Health Physics News

Volume XXXIV Number 1 For Specialists in Radiation Safety January 2006

The Official Newsletter of the Health Physics Society

In This Issue

The Birth of the HPS: A Look Back

Spending Time with the Pioneers

Mary Walchuk

As I have been working on the Look Back series for *Health Physics News* I have been speaking to and reading about many of the pioneers in the health physics field and have enjoyed getting to know something about them. In preparation for the July 2005 issue, I spent many hours listening to Newell Stannard's interviews and reading his memoirs and thought, "This is certainly a fascinating and intelligent man who is a real gentleman." I felt like I had gotten to know him a little bit and was saddened when I heard of his death just a few months ago. At that time, I wished I had met Newell in person and had seen him at work in those early days of radiation protection. Then I started wondering who members of the Health Physics Society would most like to meet. So we held a somewhat random poll and following is the question we asked and the varied and interesting answers we received.

If you could travel back in time to the early days of the Health Physics Society (late 1950s, early 1960s) which prominent health physicist would you most like to spend time with and why?

Kelly Classic

HPS Web Site Associate Editor; Health Physics *Editor; HPS Media Liaison; Health Physicist, Mayo Clinic*

Two names come immediately to mind and I can't choose. I'd like to talk to K.Z. Morgan about his stance on radiation protection issues and how it changed (or did it?). I would want to know how it felt for him, a founder of our field, to become somewhat ostracized by the health physics community. My other choice is probably an obvious one—Elda Anderson. She focused her efforts on human radiation effects and education. Since both are interests of mine, I would want to hear her philosophy on these topics and why she believed them to be so important. What would be really fun is if she could see what the Society is doing today (like our efforts toward the Web site "Ask The Experts" feature) and whether she thought it was good for the profession.

Mike Ryan

Health Physics *Editor in Chief; Elda E. Anderson Awardee; HPS Fellow*

I would like to spend time learning from Dr. Elda Anderson. As a recipient of the Elda E. Anderson

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From the President

There is one thing I have suspected all along during my 20-something years as a member of the Society, but have had reaffirmed both last year during my chapter visits and again recently. The Health Physics Society is, without a doubt, an organization in which the membership takes an active role to accomplish the Society's functions. This is especially true for those who serve on committees and in various capacities in the chapters.

As the Board of Directors considers ways that we can accomplish our goals and objectives in a more efficient manner through restructuring of the director positions and committees to better align them with the strategic plan, we must not let this process dampen the volunteer spirit that is so important to the Society and enabled us to be where we are now. Without the dedication of member volunteers, we would not have the quality of scientific programs and continuing education, recognized consensus standards, and government and public outreach programs that we currently experience. For this reason, we will continue to consider the wishes and preferences of those involved in the activities of the Society as this process goes forward.

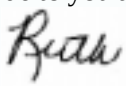
One of the main areas of focus this year is meeting the needs of the membership. Several plans are in development to address issues important to members. First of all, a member survey is being planned to canvas the members on information that the Board, Secretariat, and committees need to provide better service, to attract and retain new members, and to expand our scope of influence and education of the public. To do this, we need to make sure we ask the right questions. The committees and others will be asked to provide what kind of information they need from the members in order to plan new activities or shift course. We will be asking for your full participation in this effort, so we will attempt to make the process as painless and convenient as possible by limiting the number of questions and making it Web-based.

Providing assistance to chapters is also important. Several chapters have asked about Web-based information and functions that are available. The Society is able to provide assistance with chapter Web sites as well as electronic balloting and dues collection. Chapters will be an important part of the history celebration this year and will be given an opportunity to showcase each chapter's history as a poster presentation at the Providence Annual Meeting in June 2006.

Our liaison with Congress and federal agencies on issues important to our membership continues to be a significant part of the Society's activities. With the passage of the Energy Bill, on sections of which the Society provided input, there are additional opportunities for the Society to comment and be involved in the government process. A section of the bill involved the addition of certain naturally occurring and accelerator-produced radioactive material (NARM) to that which is regulated by the US Nuclear Regulatory Commission (NRC) and by states that have an Agreement with NRC. Since Congress directed NRC to do implementing rulemaking within 18 months, the agency is well into the rulemaking process. I recently participated in a stakeholders' meeting to represent the Society on the NARM rulemaking. Key issues in establishing rules to implement the legislation concerned defining the scope of the radioactive material covered under NRC's jurisdiction, specifically, defining "discrete sources" of radium and accelerator-produced material that have been "extracted for use in commercial, medical or research activities." The input I presented during discussions at the stakeholders' meeting was consistent with previous positions taken by the Society, which called for uniform national standards for all uses of radioactive material.

Other items of importance in the Energy Bill are expansion of nuclear power and educational fellowships in health physics. We will continue to follow the rulemaking and implementation activities of the bill and their impact on the health physics community.

Happy 2006 to you and yours,



Ruth E. McBurney

Spending Time with the Pioneers

(continued from page 1)

Award, I have heard many stories about her at the Elda Anderson Breakfast each year at the annual meeting. Dr. Anderson was first an excellent scientist, a world-class teacher, and a mentor to students. She was an advocate for excellence. Dr. Anderson was a mentor, teacher, and colleague to many who have helped shape my career. I believe that her dedication and enthusiasm for the profession of health physics, for lifelong learning, and for the spirit of collaboration that is common among health physicists today would be exciting to see firsthand.

Matt Moeller

HPS Summer School Committee; President and Chief Executive Officer, Dade Moeller & Associates, Inc.

One might joke that given my last name, there is only one answer. In fact, Dade Moeller really would be my choice as the prominent health physicist with whom I would have liked to have spent time during the early days. As some know, Dade and I felt so strongly about creating the opportunity to work together that Dade Moeller & Associates was founded in 1994, immediately following his retirement from Harvard University. As all who know Dade understand, it is a joy and privilege to work with him. The time period when I would particularly have liked to have been around him was when he was stationed with the US Public Health Service in Los Alamos in the late 1940s. Growing up, I would hear stories of those years, including his recollections of meeting numerous scientists who would become legends of the 20th century. One of them was Edward Teller. Dade's work in environmental monitoring at the site was of significance. His methods helped to detect inadvertent liquid releases from the production facility, which led to improved operations. The credibility of his work also changed a site policy that previously prohibited health and safety staff from entering certain restricted facilities. As you can tell, for many reasons I would have cherished working with Dade Moeller in the late 1940s, more than a decade before I was born.

Dade Moeller

HPS Past President, Fellow; Professor Emeritus, Harvard School of Public Health; Chairman of the Board, Dade Moeller & Associates, Inc.

Matt is correct. The years (1949-1952) that I worked in Los Alamos were among the most exciting of my career. They included participating in the atmospheric weapons tests and the birth of our oldest son, Rad. Adding to the excitement was the heavy proportion of young people in the 20- to 30-year age range. We were a close-knit group and shared in many church and cultural activities.

Among the highlights of our church group were the meetings that we held every Sunday evening. For some of these, we invited one of the senior scientists to spend time with us. The ones I remember most vividly were Edward Teller (as Matt mentioned), Enrico Fermi, and George Gamow. Dr. Gamow, who always wore the oddest of clothes—nothing he had on, his shirt, his tie, his trousers, his socks or shoes, ever matched—never seemed to be able to remember to buy a new battery for his car. For that reason, he agreed to accept our invitation only if we would promise to push his car to get the engine started when the meeting was over. Edward Teller had the same eyebrows then as he had in later years. All of these men, especially Enrico Fermi, were modest; in fact, you would have thought they were from one of the local off-site communities. Unfortunately, because this was an everyday occurrence, not a single photograph was ever taken at any of these meetings!

Deanna Hasenauer

Society of Health and Medical Physics Students (Student Chapter) President; University of Florida Health Physics Graduate Student

If I could travel back in time to the early days of health physics, I would have enjoyed working with Dr. Frederick William (Bill) Spiers. Dr. Spiers was honored by the Queen with Commander of Order of the British Empire. Through his research, Dr. Spiers determined that the skeletal microstructure could not be described using simple geometric shapes, but by frequency distributions of real bone samples. The development of the optical bone scanner provided an automatic way of measuring these chord distributions. In many ways, the chord-length distribution data measured for the 44-year-old male has served to define many of the skeletal attributes of the current ICRP Reference Man. The work of Dr. Spiers and his research team—Drs. Philip Darley, Joan Whitwell,

and Alun Beddoe—at the University of Leeds between 1949 and 1981 established the foundation of trabecular bone dosimetry which serves as the basis for almost all subsequent skeletal dosimetry models used to date.

Andrew Scott

Nuclear Medical Science Officer, US Army; PhD Student at Clemson University

Colonel Stafford L. Warren, US Army, is one individual whom I would like to talk with from the early days of health physics. A trained radiologist with an interest in radiobiology, Col. Warren was intimately involved in radiation safety during the Manhattan Project as chief of the Health Division for the Manhattan Engineer District (MED) and medical advisor to General Groves (1943). He had oversight of the health and safety program throughout the MED, notably at the Trinity test, and later commanded the Radiological Safety Group during Operation Crossroads (the test shots off the Bikini atoll—Able and Baker—1946). He also was one of the principal investigators of the effects of the atomic bomb following its use at Hiroshima and Nagasaki. He really blazed the trail for radiation safety at the dawn of our profession. Additionally, being an Army health physicist myself, I am also interested in the military evolution of our profession, of which he had a unique perspective.

Keith Dinger

HPS Past President, Fellow; HPS Congressional and Federal Agency Liaison

I would have liked to spend time knowing and working with Herbert Parker—someone whom I consider to be the father of "operational health physics." I don't know much about him but I had an occasion to briefly meet him and see him in "action" when I was Director of Radiation Health at the Portsmouth Naval Shipyard. Herbert Parker was one of two prominent health physicists on the Advisory Committee for Oversight of the Portsmouth Naval Shipyard radiation worker study, which was mandated by Congress in 1978 and supported through the National Institute for Occupational Safety and Health. While the other well-known health physicist was "posturing" for the sake of those who felt radiation was the certain cause of death of shipyard workers, Herbert Parker brought insight, perspective, and professionalism to the Advisory Committee with praise for the restrictive and well-run radiation safety program at the Naval Reactors facility.

Gen Roessler

HPS Past President, Fellow; Health Physics News*/HPS Web Site Editor in Chief; Professor Emeritus, University of Florida*

I'd like to meet them all but if you only let me pick one, my choice would be Walter Snyder. Dr. Snyder, a past president of the HPS, was a mathematician who began his career by teaching mathematics and then went on to develop an interest in health physics through a consultancy to the Oak Ridge National Laboratory. He soon became a full-time employee in the ORNL health physics division. He brought his mathematical expertise to the field of internal dosimetry at a critical time when hundreds of radionuclides became important in the fast-advancing nuclear field. The recognition given him when he received the Society's Distinguished Achievement Award in 1975 points out that he was a "health physicist, mathematician, musician, historian, connoisseur of good food and beverage." After some good food and a beverage or two I'd chat with him about dosimetry as it is used now in radiation compensation programs.

Jim Tarpinian

Elda E. Anderson Awardee, Fellow; Past President, American Academy of Health Physics; American Board of Health Physics Member; Director of Environment, Health, Safety and Quality, Brookhaven National Laboratory

I would like to spend time with Elda Anderson, probably because I have thought about her the most. Dr. Anderson was not just a peer among peers. She was a pioneer among pioneers. I wonder how Elda felt about being one of the few scientists carving a path in an exciting new field and her uniqueness as a woman in that field. Did she have any concept of the impact she would have as a role model for future generations of health physicists? Did she have a sense of her place as a historical figure? I suspect that she was largely unconcerned with those kinds of thoughts about herself. She earned a reputation for excellence in teaching while possessing a feisty spirit, strength of character, and a passion for her work. I would like her to tell me about her life experiences and why she chose the path she did. I wonder

what she would think of today's Health Physics Society and how far the field of radiation safety has come. It would be a stimulating conversation. And I'm pretty sure that, without much coaxing, she would share her bourbon with me.

Casper Sun

HPS Photographer; ABHP-II Panel; HPS History Committee Member, Fellow; Health Physics Consultant

I have been very fortunate in my 25 years in the health physics field to have worked with so many extraordinary individuals; for example, Kenneth Skrable, Allen Brodsky, Herman Cember, Marvin Goldman, Keith Eckerman, Ronald Kathren, Patricia Durbin, Naomi Harley, and Charles Meinhold have all provided incredible support and inspiration to me. However, when asked if I could go back in time, which health physicist would I most like to spend time with, I can think of no other than Dr. Dade Moeller. Aside from his too-many-to-mention achievements, Dr. Moeller has been a true mentor, leader, sponsor, and friend to me since the inception of my career. His words move me to deep contemplation and his inexhaustible work ethic motivates me to be better than I imagined possible. Although I've had the pleasure of working with him through the years, I can think of no greater reward than to have more time to learn and grow with him.

Andy Karam

Board of Directors; Former Chair, ad hoc Committee on Media Relations; Part II Panel of Examiners; Research Assistant Professor, Rochester Institute of Technology

I would have liked to have had the opportunity to have met Elda Anderson, were I able to go back a few decades. To me, teaching is one of the great joys in life, and I would love to have the chance to learn about health physics, and teaching, from someone who, from all accounts, was one of the truly great teachers in our profession.

Mike Russell

HPS Power Reactor Section Past President; Technical Specialist, Southern California Edison

My fascination isn't exactly in line with the 50s or 60s but goes back to the earlier days of the radium dial painters. Radium was a new and widely used "invention" of the 20s and 30s. Eventually, it became apparent that the occupationally exposed radium dial painters were suffering harm from their exposure. Robley Evans took on a task of examining this group of workers. His work included the development of new methods of measurement, new methods for assessing dose from internal emitters, application of epidemiological science, and the establishing of a practical occupational exposure limit. The intriguing aspect of Dr. Evans' contribution to our profession is the combination of this critically important aspect of his work—the health of radiation workers—plus the necessity of innovation to accomplish his goals.

Larry Dauer

2005 Elda E. Anderson Awardee; Department of Medical Physics, Memorial Sloan-Kettering Cancer Center

I would spend some quality time with Dr. Walter D. Claus, director of the AEC Division of Biology and Medicine, facilitator and "salesperson" for health physics, and a supporter of education. Dr. Claus was a cofacilitator and organizer with Elda Anderson, Frank Bradley, and others for the first conference. He was a charter director and served as president from 1961 to 1962. He recognized the human capital crises early on and identified a "serious need for persons well trained in the protection of personnel against radiation and radioactive materials."[1] In 1958 he made an evangelical plea for additional workers to the cause, one that is certainly still relevant today: "Health physics is a fascinating and challenging field. Good [people] are sincerely to be encouraged to enter this promising profession."[2] He believed that "the most important responsibility of the Society towards its members is to establish their activities as a profession of integrity, and its members as professional people."[3] He acted on this belief, codrafting (with Jack Healy) the constitution and bylaws of the profession and helping to form the ABHP. He recognized education as the key for developing and maintaining the profession while at the same time identifying that "the biggest problem is the inculcation of sound judgment and understanding of health physics principles."[1] As a member of the Atomic Energy Commission advisory boards for the fellowship programs in education and health physics, Dr. Claus helped to construct a community of learning. Although we get some glimpses of his operating philosophies for the profession in his brief writings, I feel that a one-on-one mentoring

session with Dr. Claus would help provide a refreshing perspective on opportunities for continuous improvement today.

[1]*Health Physics*, Vol 8, pp 93-95, 1962.
[2]*Health Physics*, Vol 1, pp 56-61, 1958.
[3]*Health Physics*, Vol 8, pp 113-116, 1962.

Jim Yusko

HPS Fellow; Radiation Protection Program Manager, Pennsylvania Department of Environmental Protection's Pittsburgh office

Regarding the "Birth of the HPS," I'd like to talk to those individuals

who were in the forefront of developing the instrumentation that we now take for granted, even some of the equipment which is considered today as being of the dinosaur class (such as Victoreen R-meters, QT-pi's, the old Nuclear Chicago stuff, etc.), the people who dreamed up this equipment—when vacuum tubes were the rage (long before transistors, even!)—and talk to them about how they were trying to detect low levels of radiation/radioactivity and what technical and technological challenges they were trying to overcome. Today, we take for granted items like femtoammeters, "smart" meters and mated probes, instruments that measure in the—forgive me—microroentgen range. I'd also like to hear their comments on how far we've come in instrumentation, if they were to see and use what is currently available. Thus, as far as my preferences, I'd like to hear from the HPs who were trying to develop instrumentation, without singling out any one or two of them—I guess this also demonstrates a typical HP's response—not following directions closely!

Paul Rohwer

HPS Past President, Fellow; Retired, Oak Ridge National Laboratory

I would like to spend time with James C. Hart. Thanks to the

mentoring of Dr. J. Newell Stannard while I was a graduate student at the University of Rochester, I was already a member of the Society when I arrived to begin my employment at ORNL in 1966, but Jim Hart reeled me in. Jim, a prominent member of the ORNL Health Physics Division, immediately approached me about active participation in the East Tennessee Chapter. I quickly learned of Jim's many contributions to the development of the health physics program at ORNL and the development of the HPS. I was also taken by Jim's engaging, enthusiastic, and colorful personality that complemented his scientific and legal expertise. I have often wondered what other contributions Jim would have made were it not for his untimely death during his year as president of the Society. Jim's fingerprint is clear on the early organization of the HPS. What would have been his advice in the intervening years, as our profession and organization have continued to evolve and mature? What would he suggest concerning our current restructuring efforts? I think we all would have benefited from his continued guidance and leadership.

Jan Johnson

HPS Board member; Senior Technical Consultant, MFG, Inc.

In reviewing old documents for the NIOSH dose reconstruction project, I have come across the names of individuals charged with

protecting radiation workers in the 40s and 50s. Some of the names are familiar, some not. If I had the opportunity I would go back in time to ask them how they managed to do such a remarkable job given the limited body of experience and equipment they had available to them. We tend to view these old records through the prism of our current knowledge, forgetting that we have the benefit of over 50 years of experience gained, in part, through the efforts of these individuals.

Mike Boyd

Legislation and Regulation Committee Member; Health Physicist in EPA's Office of Radiation and Indoor Air/ Radiation Protection Division

If I could take myself back in time, I'd like to be in Arthur Compton's office in Chicago on that day in 1943 when he assigned K.Z. Morgan to be in the "Health Physics Group." According to his autobiography, Dr. Morgan had not even heard of health physics before that day. For those of us who entered the field in the latter part of the 20th century, our challenge was to learn the science and tools of our profession. For the people in that room and their contemporaries, the challenge was to build health physics from the ground up—inventing instruments as needed, observing effects such as skin erythema, and translating those observations into the first "dose" limits. What an exciting time to be a health physicist!

Inside the Beltway

David Connolly
Washington Representative
Capitol Associates, Inc.

During the first few weeks of November, Washington, DC, bore some resemblance to ancient Rome. In the time of the Emperors, there were periods when each day brought new gladiatorial contests. Similarly, the fall of 2005 brought legislative contests each day where divergent, powerful groups of legislators would wage war over emotional issues such as Iraq, the Patriot Act, and money. Each day it seemed there was a new intrigue for the Washington community to revel in and analyze until nothing more could be said about the group of congresspeople who had initiated or blocked some particular bill. Into this period of frenetic activity, an incident happened, actually involving the Health Physics Society, which renewed my faith in our elected, representative form of government.

Following the announcement that the Conference of Radiation Control Program Directors had designated the week of 6-10 November as National Radiation Protection Professionals week, the leadership of the Society asked me, as its Washington Representative, to see if it would be possible to have a tribute to radiation protection professionals inserted in the Congressional Record, the daily journal of both the Senate and the House of Representatives. The first place I turned to was a staff member of the Senate Energy and Natural Resources Committee who works for its Chairman, Senator Pete Domenici (R) of New Mexico. After receiving a positive response, I sent the tribute over to the delegated staff person for review and action. After making an inquiry to them a few days later as to the status of the submission, I was mildly surprised when the staff person informed me that the Senator himself was reviewing the tribute. Actually, this action on the part of the Senator makes sense. After all, it is his name that will go before the tribute that appears in the Congressional Record; therefore, he wanted to make sure that anything with his name on it would be acceptable to his own standards. Pride and integrity of your work product is something we should all strive for, yet I think we sometimes forget that Members of Congress are working people, too, with similar approaches to their jobs.

. . . radiation protection professionals will then have United States Senate-passed recognition of the valuable contribution they make to this country.

Upon review of the tribute, Senator Domenici himself decided that he wanted to raise the level of recognition of these professionals to a higher level than we had requested. Accordingly, he had the tribute sent to the Senate office that actually drafts legislation and they, in turn, will recast it into a Senate Resolution. Once that task is completed, the Senator will then offer it to the full body of the Senate after the Thanksgiving recess for its approval. If affirmed, radiation protection professionals will then have United States Senate-passed recognition of the valuable contribution they make to this country.

In speeches about the legislative process, I always try to remind the audience that oftentimes Congress works like we were first taught about it in elementary school. Amid one of the most active, contentious periods of Congressional activity in recent years, what we learned in 6th grade came to pass. An elected representative of the people was conscientious enough in the performance of the duties of his office that not only did he take the time to become involved in a small, routine matter, he decided to provide some extra effort to give a group of deserving people the praise they deserved.

Chapter News

North Central Chapter

Nancy Farrington
NCCHPS Executive Council Member

NCCHPS Fall Meeting

The North Central Chapter of the Health Physics Society (NCCHPS) fall meeting was held 28 October 2005 at the Snelling Office Park, St. Paul, Minnesota. The staff of the Minnesota Department of Health, Radiation Control, hosted the meeting.

The meeting was supported in part by affiliate members including Canberra, Global Dosimetry, and Image Technology, Inc. The meeting was well attended with 43 members present.

NCCHPS President-elect Jeff Brunette gave opening remarks and welcomed everyone in attendance, with special thanks to the affiliate members.

George Johns, Jr., supervisor of the Minnesota Department of Health Radiation Control Unit, presented

the "Minnesota Department of Health Initiatives." Johns introduced his staff. He then spoke of the changing approach of the Food and Drug Administration (FDA) concerning x-ray machines. The FDA is becoming more risk based/ performance based concerning radiation machines. Johns stated that there would be changes in the x-ray rules for Minnesota. He then spoke about the state of Minnesota becoming an Agreement State and said that the Nuclear Regulatory Commission is voting on Agreement State status for Minnesota now. Hopefully Minnesota will become an Agreement State by mid-March 2006.

Evan Douple of the National Academies presented "Biological Effects of Ionizing Radiation, BEIR VII—Phase 2." Phase 2 of the BEIR VII research and report was conducted

between 1999 and 2005. It develops the most up-to-date and comprehensive risk estimates for cancer and other health effects from exposure to low-level ionizing radiation. In general, BEIR VII supports previously reported risk estimates for cancer and leukemia. The data supports a "linear no-threshold" (LNT) risk model. Douple suggested that we check out the Web site (http://www.nationalacademies.org) and search with the words "BEIR Report" to view a brief of the report. On page 3 of this brief, figure 2 uses a graph that is very striking and easy to interpret that presents the diagnosis of cancer from related and unrelated radiation exposure.

HPS President-elect Brian Dodd presented "The IAEA and the Control of Radioactive Sources."

The International Atomic Energy Agency (IAEA) has 138 member states and works for the safe, secure, and peaceful use of nuclear technologies. Brian spoke to us on orphan sources, vulnerable sources, and disused sources concerning their control or lack thereof. He presented several scenarios that demonstrated the concern the IAEA has for safety because of lack or loss of control with the change of countries' status. Brian also reiterated the Society's commitment to Health Physics without Borders and encouraged our chapter to reach out to other countries and help them establish health physics programs.

Richard Vetter from the Mayo Clinic presented "Evolution of the Regulation of Radiation in Medicine." Vetter posed the question "Why regulate?" Regulations are put in place to protect. The protection can be towards patients, employees, or the general public. He also stated that regulations have become more specific and less objective.

NCCHPS President Ken Kerns turned the gavel over to the incoming President Jeff Brunette during the business meeting following lunch.

Brother Jerome Rademacher from St. Mary's University (SMU) presented "Decommissioning a Small Academic License." Rademacher spoke about the process of decommissioning SMU. Since the decommissioning, SMU will no longer need a Specific Radioactive Materials License. SMU will be able to maintain its radioactive program using exempt quantities. Rademacher stressed the necessity to perform both surveys and wipes and the necessity of diagramming and labeling the area and wipes. During the decommissioning process, if diagramming and labeling are done prior to starting, the exact area will be known if readings are higher than anticipated.

Mike Lewandowski, 3M Corporate Health Physics, presented "The Use of Quality Tools and Techniques to Improve Radiation Safety Programs." Lewandowski spoke about the use of the Basic Concepts of Quality Tools incorporated at 3M to improve the radiation safety program. He discussed setting up a quality-improvement process and the issues related to getting buy-in from employees. In the case of 3M, the use of quality tools was an initiative of upper-level management so obtaining buy-in was not as difficult. Lewandowski then discussed the various steps in the quality-improvement process and showed examples of its use to improve radiation safety operations at 3M.

Jeff Brunette, Mayo Clinic, presented "Occupational Doses in Nuclear Cardiology and PET Cardiology." Brunette spoke specifically to Mayo Clinic concerning the addition of PET Nuclear Cardiology exams to the SPECT Nuclear Cardiology exams with employee concerns for increased occupational dose. Following a study to determine if the employees' concerns had any basis, it was determined that per patient, PET Cardiology exams have the potential for higher occupational doses. Brunette concluded that for Mayo Clinic, the potential occupational dose from PET Cardiology exams are significantly less than from SPECT Cardiology exams because of their mix of patient examinations.

Providence 2006—
Weather's Great, Wish You Were Here!

Tara M. Medich

As much of the country is plunged into the never-ending middle of winter, it is always nice to have something to look forward to. How about the 2006 Health Physics Society Annual Meeting in Providence 25-29 June? It may not be the tropical Caribbean, but in the summertime, it doesn't get any better.

Imagine a gondola ride on a beautiful river lined with quaint architecture, spanned by stone bridges, and leisurely strollers out for a walk. Now imagine that it's not Venice, Italy, but Providence, Rhode Island! You don't have to go to Europe to experience this lovely tradition. Authentic Italian gondolas are available for up to six people every night of the week except Tuesday.

Access to many points of interest around Providence has gotten easier with the introduction of ferry service to Block Island and Newport. Block Island is filled with every outdoor activity imaginable, from horseback riding to parasailing. Newport, of course, is home to the summer mansions of America's wealthiest Golden Age families. Enjoy touring the homes, the Cliff Walk, or shopping in high style.

The annual meeting only lasts for five days, but there is so much more to do and see in Providence! The New England Chapter invites you to stay as long as you like to enjoy all that the northeast has to offer.

Summer School 2006
18-23 June

Margaret E. McCarthy
Summer School Administrative Dean

The latest details about the Health Physics Society (HPS) Summer School, 18-23 June 2006 at Brown University in Providence, Rhode Island, are posted on the New England Chapter Web site http://nechps.org/SS06/ss06.html.

Brown is presently redesigning its summer program use and is allowing only academically related programs on campus. Our qualifying summer school is an initial part of this new undertaking. The dormitory housing is a bargain considering the location and air conditioning; the food is top notch and spans most alimentary requirements. Our teaching facilities are the latest in the Ivy League and comply with every federal regulation possible. Daily shuttle service will be available from the hotel to campus.

The process of registration will be slightly different this year. You will register for the tuition from HPS and be given a password to register through Brown. The Brown registration is required. Additional charges are for rooming and parking. Figures with a ±10% adjustment by March are on the Web site. Dorm costs are firm. A new part of our program is a per diem cost for one-day attendance.

If you have questions contact me at mem@schoolph.umass.edu or 413-755-4624.

Committee Activities

Society Awards—Call for Nominations

Raymond A. Guilmette, PhD, HPS Past President
Awards Committee Chair

The Health Physics Society (HPS) awards provide the opportunity to recognize outstanding scientific achievements and other significant contributions and services to our profession. Now is the time to nominate worthy candidates to the HPS Awards Committee. Society members, chapters, and sections are invited to submit nominations for the following awards to be presented at the Society's annual meeting in Providence, Rhode Island. The Awards Committee is especially seeking nominees for the Outstanding Science Teacher Award.

- Distinguished Scientific Achievement Award
- Robley D. Evans Commemorative Medal
- Elda E. Anderson Award
- Founders Award
- Fellow Award
- Outstanding Science Teacher Award

Individuals memorialized are recognized by presentations of the Distinguished Scientific Achievement Award and the Founders Award in their name.

The Nomination Process

Who can nominate: **Society rules require that nominations for awards, other than the Fellow Award, be made by chapter presidents or by petition of six members of the Society. However, the Awards Committee invites individual members or sections to provide informal recommendations.**

How to nominate: Nominations for the Distinguished Scientific Achievement Award, Robley D. Evans Commemorative Medal, Elda E. Anderson Award, Founders Award, and Fellow Award must include a nomination letter and reference letters to be considered fully by the Committee. The Committee places heavy weight on the assessment of the accomplishments of nominees by individuals familiar with the nominee. The contributions of the nominee and why such contributions are significant to the Society and the profession should be clearly documented by the nominator and the references. Letters should be as objective as possible. For the purpose of evaluation, letters of reference that attest only to the character of the nominee are insufficient.

How to submit: Nominations (including all supporting materials) must be submitted by 1 March 2006 to Raymond A. Guilmette, 269 Garver Lane, Los Alamos, NM 87544.

Please read the specific information provided below on eligibility and nominating requirements for each award. Previous award recipients are listed in the Award Recipients' section of the *Radiation Safety Professional's Membership Handbook and Directory* and on the HPS Web site (http://hps.org/aboutthesociety/people).

Distinguished Scientific Achievement Award

Purpose: This award acknowledges outstanding contributions to the science and technology of radiation safety. The recipient of the award is recognized for accomplishments of fundamental importance to the practice, acceptance, and advancement of the profession of health physics.

Other individuals who contributed in an outstanding way to the development of scientific knowledge for the protection of humankind and the environment can be permanently memorialized by the presentation of the award in their names.

Nominations for the Award

Who's eligible: Any individual except present members of the HPS Board and Awards Committee.

Material required: Each nomination shall include a short biographical résumé of the nominee's career accomplishments and documentation of why the nominee is being nominated. Reports, references, etc., should be submitted as supporting material for the nomination.

Nominations for Memorialization

Who's eligible: The person need not have been a member of the Society. The honor is generally restricted to a person who died at least five years earlier.

Material required: Each nomination shall include a short biographical résumé of the nominee's career and documentation of why the nominee is being nominated. Reports, references, etc., should be submitted as supporting material for the nomination.

Robley D. Evans Commemorative Medal

Purpose: This award is given in memory and honor of Professor Evans in recognition of his extraordinary dedication and contributions to radiation safety as physics educator, scientist, author, and humanitarian for more than 50 years. The recipient of this award demonstrates the extraordinary qualities exemplified by Professor Evans for excellence in scientific achievement, interdisciplinary capabilities, the applicability of science to real-world needs of radiation safety, and insight into simple solutions of difficult problems.

Nominations for the Award

Who's eligible: Any individual except present members of the HPS Board and Awards Committee.

Material required: Each nomination shall include a short biographical résumé of the nominee's career and a documentation of why the nominee is being nominated. Reports, references, etc., should be submitted as supporting material for the nomination.

Elda E. Anderson Award

Purpose: This award is presented to a young member of the HPS to recognize excellence in (1) research or development, (2) discovery or invention, (3) devotion to health physics, and/or (4) significant contributions to the profession of health physics.

Nominations for the Award

Who's eligible: HPS members who shall not have reached their 40th birthday prior to 1 January 2006.

Material required: Each nomination shall include a short biographical résumé of the nominee's career, date of birth, and a documentation of why the nominee is being nominated. Reports, references, etc., may be submitted as supporting material for the nomination.

Founders Award

Purpose: This award is designed to recognize exceptional service to the HPS or the health physics profession. The recipient of the award is recognized for recent contributions to the Society. In addition, others who were instrumental in the formation or development of the HPS can be permanently memorialized by the presentation of the award in their names.

Nominations for the Award

Who's eligible: Any individual except present members of the HPS Board and Awards Committee.

Material required: Each nomination shall include a short biographical résumé of the nominee's career and a documentation of why the nominee is being nominated. Reports, references, etc., should be submitted as supporting material for the nomination.

Nominations for Memorialization

Who's eligible: The person need not have been a member of the Society. The honor is generally restricted to a person who died at least five years earlier.

Material required: Each nomination shall include a short biographical résumé of the nominee's career and a documentation of why the nominee is being nominated. Reports, references, etc., should be submitted as supporting material for the nomination.

Fellow Awards

Purpose: This award is designed to honor senior members of the Society who have made significant administrative, educational, and/or scientific contributions to the profession of health physics.

Nominations for the Award

Who's eligible: HPS members who will be 50 years or older by 1 March 2006.

Except under unusual circumstances, the individual must also have been a member of the Society during the preceding five years.

Who can nominate: Any plenary member, any Fellow member of the Society, or any chapter president.

Material required: Each nomination shall include a short biographical résumé of the nominee's career and a documentation of why the nominee is being nominated. Reports, references, etc., should be submitted as supporting material for the nomination. In addition, letters from three Fellows supporting the nomination must be submitted.

Outstanding Science Teacher Award

Purpose: This award honors teachers who have made significant contributions to educating students in topics related to the field of radiation safety.

Nominations for the Award

Who's eligible: Each nominee shall be a teacher of grades K-12 at the time of nomination for the award.

Material required: Each nomination shall include a short biographical résumé of the nominee's career and a documentation of why the nominee is being nominated. Reports, references, lesson plans, and descriptions of special projects may be submitted as supporting material for the nomination.

Nominating Committee

Paul S. Rohwer, Chair

Call for Officer Nominations for 2007

The **Nominating Committee** is calling for nominees for the next Health Physics Society (HPS) election. The ballot positions to be filled are **President-elect**, **Treasurer-elect**, and **three members of the Board of Directors**. These officers, to be elected in late 2006, will take office during the 2007 HPS Annual Meeting.

Any member of the HPS may make a nomination; however, the nomination is stronger with chapter president, section president, and HPS committee chair recommendations or endorsements. The nomination must include a biographical sketch describing the nominee's applicable training, experience, and past activities as well as an explanation of why the person is being nominated. It is recommended that nominees for President-elect have previous Board experience. In making a nomination, please determine that the individual is willing to be considered as a nominee and will serve in office if elected.

A detailed description of the nomination process can be found in the Operations Section in the Members Only area of the Web site.

Nominations should be emailed to Paul Rohwer, chair of the Nominating Committee, at paulsandyr@ aol.com, faxed to Paul at 865-425-0234, or mailed to Paul at 989 West Outer Drive, Oak Ridge, TN 37830 no later than **1 March 2006**.

A New HPS Award

Ray Guilmette, Chair
Awards Committee

For those of you who attended the awards banquet at the annual meeting in Spokane last year, you should have noticed that there was a new award—the National Student Science Award.

This award was created to recognize outstanding contributions by students in grades 6-12 to the understanding of the applications of radiation and its impact on the environment and health. Eligibility for this award is to individuals currently in grades 6-12 who have contributed reports or presentations of projects on radiation benefits, applications, and impacts at local science fairs. This award is presented at a meeting of the nominating chapter or a chapter near the awardee's residence. Nominations for this award can be made by any plenary member of the Society or by a chapter.

Recognizing that most science fairs are held in the spring, the nominations must be submitted to the chair of the Awards Committee by 30 May. Each nomination should include either a report of the project that has been written by the nominated student or a set of pictures that illustrate the student's display. The nomination shall also include a discussion of the criteria used by the nominator for selecting the nominee's project. Of course, additional supporting letters may also be included.

The Awards Committee may grant up to four awards in any year. Each award shall consist of a mounted certificate naming the awardee and the title of the project and a cash award that will not exceed $1,000 total for all awards given in a year.

Within the last year, the Society has engaged the National Science Teachers Association, letting it know of the existence of our new award. But the real impetus for identifying talented students will depend on our efforts. Therefore, I strongly encourage each chapter to consider submitting nominations for this new award to the Awards Committee. (See submission information, page 10.) It is a new outreach opportunity that should not be missed.

5,000 and Counting

Mary Walchuk

The Health Physics Society (HPS) Web site Ask the Experts editors have now provided answers to 5,000 radiation-related questions and more are coming in daily. This exciting milestone is a sign of the rapid growth of this service provided by the HPS to members and nonmembers—health physicists and people in every other field—all over the world.

Massage therapist Melissa LeBlanc asked question 5,000 and Kelly Classic quickly provided an expert answer for her. (See question and answer, page 11.) For her part in achieving this milestone, Kelly will receive a donated and autographed copy of Eric J. Hall's new (sixth) edition of *Radiobiology for the Radiologist*. Hall is well known to the health physics profession and was the Society's 2005 Distinguished Scientific Achievement Award winner.

LeBlanc and Classic were eager to share their experiences with the Ask the Experts process and tell HPS members why they appreciate this outreach effort.

A Massage Therapist with a Radiation Question

Health Physics News: **What led you to wonder about your possible radiation exposure? When the woman told you she would be undergoing radiation treatment at the time of the massage, did she mention the possibility of exposure to you?**

LeBlanc: I was approached by my client to give both her and the woman massages while the woman was staying with her after treatment. She has three young children and was instructed by her doctor to stay away from home for four to five days after treatment. My client wanted to do something nice for her while she was there. My question had more to do with the safety of the woman than with my exposure. I was concerned about it interfering with the treatment in some way. I wasn't really thinking of the issue of my exposure until I received the response from Ask the Experts.

Health Physics News: **How did you find the Ask the Experts feature?**

LeBlanc: I was searching everywhere for information on radiation treatment for hyperthyroidism and the contraindications. I found information on radiation for cancer, regular treatment for hyperthyroidism, but no information on massage and this particular treatment. I was just going through the sites from my search, found this one, and figured I'd give it a try.

Health Physics News: **Before you submitted your question, was there something on the site or about the site that led you to have confidence in the people who would answer your question?**

LeBlanc: I had read through the questions and answers that had already been posted, realized my question was not in the norm, and thought that, because of the kind of questions they were looking for, they really wanted to answer questions that people needed answers to.

Health Physics News: **Did you feel that you would get a factual, reliable answer?**

LeBlanc: Yes.

Health Physics News: **When you received your answer, did it give you the information you needed?**

LeBlanc: I feel it gave me information I needed in order to make the right decision for me.

Health Physics News: **Were you able to feel comfortable about your situation or did it make you more anxious?**

LeBlanc: I felt very comfortable.

Health Physics News: **Did you feel you were able to make an educated decision about your situation?**

LeBlanc: Absolutely.

Health Physics News: **Did you give the massage or ask the client to reschedule?**

LeBlanc: I called my client, told her of the information I received and let her know I could still give her a

massage if she wanted. She chose to reschedule, feeling it would be unfair to continue with her massage while the woman couldn't have one. I also informed her of the skin-to-skin contact issue and metabolism through the sweat glands so that she can take extra precautions while the woman stays with her.

Health Physics News: **Would you recommend the Ask the Experts feature to friends with radiation-related questions?**

LeBlanc: Yes.

Health Physics News: **Is there anything else you would like to add about your experience with using Ask the Experts?**

LeBlanc: I was really impressed with the promptness of the reply. I was expecting to wait about a week for someone to get back to me. And of course, this was an added bonus.

An Expert with a Passion

Health Physics News: **How long have you been an Ask the Experts editor?**

Classic: I believe I started in 2002, but time flies and it doesn't seem that long.

Health Physics News: **What category do you cover?**

Classic: Currently I am covering the Security Screening and Radiation Workers categories.

Health Physics News: **About how many questions per week do you get in these categories?**

Classic: It probably averages about two to three per week, if that many. When all the new security screening equipment was being installed at airports, the Security Screening category was hopping. Those questions are relatively rare now.

Health Physics News: **How many experts do you rely on to help you answer questions in these categories?**

Classic: Do I dare say up to 25,000? I have no problem contacting virtually any employees at Mayo Rochester who I think have some expertise related to a question. I tell them why I am asking and they never hesitate to answer. If they fully answer the question, the answer is posted with their name on it.

Health Physics News: **What is your favorite part of being an Ask the Experts editor?**

Classic: There are two things that came immediately to mind—working with Gen Roessler and having the opportunity to share good, sound scientific information with the public.

Health Physics News: **What is the hardest part of being an Ask the Experts editor?**

Classic: Trying to make an answer understandable without a lot of scientific lingo. I read and reread my answers but I know I could use some training in this area.

Health Physics News: **Is there anything else you would like to add about being an Ask the Experts editor and expert?**

Classic: I love it and when I talk to others about it, they tell me they can see how much passion I have for it.

Check out the ATE section of the HPS Web site
http://hps.org/publicinformation/asktheexperts.cfm

ATE Question 5,000

Q: ***I am a massage therapist and have been asked to give a massage to a woman during the week she is undergoing radiation treatment for hyperthyroidism. Is this safe or is it contraindicated?***

A: Interesting question. Part of the answer depends on how much radioactive material the woman is given for her treatment of hyperthyroidism. Chances are good that it is a lower dosage of material since she will have the treatment and leave the hospital/clinic. I'm going to go on that assumption with my answer.

The first thing you should know, and I think you do, is that you will be exposed to radiation. It is likely the woman will be given a dosage of iodine-131 for her condition and, with it inside her, she becomes a radiation source for you. The good news is that, because it is a low dosage and she can immediately leave the hospital or clinic, the amount of radiation coming from her body is considered by regulators to be safe for anyone she might come in contact with.

I do have some concerns about a massage for two reasons. While the regulators of radioactive materials have determined it is safe for the woman to go about her business, there is an assumption of limited close contact with people. In your case, you will be very close for an hour or so. The closer you are to the woman and the longer you are there increases your radiation dose.

However, the bigger concern for you from my standpoint is that the type of radioactive iodine that is given can also be "sweated out," meaning that the woman's skin will have small amounts of radioactive iodine come through the pores as her body metabolizes it. You will obviously be in direct contact with her skin for the massage which is why I bring it up. This isn't much of a concern a few days after administration of this dosage, but in the initial few days it is.

Now to your question of whether this is safe or contraindicated. From a regulator's standpoint, the amount of radiation you will be exposed to is below any level of concern. We are all exposed to radiation every day and the radiation dose you might receive from giving a massage to this woman within the first few days is far less than the amount of radiation we receive in a year from natural sources (cosmic rays, radon, etc.). So, it is safe and not contraindicated. My question, though, is whether it is necessary that you get exposed to this "extra" radiation at all—does a massage really need to be done in that first week? The answer to that is yours.

Kelly Classic
Certified Medical Health Physicist

Academic Program News

Another Academic Health Physics Program Achieves ABET Accreditation

Richard Brey and Charles E. Roessler[+]*

The Clemson University MS in Environmental Health Physics program is the sixth health physics program accredited under the Accreditation Board for Engineering and Technology's (ABET) Applied Science Accreditation Commission (ASAC) and the seventh ABET-accredited academic health physics program.

Both undergraduate and/or graduate applied science programs may be accredited by ABET/ASAC. The other five ASAC-accredited health physics programs are the MS in Health Physics program at the University of Nevada-Las Vegas (2003), the BS in Health Physics program at Oregon State University (2003), both the BS and MS Health Physics programs at Idaho State University (2003) (*Health Physics News* December 2003, cover story), and the MS in Health Physics program at the Uniformed Services University (2004) (*Health Physics News* May 2005, p 15). In addition, the Texas A&M University BS in Radiological Engineering program has been accredited since 1987 under the ABET Engineering Accreditation Commission, which has the common practice of accrediting the lowest academic degree only (*Health Physics News* February 2004, p 8). The accreditation of other programs is in progress.

The effort to accredit health physics programs is a natural evolution of the profession. This is a Health Physics Society (HPS) function fully consistent with our strategic plan. It is also a way for the Society to responsibly contribute to society at large. Accreditation is a means for a program to demonstrate high quality.

All ABET/ASAC-accredited programs meet the requirements promulgated by the HPS and accepted by ABET. The HPS is currently an ABET member society and is helping to maintain the quality of science education in the United States. The realization of health physics accreditation under ABET/ASAC represents the culmination of a great deal of volunteer effort by HPS members. The efforts of everyone involved are greatly appreciated.

In the accompanying article, Dr. Timothy DeVol describes the Clemson program.

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*Richard Brey, PhD, CHP, is a professor at Idaho State University. He was instrumental in the HPS effort to develop the accreditation program with ABET/ASAC. He served successively as chairman of the HPS Academic Education Committee and then the Accreditation Subcommittee, and he also served as HPS liaison to ABET. In July 2005 he took over as the ABET/ASAC Commissioner representing the HPS.

[+]Charles ("Chuck") Roessler, PhD, CHP, Professor Emeritus, University of Florida, retired in July 2005 as the first ABET-ASAC Commissioner representing the HPS.

Clemson University Environmental Health Physics Program

Timothy DeVol, CHP, Associate Professor, Clemson University

The Environmental Health Physics (EHP) focus area, an option in the Clemson University Environmental Engineering and Science Master of Science degree, has recently been accredited under the Accreditation Board for Engineering and Technology (ABET) Applied Science Accreditation Commission (ASAC). The origin of the EHP focus area dates back to 1980, and it is fully integrated with other focus areas within the graduate-only department. The EHP focus area integrates knowledge, skills, and abilities of radiological science with those of environmental engineering science, and it provides the basis for graduates to address contemporary issues in nuclear environmental engineering and science associated with anthropogenic and natural radioactivity. The objective of the curriculum is to provide students with knowledge and training needed to protect human health and the environment from ionizing radiation. The curriculum centers on a core of courses in environmental engineering and science—Environmental Chemistry, Environmental Microbiology, and Environmental Physical/

Tim DeVol

Chemical Principles—as well as a core of health physics courses—Environmental Health Physics, Ionizing Radiation Detection and Measurements, Nuclear Fuel Cycle and Radioactive Waste Management, and Environmental Risk Assessment. The EHP faculty have been recognized nationally for their contributions to the profession, and their research efforts are well known in the discipline. Current research emphasis is in the areas of low-level radiation detection, radiochemistry, environmental monitoring, radionuclide transport, radioactive waste management, homeland security, and risk assessment. The program is especially noted for its research in the development of novel radiation detection instrumentation for environmental applications and the fate and transport of actinides and transuranics in soil.

The program is located in the L.G. Rich Environmental Research Laboratory at the Clemson Research Park. The nuclear facilities include a teaching laboratory with an array of radiation detection instrumentation, a low-level counting laboratory for environmental samples, a radiation detection and measurement laboratory, and a radiochemical separation laboratory for sample preparation. Adjacent to the Rich Laboratory is the Waste Management Inc. Laboratory, which has two state-of-the-art analytical laboratories, two high bay laboratories for scale-up projects, and a demonstration area. These facilities are specifically designed for research and treatment technologies related to hazardous, radioactive, and mixed wastes.

Alumni of the program are employed by environmental consulting firms, the Department of Energy and its contractors, the Nuclear Regulatory Commission, nuclear utilities, and regulatory agencies. The program prepares the graduates well for their profession as evidenced by professional certification including certification by the American Board of Health Physics and Professional Engineering certification.

The EHP program offers students excellent access to information technologies resources with a wireless and hard-wired computer network, developed for easy accessibility by students. The campus maintains a well-funded library with readily available resources and a library staff that is truly interested in collaboration with researchers to provide to them the services that they require. The Clemson campus provides many impressive facilities with a great deal of new, state-of-the art equipment, all housed on a very attractive campus with well-kept grounds.

Clemson University is located in the foothills of the Blue Ridge Mountains in rural South Carolina near the shores of the Lake Hartwell reservoir. Clemson is approximately two hours from major metropolitan areas of Atlanta, Georgia, Charlotte, North Carolina, and Columbia, South Carolina. The area offers numerous opportunities for the outdoor enthusiast as well as cultural activities at the Clemson University Brooke Center for the Performing Arts and the Peace Center for the Performing Arts in Greenville, South Carolina.

Additional information about the program, admission criteria, and current research efforts can be found at http://www.ces.clemson.edu/ees or by contacting Dr. Timothy A. DeVol, CHP, 864-656-1014, tim.devol@ces.clemson.edu, or Dr. Robert A. Fjeld, PE, 864-656-5569, bob.fjeld@ces. clemson.edu.

Robert A. Fjeld

For Information about These Programs:

ABET: http://www.abet.org/

Clemson University: http://www.ces.clemson.edu/ees

University of Nevada-Las Vegas: http://healthphysics.unlv.edu

Oregon State University: http://ne.oregonstate.edu

Idaho State University: http://www.physics.isu.edu/health-physics/hp.html

Uniformed Services University: http://www.usuhs.mil

Texas A&M University: http://nuclear.tamu.edu

July-December 2005 AUTHOR INDEX

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Guidelines for Life—Rules for Success

Dade W. Moeller

1. Don't ever burn your bridges! The person you tell off may be the one who will be asked to provide an endorsement for your next important position.
2. Don't sell yourself short. At the same time, however, don't over-rate your own importance.
3. You cannot lift yourself up by running everyone else down.
4. Leaders emerge; they are seldom appointed.
5. Your job is what you make it; don't wait for the boss to tell you what to do.
6. Shape your job so you are doing what you like to do; when you're having fun, time flies; a clock watcher will never be more than a hand.
7. Do every job a little better than anyone expects. If it's good enough, it's not.
8. Do your homework; be as well informed as possible on every subject that the committee or work group to which you have been appointed is scheduled to discuss.
9. Analyze your data. File cabinets are full of data that were collected and stored without ever gaining the benefit of the understanding and insights that the simplest of analyses would have revealed.
10. Finish the job—this often includes writing a paper on what you have done and publishing it; don't stop just short of the goal line.
11. Respect your coworkers and supporting staff. These include the technicians in the laboratory, the people who tabulate the data, and the janitors who keep the building clean.
12. Never let your education interfere with your work. Just because you have a degree does not make you better than others.
13. When you are near a fountain of knowledge, do everything possible to get thoroughly soaked.
14. Volunteer for new assignments, including a transfer to another city for a position with more responsibility—even if it does not include a salary increase.
15. Be active locally—in your professional society, civic activities, youth work, and your church. National leaders emerge from those who lead locally.
16. Finally—remember that you should never take both a sleeping pill and a laxative just prior to going to bed for the night.

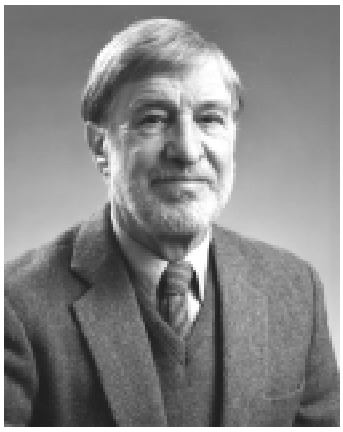
William L. McLaughlin
1928-2005

David A. Schauer, CHP

William Lowndes McLaughlin, 77, an internationally respected research scientist and teacher, died 26 October 2005 at his home in Lexington, Virginia, after a gallant battle with pancreatic cancer. The author of more than 250 scientific papers, McLaughlin was a physicist at the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland, and adjunct professor at the University of Maryland. An authority on methods of measuring radiation doses for processing and protection, he is known worldwide as the father of radiochromic-dye dosimetry. After his 1996 retirement, he was named an NIST Fellow.

William McLaughlin was born 30 March 1928 in Stony Point, Tennessee, the son of the Reverend John Calvin Brown McLaughlin and Fanny McCaa McLaughlin. A descendent of a long line of Presbyterian clergy, he spent his youth in manses in North Carolina and in Shepherdstown and Keyser, West Virginia.

He graduated from Potomac State University and from Hampden-Sydney College in 1949. In 1950-1951 he was a Rotary International Fellow at Tübingen University in Germany and spent the years from 1954 to 1956 with the US Army Signal Corps on Enewetok and Bikini islands, measuring radiation at the atomic bomb test sites.



From 1973 to 1991, he was an advisor to the Accelerator and Environmental Science Departments, Risø National Laboratory, Denmark, and from1971 to 1995 to the Dosimetry Section of the International Atomic Energy Agency.

The measurement systems he developed have been converted into commercial products that are used around the world. He traveled widely on scientific missions and mentored countless younger scientists from many countries. In 2003 NIST sponsored a three-day symposium in his honor where colleagues from around the world delivered scholarly papers based on his work.

William McLaughlin's many honors include the US Department of Commerce's Silver Medal (1969) and Gold Medal (1979), the National Bureau of Standard's Applied Research Award (1985), the American Nuclear Society Radiation Science and Technology Award (1987), and the Elsevier Science Journal of Applied Radiation and Isotopes Gold Medal (1995). He received the Research and Development 100 Award three times in his career. In 1999 the Washington Academy of Sciences honored him for "outstanding achievement in the physical sciences." He was a member of the American Nuclear Society, the American Physical Society, the Optical Society of America, the Health Physics Society, and Cosmos Club in Washington.

He was the lead author of two key books in his field, *Dosimetry for Food Irradiation* and *Dosimetry for Radiation Processing*, as well as chapter contributions to several other books. He was an editor of numerous other volumes and of the *International Journal of Applied Radiation and Isotopes* (1989-1999).

Music was one of the deepest loves of his life. He was a supporter of and subscriber to the Washington National Opera for 50 years. He was a respected authority on bluegrass and Appalachian mountain music, as well as a skilled guitar player and writer of country songs, several of which have been recorded. He often performed with his sons, both of whom are professional musicians.

He is survived by his wife, Nancy Scott McLaughlin of Lexington; two sons and their wives, Peter and Carol McLaughlin of Tucson, Arizona, and David and Gay McLaughlin of Winchester, Virginia; two stepsons, Theodore Kiesselbach of Minneapolis and Frederick Anderson of San Diego; two sisters, Margaret Grove of Charlottesville and Addie Noble Ours of Petersburg, West Virginia; and six grandchildren. His first wife, Nancy Shepherd, died in 1996.

Announcements

NCRP Releases Report No. 150

Extrapolation of Radiation-Induced Cancer Risks from Nonhuman Experimental Systems to Humans

David A. Schauer, CHP

"It has been possible to develop what appear to be useful and relevant extrapolations of radiation-induced cancer risks from nonhuman experimental systems to humans for certain situations." This was one of the conclusions contained in NCRP Report No. 150, *Extrapolation of Radiation-Induced Cancer Risks from Nonhuman Experimental Systems to Humans*. The report deals with the procedures by which radiation-induced, long-term, or chronic injury (for example, a reduction of life expectancy or increases in age-specific cancer mortality) measured in laboratory animal species can be used to estimate risks to humans. The data for such extrapolation procedures are discussed in detail.

This report undertakes an extensive review of data on radiation-induced cancer in specific major organ systems in several species of laboratory animals. Extrapolation models are described that can be used under certain conditions to apply the extensive database from laboratory animal studies to the evaluation of human radiation risks. Data from laboratory animals are also used for the estimation of genetic risk factors for radiation-induced cancer and for estimating values of dose-rate effectiveness factors and radiation weighting factors.

The primary topics of discussion in this report include:

- the history of extrapolation from nonhuman experimental systems to humans,
- cells of origin of cancer in different animal species,
- radiation effects at the molecular and cellular levels, and
- extrapolation models.

This report includes, where appropriate, a set of recommendations and conclusions specific and relevant to each section. These recommendations include the need to:

- obtain and utilize molecular mechanisms underlying the cellular events that lead to cancer in various animal species,
- archive data in a manner that is amenable to meta-analysis, and
- acquire more information on the carcinogenic effects of heavy charged-particle radiation such as that encountered by astronauts during deep-space missions.

The report is available from the NCRP Web site in both soft- and hard-copy formats.

For additional information contact David A. Schauer, 301-657-2652, extension 20, or email schauer@NCRPonline.org.

NUREG/CR-4884, Interpretation of Bioassay Measurements, Is Available Online

Laurence F. Friedman, CHP

The Government Documents Depository of the Galvin Library at Illinois Institute of Technology in Chicago, Illinois, has posted NUREG/CR-4884, Interpretation of Bioassay Measurements, on its Web site for the use of the health physics community and the general public. The URL of the document is http://www.gl.iit.edu/govdocs/resources/bioassay.html. The document has been divided into individual PDF files for convenience in downloading and is indexed by solubility class (D, W, and Y) and atomic number.

The Government Documents Depository at Illinois Institute of Technology has established a page for health physics-related material in support of its master of health physics program. We plan to add to this page as more documents are scanned.

For more information contact Aric Ahrens, coordinator of the Government Documents Depository (ahrens@iit.edu), or Laurence F. Friedman, codirector of the master of health physics program (laurence.friedman@iit.edu). For information about the master of health physics program see http://www.iit.edu/~bcps/database/search.cgi/:/frontend/prof/mhp_desc.

CHP Corner

American Academy of Health Physics
American Board of Health Physics
Web site: http://www.aahp-abhp.org

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2005 ABHP Certification Exam Results

Congratulations!

The results of the 2005 ABHP Certification Exam are as follows: 74 out of 133 candidates passed Part I and 15 out of 75 candidates passed Part II.

The following individuals have successfully completed the ABHP Certification Exam and are eligible for certification:

Bhuiyan, Md. Nasir U.
Boyce, Dale E.
Bradley, Scott E.
Caracappa, Peter F.
Farmer, Steven
Graham, Christopher C.
Hugron, Roger
Kawabata, Ken
Lagarde, Charlie S.
Marianno, Craig
Medich, Tara M.
Morgan, Thomas L.
Pugh, David L.
Stiver, John H.
Turner, Larry D.
Zoller, Scott G.

The following individuals successfully completed one part of the 2005 ABHP Certification Examination:

Abdelslam, Ebrahem M.
Al-Anazi, Ibrahim K.
Alderson, Stacey L.
Blute, Nicole
Braley, Gerald S.
Bravenec, Joseph S.
Browder, Rachel S.
Buckner, Richard B.
Bullock, Christine A.
Cezeaux, Jason R.
Chandrikamohan, Pramoth
Cicotte, George R.
Cieszkiewicz, Eric
Compton, Keith L.
Cummings, Frederick
Dampf, Michael H.
Doshi, Anshu P.
Dunkelberger, Russel O.
Flynn, Charles R.
Garino, Gerald
Glander, Lori A.
Graber, Brandon L.
Haan, Thomas P.
Hamilton, Daniel S.
Hammersmith, Michael M.
Hansen, Randy C.
Harris, Jason T.
Helm, Kenneth S.
Hooper, Charles A.
Hulke, Mark W.
Jacobsen, Joseph D.
Jokisch, Derek W.
Kolbe, William P.
Langford, John
Lee, Thomas G.
Leppert, James D.
Lewis, James A.
Lodwick, Jeffrey C.
Mahoney, Alan
Malsbury, David B.
Medich, David C.
Menge, James P.
Miller, Robert E.
Miller, Roy H.
Miller, William F.
Murray, Bruce L.
Nelsen, Lindsay A.
Nicosia, William C.
Niven, Erin S.
Nusenow, Craig D.
Oldfield, Brian
Ong, Augustinus
Osborn, Harold A.
Owen, Jr., Austin A.
Patton, Phillip W.
Philipson, Danielle N.
Philipson, Jake A.
Randall, Dale B.
Reeder, Ricky J.
Ridgley, Darin L.
Rolph, James T.
Schmitt, Wayne A.
Smith, Joe W.
Smith, Lynn M.
Stewart, Donald Neil
Warren, Ronald W.
Wiley, Jr., Albert Lee
Yoder, Kay M.

NOTE OF THANKS: The ABHP appreciates the help of the many CHPs who have donated many hours of their time to develop and grade the exams and to serve as proctors. Without their help, the examinations could not have taken place.

McAdams Award Reminder

Nominations for the William A. McAdams Outstanding Service Award are due by **3 March 2006**. This award is presented annually by the American Board of Health Physics and the American Academy of Health Physics to honor a certified health physicist who has made a significant contribution toward the advancement of professionalism in health physics and to the certification process. Any member of the American Academy of Health Physics may submit a nomination.

More information and the nomination form can be found at www.hps1.org/aahp/McAdams_Nomination. pdf.

Application Reminder

Complete applications to take either part of the 2006 ABHP examination must be filed with the Executive Secretary, postmarked no later than **15 January 2006**.

More information can be found at www.hps1.org/aahp/abhp/prospect.htm#.

Exam Site Committee Activities

Donald Brady, Chair

For those of us who took the CHP exams remotely from the annual meeting, the question of who sets up, coordinates, and administers these remote sites may never occur to us. Over the last three years I have had the privilege of witnessing this process as a member of the exam site committee. Over these years, I found that through the hard work of numerous volunteers, this process occurs very efficiently and cost effectively. CHPs around the country take time away from work and family to proctor these exam sites. I have been overwhelmed by their generosity when they were asked by me or other committee members to set up a remote exam location. In some cases CHPs have even "passed the hat" to pay for the location. We have been able to support 11 remote exam locations on a yearly basis. These locations provide access to candidates in all regions of the United States.

What does it take to proctor an exam site? Exam sites must have two proctors at all times during the test, the lead proctor must receive and send the examination materials, and an accessible location must be available. Exam site committee members contact CHPs in an area in which an exam site is desired or has been requested. In some cases, CHPs have performed this service for many years with no recognition. I would like to thank all exam site committee members and Nancy Johnson of the Secretariat for their hard work in coordinating these exam sites. But most of all, thanks to this year's exam site volunteers listed below who make the exam sites happen.

- Burlington/Boston: Mark Walsh, David Drum
- Chicago, Illinois: Steve Butala, Bill Munyon, Bruce Murdoch, Paul Neeson, Mike VanDerKarr
- Cleveland/Columbus, Ohio: Leonard Davis, Bill Thomas
- Dallas/Ft. Worth, Texas: John Lowe, Bob Evans
- Gaithersburg, Maryland: Jim Tracy, Tom O'Brien, Tim Mengers
- Golden, Colorado: Mike McDonald, Ted Borst
- Idaho Falls, Idaho: Bob Boston, Paul Ruhter
- Los Alamos, New Mexico: Michael W. Mallett, David L. Wannigman
- Oak Ridge, Tennessee: Mark McHugh, Art Palmer
- San Francisco, California: Tony Sorensen, Greg Jones
- Schenectady, New York: Anthony DeAngelo, Frank Augustine, Douglas Marx, Dennis Taylor
- Spokane, Washington: Jim Tarpinian, Steve Bump, Sharon Dossett, Sandy Kienholz, Kathy Pryor, Mary Birch, Jim Willison

The Display Ads, Short Course listings, and Placement Center are available in the hard-copy version of *Health Physics News*.

***Health Physics News* Contributions and Deadline**
Almost everything the Managing Editor receives by 20 January will be printed in the March issue.

HPS Reference Library: http://www.min.uc.edu/nuclear/hpspep/peplib.html

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Article II, Section 1, of the Bylaws of the Health Physics Society declares: "The Society is a professional organization dedicated to the development, dissemination, and application of both the scientific knowledge of, and the practical means for, radiation safety. The objective of the Society is the protection of people and the environment from unnecessary exposure to radiation. The Society is thus concerned with understanding, evaluating, and controlling the risks from radiation exposure relative to the benefits derived." *Health Physics News* is intended as a medium for the exchange of information between members. *Health Physics News* is published monthly and is distributed to the members of the Society as a benefit of membership. Subscriptions for nonmembers are available. Libraries, institutions, commercial firms, government agencies, and any person not eligible for membership may obtain a subscription. A small inventory of recent back issues is maintained by the Society at the Office of the Executive Secretary to supply copies to new members not yet on the mailing list. Inquiries about back copies and about subscriptions should be directed to the HPS Secretariat.

***** CHANGE OF ADDRESS, PHONE, FAX, OR EMAIL INFORMATION *****

If you have a change of address, phone or fax number, or email address you may now make those changes via the Health Physics Society (HPS) Web site (www.hps.org) in the Members Only section. The changes will be made to the Web site database and will also automatically be sent to the HPS Secretariat so that changes will be made on the Society database.

If you do not use the Internet make your changes through the HPS Secretariat.
Please make any changes or corrections BESIDE YOUR MAILING LABEL (on the reverse side of this notice).
If you have any change in your phone number, fax number, or email address, please note it near the label.

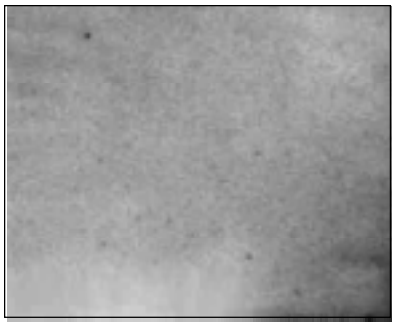
Odds and Ends from the Historical Archives

Paul Frame

Photographic Evidence

Prior to WW II, the Kodak Company had gone to considerable trouble to ensure that the cardboard it used for packaging film was free of radioactive contamination. Kodak had learned to its dismay that cardboard and paper made from recycled products could be contaminated due to materials originating from the radium industry.

Shortly after the atomic bomb was dropped on Hiroshima, Kodak observed some spotting on its film (see accompanying photo) that it traced back to contamination in its cardboard. Dr. J.H. Webb, a Kodak employee, studied the matter and concluded that the contamination must have come from a nuclear explosion somewhere in the United States. In fact, it came from the world's first nuclear explosion, the Trinity test, that took place in Alamogordo, New Mexico, 16 July 1945. Recognizing the sensitivity of this information, Dr. Webb kept his discovery secret until 1949.



In response to this event, the Kodak Company installed air samplers in the intakes of its building ventilation system to monitor for fallout.

Upcoming Events

39th Health Physics Society Midyear Topical Meeting
http://hps.org/newsandevents/meetings/meeting9.html
22-25 January 2006
Scottsdale, Arizona

2006 HPS Summer School "Medical Health Physics"
http://nechps.org/SS06/ss06.html
18-23 June 2006
Brown University
Providence, Rhode Island

51st Annual Meeting of the Health Physics Society
http://hps.org/newsandevents/meetings/meeting5.html
25-29 June 2006
Westin Convention Center
Providence, Rhode Island

NCRP 2006 Annual Meeting
"Chernobyl at Twenty"
http://www.ncrponline.org/
3-4 April 2006
Crystal City Forum
Arlington, Virginia

HPS Web Site: http://www.hps.org

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