NSTX-U

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Discussion of T&T Contributions to FY JRT

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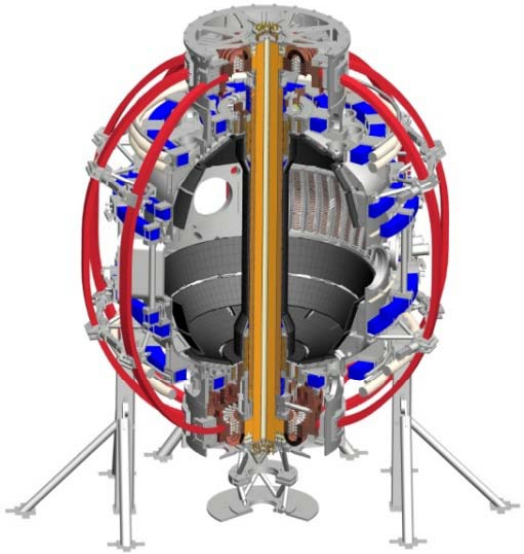

T&T TSG Experimental Ideas

- NSTX-U will have a set of experimental knobs to vary/control pressure and current profiles
  - Two NBIs (6 independent sources), HHFW, 3D coils and lithium deposition
    - Different pressure and current profiles from using a subset of the 6 NBI sources
    - Heating/current drive from HHFW with NBI or used independently
    - 3D coils used to modify rotation profile coupled with NBI
    - Different profiles with/without lithium
  - Need to identify ways to decouple pressure and current profile variations
    - Different time scales of pressure and current profile relaxation
    - HHFW in heating mode

T&T TSG Experimental Ideas

- Some first year T&T researches to support the FY15 JRT
  - q_{min} dependence of confinement with fixed q_{95}
    - DIII-D observation of degraded confinement with broader current profile and with q_{95} fixed
  - B_T, Ip and collisionality scalings with different NBI source combinations and HHFW
    - Try to decouple pressure and current profile effects
    - 3D coils to modify rotation profile
  - Lithium scan to vary pressure and current profile
    - Need to assess the coupling between pressure and current profile
  - Lithiated and non-lithiated plasma comparison
    - Confinement and pressure profiles are known to be different between the cases from NSTX experiments