

Abstract Submitted
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DIII-D Research in Support of ITER¹ E.J. STRAIT, General Atomics, DIII-D TEAM — DIII-D research is providing key information for the design and operation of ITER. Recent results have led to improved understanding of several critical issues, including control of edge-localized modes (ELMs), plasma rotation effects, mitigation of disruptions, and plasma-wall interactions. Recent experiments and modeling on ELM suppression with resonant magnetic perturbations have provided key information for the assessment of ELM control coil options in ITER. In addition, DIII-D experiments that simulate the various ITER operating scenarios provide a platform for projections of fusion performance and tests of plasma control. Experiments have investigated the L-H transition threshold and energy confinement dependence on ion mass number, at the low values of input torque and plasma rotation that are expected in ITER. We will give an overview of these and other key ITER-related research topics at DIII-D.

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