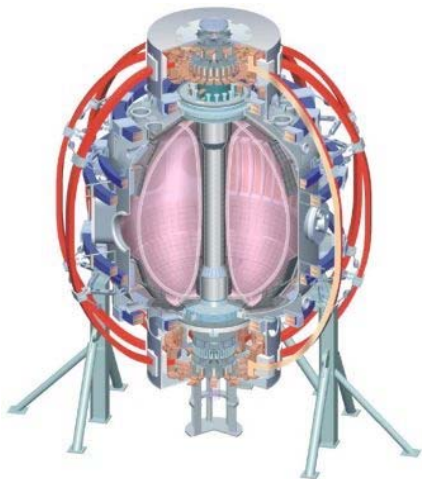


Searching for EHOs in low- δ plasmas with early n=3 RMP

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Searching for EHOs in low- δ plasmas with early n=3 RMP

- Hypothesis: Early n=3 RMP in low- δ NSTX plasmas can induce edge harmonic oscillations (EHOs)
- Justification
 - NSTX type I ELMs identified as ballooning instabilities (Maingi, NF 2005)
 - Rotation and rotation shear are **stabilizing** for mid/high-n ballooning modes (Snyder, NF 2007)
 - RMP **induces** ELMs in NSTX (Canik, 2010) \rightarrow consistent with PB picture
 - ELMs and EHOs in DIII-D QH-mode plasmas are low-n peeling instabilities (Burrell, NF 2009; Snyder, NF 2007)
 - Rotation and rotation shear are **destabilizing** for low-n peeling modes (Snyder, NF 2007)
 - RMPs **suppresses** ELMs in DIII-D \rightarrow consistent with PB picture
 - Low-n peeling modes (ELMs & EHOs) are favored at low density (low collisionality) and low triangularity
- 0.5 days
- R11-4, FY11 JRT