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Newsletter



NEW ENGLAND CHAPTER OF THE HEALTH PHYSICS SOCIETY

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Visit our web site at www.nechps.org.

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Message to the Members

Margaret E. McCarthy

The penultimate meeting of the NECHPS occurred in May at Papa Razzi in Wellesley- good food and a good talk by Jay Tarzia. At the meeting I collected some additional archive material from our beloved emeriti (see the website for a photo of Bob Devlin and Charlie Killian). I am collecting old NECHPS memorabilia to be archived in Tennessee. Remember that the word, ephemera, means just that—it's gone without care.

Cooperation with the Connecticut Chapter of HPS has been a year long goal of mine. Their meetings have been revitalized what with two this year in West Hartford. If you want to be on the CTHPS mailing list, contact Peter Mas or June Tampkin-Price.

As we close out our year, the Annual Meeting occurs on Tuesday the 8th of June. The placement of this date allows those who will attend the IRPA meeting in Madrid, Spain, to return and attend the annual meeting. You attendees may wish to post photos on our web site. Send those photo directly to the editor. A future 2004—2005 meeting includes a topic on the IRPA meeting.

The Annual HPS meeting will occur in Providence RI in July 2006. The summer school of June 2006 is the responsibility of our Chapter. The board approved Academic Dean is Dave Medich, who is responsible for the didactic portion of the summer school. The topic selected and approved by the board is:

***“Medical Health Physics, [with the sub topic]
Radiation Protection and Shielding”***

The date of the summer school is: June 18—23, with classes June 19—23, 2006.

The Administrative Dean, whose duties include housing and visuals, is myself. Within one month, June 2004, the site will be selected, probably in the near Providence RI area. Any suggestions or notes on potential problems for the town selection and housing can be sent to me.

On a more serious note, the board has established a new policy on the dinner meetings. There will be a

price structuring for registrants before a stated deadline. After that deadline and the at-the-door price will be more costly. Those persons who register are committed for payment. More details will be published in subsequent newsletters.

See you at the June Annual Meeting, Margaret (aka Maggie)

The Father of the H-Bomb

Anthony Honnellio

[Dr. Teller passed away on September 10th, 2003. Tony Honnellio has written a superb biographical sketch about the controversial scientist.]

Born 1908, in Budapest Hungary, Edward Teller was one of the more influential and controversial scientific figures of the twentieth century.

Just before his eighteenth birthday Teller enrolled in the Karlsruhe Institute of Technology in Germany to study chemical engineering. Within two years, he was captivated by the new field of quantum mechanics and pursued its study at the University of Munich. It was during this time that Teller lost his right foot in a streetcar accident. After recovering from the accident and learning to walk with a prosthetic he continued his studies at the University of Leipzig, studying under Werner Heisenberg and obtained a Ph.D. in theoretical physics. After graduating, Teller was a research consultant at the University of Göttingen and worked with Niels Bohr and later with George Gamow as professor of physics and George Washington University after emigrating to the US in 1935.

During this time Teller contributed profoundly to the modern explanation of solar energy and anticipating the theory behind thermonuclear detonations. In 1940 he, along with Leo Szilard and Eugene Wigner, met with a US government committee to discuss the feasibility of a nuclear fission weapon. Later, first at Columbia University, then at the University of Chicago Teller worked closely with Szilard and Enrico Fermi to construct the first nuclear reactor.

Teller became a US citizen in 1941 and joined Robert Oppenheimer and several other leading physicist as part of the Manhattan Project. When operations were moved to Los Alamos, Teller was charged with proving that an atomic explosion would not destroy the

earth in an uncontrollable chain reaction, setting the oceans on fire and consuming the world. During this time Teller was more interested in what he called the "Superbomb" which would mimic the sun employing fusion to create vast amounts of energy.

The atomic bomb was successfully developed and ready for use, Teller recommended a demonstration of the device over the skies of Japan to effectively force Japan to surrender. Oppenheimer rejected the idea and pressed for the military use of the weapon.

After the Soviet Union successfully detonated its own atomic weapon in 1949 President Truman launched a formal drive to develop the fusion bomb. Teller became assistant director at Los Alamos and continued theoretical work on his superbomb. Although Teller has been dubbed the father of the hydrogen bomb, there has been much dispute as to who developed the design. In reality it was Enrico Fermi who thought of using a fission explosion to affect a fusion reaction in deuterium. Additionally mathematician Stanislaw Ulam suggested a configuration in which shock waves from the fission reaction would trigger the fusion reaction. It was Hans Bethe who attributed the idea of the final design to Ulam, however, Teller himself claimed credit for the design stating "Ulam triggered nothing."

In any event the H-bomb was successfully developed and tested on the Eniwetok atoll in 1952 producing one of the most powerful explosions ever felt on earth.

In 1954 Teller fell out of favor with many in the physics community and lost many friends when he testified against Oppenheimer, who had been accused of disloyalty and of delaying the development of the hydrogen bomb. Teller stated the Oppenheimer was a loyal American but went on to criticize the former Los Alamos Director stating "His actions frankly appeared to me confused and complicated... I would personally feel more secure if public matters could rest in other hands".

In the mid to late 1950s Teller became the Associate Director of nuclear laboratories at Lawrence Livermore (a position he maintained until 1975) and was instrumental in the development of safety standards for nuclear power. Teller also championed the ill-fated Project Plowshare. This program was developed to investigate peaceful uses of atomic

weapons such as creating artificial harbors.

In the 1960s Teller became more involved in public policy and was a strong opponent of the Comprehensive Test Ban Treaty with the Soviet Union. He received the Enrico Fermi Award in 1962 for his contributions to national defense and is widely believed to be the model for the leading character in Stanley Kubrick's 1964 film Dr. Strangelove.

In the 1980s Teller was a leading supporter of the Strategic Defense Initiative or Star Wars. He was also one of the first to suggest using nuclear explosions to prevent asteroids from hitting earth.

Edward Teller was gregarious and self-assured. From an early age he had a sense of inner direction that was counted by some as arrogance. He was noted as being generally kind but was also known to easily turn self-righteous and intimidating. He repudiated any moral implications of his work and always strove towards his optimistic vision of technology harnessed for the world's benefit. Like him or not, one cannot deny Edward Teller's contributions to our understanding of the physical world.

New Members

If you know anyone who wants to join NECHPS, tell him/her to visit the website (www.nechps.org) or contact John Sumares at 617-427-2944. Student members are always welcome, and remember, student membership is free!

New Address??

To change your address or contact information, visit the NECHPS website at www.nechps.org. Keeping this information current will ensure accurate entries for everyone in the NECHPS Membership Directory, and will ensure you receive your newsletter.

What's New?

Changed jobs? Just got married? Celebrating a promotion? Drop me line and I'll let the membership know via the Newsletter!

HDER Information

Margaret E. McCarthy

Margaret E McCarthy & Ninni Jacob are the representatives to the HDER program. Below is a statement on the Adoption of New ANSI Standards quoted from the HDER May 2004 newsletter.

“The mission of the Homeland Defense Equipment Reuse (HDER) Program is to provide excess radiological detection instrumentation and other equipment, as well as training and technical support, to emergency responder agencies nationwide to immediately enhance their homeland security capabilities. The used, but operable instrumentation provided through HDER constitutes a rapid, short-term solution to the immediate needs of emergency responders for this equipment. With the recent adoption of new standards for radiation detection instrumentation by the Department of Homeland Security, it is envisioned that this new standards-based equipment will ultimately be substituted for HDER equipment as the new equipment becomes more widely available and as state and local budgets allow. In addition, ODP will require that new instrumentation procured with ODP grant funds be compliant with the new standards. However, calibration and maintenance of HDER equipment will also continue to be allowable expenses.”

Free Meeting!

If you've got something you'd like to submit for the NECHPS Newsletter, please pass it along. We'll accept HP news updates, editorial pieces, or just about anything of interest to the New England Health Physics community. The article featuring recent developments at the MIT Research Reactor is a perfect example of the type of submission that is of interest.

If your submission finds its way into the Newsletter, you'll earn free admission for yourself or a guest to one of the chapter meetings (excluding Annual).

You can e-mail submissions to Doug LaMay at dlamay@mit.edu. WordPerfect and MS Word submissions are acceptable. You can also fax short submissions or announcements to (617) 252-1533.

Membership Dues

Members are reminded that you should pay your dues *as soon as possible* to ensure that your membership status remains in good standing.

Dues are \$10.00 per year, however, a payment of \$40.00 will earn you 5 years of Chapter membership.

NECHPS / Rad Waste Country Club Golf Tournament

Apple Hill Golf Club
Route 107, East Kingston, New Hampshire

Friday, August 6th, 2004 at 8:30 AM

Price of \$95.00 includes 18 holes of golf, cart, buffet dinner, course beverages, and prizes!

RSVP by July 18, 2004 with entry fee to:

Ron Thurlow
Seabrook Station 49-HP
PO Box 300
Seabrook, NH 03874

For more information:

call Ron at (603) 773-7438 OR
e-mail him at ronald_thurlow@fpl.com.

Please RSVP with entry fee by July 18th!

Space is limited to the first 120 paid participants!

GOLFERS WANTED!

If anyone is interested in a NECHPS *golf outing* I would like to hear from you!

I would like to see if there is enough interest to set this up for a weekday sometime this summer.

Please e-mail me if you would be interested:
william.lorenzen@childrens.harvard.edu.

