

Abstract Submitted
for the DPP05 Meeting of
The American Physical Society

Deuterium-tritium solid layer formation and characterization in a beryllium shell¹ BERNARD KOZIOZIEMSKI, Lawrence Livermore National Laboratory, DAVID MONTGOMERY, CORT GAUTIER, Los Alamos National Laboratory, JAMES SATER, JOHN MOODY, JORGE SANCHEZ, Lawrence Livermore National Laboratory — Copper-doped beryllium ablators are part of the current baseline design for indirect drive hohlraum targets for use at the National Ignition Facility. Recent advances in phase-contrast enhanced x-ray imaging have made it possible to characterize solid deuterium-tritium layers inside of the optically opaque beryllium shells. The imaging system used for characterization will be described. We will report results of experiments to produce smooth D-T layers inside of a beryllium shell. We find that the D-T layer RMS roughness of modes 4-128 increases from 0.9 μm at 19.4 K to 1.3 μm at 18.3 K. We observe the layer to become smoother with time when held at 18.3 K.

¹This work was performed under the auspices of the U.S. Department of Energy by the University of California, Lawrence Livermore National Laboratory under contract No. W-7405-Eng-48 and by Los Alamos National Laboratory under Contract No.W-7405.

Bernard Kozioziemski
Lawrence Livermore National Laboratory

Date submitted: 02 Aug 2005

Electronic form version 1.4