

Abstract Submitted  
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**Shielding design for the Magnetic Recoil Spectrometer (MRS) at OMEGA and the NIF using TART2002** D.T. CASEY, J.A. FRENJE, C.K. LI, J.R. RYGG, F.H. SEGUIN, R.D. PETRASSO, MIT, V.YU. GLEBOV, D.D. MEYERHOFER, T.C. SANGSTER, C. STOEKL, LLE, S. HAAN, S. HATCHETT, P. AMENDT, D. EDER, N. IZUMI, O. LANDEN, D. LERCHE, LLNL, D.C. WILSON, G. KYALA, LANL, R. LEEPER, R. OLSON, SNL — A Magnetic Recoil Spectrometer (MRS) is currently being developed, at both OMEGA and the NIF, for measurements of down-scattered neutrons from which  $\rho R$  of cryogenic DT implosions can be inferred. As is the case for complementary methods to measure  $\rho R$ ,<sup>1</sup> minimizing the effect of the background is critical for successful implementation. The established minimum S/B of 20, folded with CR-39 neutron response, determines the tolerable neutron fluence. The transport code TART2002 was used to calculate the neutron fluence at the MRS detector and provided input for design of the shielding for the MRS. This poster will present the current status of this project. This work was supported in part by LLE, LLNL, the U.S. DoE, the Univ. of Rochester, and the N.Y. State Energy Research and Development Authority.

<sup>1</sup>C. K. Li *et al*, Phys. Plasmas **8**, 4902 (2001)

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