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Overview of the Marble experiment M.R. DOUGLAS, J.R. FINCKE, G.P. GRIM, B.M. HAINES, T.J. MURPHY, R.E. OLSON, R.C. SHAH, J.M. SMIDT, I.L. TREGILLIS, J.A. OERTEL, LANL — Work is underway to develop a new ICF platform on the Omega and NIF facilities to better quantify the influence of heterogeneous mix on fusion burn. Results of these experiments will be compared to a probability distribution function (PDF) burn model that has been developed to address yield from separated reactant experiments. CH capsules comprised of CH or CD solid foam cores containing tritium gas are being proposed along with capsules filled with a mixture of deuterated propane and tritium gas. For configurations in which the D and T are initially spatially separated, subsequent DT yield is used to characterize the mix. An overview of the experimental concept will be presented, and simulations in preparation for the platform will be discussed. This work is supported by the US DOE performed by LANL under contract DE-AC52-06NA25396.

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