

Abstract Submitted  
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**Experimental demonstration of x-ray betatron radiation spectrum from laser accelerated electron beams**<sup>1</sup> VALENTINE LEURENT, PIERRE MICHEL, LLNL, CHRIS CLAYTON, UCLA, BRADLEY POLLOCK, TILO DOEPPNER, LLNL, JOSEPH RALPH, ART PAK, TYAN-LIN WANG, CHAN JOSHI, UCLA, GEORGE TYNAN, UCSD, LAURENT DIVOL, JOHN PALASTRO, SIEGRIED GLENZER, DUSTIN FROULA, LLNL — New laser wake-field acceleration (LWFA) experiments have been carried out at the Callisto Laser Facility, Lawrence Livermore National Laboratory. We will present results of the first experimental campaign on LWFA. The electron beam energy spectrum was measured with a two-screen spectrometer to avoid ambiguities due to the possible angle of the electron beam at the plasma exit [1]. Electron beams up to 300 MeV were measured. X-ray betatron radiation from the accelerated electrons were also measured. By using a set of filters acting like a spectral step function, the x-ray spectrum was reconstructed from fitting theoretical estimates; the radiation peaks at a few keVs. [1] R. Ischebeck et al., Proceedings of PAC 2007, Albuquerque NM, p. 4168. LLNL-ABS-405251

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