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The Quartraum: A platform for investigation of cross-beam energy transfer[1] D.E. HINKEL, M.B. SCHNEIDER, M.D. ROSEN, E.A. WILLIAMS, Lawrence Livermore National Laboratory — Cross-beam energy transfer [1] is a methodology used at the National Ignition Facility (NIF) to control implosion symmetry, by transferring energy between the inner and outer cones of laser beams. This process is time-dependent, and does not transfer power in a spatially uniform manner. A platform to investigate the spatial non-uniformity of laser beams after having undergone cross-beam energy transfer is under development. This target consists of the slice of the hohlraum near the laser entrance hole (LEH), where transfer occurs, which is roughly one-fourth the length of a nominal hohlraum (quartraum). Beams are incident on this LEH from only one side of the quartraum. The outer beams hit the quartraum cylindrical walls, and the inner beams hit the far endcap of the cylinder. This far endcap is either a 100% LEH window that the inner beams burn through (and then strike a witness plate), or it is a thin wall that is imaged. Stretch goals for this platform are detection of specularly reflected outer beams, or of Brillouin Enhanced Four-Wave Mixing.

[1] P. Michel *et al.*, Phys. Plasmas **16**, 042702 (2009), and references therein.

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