

Abstract Submitted
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MHD Stability Research in DIII-D¹ E.J. STRAIT, DIII-D STABILITY GROUP, General Atomics — MHD stability research in DIII-D is aimed at improving our scientific understanding of the stability of tokamak plasmas and ultimately at developing active methods for improvement of plasma stability. Advances in understanding and control tools have led to recent successes including stabilization of the $m/n=2/1$ neoclassical tearing mode with localized electron cyclotron current drive, stabilization of the resistive wall mode by sustained plasma rotation, and disruption mitigation using real-time detection of the impending disruption. Future advances will depend on new tools including additional rf power, new internal control coils, and lithium beam polarimetry measurements of the edge current density. Improved understanding will also require use of theory and numerical models that go beyond ideal MHD to include plasma rotation, resistivity, neoclassical effects, fast ion effects, and nonlinear physics.

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- Prefer Oral Session
 Prefer Poster Session

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