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Fast electron transport in shock-wave heated planar Au targets
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Hydro modeling shows that in a re-entrant cone-guided Fast Ignition, shell compression launches a shock into the tip of the cone through which the ignition electrons must propagate. The transport of fast electrons through shocked and unshocked Au targets is investigated using the Titan laser at LLNL. A shock wave is launched by the long pulse (300 J, 3ns, 532 nm) interacting with the CH of a CH/Cu/Au target. Fast electrons generated by the short pulse (150J, 0.7 ps, 10^{20} W/cm^2) interacting with the Au are transported through the gold. Cu K-alpha induced by the electrons is recorded with HOPG spectrometers and spherical Bragg crystal imagers as a function of the delay of two pulses. Detailed analysis of results will be presented. This work was supported by the US DOE under contracts DE-FC02-04ER54789 (Fusion Science Center) and DE-FG-02-05ER54834 (ACE).

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