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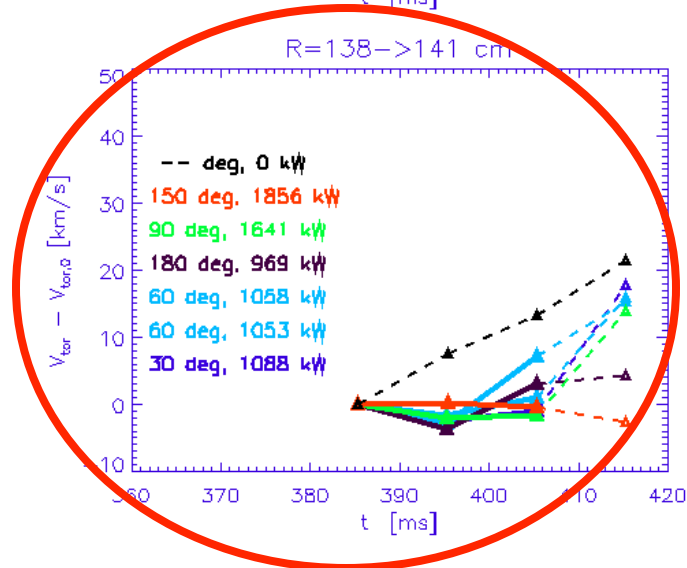
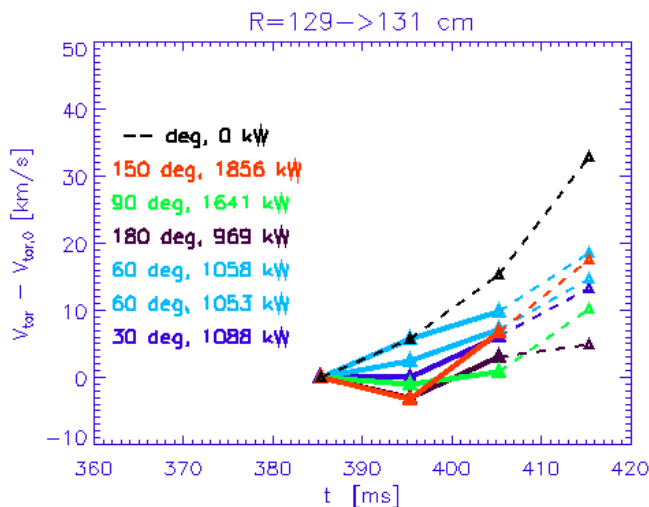
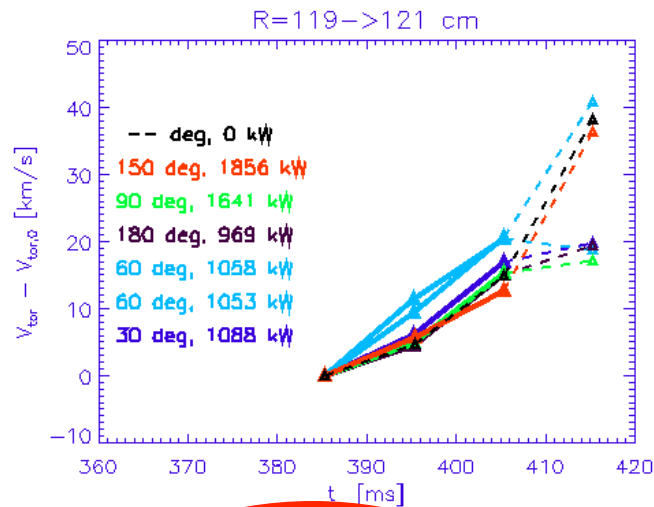
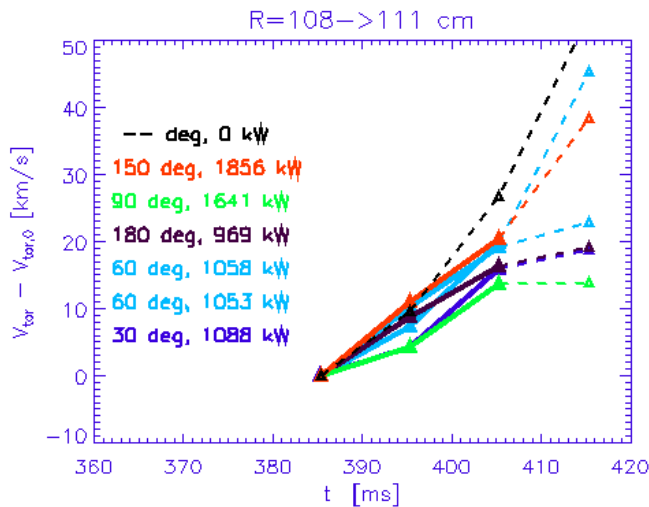
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# XP proposal: Effects of HHFW on toroidal rotation

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ITPA EP-2, EP-4

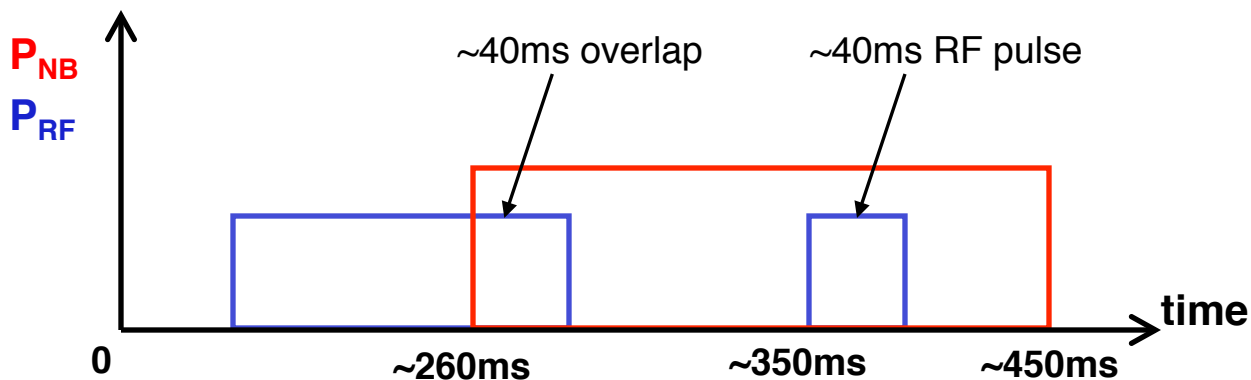
# Effects of HHFW on plasma rotation observed in the past – no clear understanding



- Toroidal rotation seems to “freeze” at the edge during HHFW
  - See G. Taylor’s APS invited ’09
- Rotation “freed-up” when RF stops
- Phase/RF power dependence unclear

# Systematic scan of RF, plasma parameters would allow to clarify the “RF clamping effect”

- Perform systematic study of edge rotation locking
  - RF phase scan, constant RF & NB power
  - RF power scan, constant RF phase & NB power: threshold?
  - NB power scan, constant RF phase & power
- Passive CHERS signal can be used to measure edge rotation during RF only



**Run time:  
1/2 day**

- Main issues to investigate:
  - Behavior of impurities and fast ions
  - Does RF “freeze” the rotation profile, or RF is an additional drag?