
XP512 NSTX/DIII-D RWM Similarity

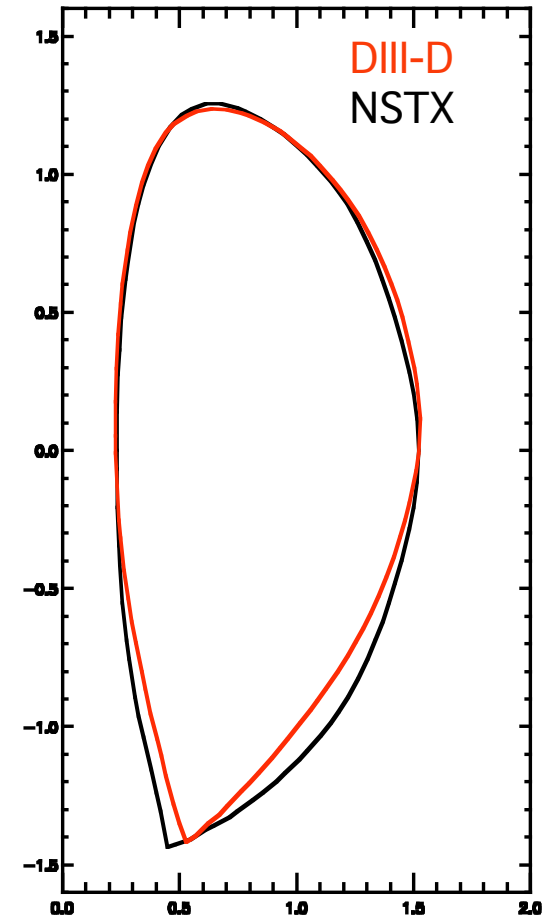
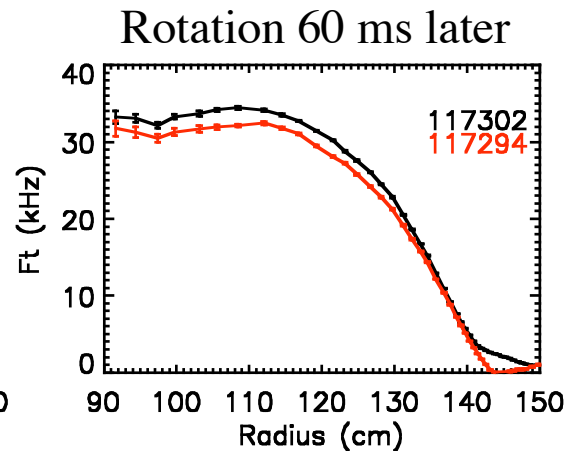
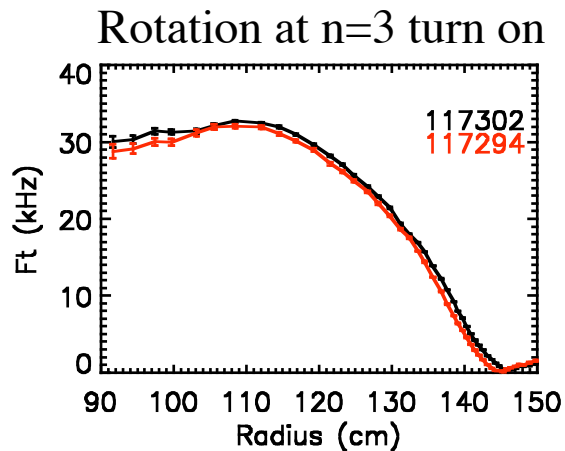
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NSTX Physics Meeting

8/8/2005

Similarity XP Explores Aspect Ratio Effects on RWM Stability

- Objectives:
 - ❑ Mode structure & dynamics
 - ❑ Critical rotation
 - ❑ Resonant field amplification
- Technique:
 - ❑ Duplicate DIII-D shape in NSTX
 - achieved with some development time
 - ❑ Control rotation profile with external fields
 - DC n=3 used for braking



Ω_{crit} Appears Higher at Lower-A

- Now using similar technique to measure Ω_{crit}
 - rotation profile effects still being examined
- q & β scans begun
 - vary I_p to scan q
 - $6.7 \leq q_{95} \leq 9.5$
 - vary magnitude of braking to scan β
 - $4.0 \leq \beta_N \leq 4.9$
- RFA study started
 - only one shot
 - no $n=1$ tearing mode triggered by external field

