FY16 NSTX RUN LOG

NSTX-U FY 16 Run started on Dec. 18, 2015. FY 2016 Operation Targets: TBD Complete: 4.81 run weeks producing 492 plasmas

| <u>Date</u> | Run Time (Daily hrs) | Accumulated FY Run Time (hrs) | Accumulated FY Run Weeks (40 hours / week) | Plasma Attempts | Plasma <u>Achieved</u> | Experimental Topics | Comments |
|--|-------------------------|----------------------------------|--|--------------------|---------------------------|--|---|
| 12/18/15 Week's End | 4.83 | 4.83 4.83 | 0.12 0.12 | 13 | 11 | XMP-101: Inductive Start-Up Scenarios | Delayed start for ISTP. Missed shots/down time for ECH |
| Week's End 12/21/15 | 3.61 | 8.44 | 0.21 | | | XMP-106: Magnetic calibration | Delayed start for field coil/PSRTC/PCS |
| | 3.01 | 0.77 | 0.21 | | | XMP-101: Inductive Start-Up | Testing |
| | | | | 15 | 15 | Scenarios | |
| 12/22/15 | 7.87 | 16.31 | 0.41 | 25 | 25 | XMP-126: Ip and R Control | Additional test time for PF3U/L test shots. |
| | | | | | | XMP-105: Vertical Position Control Checkout | Shots. |
| Week's End | | 16.31 | 0.41 | | | Control Checked | |
| 1/4/16 | 0 | 16.31 | 0.41 | 0 | 0 | | Vacuum Vessel Boronization |
| 1/5/16 | F 07 | 21.20 | 0.50 | 1.1 | _ | XMP-101: Inductive Start-Up | N |
| | 5.07 | 21.38 | <u>0.53</u> | 11 | 7 | Scenarios XMP-126: Ip and R Control | Missed shots on FCPC/Controls. Down due to ECH/FCPC |
| | | | | | | XMP-101: Inductive Start-Up | Missed shots on Controls/FCPC. |
| 1/6/16 | 6.78 | 28.16 | <u>0.70</u> | 19 | 9 | Scenarios | Down for FCPC. |
| | | | | | | XMP-105: Vertical Position | |
| | | | | | | Control Checkout XMP-126: Ip and R Control | 1 |
| | | | | | | XMP-127: Neutral beams into | Down for Ip permissive |
| 1/7/16 | 8.27 | 36.43 | <u>0.91</u> | 26 | 25 | plasma | |
| | | | | | | XMP-107: Neutron CalibrationTransfer | |
| | | | | | | XMP-101: Inductive Start-Up | 1 |
| | | | | | | Scenarios | |
| | | | | | | XMP-105: Vertical Position | |
| | | | | | | Control Checkout XMP-126: Ip and R Control | - |
| | | | | | | XMP-127: Neutral beams into | Mag test shots after 4PM |
| 1/8/16 | 8.24 | 44.67 | <u>1.12</u> | 26 | 23 | plasma | |
| | | | | | | XMP-105: Vertical Position | |
| | | | | | | Control Checkout XMP-126: Ip and R Control | 1 |
| | | | | | | XMP-106: Magnetic calibration | |
| Week's End | | 44.67 | <u>1.12</u> | | | | |
| | | | | | | | TF Water Fitting Repair. Vacuum |
| 1/11/16 | | | | 0 | 0 | XMP-128: Increase the | Vessel Boronization on 2nd shift |
| | | | | | | Elongation in L-Mode | Extra test time for gas injection system(GIS). Down due to |
| 1/12/16 | 7.86 | 52.53 | <u>1.31</u> | 18 | 15 | | Controls/Torus systems. |
| | | | | | | XMP-128: Increase the | Time spent on NB Conditioning. |
| 1/13/16 | 7.5 | 60.03 | <u>1.50</u> | 25 | 15 | Elongation in L-Mode | Missed shots on fizzles/FCPC |
| 1/14/16 | 6.55 | 66.58 | 1.66 | 22 | 19 | XMP-128: Increase the Elongation in L-Mode | Additional test time for FCPC/NB. Missed shots on fizzles/FCPC |
| .,,,,,, | 0.00 | | 1100 | | | XMP-116: Initial H-mode | Missed shots on fizzles/1 Gr C |
| | | | | | | Development | |
| 1/15/16 | 3.19 | 69.77 | 1.74 | 8 | 6 | XMP-116: Initial H-mode Development | Delayed start to GIS/FCPC. Down for FCPC. Missed shots on PCS |
| Week's End | 3.19 | 69.77 | 1.74 | 8 | 0 | Development | TOFFICE MISSER SHOTS OFFICE |
| | | | | | | XMP-101: Inductive Start-Up | Delayed start for GIS. Extra testing |
| 1/18/16 | 3.58 | 73.35 | 1.83 | 15 | 10 | Scenarios | for Mag Diag. Down for PCS/FCPC. |
| | | | | | | XMP-106: Magnetic calibration | Missed shots on DCPS/FCPC |
| | | | | | | XMP-116: Initial H-mode | 1 |
| | | | | | | Development | |
| 1/10/16 | 7 27 | 90.03 | 2.02 | 25 | 22 | XMP-116: Initial H-mode | Delayed start/Down for ECS. |
| 1/19/16 | 7.27 | 80.62 | 2.02 | 25 | 23 | Development | Missed shots on disrupts Investigate PF1CU electrical |
| 1/20/16 | 0 | 80.62 | 2.02 | 0 | 0 | | insulation |
| | | | | | | XMP-116: Initial H-mode | Down for water/SPA's. Missed shot |
| 1/21/16 | 4.04 | 84.66 | 2.12 | 12 | 11 | Development XMP-121: Six SPA and RWM | on fizzle |
| | | | | | | coil checkout | |
| | | | | | | XP-1506: Low-beta locked |] |
| | | | | | | mode studies XMP-116: Initial H-mode | Down (CA for ND Minard above |
| 1/22/16 | 8.43 | 93.09 | 2.33 | 29 | 27 | Development | Down/CA for NB. Missed shots on level 1 Faults |
| | - | | | | | XP-1506: Low-beta low- | loto. I I duito |
| Manual 7: First | | 02.00 | 2.00 | | | desntiy locked mode studies | |
| Week's End | | 93.09 | <u>2.33</u> | <u> </u> | | 1 | |

FY16 NSTX RUN LOG

| | | 1 | 1 | 1 | T | T | Investigate Outer Vesuum Vessel |
|---------------|------|---------------------|-------------------|-----------------|--|---|---|
| 2/8/16 | 0 | 93.09 | 2.33 | 0 | 0 | | Investigate Outer Vacuum Vessel to Gnd leakage Path |
| 2/9/16 | 3.28 | 96.37 | 2.41 | 9 | 7 | XMP-137: Increase In and kap | Extra Test time for Controls/FCPC. |
| 2/3/10 | 3.20 | 30.37 | 2.41 | 1 9 | ' | XMP-138: Vertical Control | Missed shots on Aborts |
| | | | | | | Checkout | IMISSEU STIOLS OIT ADOLLS |
| | | | | | | XMP-137: Increase Ip and | Extra test time for NB. Down for |
| 2/10/16 | 0.75 | 97.12 | 2.43 | 1 | 1 | kappa in L- and H-modes. | IGIS |
| | | | | | | XMP-138: Vertical Control | |
| | | | | | | Checkout | |
| | | | | | | XMP-137: Increase Ip and | Extra test time for Controls. Down |
| 2/11/16 | 7.06 | 104.18 | 2.60 | 19 | 19 | kappa in L- and H-modes. | for Controls |
| | | | | | | XMP-138: Vertical Control | |
| | | | | | | Checkout | |
| | | | | | | XMP-115: Isoflux | |
| | | | | | | Commissioning | |
| | | | | | _ | XMP-115: Isoflux | Delayed/down start for MG. Missed |
| 2/12/16 | 3.32 | 107.5 | 2.69 | 10 | 9 | Commissioning | shot on Abort (NB) |
| Week's End | | <u>107.5</u> | 2.69 | | | | |
| | | | | | | XMP-137: Increase Ip and | Delayed start for TVPS. |
| | | | | | | kappa in L- and H-modes. | Delayed/down for FCPC. Missed |
| 2/15/16 | 2.66 | 110.16 | 2.75 | 7 | 6 | | shot on Com |
| | | | | | 1 | XP-1506: Low-beta low- | Delayed start/Down for FCPC/Con. |
| | | | | | | desntiy locked mode studies | Early End/CA for TOR. Missed shots |
| 2/16/16 | 2.45 | 112.61 | 2.82 | 6 | 3 | | on Aborts, Fizzles. |
| | | | | | | | Only testing/troubleshootingGIS, |
| 2/17/16 | 0 | 112.61 | 2.82 | 0 | 0 | | FCPC & Controls |
| | | | | | | XMP-115: Isoflux | CA/Down for GIS/NB/Control. |
| 2/18/16 | 3.98 | 116.59 | 2.91 | 7 | 5 | Commissioning | Missed shots on DCPS |
| | | | | | | XP-1506: Low-beta low- | |
| | | | | | | desntiy locked mode studies | |
| | | | | | | XMP-115: Isoflux | |
| 2/19/16 | 9.13 | 125.72 | 3.14 | 25 | 23 | Commissioning | Missed shots on DCPS |
| Week's End | | <u>125.72</u> | <u>3.14</u> | | | | |
| | | | | | | XMP-115: Isoflux | Delayed start for NB1A/GIS. |
| 2/22/16 | 1.8 | 127.52 | 3.19 | 5 | 4 | Commissioning | Delayed/down for DCPS/Penning |
| 0 (00 (5 5 | | | | | | XMP-115: Isoflux | |
| 2/23/16 | 4.63 | 132.15 | 3.30 | 15 | 15 | Commissioning | Delayed start for NB1A. |
| 2/24/16 | 0.02 | 140.10 | 2.50 | 1.0 | 17 | XMP-115: Isoflux | Deleved start for NR1A |
| 2/24/16 | 8.03 | 140.18 | 3.50 | 18 | 17 | Commissioning XMP140: PF-5 Proportional | Delayed start for NB1A. |
| 2/25/16 | 6.58 | 146.76 | 3.67 | 21 | 20 | EFC Test | GIS Work |
| 2/23/10 | 0.30 | 140.76 | 3.07 | | 20 | XMP-137: Increase Ip and | dis Work |
| 2/26/16 | 7.68 | 154.44 | 3.86 | 22 | 18 | kappa in L- and H-modes. | Down for Con/FCPC |
| Week's End | 7.00 | 154.44 | 3.86 | | 10 | Rappa III E- and II-modes. | Down for convicie |
| WEEK 3 LIIU | | 137.77 | 3.00 | | | XMP-121: Six SPA and RWM | Down for water |
| 2/29/16 | 6.47 | 160.91 | 4.02 | 23 | 16 | coil checkout | PLC/Controls.Missed shots on |
| | **** | | | | | XMP-137: Increase Ip and | DCPS/Fizzle/Con |
| | | | | | 1 | kappa in L- and H-modes. | DOI 3/112216/ COII |
| | | | | | | XMP140: PF-5 Proportional | Delayerd start for water PLC. |
| 3/1/16 | 7.78 | 168.69 | 4.22 | 24 | 23 | EFC Test | Missed shot on fizzle. |
| | | | | | | XMP-137: Increase Ip and | |
| | | | | | | kappa in L- and H-modes. | |
| | | | | | | XMP-137: Increase Ip and | Delayed start for controls. Down |
| 3/2/16 | 6.88 | 175.57 | 4.39 | 17 | 17 | kappa in L- and H-modes. | for Water PLC/FCPC PLC |
| 3/3/16 | 8.46 | 184.03 | 4.60 | 25 | 24 | XMP-111: MPTS Commissioni | Prob. with Con glitches/NB |
| | | | | | | XP-1506:Low-Beta Error field | reliability. Missed shot on abort. |
| | | | | | | correction | |
| ΙΤ | | | | | | XMP-115: Isoflux | Down for Water PLC. Early NB trips. |
| 3/4/16 | 8.19 | 192.22 | 4.81 | 26 | 24 | Commissioning | Miss shots on Aborts |
| | | | | | 1 | XMP-138: Vertical Control | |
| | | | | | - | Checkout | 4 |
| | | | | | 1 | XMP-137: Increase Ip and | |
| · · · · · | | 100.00 | 4.04 | + | | kappa in L- and H-modes. | |
| Week's End | | 192.22 | <u>4.81</u> | 1 | | 1 | |
| + | | 400.00 | | | 100 | 1 | |
| <u>Totals</u> | | 192.22 Run Hours | 4.81 Run Weeks | 569 Attempts | 492 Plasmas | 1 | <u> </u> |
| | | BUD HOURS | BUILL VVEEKS | AHAMNIS | | | |

Run Hours Run Weeks Attempts Plasmas