



Cascade Chapter



Avalanche

The official newsletter of the
Cascade Chapter of the Health Physics Society

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<http://www.hpschapters.org/cascade/>

President's Corner

by Howard Wallace

I'm just back from the midyear meeting of the HPS in Albuquerque, New Mexico. My wife Danhua and I spent a week there eating green and red chili, attending classes, lectures, and the professional development school on Risk Communication.

As usual, I came back from the meeting inspired. It is wonderful to have the opportunity to hobnob with the luminaries in our profession, and to hear the latest thoughts on current issues. The Rio Grande Chapter did a great job as hosts, sponsoring nights out at the Atomic Museum and the Balloon museum. One of the highlights was the Sandia tour, where we got to witness a prompt criticality event. It was a thrilling, loud, bright, and most memorable seven milliseconds.

In addition to the fun and the excitement of the conference, exceptional speakers reminded us of the importance of our risk communications. When I first entered the field of health physics two decades ago, my mentors told stories of women aborting their pregnancies because of fears of what low doses of radiation would do to their child. Another such story from recent times was told at the conference, and it drove home the fact that misperceptions of radiation risk continue to have very real effects on the lives of people.

We heard that it is very difficult to teach people how to react to a dirty bomb, not because the appropriate responses are difficult or ineffective, but because many people are fatalistic about radiation exposure. Many people think that if a radiological event occurs they will die no matter what they do. Such people are unlikely to put much energy into learning appropriate responses. People can and do learn how to respond to biological and chemical threats much more readily than they do to radiological threats. The reasons for the difference appear to be almost completely psychological.

Interesting data was presented from confidential surveys of medical personnel and first responders, indicating that during a radiological emergency they may not behave in the

manners that their procedures dictate. Concerns about personal safety and safety of family may override their instructions. Unfortunately, many of their overriding concerns are not based on accurate risk perceptions.

Another concern was related to the possibility that, in the event of a radiological event, medical facilities would be overwhelmed by thousands of people with no medical problems, presenting and demanding evaluation and care. These hypothetical persons got the moniker "the worried well."

During our week in Albuquerque, President Obama addressed the nation in his State of the Union address. His endorsement of "clean nuclear power" drove home the point that our risk communication issues are not going away anytime soon.

Throughout the conference I was encouraged by the ability of the health physics professionals to come to a common understanding of the risks of radiation exposure and the uncertainties involved. Where we differ is on how to communicate risks to the public, and what to emphasize. The risk communication issue is vital, the need for public understanding is now, and the best resource for meeting that need is us. Not one of us, and not the "experts" among us, but all of us; talking, debating and interacting with a common vision of serving humanity.

Spread the Word About Health Physics!

by Philip Campbell

Have you ever found yourself trying to explain to someone what exactly a Health Physicist does? This can be a hard task because the majority of people have never even heard of health physics. One of the goals of this committee is to increase people's awareness of health physics. In that effort, I would encourage you to seek out opportunities to speak about your profession.

On February 2nd, I was given the opportunity to host a table at my son's junior high career fair. I had a G-M detector and a few common radioactive items with me. (Uranium ore, Vaseline glass, smoker detector, thorium lantern mantels, etc) It was a lot of fun, and I had the chance to talk

to about 50 or 60 kids about health physics. Every single one of them had no idea what health physics was. Luckily, I was able to explain it to them and a couple of kids seemed really interested. My goal for attending the career fair was not to convince every kid to become a health physicist, but to introduce them to health physics and to provide greater name recognition for our profession.

If you are presented with an opportunity to talk about health physics, please take it. Career fairs, science classes, mentorship programs...the more people hear about health physics the better it is for our profession.

If you are giving a formal presentation, please let me know. In preparation for the career fair I developed the *Health Physics* information sheet included in this edition of the *Avalanche*. It provides some basic knowledge of our profession along with some selling points which will hopefully get people interested in health physics. The chapter has also purchased some give-a-ways that we will provide to you. These clips say "Health Physics...Think about it!" and will hopefully remind people about our profession and what we do. These are available for you to handout during your presentation.



A Healthy Chapter

by Philip Campbell

In order for us to maintain a healthy and active chapter we need members who are willing to serve as officers. In the past we have had a difficult time finding members who are willing to serve, and this year is no different. Jennifer Johnson, the chair of the nominating committee, is in earnest search of officers to fill the positions of president-elect and secretary. She has even humbly offered to be president for the **third time** if no one will step up. Hopefully this won't be necessary.

As President-elect you will work with the Executive Council to organize the chapter meetings. After serving one year as President-elect, you will become President automatically. The President presides over the Executive Council and typically runs the chapter meetings. Both jobs are fairly easy and require little time commitment.

Serving as Secretary of the chapter requires a little more time. The Secretary is responsible for keeping the minutes of both the Executive Council and Chapter meetings; keeps a list of all chapter members and works with the Treasurer to collect annual dues; sends out and collects ballots used in elections and amending procedures; and sends out the

Avalanche two to three times each year. It sounds like a lot of work, but it actually is not that bad.

Serving as a chapter officer is very rewarding. I should know I have been serving as chapter secretary since 2006. I have had the opportunity to meet most of the chapter members, improve my writing skills, and help shape the direction of the chapter. I have also had the chance to work with some great people on both the local and national level.

Please seriously consider whether or not you can support the chapter by serving as either President-elect or Secretary. Your work as an officer of the chapter will benefit every member. It does not require a lot of time, it will look good on your resume, and it will really get you in touch with the society!

Chapter's Fall Meeting

Hopefully this will also appear in the next HPS newsletter

The Fall Meeting of the Cascade Chapter was held at the Red Lion Inn in Olympia, WA on November 6, 2009. The meeting was well attended by 29 of the 68 CCHPS members and 16 visitors. The speakers for the meeting were Dr. Dan Strom, Energy and Environment Directorate of Pacific Northwest National Laboratories, and Bill Bartholet, an Associate Fellow with the Boeing Advanced Physics Laboratories.

The CCHPS business meeting was called to order following a continental breakfast provided by Seltech Instrument Manufacturer Representatives, Inc. During the business meeting, the chapter decided to sponsor a booth at the Washington State Science Teachers Association annual meeting in March 2010. The idea is to get in touch with local science teachers to determine how the CCHPS can best help them incorporate radiation in their curriculum. The Chapter's HPS liaison (Dan Strom) was in attendance and talked about his role as liaison and what he can do for the chapter. He also answered questions.

Once the business meeting concluded, Dr. Strom presented his first topic titled *Variability, uncertainty, error, bias, and blunder*. He discussed the differences between these often confusing terms and how these terms apply to health physics. He also talked about the 1995 ISO Guide for expressing the uncertainty of a measurement, the 2009 National Research Council Report addressing modeling and decision-making, and the use of Bayesian statistical inference in health physics.

After lunch was served, Mr. Bartholet gave his presentation titled *Radiation Protection in Space*. It was interesting to hear the challenges of designing shielding for the radiations encountered in space. Mr. Bartholet's take home message for this presentation was, "New long duration missions into

deep space will elevate long term exposure to galactic cosmic rays as a significant mission design parameter. This constraint will increase the desire to reduce the current state of health risk uncertainty for cosmic ray exposures.”

Following the afternoon break sponsored by Mirion Technologies’ Global Dosimetry, Dan Strom presented his second topic titled *Physics, Health Physics, and Applications of Backscatter X-ray Imaging Technology*. This presentation covered how x-ray backscatter works (reflection as opposed to transmission), the physics of Compton backscatter, what the physics tells about which atomic numbers are preferentially imaged, as well as effects of densities and thickness. It was interesting to learn about this new technology and how it is being used.

The meeting was very successful. Many positive comments were received following the meeting, and people really seemed to enjoy the topics that were presented.

Regulations Corner

New NRC Reg Guide for ALARA at Medical institutions

The NRC has issued a draft regulatory guide (DG-8037) titled *Information Relevant to Ensuring that Occupational Radiation Exposures at Medical Institutions Will be as Low as is Reasonably Achievable*. This guide is directed specifically toward medical licensees and recommends methods that the staff of the NRC considers acceptable to maintain occupational exposures as low as is reasonably achievable (ALARA) in medical institutions. The Federal Register notice and the full draft of the Reg Guide can be found on our website.

The NRC is currently soliciting comments on DG-8037 until March 19, 2010. Comments can be made online at <http://www.regulations.gov/search/Regs/home.html#documentDetail?R=0900006480a81fe4>.

NRC Safety Culture Policy Statement

The NRC is currently seeking public comment on a draft Commission policy statement on safety culture. The draft safety culture policy statement was published in the Federal Register (74 FR 57525) on November 6, 2009. The comment period has been extended to March 1, 2010. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received before this date. You can comment on this proposed policy statement here: <http://www.regulations.gov/search/Regs/home.html#docketDetail?R=NRC-2009-0485>.

The NRC is also planning to hold several workshops to help define objectives, strategies, activities and measures that enhance safety culture for NRC-regulated activities.

Specifically, the workshops will focus on: (1) Development of a common safety culture definition; and (2) development of high-level description/traits of areas important to safety culture. These workshops aim to develop these concepts for incorporation into the draft final policy statement and will be considered when revising the oversight programs for NRC-regulated nuclear industries. The tentative dates for the planned public workshops are February 2-4, 2010, and April 13-15, 2010, and October 27-28, 2010, at or near NRC headquarters in Rockville, MD.

10 CFR 20 AND 50

As described in the last issue of the *Avalanche*, the NRC is also seeking public comment on potential changes to 10 CFR 20 and 10 CFR 50. Specifically, the NRC is looking at the effects of implementing the recommendations of ICRP 103 (December 2007), which includes lowering the occupational dose limit to 2 rem per year.

Members are encouraged to submit any comments or questions by March 31, 2010 to www.Regulations.gov or via email to Reg4rp@nrc.gov.

Announcements

2010 Dues

We are now accepting payments for 2010 dues. In order to keep up with the increased operating costs, dues for 2010 have increased. This year’s dues are \$25 for Plenary membership, \$20 per person for Group membership, and \$12.50 for Student and Member Emeritus membership. If you are not sure if you have paid your 2010 dues, please contact the chapter secretary.

Benefits of membership include lowered cost of meetings, professional contacts, the *Avalanche* newsletter, and association with really great people. If you have five or more members in your organization, then a Group membership is the way to go. In addition to the above benefits, each Group member receives free admission to the Annual meeting (lunch is not included).

More information about the different membership categories and the benefits of each type of membership can be found on the [CCHPS website](#).

2010 Elections

The offices open for the 2010 election are Secretary and President-Elect. These terms will run from May 2010 to May 2012. The President–Elect becomes President during the second year.

Serving as a CCHPS officer is a great way to support the chapter and get to know other members. The Nominating Committee consists of Jennifer Johnson, Norm Dyer, and

Bill Tuttle. If you are interested in running for one of these offices, you can talk to a member of the nominating committee, or you can contact the chapter secretary, who will forward your information to the committee.

You can expect to see your CCHPS ballot in late March or early April. The ballot will close on May 7th, the day of the Spring CCHPS meeting.

Instrument Calibration Training

The Executive Council is looking into the possibility of bringing the Ludlum Calibration Training trailer to our area this summer. Based on the results of the survey performed a few months ago, it looks like we have enough interest to hold a training session in both Oregon and Washington. If you are interested in helping plan this event, please contact the chapter secretary.

2010 Meetings

Winter

There will not be a winter meeting this year. Instead, the executive council will focus on the Annual meeting and the possibility of bringing the Ludlum Calibration Training trailer to the area later this year.

Spring (Annual)

The Annual Dale E Trout meeting is scheduled for May 7, 2010 at Oregon State University. The HPS president-elect will be speaking, and we will hear presentations from a few graduate students. The annual meeting is a great opportunity to catch-up with old friends or to make new ones. Please join us.

Fall

The fall meeting will be held in late October or early November in the Olympia area. If you would like to present a topic at this meeting please contact the chapter secretary.



<http://www.orau.org/ptp/collection/hpposters/hpposters.htm>

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