

# Workshop Announcement

## "Seeing Radiation: Nuclear Science Experiments"

A Teacher Workshop For High School Science Educators

March 23, 2007

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](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.

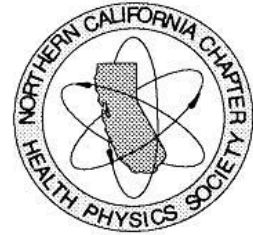
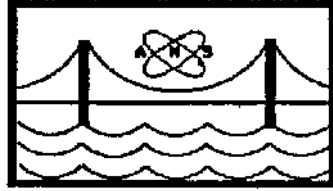
Funding for the workshop is provided in part by a grant to ANS from the U.S. Department of Energy, Office of Nuclear Science and Technology, in part by the Northern California Chapter of the Health Physics Society, and through individual and organizational contributions to ANS PEP and ANS-NCS.

In addition to the Science Teacher Workshop, two other educational opportunities are available:

- *Do you have a science student who could benefit from a science and engineering summer camp at a leading university? Financial support is available to provide this opportunity free to high school juniors and seniors. For more information, see <http://www.nuc.umd.edu/summercamp/camp.html>.*
- *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/scholarship.htm>.*



American Nuclear Society  
Northern California Section



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 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, Geiger counters, science and engineering career brochures for students, and resources for obtaining additional information. 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. Cancer medical 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

Lunch will be provided as part of the workshop. We are asking school administrators to consider this workshop an in-service professional development activity. Workshop registration is free, but as spaces are limited, it is important to RSVP to [marijad@nuc.berkeley.edu](mailto:marijad@nuc.berkeley.edu). For more information, please see [http://www.nuc.berkeley.edu/news/Sci\\_teachers\\_workshop/index.htm](http://www.nuc.berkeley.edu/news/Sci_teachers_workshop/index.htm).