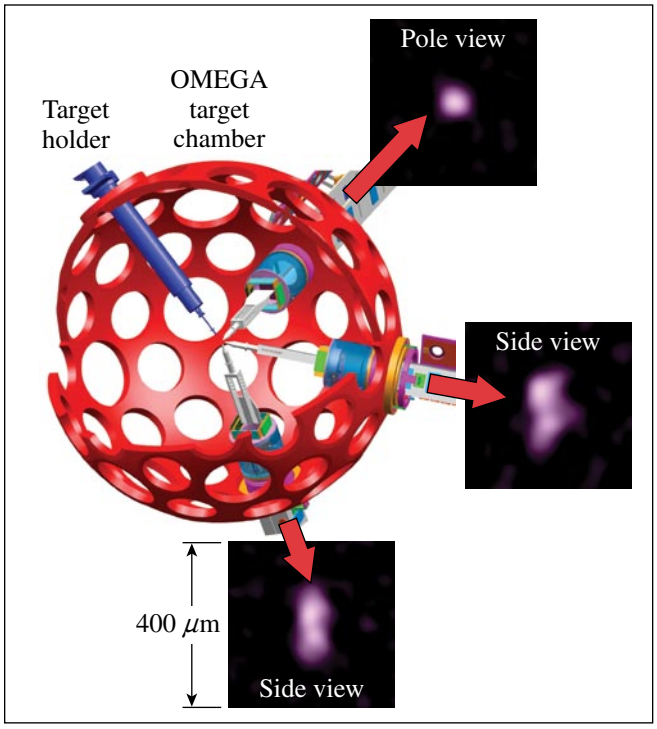
About the Cover:

The front cover shows LLE lab engineer Sam Roberts (left) and MIT scientist Fredrick Séguin (right) inspecting parts of a proton emission imaging camera developed in a MIT–LLE research collaboration. Up to three of these cameras are used simultaneously to study the 3-D spatial distribution of nuclear burn in ICF experiments on the OMEGA laser, as indicated schematically in the diagram on this page. Measurements of the distribution of burn are important because they indicate where fusion reactions actually occur as a consequence of all the complicated processes that affect capsule implosion dynamics. An article in the last issue of the LLE Review (**Proton Core Imaging of the Nuclear Burn in Inertial Confinement Fusion Implosions**, vol. 104, p. 197) described the structure of the cameras themselves, while the lead article in this issue presents the first systematic measurements of the dependence of burn region size on capsule parameters and laser drive parameters for spherically symmetric implosions. Future publications will discuss measurements of the effects of drive asymmetry and capsule shell asymmetry on burn asymmetry. The three sample images in the illustration show the surface brightness of a D^3He burn region as seen simultaneously from three orthogonal directions. Prolate ("sausage-shaped") burn asymmetry resulted from (intentional) laser drive asymmetry.



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