

Abstract Submitted
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New results from Compton spectrometer experiments AMANDA GEHRING, MICHELLE ESPY, TODD HAINES, Los Alamos National Laboratory, TIMOTHY WEBB, Sandia National Laboratory — Over the past three years, a Compton spectrometer has successfully measured the x-ray spectra of intense radiographic sources. In this method, a collimated beam of x-rays incident on a converter foil ejects Compton electrons. A collimator in the entrance to the spectrometer selects the forward-scattered electrons, which enter the magnetic field region of the spectrometer. The position of the electrons at the magnet's focal plane is proportional to the square root of their momentum, allowing the x-ray spectrum to be reconstructed. The spectrometer is a neodymium-iron magnet which measures spectra in the less than 1 MeV to 20 MeV energy range. In addition, a new spectrometer has been constructed that is a samarium-cobalt magnet with a calculated energy range of 50 keV to 4 MeV. The spectrometers have been fielded at both continuous and pulsed power facilities. Recent experimental results will be presented.

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