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Theory Experiment

Phase-space Analysis of Resistive Wall Mode Dynamics,* E.J. Strait, A.M. Garofalo, G.L. Jackson, R.J. La Haye, *General Atomics*, H. Reimerdes, M.J. Lanctot, *Columbia University*, M. Okabayashi, *Princeton Plasma Physics Laboratory*, Y. In, *FAR-TECH, Inc.* — Phase-space analysis in the plane of plasma rotation vs. mode amplitude offers a possible approach to studying the dynamics of resistive wall modes (RWMs). Models for the interaction of RWM growth and rotation braking can be characterized by their trajectories and fixed points in the phase plane, allowing a qualitative comparison of the models with each other and with experiment. This technique is well suited to analysis of RWMs in high beta plasmas, where ELMs and other transient events provide “kicks” away from a stable fixed point in the phase plane. Preliminary results will be presented.

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