NCCHPS

The Newsletter of the Northern California Chapter of the Health Physics Society

May 2008

NCCHPS Affiliate's Night!

Thursday, May 15, 2008
USS Hornet Museum, Alameda

6 pm-Social Hour
7 pm-Dinner
8 pm-Affiliate's Night Activities

About the Affiiate's Night:

Join us for a fascinating evening remembering those who have served the US in peace and conflict by attending the Affiliate's Night at the USS Hornet Museum, Alameda. Affiliate's Night is our opportunity to thank the many supporters of NCCHPS. Our Affiliates will introduce their products and services to the Chapter. There will be opportunities to visit Affiliate representatives, try out various products, and learn about their many services. The Board will give a presentation about Chapter activities. Check inside this issue of the Newsletter to find out more about our Affiliate's products and services.

The USS Hornet Museum provides a remarkable venue for our meeting. You'll get an up-close view of the exploits of this historic vessel and her namesakes, including the Doolittle Raid, naval campaigns, and the recovery of the Apollo 11 astronauts, first to the moon. Check inside for directions to the USS Hornet Museum.

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Seventh Annual Science Teachers Workshop

On March 14 the American Nuclear Society – N. California Section (ANS-NCS) and NCCHPS with the UC-Berkeley Department of Nuclear Engineering hosted the seventh annual 2008 UC Berkeley Science Teachers Workshop at the UC Berkeley Bechtel Center. About 28 junior and high school teachers from across Northern California attended this full day event. The workshop was lead off by a warm introduction by Prof. Jasmina Vujic (Chair, Department of Nuclear Engineering), then followed by radiation basics lectures by Brooke Buddemeier (LLNL, NCCHPS) and Prof. Eric Norman (LLNL, UC Berkeley), a cloud chamber demonstration by Joel Cehn (NCCHPS), an informative "Energy Technology and Climate Change" lecture by John Ziagos (LLNL), a tour of the Advanced Light Source at Lawrence Berkeley National Laboratory, and hands-on geiger counter experiments by Annmarie Wood-Zika (LLNL). The workshop was concluded with a motivational "Energy from Fusion: California's Role" presentation by Prof. Per Peterson. A "seriously rad" educational time was had by all the science teachers, who professed their sincere appreciation for the up-to-date nuclear information and bag full of lecture materials and classroom props provided by the workshop. Many thanks to Marija Drezgic (Dept. Nuclear Engineering Chair's Assistant), Mark Mitchell (workshop coordinator, ANS-NCS, LLNL), Radoslav Radev (NCCHPS, LLNL), Kathleen Dinnel-Jones (NCCHPS, LLNL), John Pasinosky (NCCHPS), and the students of the UC Berkeley American Nuclear Society for all of their support and effort in coordinating this 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.

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IMPORTANT INFORMATION ABOUT THE MOYER FELLOWSHIP

from Charles Schmidt, Bill Vermeere and Radoslav Radev

In this newsletter we are pleased to include a long overdue biography of Burton Moyer and history of the Moyer Fellowship Fund. Take a moment to find this two page article. We think that you will find it interesting and informative. Note: The writing was done by Linda Schmidt who is not a chapter member, but happens to be related to one of the committee members.

In May, we will send a $4000. check as our portion of the annual $8000. Moyer Fellowship. That fellowship is awarded to the outstanding applicant for the seven graduate fellowships offered by the HPS, and is the most prestigious of those. Over the past few years, we have increased that stipend from $3000 to the present $4000, an accomplishment for which our chapter members should be proud.

Including the chapter meeting in May, 2007 we have received donations in the past twelve months totaling $2335. That is a goodly amount. However it is well short of our annual commitment, and also represents gifts from only seven chapter members. From the MidYear Meeting we raised $590 total from the book sales by Ralph Thomas and the "games" managed by Radoslav Radev. We gratefully acknowledge donations received from Mike Grissom, Melissa Mannion, Calvin Jackson, Heidi Lach and Annmarie Wood-Zika. Special thanks to Patricia Durbin and to Elsa Nimmo for their especial generosity.

We cannot conclude without a request for additional gifts to the Moyer Fund. If you haven't done so already, take a look at the adjacent document about Burton Moyer. Consider making an investment in the future of Health Physics. If you are willing and able, bring a check payable to NCCHPS to this upcoming May meeting. Students in Health Physics will benefit from your support.

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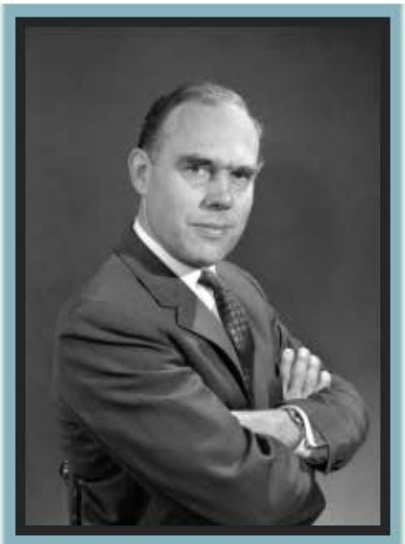

Burton J. Moyer (1912–1973) was a professor and chairman of the University of California-Berkeley Physics Department, and staff member at Lawrence Berkeley Laboratory.

As both a researcher and teacher, Professor Moyer combined the best of scientific and humanistic traditions by using his scientific training and clear thinking for humane ends. His work has led him to be known as "the father of accelerator health physics."

The **Burton J. Moyer Memorial Fellowship** was established by the Northern California Chapter of the Health Physics Society to honor Moyer and to encourage his ideals in the study of the safe use of radiation for the benefit of all people.

One of the most highly regarded awards for education in radiological protection, the Fellowship consists of a cash stipend as well as a travel grant to allow the recipient to attend the Health Physics Society annual meeting.

Special thanks to Wade Patterson of the NCCHPS and Carl Helmholz of the UC Department of Physics, who were the guiding lights in establishing the Fellowship.

The Burton J. Moyer Memorial Fellowship

BURTON J. MOYER WAS BORN in 1912 in Greenville, Illinois, where his father was professor of chemistry at Greenville College. He was greatly influenced by his parents, both deeply religious persons, who instilled in him a great sense of responsibility and service. Moyer received his undergraduate degree at Seattle Pacific College and completed his Ph.D. in physics at the University of Washington in Seattle in 1939.

He returned to Greenville College as professor of physics but was soon lured to Berkeley to work under Ernest Lawrence in the growing field of radiation physics. After joining the Radiation Laboratory in 1942, Moyer initially worked on the separation of uranium isotopes; his research eventually encompassed topics in both nuclear and high-energy physics. A series of papers soon established him as one of the world's leading high-energy physicists. Perhaps his best known paper, "High Energy Photons from Proton Nucleon Collisions" (1950), announced the discovery of the neutral pi meson—a milestone in the field of particle physics.

Moyer did not sequester himself away in the lab, however. He enjoyed teaching, particularly mechanics, and was appointed associate professor in the physics department in 1950 and professor in 1954. He directed the thesis research of 62 students, generating a steady stream of important papers. In both his writing and lectures, Moyer was notable for his clarity, precision, thoroughness, and expert analysis.

MOYER'S OUTSTANDING INTELLECT and sense of ethical responsibility made him uniquely well suited to respond when, in 1947, Lawrence requested that he establish a professional health physics group at the Radlab (now Lawrence Berkeley National Laboratory). The successes of early proton synchrotrons had led to a radiation crisis that needed prompt attention—technically difficult work that was of vital importance for the safety of his colleagues.

Moyer accepted the challenge, and established a standard that would be adopted by accelerator laboratories around the world, as independent health physics groups consulted with accelerator designers on matters of radiation safety. In 1962, he successfully installed shielding at the Bevatron designed to reduce radiation intensities by a factor of 100. This "Moyer Model" subsequently served in the design of many accelerator shields.

Moyer continued to direct the health physics activities at the Laboratory until

Moyer in the classroom.

ALL PHOTOS COURTESY ERNEST O. LAWRENCE BERKELEY NATIONAL LABORATORY

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Moyer (at right) with Ed McMillan during the eta zero zero experiment.

1970. Throughout his tenure, he made significant decisions that shaped the health physics profession. His research and publications led in large measure to present understanding of radiation protection problems; he was a key figure in establishing the dosimetry of accelerator radiation fields and in developing modern radiation transport codes.

IN SPITE OF HIS HEAVY COMMITMENT at the Laboratory, Moyer was active on several campus committees as well as on the Statewide University Radiological Safety Committee (1959–60). In 1962, he accepted the chairmanship of the physics department at Berkeley and became a trusted administrator who successfully weathered the campus tumult of the 1960s. "At the time of the worst student unrest, he was one of a handful of people who managed to gain the confidence of both the administration and of the rebellious students," recalled Emile Segré in 1993.

Moyer was an elder in the Presbyterian Church and had wanted to spend time in missionary work in China. Although various events prevented this, in 1965 he traveled to the India Institute of Technology at Kanpur, where he spent a year teaching, aiding the research program, and helping to create a viable technical school.

In 1968, Moyer retired from the physics department chairmanship and returned to research and teaching, as well as to work with the National Science Foundation and Atomic Energy Commission. In 1971, he accepted the position of dean of the College of Liberal Arts at the University of Oregon, where his sound judgment and good humor helped guide the University through that institution's worst budgetary crisis. He died in Eugene, Oregon on April 21, 1973.

AS A SUPERVISOR, MENTOR, and friend, Professor Moyer was admired as a man of generous and serene goodwill and absolute integrity. The Burton J. Moyer Fellowship honors his legacy of service to our fellow men everywhere.

Material for this biography was gathered from In Memoriam, *by E. Segré, E. D. Commins and A. C. Helmholz; the G. William Morgan Lecture* Accelerator Radiological Protection—A Personal and Privileged Odyssey, *by Ralph H. Thomas; and* A Man and his Contribution to Radiological Protection—A Tribute, *by Ralph H. Thomas.*

Brochure written and designed by Linda Schmidt.

The national Health Physics Society administers the awarding of the Fellowship.
Applications may be obtained from the HPS web page, www.hps.org.
Additional information and materials may be found at http://hps.org/documents/student_fellowship_08.pdf .

Previous Recipients

1985 Anthony Greenhouse, University of California, Berkeley
1986 Mark Joseph Rudin, Purdue University
1987 Chwei-jeng (James) Liu, Texas A&M
1988 John Copeland, University of Lowell
1989 Christine L. Hartmann, University of Wisconsin-Madison
1990 Marty A. Tries, University of Lowell
1991 Philip C. Fulmer, Texas A&M
1992 Brian Scott, University of Florida
1993 Mark Nell, University of Missouri, Columbia
1994 H. Justin Mohler, Colorado State University
1995 Jay M. Thompson, Texas A&M University
1996 Loren M. Thomsen, University of Florida
1997 Lionel G. Bouchet, University of Florida
1998 Jennifer Jacobs, University of Florida
1999 Kenneth G. Veinot, Georgia Institute of Technology
2000 Heather Gepford, Georgia Institute of Technology
2001 Chengyu Shi, Rensselaer Polytechnic Institute
2002 Yayum Song, University of Nevada, Las Vegas
2003 Baodong Wang, Rensselaer Polytechnic Institute
2004 Jonathan Saleeby, University of Massachusetts Lowell
2005 Nino Chelidze, Idaho State University
2006 Scottie Walker, University of Florida
2007 Maia Avtandilashvili, Idaho State University

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2008 Election of Officers for the Northern California Chapter of the Health Physics Society

On behalf of the Northern California Chapter of the Health Physics Society (NC-CHPS) Board of Directors, we call your attention to the 2008 ballot of officers.

Ballots were mailed March 31, 2008 listing the candidates running for president-elect, treasure, and member-at-large. You may write in a candidate if you wish, using the space provided for each office. Biographies and election statements from the candidates were attached for your reference.

Please return your ballot so that it is received no later than April 30, 2008. You may return your ballot to Heidi Lach, NCCHPS Secretary, by any of the following methods:

- By e-mail to lach@gene.com

- By regular mail sent to:
  Heidi Lach, NCCHPS Secretary
  Genentech Inc.
  1 DNA Way MS 71
  South San Francisco CA 94080.

For a mailed ballot to be valid, it must show your name and return address on the envelope and must be signed across the seal of the envelope.

Thanks for your support of the NCCHPS and its officers!

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303 948-5001 (off)
303 907-0324 (cell)
denny.cannon@thermofisher.com

Eberline became Thermo Electron, which just became Thermo Fisher Scientific. As the name gets larger, so do the markets we are asked to serve. Still using radiation physics as the basis for our technology, we now offer the DOE, Nuclear Power, and the 1st responder market some true innovation. We now have an entire family of instruments, designed for use by the DOE and the Health Physics market, built around the RadEye hand-held meter. Example: Recall the E600/380AB approach to Alpha contamination measurements? A two handed operation with cable connection problems? It is now a 1-handed, lightweight device capable of logging 1600 data-points. And no cable! We're doing similar things with pancake probes as well. We now offer a NaI-based Survey meter/pager/dosimeter (RadEye-PRD-ER) that has a range to 10R/hr! You may have seen the Interceptor - a high resolution (Cad Zinc Telluride) hand-held Isotope Identifier. We have a new PCM-2 due out in '07 and we offer a state of the art Hand/Foot monitor, the HFM-11. For more information, please contact Denny

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California's only licensed radioactive waste broker/processor, Thomas Gray & Associates provides disposal brokerage, health physics, training and transportation services to the Western United States. To find our how we can provide you service, please contact us at (714) 997-8090 or on the internet at http://www.tgainc.com.

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Seltech Inc is the sales organization representing a number of nuclear measurement manufacturers. Clyde Makinson in Richland Washington and Rick Tomblison in Blackfoot Idaho work as application oriented salesmen with over 70 years of combined experience in the nuclear industry.

Seltech Represents:

- Ludlum Measurements
- Gamma Products – automatic sample changers, counting systems and shields
- HI-Q Environmental Products – air sampling equipments
- Lab Impex Systems – area and stack monitoring system
- XRF Corp – Hand Held Isotopic Identifier with CdTe detector
- Ordela Inc – alpha scintillation detector and alpha spectrometers
- TSA Systems – SNM monitors and mobile GPS survey systems.
- Bladewerx – alpha spectra, continuous air particulate monitors
- Shieldwerx - Polyethylene-Based Gamma & Neutron Shielding

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DRIVING DIRECTIONS

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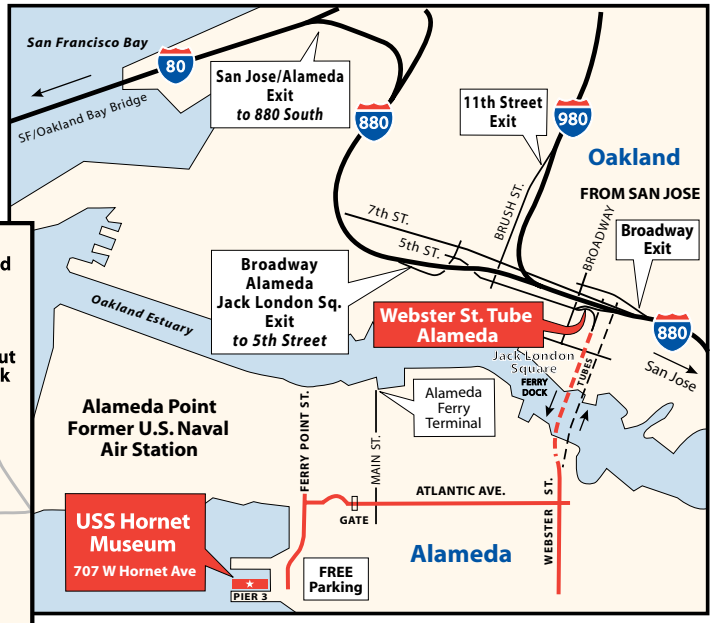
www.uss-hornet.org



Accessible by Land…or Sea

- Centrally located between Oakland & San Francisco airports
- Charter bus and ferry services available
- 750 complimentary parking spaces adjacent to the ship

From San Francisco and Bay Bridge:

Cross the Bay Bridge towards Oakland and follow the signs for S880/San Jose/Alameda. Take the Broadway/Alameda exit and turn right on 5th Street. After proceeding at least three blocks, merge into left lane and follow signs to Alameda via the Webster Street Tube (tunnel). Upon exiting the tube, follow Webster Street to Atlantic Avenue and turn right. Follow Atlantic Avenue through the gate into Alameda Point (formerly Naval Air Station Alameda). Turn left on Ferry Point and proceed along the water towards the cluster of large ships.

From Sacramento and 80 Westbound:

Take 880 south and take the Broadway/Alameda exit. At the end of the ramp turn right on 5th Street. After proceeding at least three blocks, merge into left lane and follow signs to Alameda via the Webster Street Tube (tunnel). Upon exiting the tube, follow Webster Street to Atlantic Avenue and turn right. Follow Atlantic Avenue through the gate into Alameda Point (formerly Naval Air Station Alameda). Turn left on Ferry Point and proceed along the water towards the cluster of large ships.

From Walnut Creek and 24 Westbound:

Take Highway 24 to 980 to downtown Oakland. Take the 11th/12th Street exit onto Brush Street. Proceed to 7th Street and turn left onto 7th Street. Turn right on Webster Street which will take you into the Webster Street Tube (tunnel) to Alameda. Upon exiting the tube, follow Webster Street to Atlantic Avenue and turn right. Follow Atlantic Avenue through the gate into Alameda Point (formerly Naval Air Station Alameda). Turn left on Ferry Point and proceed along the water towards the cluster of large ships.

From San Jose and 880 Northbound:

Proceed toward downtown Oakland and take the Broadway exit. At the end of the ramp, follow the signs to Alameda, turning right on Broadway and then immediately turning right on 7th Street. Go two blocks to Webster and turn right again, entering the Webster Street Tube (tunnel) to Alameda. Upon exiting the tube, follow Webster Street to Atlantic Avenue and turn right. Follow Atlantic Avenue through the gate into Alameda Point (formerly Naval Air Station Alameda). Turn left on Ferry Point and proceed along the water towards the cluster of large ships.

From Oakland International Airport:

Follow Hegenberger out of the Airport and turn left on Doolittle Drive. This will lead over a bridge and become Otis Drive. At the end of the road, turn right on Westline Drive/8th Street. Turn left on Central Avenue and follow the road approximately one mile and through the bend. After the traffic light, stay to the left to continue on Main Street. At Atlantic Avenue, turn left through the gate and into Alameda Point (formerly Naval Air Station Alameda). Turn left on Ferry Point and proceed along the water towards the cluster of large ships.

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2008 NCCHPS Meeting Dates:

May 15, 2008
Affiliates Night
USS Hornet Museum, Alameda

Direct input for our next newsletter to:

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925-423-1470

NCCHPS
c/o Warren TenBrook
Lawrence Livermore
National Laboratory
P.O. Box 808, L-344
Livermore, CA 94550

http://hpschapters.org/ncchps/

The Next NCCHPS Meeting!

Thursday, May 15, 2008
USS Hornet Museum
707 W Hornet Ave
(Pier 3, Alameda Point)
Alameda, CA 94501
(510) 521-8448
http://www.uss-hornet.org

Parking: Free parking is available at the pier.

Deadline: Please register by May 9, 2008 online.

NCCHPS members - $25 ($30 at the door)
Members' spouses - $30
Students - $10
Non-NCCHPS members - $48

Register for dinner ONLINE at

http://hpschapters.org/ncchps/dinner.php3

Contact Quang Le ONLY if you encounter problems with online registration: quangles@sbcglobal.net, (925) 422-7543

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