

Abstract Submitted
for the DPP07 Meeting of
The American Physical Society

Preparation of Deuterated Polymer Targets for the OMEGA Magnetic Recoil Spectrometer¹ JACQUELINE STRAIN, GERALD RAWCLIFFE, JOSEPH KATZ, KURTIS FLETCHER, Physics and Astronomy, State University of New York at Geneseo, JOHAN FRENJE, Plasma Science and Fusion Center, Massachusetts Institute of Technology, SEAN MACMULLIN, Physics and Astronomy, University of North Carolina - Chapel Hill — Uniform deuterated polymer films on tantalum substrates are used as targets for the new Magnetic Recoil Spectrometer (MRS) at the OMEGA laser system at the University of Rochester's Laboratory for Laser Energetics. The MRS is designed to measure the neutron energy spectrum produced in inertial confinement fusion (ICF) experiments by detection of deuterons elastically scattered from the polymer target. The goal of our project is to produce circular films with areas ranging from 2 to 15 cm² and thicknesses ranging from 40 to 300 microns. Design parameters stipulate that the polymer thicknesses must be characterized to within 5% with less than 5% variation throughout the sample. Methods for preparing and characterizing these films will be discussed.

¹Supported in part by the US Department of Energy through the Laboratory for Laser Energetics at the University of Rochester.

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Date submitted: 18 Jul 2007

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