

Abstract Submitted
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Update on Specifications for LMJ Ignition Targets GIORLA JEAN, CEA, CHERFILS CATHERINE, GALMICHE DIDIER, GAUTHIER PASCAL, LAFFITE STEPHANE, MASSE LAURENT, POGGI FRANCOISE, QUACH ROBERT, SEYTOR PATRICIA — The Laser Mégajoule (LMJ) facility will deliver up to 1.40 MJ of 0.35 μm light in 160 beams in a first step. The targets for the first ignition experiments rely on indirect drive and use plastic capsules doped with germanium. The target fabrication specifications are the result of an extensive robustness study where all fabrication, laser and experimental errors are taken into account. This study is complete for the ‘baseline’ target A1040 designed for 240 beams and is in progress for lower laser energy targets. The target dispersions are regrouped into 1D errors, which keep the implosion spherical, and 3D errors, which induce a deformation of the DT shell. The 3D robustness is expressed in terms of non linear deformation at peak velocity and compared to the deformation threshold obtained with 2D simulations. We have performed an experimental design method based on 2000 1D-simulations, which gives the fusion energy as a function of the 22 1D-parameters and allows us to estimate the 1D-margin, as a function of DT aging and DT gas density for a given temperature law.

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