

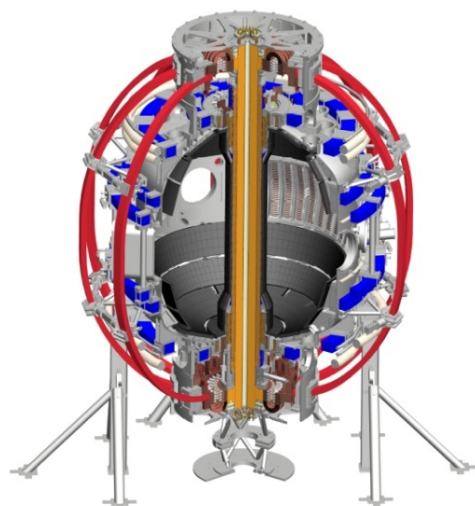
Operations Notes

Updates Since Last Team Meeting

Stefan Gerhardt

Coll of Wm & Mary
Columbia U
CompX
General Atomics
FIU
INL
Johns Hopkins U
LANL
LLNL
Lodestar
MIT
Lehigh U
Nova Photonics
ORNL
PPPL
Princeton U
Purdue U
SNL
Think Tank, Inc.
UC Davis
UC Irvine
UCLA
UCSD
U Colorado
U Illinois
U Maryland
U Rochester
U Tennessee
U Tulsa
U Washington
U Wisconsin
X Science LLC

NSTX Team Meeting
B318
January 3rd, 2013



Culham Sci Ctr
York U
Chubu U
Fukui U
Hiroshima U
Hyogo U
Kyoto U
Kyushu U
Kyushu Tokai U
NIFS
Niigata U
U Tokyo
JAEA
Inst for Nucl Res, Kiev
Ioffe Inst
TRINITI
Chonbuk Natl U
NFRI
KAIST
POSTECH
Seoul Natl U
ASIPP
CIEMAT
FOM Inst DIFFER
ENEA, Frascati
CEA, Cadarache
IPP, Jülich
IPP, Garching
ASCR, Czech Rep

NCS Details (NCS=NSTX Control System)

- Most work in this area now dedicated to DCPS.
 - DCPS = Digital Coil Protection System
- Made significant changes to the way PF coil voltage requests are passed around PCS.
 - Allows new PF coils to be added to PCS control with no code kludges.
- Progress was made on implementing data-transfer streams for the new computer.
 - Firmware updates to the data-transfer card (SL240) were made to make it backward-compatible with other elements of the data-stream hardware.
 - Started testing of Adnaco PCI extension crates for use in the PCS data stream
- Side note: GA is now purchasing a “RedHawk” realtime Linux box for DIII-D PCS.

Review of NSTX-U Gas Injection System Held in the Late Summer

- Peer review of NSTX-U gas injection systems was held in August.
 - See: http://nstx.pppl.gov/DragNDrop/NSTX_Upgrades/GIS/
 - R. Raman lead effort, support from Lane, Vlad, Bill, Stefan,...
- Important findings/results.
 - One of the high-field side gas delivery tubes was modified so that its light plume would not interfere with MPTS.
 - Has the added benefit of being a shorter tube.
 - Found that ports used for LFS gas injection on NSTX have been removed for J-K cap installation.
 - Bill and Lane found locations for six new ports, and the installation of those ports is now a task for the construction team.
 - Will support GIS, MGI, new Penning gauge (#3), future GIS needs.
 - Determined the need to review boronization system for NSTX-U.
 - Task is ongoing.
 - Other desires:
 - Divertor gas injectors for upper and lower divertor need to be incorporated into new CHI gap tiles, ports found for tubes to enter NSTX.
 - Additional high pressure gas delivery system for MGI and divertor gas.
- Need to complete a control system specification document for the GIS.

Diagnostics

- MPTS Upgrade Update:
 - A successful FDR for the modifications to the laser input optics was held on November 19.
 - A Peer Review for the modifications to the light collection optics will be held in January.
 - The hole in vacuum vessel for the Bay L cap will be cut in January and the cap will be welded into the vessel in February.
 - A FDR for the modifications to the laser output beamline and beam dump will be held in March.
- Locations for high vacuum gauges being finalized.
- L. Roquemore working with a designer to develop designs for diagnostic ports on the Bay K NB duct, and the port covers for Bays E, I, and J.
 - Designs will be reviewed in the next two months.

Diagnostic Reinstallations

- Meeting on Dec. 12 was held with many diagnosticians to go over reinstallation plans.
 - Can (and should!) start reinstallations as early as May/June 2013.
 - Fundamental Goal: be in a state where a vent is not required following CD-4.
 - Diagnosticians asked :
 - to look at summary spreadsheet and comment on its accuracy
 - to begin preparation of procedures for reinstallation, based on template.
 - Spreadsheet forms the basis calibration & installation time requests.
 - Procedures will be required for all work in the NTC for the near future.
 - Presentation material, draft port map, and procedure template at:
 - http://nstx.pppl.gov/DragNDrop/Operations/Diagnostics_&_Support_Sys/NSTX-U%20Reinstallations/
- Limited response to date:
 - Have heard from people responsible for BES, MSE-LIF, TFIDA, SSNPAs.
 - Requesting a response to the spreadsheet content by end of next week.
 - That is to say, please look at this and respond by Friday the 10th.
 - Otherwise, present estimates for installation and calibration times may get passed along to Upgrade planning.