

# "Fishbone" instabilities

- Interesting, new physics insights into bursting/chirping beam driven instabilities in last run.
- Evidence of fast ion losses, potential impact on other devices.
- Experiments to vary fast ion distributions, pin down mode structures

# TAE scaling experiment

- Understand TAE-induced fast ion losses.
- Document mode structure
- Study threshold conditions
- Interaction with H-modes and high beta.
- Improved reflectometer data to determine mode structure.

# CAE studies

- Improve documentation of CAE(/GAE?) mode structure with improved diagnostics (multi-channel reflectometer, improved Mirnov arrays, supporting diagnostics).
- Last campaign the focus was on threshold - weak CAE. Push more towards larger mode amplitude.

# NTM experiments

- Longer pulse length, possibility of evolving bootstrap current in time  $\Rightarrow$  mode amplitude.
- Examine coupling to internal, ideal modes (1/1, 2/2, etc.)
- Preliminary "onset" studies (we can avoid sawteeth).