

PPPL	PRINCETON PLASMA PHYSICS LABORATORY	ORGANIZATION/ MISSION	No. O-043 Rev 1 page 1 of 2
Subject: ITER and Tokamaks Department Mission Statement		Effective Date: May 29, 2015	Initiated by: Head, ITER and Tokamaks
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INTRODUCTION

The mission of the ITER and Tokamaks Department is to conduct world-leading research on national and international fusion experiments and the execution of ITER physics tasks, in pursuit of the goals of the U.S. Fusion Energy Sciences program and the PPPL Mission. Our mission is accomplished by effectively leveraging core PPPL scientific and engineering expertise to produce high impact research papers and outstanding engineering solutions for fusion energy science.

The Department members perform research to increase knowledge and understanding of the Burning Plasma State and to predict and optimize scenarios for Next Step Experiments.

The strategic goals of the research program include:

- Perform world-leading research and diagnostic development on national and international facilities
- Technology development to support programs and maintain core competency
- Leveraging onsite PPPL expertise to maximize the success of national and international programs
- Leveraging knowledge gained in I&T to advance NSTX-U and Theory's contributions to fusion science

In addition for ITER, the Department performs research tasks to aid ITER design and formulation of the ITER research plan. The Department aims to support the development of a US ITER physics team, fosters mechanisms to conduct ITER research and participates in reviews of the ITER Project..

Scientific collaborations at leading national and international facilities are an essential part of the PPPL mission since they provide opportunities to learn from and contribute to the worldwide effort to resolve key issues in fusion energy science. PPPL's conduct of off-site research is expected to be a long-term component of the laboratory's program.

ORGANIZATIONAL STRUCTURE

The ITER and Tokamaks Department is organized into the following topical areas:

RF Science & Technology
Energetic Particle Physics
Advanced Scenarios
Turbulence & Transport
Boundary Physics

Each area has a topical leader who will work in conjunction with the managers of the following divisions within the I&T Department:

- DIII-D Research
- C-Mod Research
- International Collaborations

RESPONSIBILITIES

- The DIII-D Research team performs and supports research on the DIII-D tokamak at General Atomics in La Jolla, California;
- The C-Mod Research team performs and supports research on the C-Mod tokamak at the Massachusetts Institute of Technology in Cambridge, Massachusetts;
- The International Collaborations team performs and supports research on the Joint European Torus tokamak in England, the KSTAR device in South Korea, the EAST tokamak in China and on other international facilities.
- The ITER research task team executes tasks under Strategic Partnership Projects (SPP) with the ITER Organization.
- The Department achieves these goals by providing direction, support, and services, and by fostering an environment that encourages technical excellence, innovation, and creativity, and professional growth while assuring quality, worker safety and health and protecting the environment.
- The Department's elements work with the PS&T Department for diagnostics and RF technology development, the Theory Department and the CPPG for integrated theory and modeling support, the NSTX-U Research team for coordination of research activities to maximize the value of the research for not only the host institution but as a benefit to NSTX-U as well, the ITER Fabrications Department for coordinating ITER work, with the Engineering and Infrastructure Department for electrical engineering, mechanical engineering, and engineering analysis work and with Quality Assurance for support in planning, procurements, and fabrications.
- The Department encourages its researchers to interact thru the International Tokamak Physics Activity (ITPA) to play leading roles in international fusion research.
- In addition to scientific personnel, experienced engineers and highly skilled technicians are contributing to the operations teams at remote sites and participate in the design, construction and installation of upgrades and modifications to these devices