

Abstract Submitted
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Initial results from the Omega Asymmetric Burn Experiment – ABEX¹ EVAN DODD, FREDERICK WYSOCKI, JOHN BENAGE, VINCENT THOMAS, ROBERT KARES, KIMBERLY OBREY, DEREK SCHMIDT, Los Alamos National Laboratory — A new experiment has been designed to explore fusion burn degradation mechanisms in asymmetric laser-driven implosions. This presentation will present experimental design considerations, goals for the first series of tests, and a summary of the results from that series conducted at the Omega laser facility on April 5, 2011. The manufacturing technique will be summarized and issues to be addressed with several control capsules will be presented. Example data from time-integrated and time-resolved x-ray self-emission imaging along with time-resolved fusion burn rates and total neutron yield as a function of asymmetry will be presented. The scaling of measured yield degradation with calculated enstrophy derived from hydro-code simulations will be examined.

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Evan Dodd
Los Alamos National Laboratory

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