

Abstract Submitted
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Progress in Developing ITER Operational Scenarios on DIII-D¹

E.J. DOYLE, UCLA, J.C. DEBOO, J.R. FERRON, R.J. LA HAYE, J.E. KINSEY, T.C. LUCE, P.A. POLITZER, General Atomics, DIII-D ITER DEMONSTRATION WG TEAM — The DIII-D program has initiated an effort to provide experimental evaluations of four ITER operational scenarios: baseline ELMy H-mode, advanced inductive, hybrid, and steady-state. Discharges in 2008 matched the anticipated ITER design for plasma shape, aspect ratio and value of I/aB , with size reduced by a factor of 3.7, while matching key performance targets for β_N and H_{98y2} . In 2009, attention has focused on improving the match to anticipated ITER parameters: Baseline scenario plasmas have been operated with reduced densities to match the anticipated ITER edge pedestal collisionality, while maintaining target values for β_N and H_{98y2} . These plasmas have enabled a demonstration of 2/1 NTM mode suppression at low q_{95} using ECCD, as planned for ITER. Additional experiments are planned to investigate operation of baseline scenario plasmas with low torque input (low rotation), as well as rf-dominated operation. Comparison of experimental profiles to those from transport modeling will be shown.

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Edward Doyle
UCLA

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