

**8th Annual
LLNL/LPC Science and Engineering Seminar Series
Theory to Practice: How Science is Done**

Accelerator Mass Spectrometry: Peeking at Particles for Human Health

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Wednesday, November 1, 2017
6:00-7:15 pm
Building 2400, Room 2420

Free and open to the public

Abstract: Accelerator mass spectrometry (AMS) is a technique for measuring long-lived radionuclides that occur naturally in our environment. AMS uses a particle accelerator in conjunction with ion sources, large magnets, and detectors to separate out interferences and count single atoms in the presence of a thousand-million-million stable atoms. At the Center for Accelerator Mass Spectrometry at Lawrence Livermore National Laboratory we measure about ten different radionuclides. They are used for a wide variety of dating and tracing applications in the geological and planetary sciences, national security, archaeology, and biomedicine. Biomedical applications – especially those focused on human health - will be discussed.



Graham Bench is the Director of the Center for Accelerator Mass Spectrometry. He received his Ph.D. in Physics from the University of Melbourne, Australia in 1991. His research interests focus around application of accelerator based ion beam analysis (including microbeam) techniques and Accelerator Mass Spectrometry (AMS) to the study of problems in the bio-medical and environmental sciences and materials characterization.