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Solenoid-free Start-up and Ramp-up Progress and Plans

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For the NSTX Research Team NSTX Mid-Run Assessment



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2010 goals

- CHI
 - Optimize current in CHI Absorber coils to reduce arcs
 - Increase capacitor energy to try to increase flux from CHI
 - Apply radial position control earlier (now at t=40ms, reduce to t=20ms)
 - Test use of Li powder to coat upper divertor and limit low Z impurities
 - Use HHFW heating to burn through impurities
- HHFW Use higher power and ELM recognition to:
 - Heat a I_p 250-400 kA inductive discharge with HHFW
 - Assess current sustainment and ramp-up of a 250-400kA inductively generated discharge with HHFW + bootstrap overdrive (Preliminary result achieved 60-80% NIF)