

A TARGET FABRICATION AND INJECTION FACILITY FOR LASER-IFE

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We have defined the characteristics of a target injection and tracking facility to validate the science and technology of full-scale components for a laser inertial fusion energy (IFE) power plant. This facility will be a key component of the plan to develop laser IFE with direct drive targets and solid wall chambers. It is the final step before the construction of an engineering test facility. Elements of the facility include mass production (batch mode) of cryogenic targets that meet the specifications of high gain, target injection into the chamber and target tracking in the chamber. The chamber will have the same environment (background gas, wall temperature, *etc.*) as envisioned for a laser IFE power plant, and the facility will include steering of a low-energy laser onto the target in flight.

We will describe the program goals, key science and technology issues which will be addressed in the facility, quantitative requirements for successful target injection, major characteristics of the various subsystems, and the R&D which will be needed in order to prepare for construction and operation.

Topical Category:	Experimental Devices
Poster or Oral Preferred:	Oral preferred
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