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****FOR IMMEDIATE RELEASE ****

McLean, VA, January 22, 2008 – What new frontiers of science can be probed with the world's first free electron laser using x-ray wavelengths? How can we quickly deploy appropriate radiation detection systems to any location on a highway when a vehicle's cargo is suspect? How much has the average medical radiation exposure increased and why?

These and other questions will be addressed at the 2008 Midyear Topical Meeting of the Health Physics Society (HPS), which will take place January 28-30, 2008 in Oakland, California at the Oakland Marriott Convention Center. Approximately 400 attendees are expected, with over 130 presentations throughout the three days.

Here are two examples of the noteworthy talks that will be presented at the meeting:

MEDICAL RADIATION EXPOSURES RISING

In 1982, the per capita radiation dose due to medical imaging was estimated to be 0.54 mSv and the collective dose 124,000 person-Sv. The preliminary estimates of the NCRP Scientific Committee 6-2 medical subgroup are that in 2006, the per capita dose from medical exposure (not including radiotherapy) had increased almost 600 percent to about 3.0 mSv and the collective dose had increased over 750 percent to about 880,000 person-Sv. The largest contributions and increases have come primarily from CT scanning and nuclear medicine. (Presentation TPM-B.1 Tuesday, January 29, 2008, Presenter email: fmettler@salud.unm.edu)

WORLD'S FIRST FREE ELECTRON X-RAY LASER

The Linac Coherent Light Source (LCLS) at the Stanford Linear Accelerator Center (SLAC) will be the world's first free electron laser at x-ray wavelengths when it becomes operational in 2009. Ultra-fast pulses of unprecedented brightness will enable completely new classes of experiments, such as following atomic rearrangements during chemical reactions, and imaging of single molecules.

(Two presentations: MPM-A.4 Monday, January 28, 2008, Presenter email: mao@slac.stanford.edu; and WAM-A.5 Wednesday, January 30, 2008, Presenter email: msantana@slac.stanford.edu)

OTHER HIGHLIGHTS

- Information about particle accelerator facilities for medical therapy; use of radiation-generating machines for cargo imaging systems;
- Discussion of a new technique that overcomes these limitations by obtaining tomographic images using the multiple scattering of cosmic radiation as it transits each vehicle;
- A Nuclear Regulatory Commission update on efforts to regulate naturally-occurring and accelerator-produced radioactive materials;
- Performance of non-destructive testing radiography using a battery-powered portable x-ray generator rather than a traditional gamma radiography source;
- A report on the status of two new International Electrotechnical Commission international standards (one on personnel screening and one on cargo/vehicle inspection systems);

- A review of the recently released ANSI Standard related to the use of radiation detection equipment used for homeland security;
- A new method for delivering therapeutic radiation doses using a miniature x-ray source.

Information about these and all of the presentations can be found at http://hps.org/documents/2008_midyear_preliminary_program.pdf.

ABOUT THE HEALTH PHYSICS SOCIETY

The Health Physics Society consists of approximately 5,500 radiation safety professionals whose activities include ensuring safe and beneficial uses of radiation and radioactive materials, assisting in the development of standards and regulations, and communicating radiation safety information.

The Society is a nonprofit organization formed in 1956. Its primary mission is excellence in the science and practice of radiation safety. The Society has members in approximately 70 countries, and has established nearly 50 chapters and 10 student branches. Visit www.hps.org for more information.

Health physicists promote the practice of radiation safety. They work in occupational environments such as universities, local hospitals, manufacturing, and nuclear power plants as well as in environmental areas such as radioactive waste sites. They are involved in understanding, evaluating, and controlling radiation's potential risks relative to its benefits in applications such as fighting disease, supplying energy, and increasing security.

IF YOU CAN'T ATTEND THE MEETING

The HPS meeting webpage (<http://hps.org/newsandevents/meetings/meeting5.html>) contains links to the full program. Reporters who would like to attend the meeting or who need assistance contacting the presenters should contact HPS Media Liaison Kelly Classic (media@hps.org).