

Cover Photos

Top Left: Dr. Steven Ivancic is shown securing the extreme-ultraviolet (EUV) spectrometer to the Multi-Terawatt (MTW) laser target chamber. The EUV spectrometer measures emission from targets rapidly heated by the subpicosecond MTW laser pulse.

Top Right: Optical manufacturing process engineer, John Spaulding, and Coating Operator, Justin Foster, are shown installing an optic on a new prototype stage built to support research and development work on glancing-angle-deposition (GLAD) coatings.

Center: Photograph of a diamond-anvil cell experiment conducted on OMEGA. These experiments generate ultrahigh pressures in mixtures of hydrogen and helium to simulate the conditions inside Saturn's atmosphere. Analysis of these

experiments points to possible "helium rain" inside Saturn's atmosphere that may account for its unexpectedly high brightness. The work was presented at an American Geophysical Union meeting and was highlighted in a Science Magazine article in December 2015.

Bottom Left: Summer High School intern, Joy Zhang of Penfield High School is shown adjusting a digital microscope that is being developed for use on the target Fill/Transfer Station to view target defects.

Bottom Right: Photograph of a new layering sphere designed to fill targets with liquid D₂ (and DT) through a 10- μ m-diam tube. The new design is required for the project to demonstrate compressed direct-drive implosion pressures of 100 Gbar in cryogenic targets.

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