

Abstract Submitted
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The Marble experimental plan¹ T.J. MURPHY, M.R. DOUGLAS, J.R. FINCKE, R.D. GILBERTSON, G.P. GRIM, B.M. HAINES, C.E. HAMILTON, J.A. OERTEL, R.E. OLSON, D.W. SCHMIDT, R.C. SHAH, J.M. SMIDT, I.L. TREGILLIS, Los Alamos National Laboratory — The Marble campaign will quantify the effects of heterogeneous mix on fusion burn in ICF capsules using deuterated foam and tritium gas filled capsules. The heterogeneousness of the mix will be controlled by varying the porosity of the foam. Platform development efforts are underway, and experiments will be performed in FY2015 on Omega using direct-drive capsule implosions and on NIF using near-vacuum hohlraum capsule implosions to provide initial data on the performance of foam-filled capsule implosions. Capsules filled with a mixture of deuterated propane and tritium will be used as controls, providing data from uniformly mixed reactants. Capsules filled with engineered foams of specified porosity are currently being developed.

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