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Experimental Setup and Characterization of Laser Produced X-Rays P.J. BONOFIGLO, M.E. LOWENSTERN, C. ZERGER, C. ARNETT, P.A. KEITER, C.C. KURANZ, R.P. DRAKE, University of Michigan — Laser produced x-rays are a well-established diagnostic tool for imaging many events in High Energy Density (HED) experiments. However, many of these experiments suffer from low signal-to-noise. We strive to produce both production and detection of the x-ray signal. We will study laser-irradiated foils with a low energy laser. We used a ND:YAG laser at 532 nm with a pulse duration and energy of 8 ns and 160 mJ respectively. We will present our initial design work on the experimental setup, and we will also report the measurement of x-rays from different laser-irradiated metal foils from a photodiode and spectrometer. Our future work will entail characterizing the x-rays through measurements with a streak camera and microchannel plates (MCPs).

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