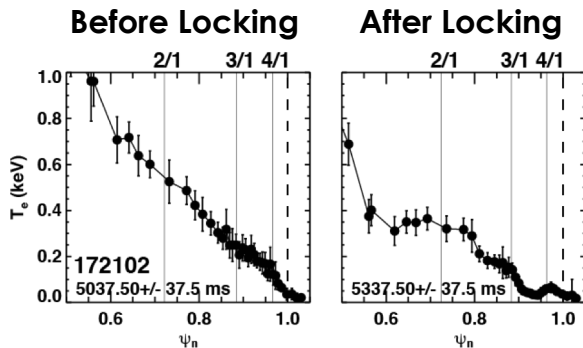


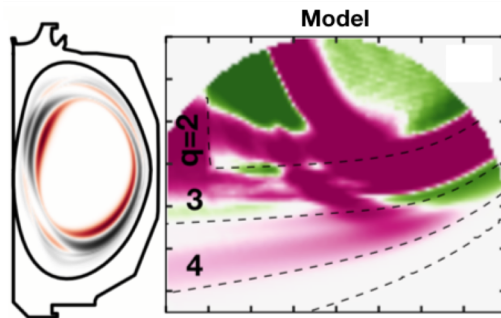
# Observation of multiple helicity mode-resonant locking leading to a disruption on DIII-D

- **Localized internal measurements show formation of radially separated island chains as plasma locks preceding disruption**
  - Islands widen leading to island overlap that allows the cold boundary region to penetrate into the core resulting in thermal collapse
- **Observations reproduced with reduced nonlinear MHD modeling with TM1 code**

## Thomson Scattering



## Model 2/1, 3/1, 4/1 island chains



## Island Structures Observed with Dual SXR Imaging

