**STUDENT SECTION 1**

**Lawrence Livermore National Laboratory**

The National Ignition Facility (NIF) at Lawrence Livermore National Laboratory is the world’s largest and highest-energy laser, big enough to hold three football fields—and it made international headlines last December when an experiment conducted there achieved fusion ignition, a major scientific breakthrough that experts believe will lay the groundwork for advancements in national defense and the future of clean power. It’s also where mechanical engineering major Benjamin Tarver spent his summer as a laser systems engineering and operations intern.

This prestigious opportunity gave Tarver—who just entered his third year at UC San Diego this fall—a glimpse into a potential career path. During his three months at Lawrence Livermore, he was tasked with designing and executing experiments to test how cooling NIF's camera systems might prevent them from accumulating and displaying radiation damage.

“I wasn’t sure whether or not I wanted a career in research and development, but I think this internship has put me more confidently on a path toward getting a graduate degree and pursuing that type of career,” said Tarver. “Due to my exposure to all of the challenging—but really rewarding—problems that you can work on at Lawrence Livermore, I’ve become more convinced that research is the right path for me.”

From touring the NIF and participating in his first poster session to visiting Stanford University’s SLAC National Accelerator Laboratory, Tarver says his summer internship was full of highlights and lessons that he’ll bring back to the Coimbra Research Group at UC San Diego, where he volunteers in support of the lab’s climate change mitigation research.

“Being immersed in this environment where you get to learn how scientists and engineers are innovating a future for us where we could potentially harness fusion reactions to produce usable clean energy has been quite rewarding,” said Tarver. “Even though it’s still a long while off, I’ve gotten a greater appreciation of how valuable each step of the incremental process toward that future goal really is. It takes a ton of hard work, but it’s worth the effort.”