

Abstract Submitted
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Soft X-ray spectral measurements from Laser Wakefield Acceleration SAHEL HAKIMI, NICHOLAS BEIER, University of California, Irvine, YONG MA, JESUS HINOJOSA, AMINA HUSSEIN, ANATOLY MAKSIMCHUK, JOHN NEES, University of Michigan, TOSHIKI TAJIMA, University of California, Irvine, KARL KRUSHELNICK, ALEC THOMAS, University of Michigan, FRANKLIN DOLLAR, University of California, Irvine, DEPARTMENT OF PHYSICS AND ASTRONOMY, UNIVERSITY OF CALIFORNIA, IRVINE, CALIFORNIA 92697, USA COLLABORATION, CENTER FOR ULTRAFAST OPTICAL SCIENCE, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICHIGAN 48109, USA COLLABORATION — We have performed soft X-ray measurements from LWFA experiments using the HERCULES laser system at University of Michigan. A high-resolution spectrometer captured radiation emitted from LWFA interactions with a gas cell target and 30 fs pulses with powers of 100 TW. Spectral lines and broadband emission measurements were made alongside electron beam characterizations, and an inference to the electron acceleration mechanism is discussed. Simulations were also performed showcasing radiation generation.

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