof. Jasmina Vujic, UC Berkeley)
- 9:00 a.m. Nuclear radiation basics (by health physicist)
- 9:45 a.m. Cloud chamber experiment (by industrial safety specialist)
- 10:30 a.m. ABC's of Radioactivity (by a guest scientist)
- 11:15 a.m. Energy and the Environment research lecture (by a guest scientist)
- 12:00 p.m. Lunch (at the facility)
- 1:15 p.m. Tour to Advanced Light Source at Lawrence Berkeley National Laboratory
- 2:30 p.m. Geiger counter experiment (by health physicists)
- 3:30 p.m. "Energy from Fusion: California's Role" (by Prof. Peterson)
- 4:45 p.m. Evaluation and Conclusion

Workshop registration is free, but as spaces are limited, it is important to RSVP. Lunch will be provided as part of the workshop. We are asking school administrators to consider this workshop an in-service professional development activity.

To enroll, complete the registration form (below) and mail it to the address below. Please respond early; registrations will be taken on a first come-first served basis and space is limited to 25 participants. Once you have registered, we will provide you with more information, including directions to the facility. If you have any questions regarding directions or registration, you can e-mail or call Marija Drezgic at marijad@nuc.Berkeley.edu or at 510 / 642-4077. If you have technical questions regarding the workshop, you can e-mail northcal@local.ans.org.

Sincerely,

Prof. Jasmina Vujic
Workshop Coordinator

Return form

PLEASE PRINT

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Workshop on Nuclear Science, Friday, April 3, 2009, UC Berkeley				
Last name		First name		MI
Address		City	State	Zip
School Name			Grade	Subject
Home Phone		School Phone		Email

Photo ID and Citizenship information required for admission to ALS Tour included in workshop

Citizenship _____

I will bring my _____ Drivers License _____ Passport bearing the # _____

Mail form to: Marija Drezgic
Nuclear Engineering Department
University of California, Berkeley
4155 Etcheverry, MC 1730
Berkeley, CA 94720-1730

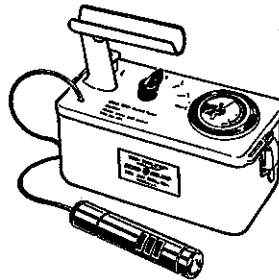
Phone: 510 / 642-4077

Outreach Department
American Nuclear Society
555 N. Kensington Ave.
LaGrange Park, IL 60526

Attend Workshop and Get Your Free Geiger Counter!



Register NOW



- Do you have a science student who could benefit from a **nuclear science and engineering summer camp** at a leading university? Financial assistance is available to provide this opportunity to high school juniors and seniors. For more information about the nuclear engineering camp, see <http://precollege.mst.edu/nuce.html>. For information about financial assistance, contact northcal@local.ans.org
- Do you have a graduating science student whose college education you would like to support? The ANS-NCS also offers **science and engineering scholarships** to graduating high school seniors. For more information, see <http://www.Nuc.Berkeley.EDU/ans/norcal/>

Can't attend the workshop? Interested in nuclear science and technology? Want information and ideas for your classroom?

Check out the ANS ReActions newsletter! Back issues are available online, at

<http://www.ans.org/pi/teachers/reactions/>

While you're there, **sign up for e-mail notification** when future issues appear on-line.

Visit the Public Information page on the ANS web site! <http://www.ans.org/pi/>

Visit www.aboutnuclear.org