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K_α Production in Solid Targets as a function of Laser Pre-Pulse and Pulse Length[1] L.C. JARROTT, D. MARISCAL, B. WESTOVER, F.N. BEG, UCSD, M. SUGGIT, University of Oxford, C. CHEN, D. HEY, T. MA, B. MADDOX, J. HAWRELIAK, H.-S. PARK, B. REMINGTON, A. MACPHEE, LLNL — K_α production from solid targets interacting with the Titan laser has been measured as a function of laser prepulse and pulse length. An artificial pre-pulse was added using the Titan long pulse beam co-linearly with the short pulse beam allowing the pre-pulse to be varied from its inherent value of roughly 20mJ up to 5J with 3 ns pulse duration. The main laser parameters for the pre-pulse scan were ∼300J laser energy, 40ps pulse length. For the pulse length scan, the Titan short pulse laser was varied from 0.7ps to 190ps keeping the laser energy fixed at 150 J. Relative Ka production was measured using a Transmission Crystal Spectrometer as well as the HOPG Crystal Spectrometer and absolute values were calculated by cross calibrating a Single Hit CCD camera with both spectrometers. Detailed experimental results will be presented at the meeting.

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