NSTX-U

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EP-TSG: diagnostics re-commissioning and initial XPs

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pre-forum meeting #1
PPPL, Room B318
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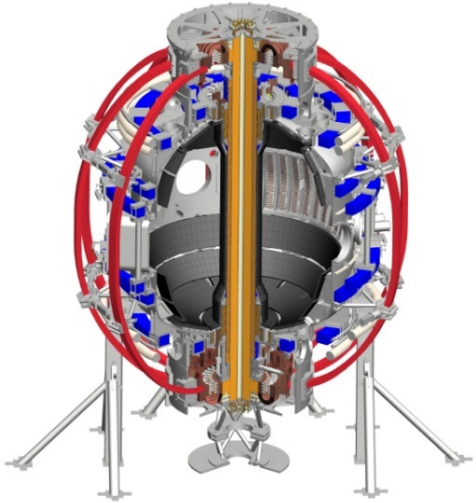

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First month of EP research: target re-commissioning of primary diagnostics, baseline for JRT-15 & R15-2

- *Planned XMPs:*
  - Neutron calibration: low PNB discharges, Einj=40-50keV
    - Transfer calibration from pulse-counting to current mode
  - FIDA/ssNPA/sFLIP checkout
    - Commission new t-FIDA, ssNPA systems; checkout sFLIP & v-FIDA

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- *Topics for initial XPs:*
  - NUBEAM validation
    - MHD-quiescent plasmas, low P_{NB} (NB blips)
    - Validate NUBEAM modeling for "classical" conditions
  - On- vs. off-axis NB for "fiducial-like" H-mode
    - Move up in P_{NB}, use "standard" H-mode target
    - Perform initial assessment of J_{NB} vs NBI
  - Dependence of fast ion distribution on NBI parameters
    - Systematic scans of tangency radii, NBI energy
    - Assess resulting F_{NB}; initial characterization of *AEs vs. F_{NB}