

# NCCHPS

Northern California Chapter-Health Physics Society

September 2017

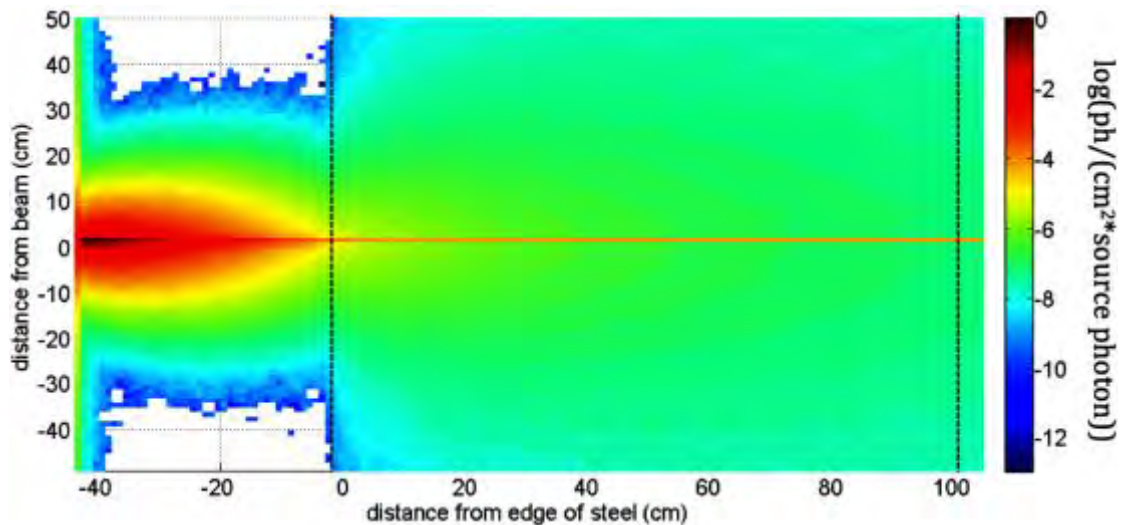


## *The NCCHPS September 2017 Dinner Meeting*

*Thursday, September 21, 2017*

*Dragon Rouge Restaurant, Alameda*

*6 pm Social / 7 pm Dinner / 8 pm Announcements and Technical Presentation*



### **Plasma Acceleration Based Near Monoenergetic Photon Sources**

Near-monoenergetic photon sources at MeV energies have the potential to provide significant performance enhancements or enable new capabilities in nuclear nonproliferation as well as in security, industry and medicine. Their advantages lie in the ability to control energy, energy spread, flux, angular divergence and pulse structure to deliver the photons needed for signature generation while suppressing extraneous radiation dose and signal background that is associated with current bremsstrahlung sources. Simulations indicate that dose reductions range from about 2x to above a factor of 50. Photon sources based on Thomson scattering using compact laser-plasma accelerators are being developed to enable these benefits in compact laboratory-scale or potentially transportable packages. The installation of an experiment to test these capabilities will be discussed, including control of radiation dose and beam collimation. The path from near term experiments towards applications requirements will be discussed.

## About the Speaker



### Cameron G.R. Geddes Staff Scientist, Lawrence Berkeley National Laboratory

Dr. Geddes is a staff scientist in the BELLA center of Lawrence Berkeley National Laboratory, investigating use of laser driven plasma waves to build compact next generation particle accelerators and photon sources. These accelerators sustain much higher accelerating fields than conventional devices, allowing compact machines. His current project is developing compact sources near-monochromatic MeV photons for nuclear material detection and characterization. Other applications include extending the future reach of high-energy particle physics as well as radiation sources in the X-ray to THz bands.

Geddes received the Ph.D. in 2005 at the University of California, Berkeley, supported by the Hertz Fellowship. He received Hertz and APS Rosenbluth dissertation prizes for the first laser driven accelerator to produce mono-energetic beams. He is a fellow of the American Physical Society. He received the B.A. degree from Swarthmore College in 1997, and received the APS Apker and Swarthmore Elmore prize for work on Spheromak equilibria. Previous research included Thomson scattering measuring driven waves in inertial confinement fusion plasmas (1997-99, LLNL), wave mixing (1999, Polymath), small aspect Tokamaks (1995, Princeton/U. of Wisconsin), and nonlinear optics (1993-95, Swarthmore).

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## ***51st Midyear Meeting of the Health Physics Society 4-7 February 2018, Denver, Colorado***



The 2018 Midyear Meeting will be held in the mile-high city of Denver, Colorado, 4-7 February 2018. Denver is located on the high rolling plains of the Rocky Mountains with panoramic views of 14,000 ft. snowcapped mountains. Downtown Denver offers a variety of activities as well as easy access to nearby ski resorts. The midyear will not be a topical meeting so we are strongly soliciting the full spectrum of radiation protection specialties. Everyone is welcome to come to share their world to make this a wonderful midyear session!

### **Denver Marriott Hotel**

**HPS Group Rates start at \$203 per night. Book your room reservation**

at [https://aws.passkey.com/event/49128173/owner/3135/home?utm\\_campaign=274573209](https://aws.passkey.com/event/49128173/owner/3135/home?utm_campaign=274573209)



Thermo Fisher Scientific is continuing to advance instrumentation used in the measurement of radiation. These advancements are in the areas of personnel contamination, dosimetry, and hand-held survey instruments.

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The **Thermo-Harshaw TLD** products (readers and materials) are the state of the art for passive monitoring using TLD. The **EPN-Mk2** and **EPD-N2** (gamma neutron) are the active dosimeters of choice at virtually all DOE and DOD sites.

The **RadEye-"X"** series has already been selected by many DOE National Labs as a superior replacement for the older box-style analog meters, including our own E600. These labs are realizing not only the cost savings advantages of the RadEye-X, but also the simplicity and robustness that has been designed into a sophisticated digital meter that weighs approx 4 oz. and "talks" to all of your existing probes.

Justin Kung  
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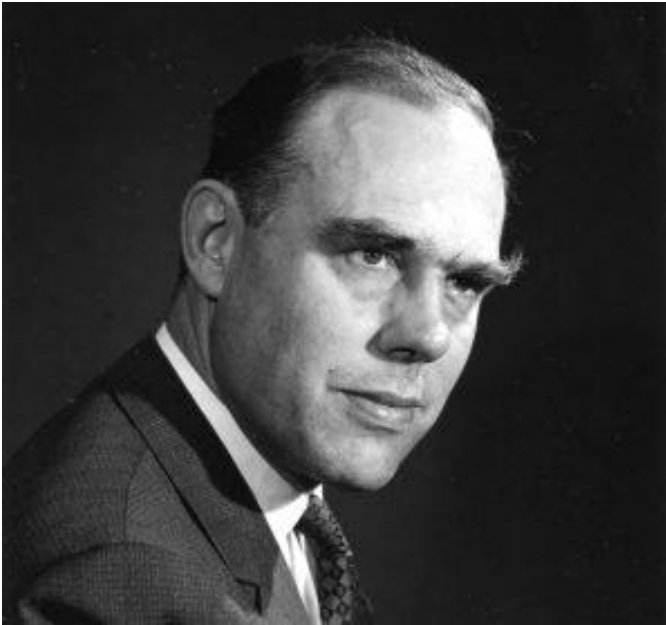
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**News from Burton J. Moyer Memorial Fellowship Fund Committee**



The Burton J. Moyer Memorial Fellowship Fund (BJMMFF) provides financial support to a full-time graduate student in health physics (\$10,000 annually). The Burton J. Moyer Memorial Fellowship is the most prestigious fellowship in the field of health physics. It has been continuously awarded since 1985.

For some time Burton J. Moyer Memorial Fellowship (BJMF) Committee was short of NCCHPS bylaws recommended number of members. After retiring from a stellar 39 years career at LLNL Kathy Shingleton accepted the invitation to join the Committee membership. Now the Committee consists of a Chairperson and

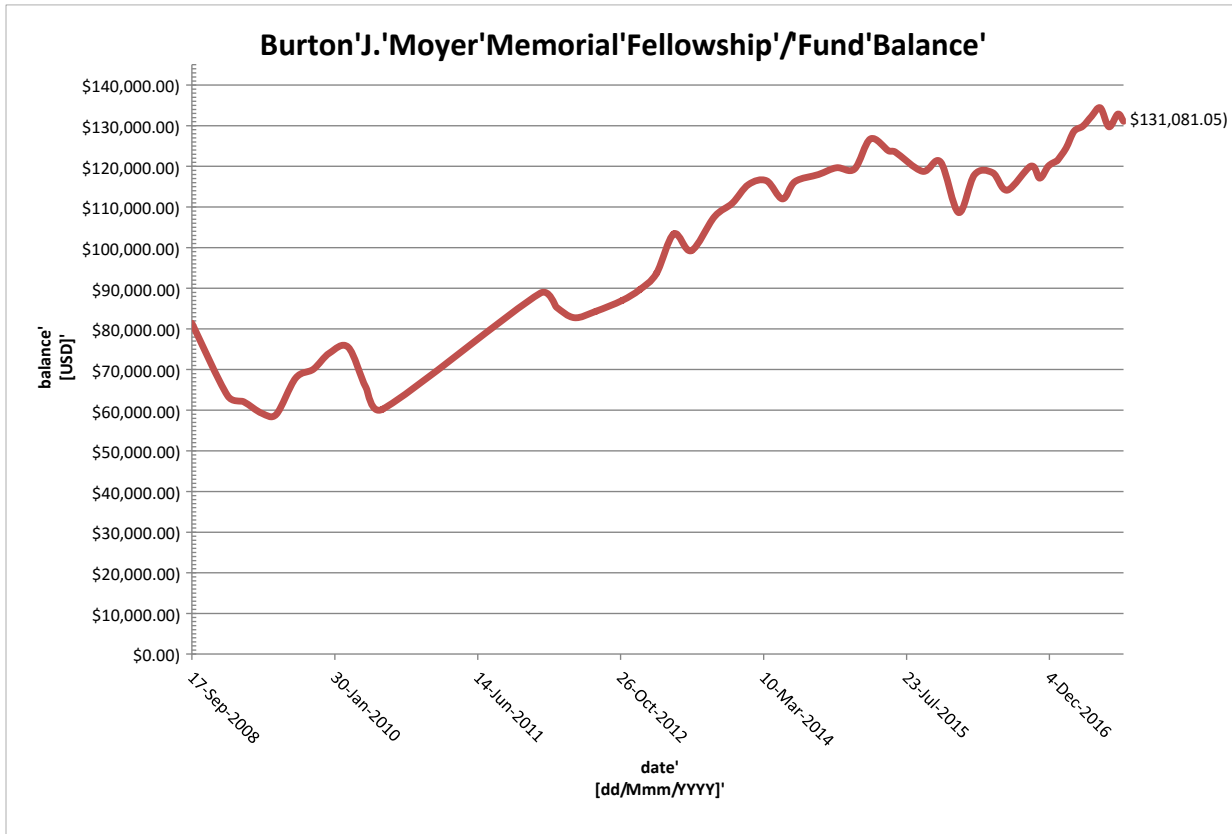
two Members. The BJMF Committee is responsible for all activities relating to the Burton J. Moyer Fellowship Fund, the selection of NCCHPS recommendation for the BJMF Award recipient, and any other activities authorized by the NCCHPS Board of Directors. The selection of BJMF Award recipient takes place in March-April timeframe.

Burton J. Moyer Memorial Fellowship Fund monies are invested into 7 Fidelity mutual funds and one money market account. As of August 11, 2017, the value of BJMMFF investments totals \$ 131,165 thanks to the favorable market conditions. BJMMFF is governed by NCCHPS Bylaws and these monies are separate from the NCCHPS operational funds. The value of the Burton J. Moyer Memorial Fellowship Fund (including donations) for the past year were

- 2/2017 - \$128,620
- 4/2017 - \$129,932
- 8/2017 - \$131,165

For the past year we received donations to the Burton J. Moyer Memorial Fellowship Fund totaling \$1470.

**News from Burton J. Moyer Memorial Fellowship Fund Committee (Continued)**



**Burton J. Moyer Memorial Fellowship Fund DONATIONS:**

We appreciate donations to BJMMFF of any amount, no matter how small; the donations are tax deductible.

Checks payable to NCCHPS may be sent to our treasurer, with the notation “For the Moyer Fund” or you can contribute when you pay for your dinner meeting with one combined check. You may indicate if you wish your donation to remain anonymous.

**Radoslav Radev,**

**Chairperson, NCCHPS Burton Moyer Fellowship Committee**

## *President's Message*

As always summer went by pretty fast, hope all you enjoy it. This summer I had the opportunity to see some historic sites (like Experimental Breeder Reactor 1) and appreciate the work of health physicist that came before us. I know that some years later a young health physicist will visit where we work today and will think of us 😊 so keep up the good work.

The Board met in July to transition our incoming board members into their new roles. I am honored to welcome President-Elect Maranda Cimeno, Secretary Dan Hibbing and Member-at-Large Heather Garcia Byrnes to the 2017-2018 NCCHPS Board of Directors. Thank you for your time and effort to make our chapter stronger.



I would like to extend my thanks to the former members of NCCHPS board, Greg Jones (past president) and Member-at-Large Craig Maxwell. We will miss your helpful presence on the board. But as you know, there are many other ways to help NCCHPS community and I am sure you will continue to serve our community as a member.

I am very anxious to serve as your president over the next year. My goal is to increase our presence in social media as well as having more outreach activities with local schools and colleges. Please do not hesitate to share your ideas with me to help foster our profession.

Hope to see you in September.

**Ibrahim Ozcan, President  
NCCHPS**

<p><b><i>Upcoming NCCHPS Meetings...</i></b></p> <p><b>September 21, 2017</b>  <b>Dr. Cameron G. R. Geddes</b></p> <p><b>November 17, 2017</b></p> <p><b>January 19, 2018</b></p> <p><b>March 16, 2018</b>  <b>HPS President Elect</b></p> <p><b>May 18, 2018</b>  <b>Affiliates Night</b></p> <p><b>Mailing Address:</b>  <b>NCCHPS</b>  <b>4435 First Street #141</b>  <b>Livermore, CA 94550</b></p> <p><b>Email:</b>  <a href="mailto:ncchps@gmail.com">ncchps@gmail.com</a></p> <p><b>Website:</b>  <a href="http://hpschapters.org/ncchps/">http://hpschapters.org/ncchps/</a></p> <p><b>Newsletter Editor:</b>  <b>Warren TenBrook</b>  <a href="mailto:warren@tenbrook.org">warren@tenbrook.org</a>  <b>(925) 423-1470</b></p> <p><b>Affiliate Liason:</b>  <b>Nelson Chiu</b>  <a href="mailto:ncchpsaffiliatecontact@gmail.com">ncchpsaffiliatecontact@gmail.com</a>  <b>(414) 559-5586</b></p>	<p><b><u>The Next NCCHPS Meeting!</u></b></p> <p>Thursday, September 21, 2017          6:00 – 7:00 pm no-host meet &amp; greet          7:00 – 8:00 pm dinner          8:00 pm announcements and technical presentation.</p> <p>Venue Details:          Dragon Rouge Restaurant          2337 Blanding Ave., Alameda, CA 94501          510-521-1800  <a href="http://dragonrougerestaurant.com/">http://dragonrougerestaurant.com/</a></p> <p>The dinner menu is buffet style:</p> <p>Beverages: soda and water, cash and carry bar          Appetizer: roll sampler and mango salad          Dinner: Garlic noodles with tofu and veggies, catfish claypot, bouncing beef, brown rice          Dessert: Banana somosas with ice cream</p> <p><b>Register by 10 pm Tuesday, September 12 at the link below:</b>  <a href="http://hpschapters.org/ncchps/docs/pages/meetings.html">http://hpschapters.org/ncchps/docs/pages/meetings.html</a></p> <p>NCCHPS members \$30 (\$35 @ door)          NCCHPS guests \$35          Students \$10          Non-members \$40</p> <p><b>Only online registrations accepted.</b></p> <p>Contact Member-at-Large Heather Byrnes ONLY if you encounter difficulties using the form: <a href="mailto:byrnes7@llnl.gov">byrnes7@llnl.gov</a></p> <p>Please note that in order to avoid unnecessary costs to the Chapter, you may be charged for no-shows. Cancellations may not be made after the RSVP deadline.</p>	<p><b><u>2017-2018 NCCHPS Board Members:</u></b></p> <p><b>President</b>  <b>Ibrahim Ozcan</b>  <a href="mailto:iozcan@lbl.gov">iozcan@lbl.gov</a>  <b>(510) 495-2842</b></p> <p><b>President-Elect</b>  <b>Maranda Cimeno</b>          Genentech, Inc.  <a href="mailto:cimeno.maranda@gene.com">cimeno.maranda@gene.com</a></p> <p><b>Past President</b>  <b>Lydia Tai</b>  <a href="mailto:Tai4@llnl.gov">Tai4@llnl.gov</a>  <b>(925) 422-0475</b></p> <p><b>Secretary</b>  <b>Dan Hibbing</b>  <b>(510) 643-9242</b>  <a href="mailto:dhibbing@berkeley.edu">dhibbing@berkeley.edu</a></p> <p><b>Treasurer</b>  <b>Chad Hopponen</b>  <a href="mailto:hoppynhi@gmail.com">hoppynhi@gmail.com</a>  <b>(925) 422-7128</b></p> <p><b>Member-at-Large</b>  <b>Paul Swearingen</b>  <a href="mailto:swearingen.paul@gene.com">swearingen.paul@gene.com</a>  <b>(650) 255-3088 (work)</b></p> <p><b>Member-at-Large</b>  <b>Heather Byrnes</b>  <b>(925) 422-1790</b>  <a href="mailto:byrnes7@llnl.gov">byrnes7@llnl.gov</a></p>
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