

Abstract Submitted
for the APR10 Meeting of
The American Physical Society

First Deployment of an Electron Beam Ion Trap at an Advanced Source of Hard X-rays J.D. GILLASPY, NIST, E. SILVER, Harvard-Smithsonian Center for Astrophysics, E.P. KANTER, Argonne National Laboratory, N.S. BRICKHOUSE, Harvard-Smithsonian Center for Astrophysics, R.W. DUNFORD, Argonne National Laboratory, K. KIRBY, T. LIN, Harvard-Smithsonian Center for Astrophysics, J. MCDONALD, George E. Wahlen Department of Veterans Affairs Medical Center, D. SCHNEIDER, Lawrence Livermore National Laboratory, S. SEIFERT, L. YOUNG, Argonne National Laboratory — We have deployed an Electron Beam Ion Trap (EBIT) at the Advanced Photon Source. The EBIT was cooled to 4K with a cryocooler and mounted on stepper motors to allow precise adjustment relative to the x-ray beam. The electron and x-ray beams crossed at a right angle in the horizontal plane. Spectra of photons emitted off-axis from the incident beams were recorded as Kr²⁶⁺ and Ar⁸⁺ ions were subjected to x-rays up to 18 keV. No heating or other adverse effects on the operation of the cryogenic ion trap were experienced. Spectra and lessons learned for future work will be presented.

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Date submitted: 26 Oct 2009

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