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XP610 Summary: Study of Transport with Reversed Shear in NSTX

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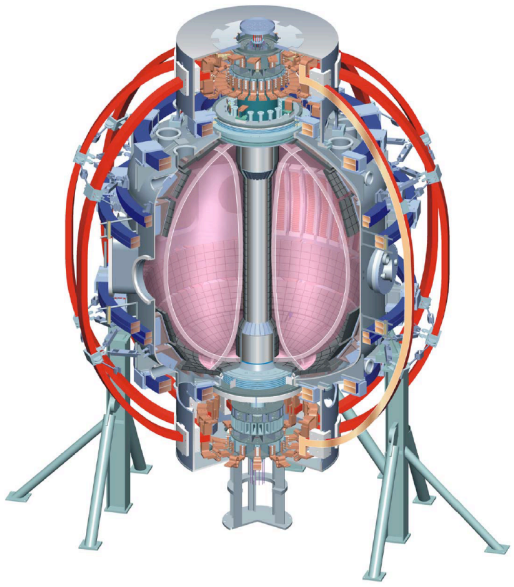
NSTX Physics Meeting

June 5, 2006

Princeton, NJ



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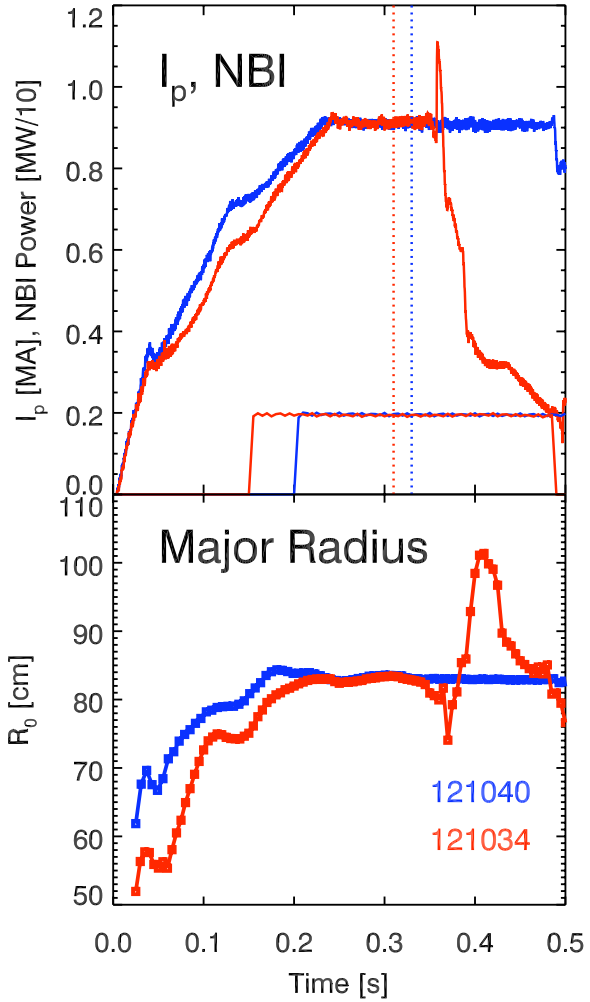
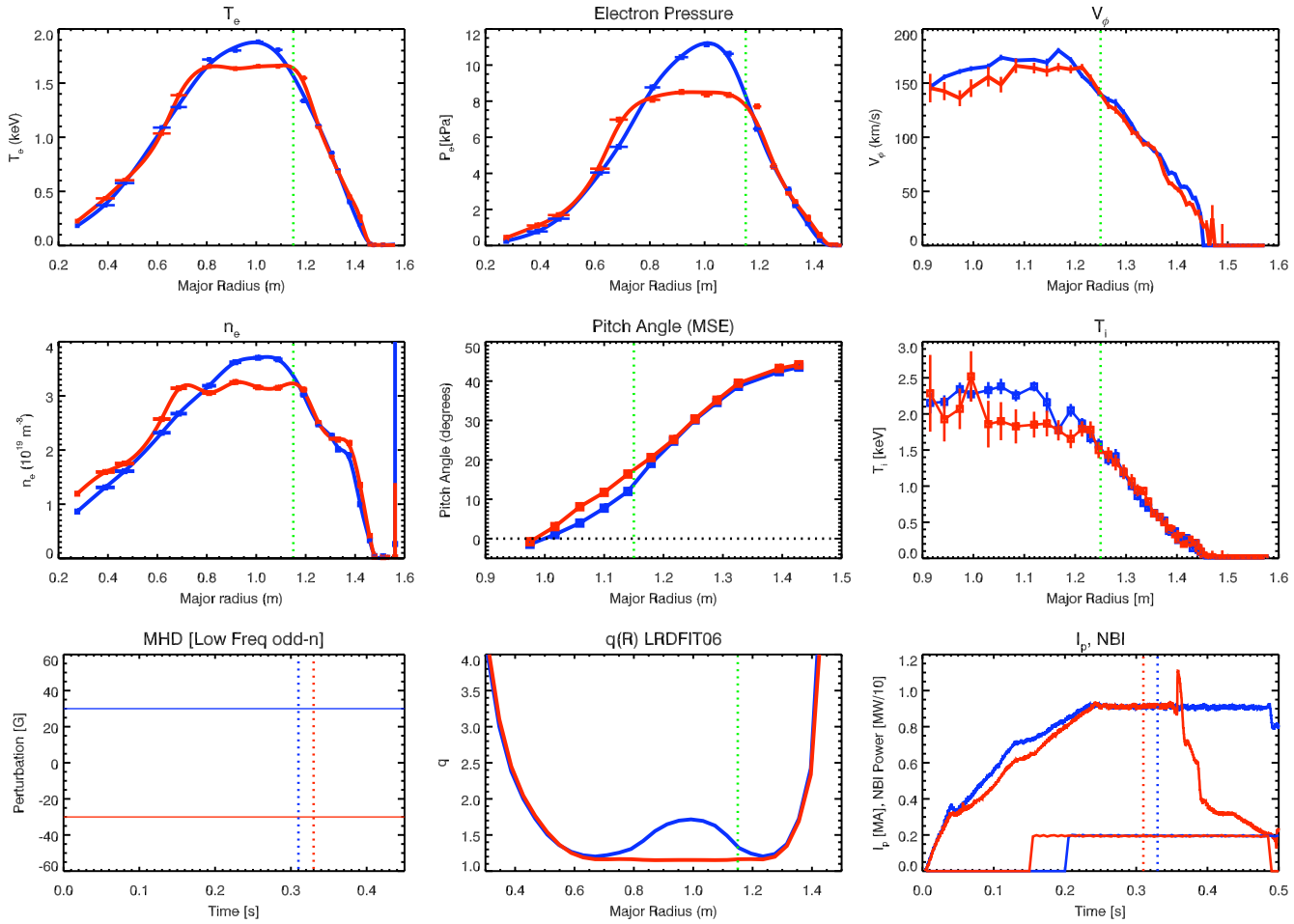
Development of Monotonic q-profile



- Produced monotonic q-profile at 900 kA.
- Small plasma startup allowed more current to reach core and produce a range of q-profiles with q(0) ~0.95-1.5.

Comparison of RS and monotonic profiles

XP610 Reversed Shear L-Modes 121040@330ms (Blue), 121034@310ms (Red)



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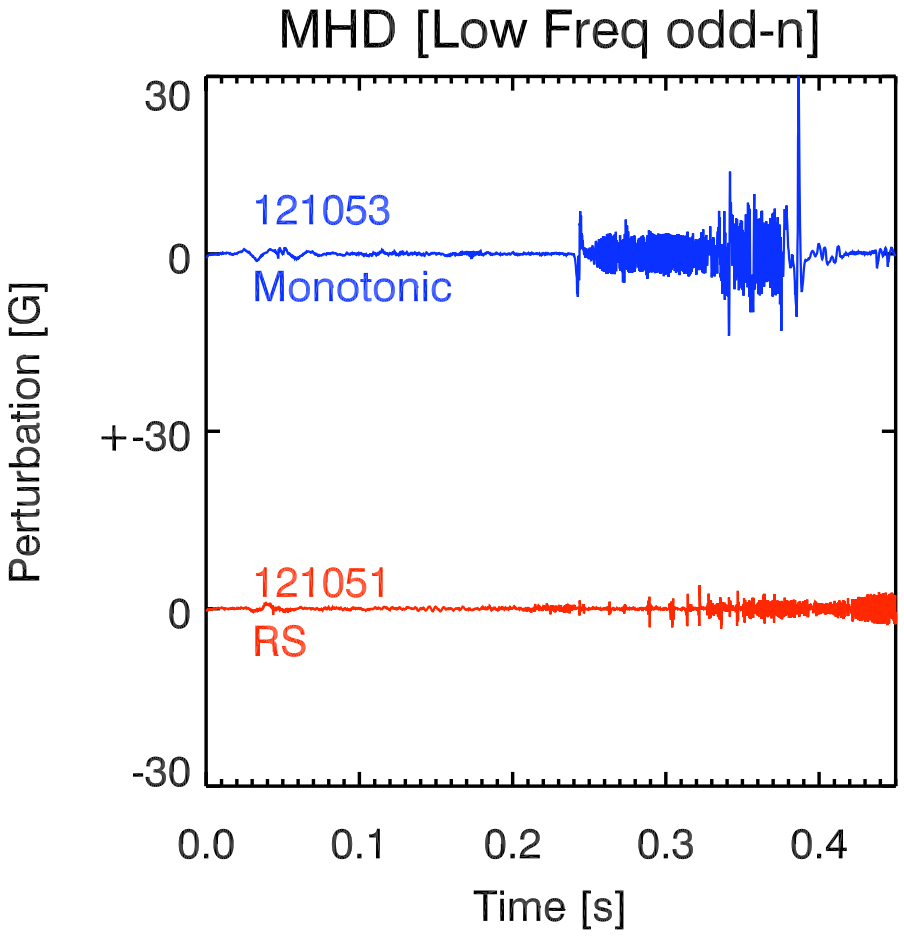
MHD behavior is different



- q-profiles have increasing amount of low frequency MHD as shear is reduced toward zero.
- The effect of the MHD on core temperature is being investigated.