

INERTIAL FUSION TECHNOLOGY

Targeting Development in Fusion Research, Discovery Science and High Energy Density Physics



NIF Target Chamber with the Target Inserter/Positioner



THE RELEVANCE OF FUSION RESEARCH

General Atomics (GA) is a world leader in the development and fabrication of complex targets for experiments in Astrophysics, Inertial Fusion and High Energy Density Physics (HEDP).

NATIONAL SECURITY

GA's Inertial Fusion Technology (IFT) group provides precision targets in support of Department of Energy (DOE) research programs. These targets enable experimental capabilities and the development of scientific understanding of HEDP conditions necessary to ensure a safe, secure and effective weapons stockpile.

DOE's programs attract innovative, talented scientists to the field of HEDP - enabling the expansion of knowledge in this area. It also ensures the preservation and cultivation of capabilities that are essential to the maintenance of a nuclear deterrent (stockpile stewardship).



CREATING STARS IN THE LAB



Until recently, scientists could only observe astrophysical phenomena from afar and theorize about the underlying physics behind these observations.

Today, thanks to DOE-supported facilities, scientists are able to recreate, on a small scale, the extreme conditions found in stars, supernovae and planets - transforming astronomy from an observational to an experimental science.

These laboratory-based experiments provide insight into the physics of stars and planets and reveal new states of matter being formed and transformed under these extreme conditions.

Experiments on NIF help us understand the birth of stars like those forming in the Pillars of Creation

TOMORROW'S TECHNOLOGY LEADERS

GA is committed to science, technology, engineering and math (STEM) through a wide range of outreach programs - ensuring the ongoing development of scientists and engineers.

Over 100 students have participated in IFT internships (representing seven University of California campuses). Over half of these interns have gone on to pursue advanced technical degrees.



GENERAL ATOMICS
Over 50% of students in GA's IFT internship program have gone on to earn graduate degrees

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