



U.S. DEPARTMENT OF
ENERGY

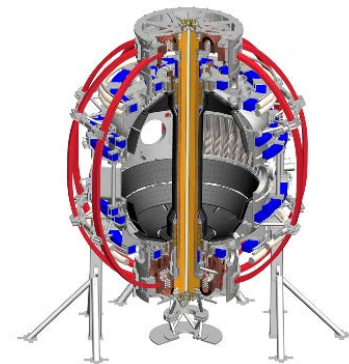
Office of
Science



Program status, run coordination

J. Menard

NSTX-U Team Meeting
PPPL B318
July 15, 2016



Program / run coordination update (1)

- Had recent budget & schedule discussion with FES
- Mutual conclusion / decision that:
 - There are many tasks to be completed for FY17:
 - Remove PF1AU to try to identify root cause of coil failure
 - Fabricate and install new PF1AU coil (if possible)
 - High-Z tiles, high-k, FIRETIP, PBLs, resistive bolometers, Bay J cover(?)
 - Operate 16 run weeks, JRT on dissipative divertors, research milestones
 - Still have goal of pushing to full B_T and I_p by end of FY17 run
 - **No Q1 operations in FY17 (FY17 run time will be at end of FY)**
 - Need to assess if operating w/o PF1AU consistent with high- I_p ops
 - May need to wait for new PF1AU installation before operating in FY17
 - Would like to get more runtime and science to generate data and results for conferences & publications for next ~1 year
 - **Permission & funding to operate through September 2016**

Program / run coordination update (2)

- Priorities for research ops during remainder of FY16:
 - Shot (re)-development without PF1AU (could take weeks...)
 - If good enough, will keep going through end of FY16
 - If problematic, stopping ops would give us head-start on FY17
 - Complete milestones
 - Calibrate MSE-CIF, finish several EP-related XPs, L-mode transport XPs, NBI into low I_p , get reliable (early) H-mode, assess confinement, pedestal w/o PF1AU, MS-TSG XPs on NTV, TM, RWM, etc...
 - Try to push up I_p – notable outcome, needed for research milestones
 - Use MGI system for 1st time - contribute to JRT, get publishable data
 - Other goals
 - More EFC, test IGI, assess impact of LiTER usage
 - IGI ready now, LiTER very close (successful ACC review yesterday)
 - Pushing for PF1C usage, but presently unclear if clamps can be ready
 - PF1Cs required for higher upper triangularity, snowflake development, CHI

Long-term schedule issues

- Divertor cryo-pump CDR early next month - project going well so far – good topic for future team meeting
 - Initial cost estimates of project: \$5-10M
 - Above \$5M MIE threshold requires line-item in budget
 - Will not be in budget until FY18 if approved – cannot begin construction until approved and in budget
 - Will continue with advanced conceptual design
- Likely will not be ready for long cryo-outage until end of FY18/early FY19 vs. previously planned mid-FY18
 - Plan to use portion of advance cryo-funding in FY16 for Aug/Sep FY16 operations and for fabrication of new PF1AU
 - Cryo delay could impact outage duration between FY17 and FY18, and also # of run weeks in FY18 (all TBD)