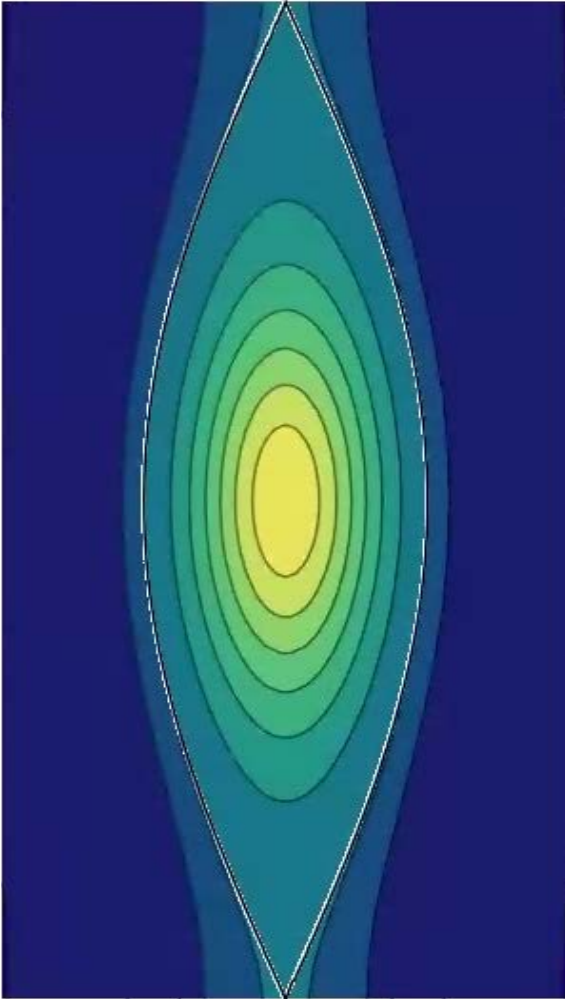


Stabilization of Magnetic Islands by RF Current Condensation - A. Reiman and N. Fisch



Conventional model assumes local electron acceleration and power deposition unaffected by presence of island, but:

- Deposition sensitive to small change in temperature.
- RF heats island, with T peaked at center.
- Nonlinear enhancement of heating.
- Exponential dependence of current on temperature concentrates current.
- Larger resonant component of current gives efficient stabilization of larger islands that can cause disruptions.
- Reduces sensitivity to precise radial alignment of RF ray trajectories.