Nonlinear NIMROD simulations capture saturation of the broadband MHD in DIII-D QH-mode

- **Saturation mechanism depends crucially on flow**
  - Simulation without flow → no saturation

  - Linear structures sheared apart, high-n modes suppressed

  - Density & temperature de-correlate leading to enhanced particle transport

Pressure

40 µs

Sheared eddies

Ti, n relative to normal flow

Kinetic Energy decomposed by toroidal mode

0

1,2

4,5

time (sec)

1e−4