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Scientific Evening Talk

Wednesday, December 12, 2012, 18.30 h

Magnus-Haus Berlin, Am Kupfergraben 7, 10117 Berlin

Microscopy with X-rays: A new look at Life and Materials

Prof. Dr. Janos Kirz
Advanced Light Source
Lawrence Berkeley National Laboratory
Berkeley (USA)

The discussion will be chaired by
Prof. Dr. Wolfgang Eberhardt
Scientific Director Magnus-Haus

'Nachsitzung' with food and drinks in the 'Remise' sponsored by the WE-Heraeus-Foundation
RSVP:
http://www.dpg-physik.de/dpg/magnus/formulare/formular_2012-12-12/anmeldung-2012-12-12.html

Janos Kirz was born in Budapest, Hungary, and emigrated to the US in 1957. He received his Ph. D. from the University of California, Berkeley in 1963. He is Distinguished Professor Emeritus at Stony Brook University, where he led a group in the development of X-ray microscopy, and served as Chair of the Department of Physics and Astronomy between 1998 and 2001.
He is currently Scientific Advisor to the Advanced Light Source in Berkeley, where he was Acting Director between 2004 and 2006. He chairs the Scientific Council for the DESY laboratory in Hamburg, the Proposal Review Panel for the Free Electron Laser, FERMI, in Trieste, and the Policy and Advisory Board for the Cornell High Energy Synchrotron Source, CHESS. Last fall he was Academia Sinica Visiting Professor at the University of Science and Technology of China in Hefei.

Abstract: X-ray microscopy exploits the penetrating power and rich spectral structure in the interaction of X-rays with matter. Recent developments in bright X-ray sources such as electron storage rings and free electron lasers, along with modern microfabrication techniques for making exquisitely precise X-ray optical elements have led to dramatic advances in the resolution and the versatility in X-ray microscopy. The lecture will review the physics behind X-ray microscopes using either coherent or incoherent X-ray beams, recent advances and ultimate limitations. Applications to biology and materials science from a variety of laboratories will be used to illustrate the emerging capabilities of the technique.