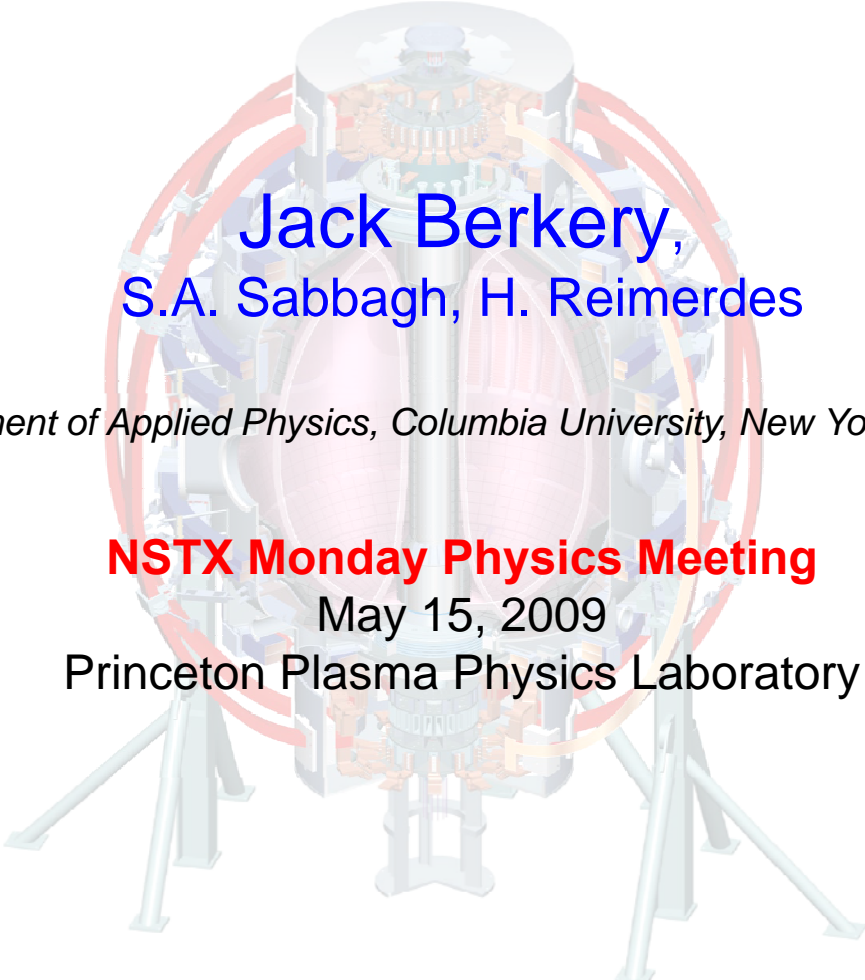


# XP932: Influence of Hot Ions on RWM Stability

College W&M  
 Colorado Sch Mines  
 Columbia U  
 Comp-X  
 General Atomics  
 INEL  
 Johns Hopkins U  
 LANL  
 LLNL  
 Lodestar  
 MIT  
 Nova Photonics  
 New York U  
 Old Dominion U  
 ORNL  
 PPPL  
 PSI  
 Princeton U  
 Purdue U  
 SNL  
 Think Tank, Inc.  
 UC Davis  
 UC Irvine  
 UCLA  
 UCSD  
 U Colorado  
 U Maryland  
 U Rochester  
 U Washington  
 U Wisconsin



**Jack Berkery,**  
 S.A. Sabbagh, H. Reimerdes

*Department of Applied Physics, Columbia University, New York, NY, USA*

**NSTX Monday Physics Meeting**

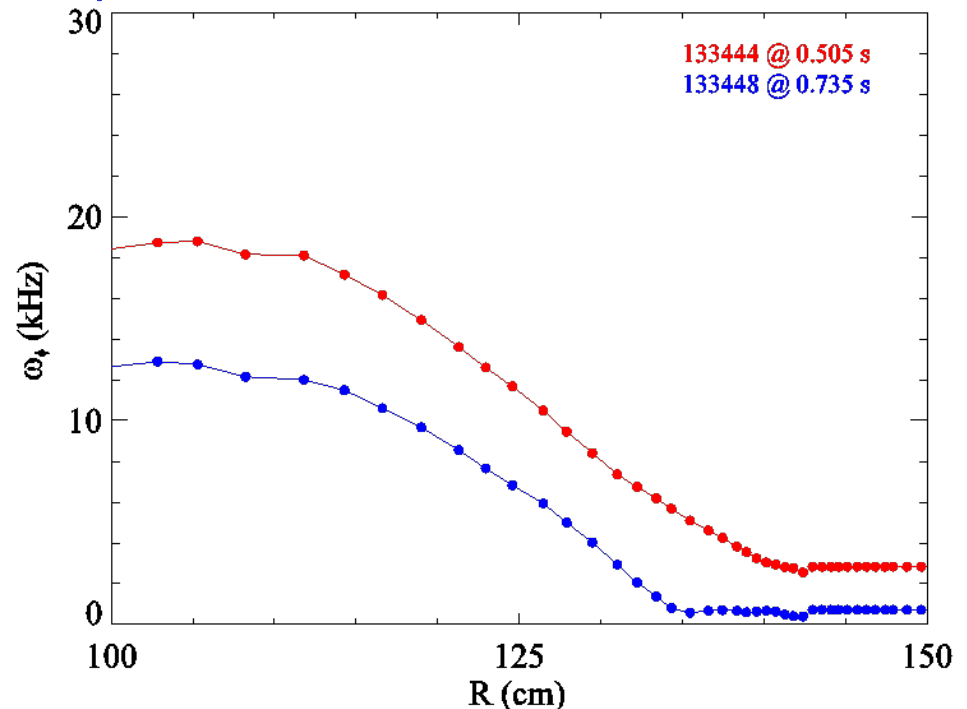
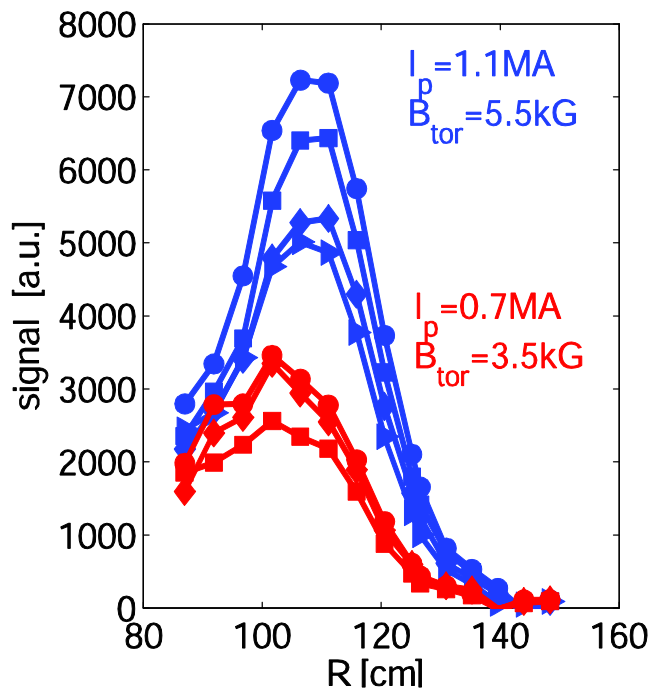
May 15, 2009

Princeton Plasma Physics Laboratory

Culham Sci Ctr  
 U St. Andrews  
 York U  
 Chubu U  
 Fukui U  
 Hiroshima U  
 Hyogo U  
 Kyoto U  
 Kyushu U  
 Kyushu Tokai U  
 NIFS  
 Niigata U  
 U Tokyo  
 JAEA  
 Hebrew U  
 Ioffe Inst  
 RRC Kurchatov Inst  
 TRINITI  
 KBSI  
 KAIST  
 POSTECH  
 ASIPP  
 ENEA, Frascati  
 CEA, Cadarache  
 IPP, Jülich  
 IPP, Garching  
 ASCR, Czech Rep  
 U Quebec

# XP932 first part completed

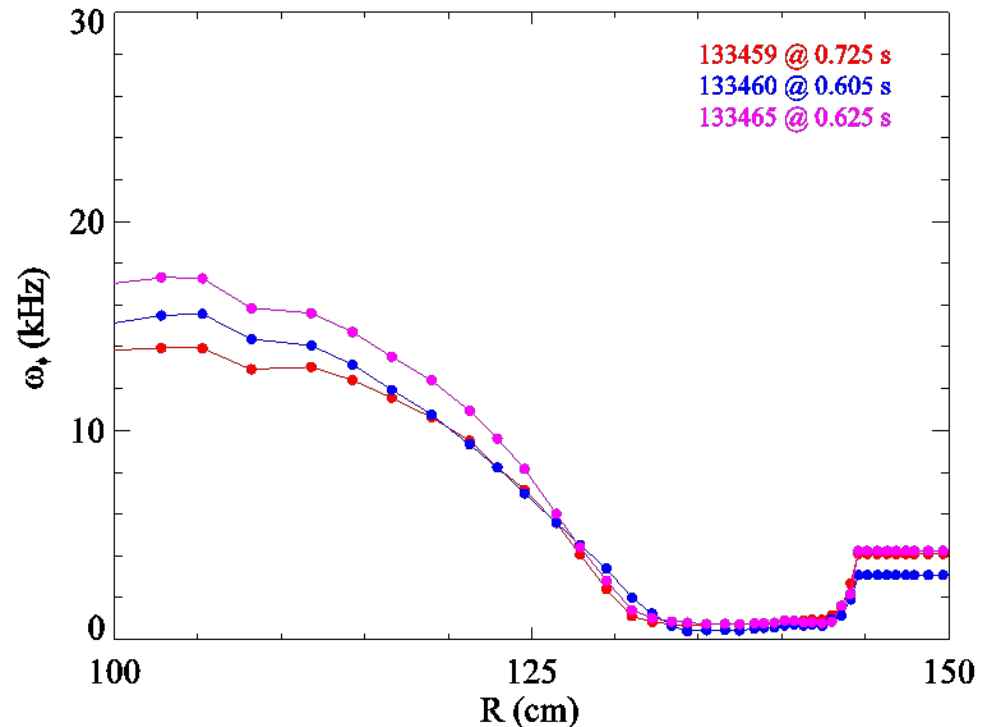
- Successfully scanned range of current/field from 0.7MA, 0.35T to 1.1MA, 0.55T.
  - FIDA indicates a large change in fast ion density over this range.
- Preliminary results are consistent with theory
  - Less hot ions, requires more plasma rotation.



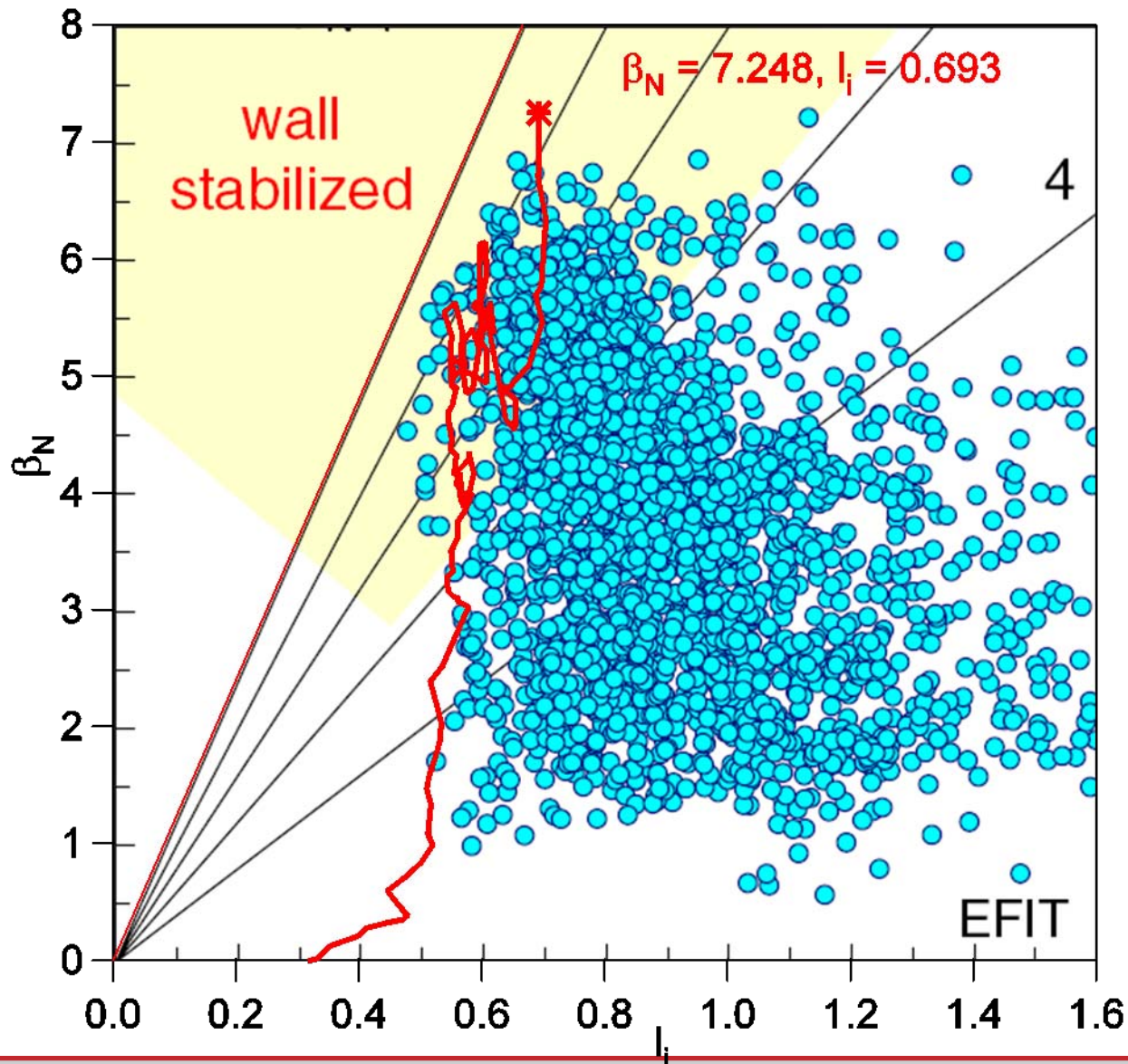
# XP932 second part incomplete

- Changed beam voltages for 0.7MA and 1.0MA cases.
  - FIDA so far inconclusive about the effect on fast ion density.
  - No MSE data for these shots.

A (kV)	B (kV)	C (kV)
90	95	0
90	0	95
90	65	65



# Record $\beta_N$ shot



(Sabbagh et al., NF, 2006)