

About the Cover:

The cover photo shows the Tunable OMEGA P9 (TOP9) beam firing in a cross-beam energy transfer experiment. OMEGA heater and pump beams, as well as the TOP9, interact in a supersonic flow of plasma delivered by a gas jet (left center) inserted into the target chamber. Thomson-scattered radiation is collected with a re-entrant reflective telescope (lower right). The beam geometry for this experiment is shown as a schematic in the inset. This flexible and comprehensive experimental and diagnostic suite enables critical research into the fundamental behavior of plasmas under the influence of laser radiation. In this volume we feature two such examples of work in this area: Evidence of the distortion of electron distribution function from laser-plasma heating (p. 63), a resolution to a decades-old prediction in plasma physics; and a look to the future of laser-plasma interactions (p. 75) enabled by emerging technologies.

The TOP9 beam originates in the OMEGA EP Laser Bay (left) where it is then transported across the laboratory to the OMEGA Target Bay (right) to be directed into the target chamber for experiments.



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