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Impact of target modifications on Magnetized Liner Inertial Fusion performance MATTHEW GOMEZ, PATRICK KNAPP, ADAM SEFKOW, STEPHEN SLUTZ, THOMAS AWE, STEPHANIE HANSEN, KELLY HAHN, ERIC HARDING, CHRISTOPHER JENNINGS, RYAN MCBRIDE, DANIEL SINARS, GREGORY ROCHAU, KYLE PETERSON, Sandia National Laboratories — Magnetized Liner Inertial Fusion (MagLIF) is a magnetically-driven fusion concept in which an axial magnetic field and laser heating are used to relax the implosion requirements of inertial confinement fusion [S. A. Slutz et al., Phys. Plasmas 17, 056303 (2010)]. Initial experiments demonstrated the promise of the concept with relatively high yields (primary DD = 2e12), ion temperatures (2.5 keV), and magnetic field-radius products (>0.3 MG-cm). In order to better understand the portions of parameter space in which MagLIF can operate effectively, a series of experiments are being conducted to test the impact of various changes (e.g., laser-entrance-hole window thickness, imploding height of the target, endcap material, laser energy, laser spot size, initial fuel density). The impact of these changes on target performance (primary neutron yield, ion temperature, stagnation volume, etc.) will be discussed. *Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under Contract No. DE-AC04-94AL85000.

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