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Experimental investigation of Eagle nebula pillars using a multiple hohlraum array DAVID MARTINEZ, JAVE KANE, Lawrence Livermore National Laboratory, BRUNO VILLETTE, CEA, MARK POUND, University of Maryland, ALEXIS CASNER, CEA, ROBERT HEETER, Lawrence Livermore National Laboratory, ROBERTO MANCINI, University of Nevada, Reno — The “pillars of creation” are stunningly beautiful and physically puzzling molecular cloud structure in the Eagle nebula. Formation of these pillars has been subject of debate since their observation. Although extensive observation and modeling have attempted to answer the creation of the observed pillars, experiments have not adequately tested the theoretical models surrounding the photoevaporation of the molecular clouds. Recent Omega EP experiments at the LLE developed a 30ns x-ray drive using a multiple hohlraum array (“Gatling gun” approach) to drive the photoevaporation process and test pillar formation. This proof of principle experiment imaged the initial stages of a pillar using Ti area backlighter through a driven 50mg/cc R/F foam with an embedded solid density CH ball. This presentation will give an overview of the experimental design and results from the experiment. This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344. LLNL-ABS-656872

David Martinez
Lawrence Livermore National Laboratory

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