

FY16 NSTX RUN LOG

NSTX-U FY 16 Run started on Dec. 18, 2015.

FY 2016 Operation Target: 18 run weeks

Complete: 8.95 run weeks producing 940 plasmas

Date	Run Time (Daily hrs)	Accumulated FY Run Time (hrs)	Accumulated FY Run Weeks (40 hours / week)	Plasma Attempts	Plasma Achieved	Experimental Topics	Comments
12/18/15	4.83	4.83	0.12	13	11	XMP-101: Inductive Start-Up Scenarios	Delayed start for ISTP. Missed shots/down time for ECH
Week's End		4.83	0.12				
12/21/15	3.61	8.44	0.21	15	15	XMP-106: Magnetic Calibration XMP-101: Inductive Start-Up Scenarios	Delayed start for field coil/PSRTC/PCS Testing
12/22/15	7.87	16.31	0.41	25	25	XMP-126: Ip and R Control XMP-105: Vertical Position Control Checkout	Additional test time for PF3U/L test shots.
Week's End		16.31	0.41				
1/4/16	0	16.31	0.41	0	0		Vacuum Vessel Boronization
1/5/16	5.07	21.38	0.53	11	7	XMP-101: Inductive Start-Up Scenarios XMP-126: Ip and R Control	Missed shots on FCPC/Controls. Down due to ECH/FCPC
1/6/16	6.78	28.16	0.70	19	9	XMP-101: Inductive Start-Up Scenarios XMP-105: Vertical Position Control Checkout XMP-126: Ip and R Control	Missed shots on Controls/FCPC. Down for FCPC.
1/7/16	8.27	36.43	0.91	26	25	XMP-127: Neutral beams into plasma XMP-107: Neutron Calibration Transfer XMP-101: Inductive Start-Up Scenarios XMP-105: Vertical Position Control Checkout XMP-126: Ip and R Control	Down for Ip permissive
1/8/16	8.24	44.67	1.12	26	23	XMP-127: Neutral Beams into Plasma XMP-105: Vertical Position Control Checkout XMP-126: Ip and R Control XMP-106: Magnetic Calibration	Mag test shots after 4PM
Week's End		44.67	1.12				
1/11/16				0	0		TF Water Fitting Repair. Vacuum Vessel Boronization on 2nd shift
1/12/16	7.86	52.53	1.31	18	15	XMP-128: Increase the Elongation in L-Mode	Extra test time for gas injection system(GIS). Down due to Controls/Torus systems.
1/13/16	7.5	60.03	1.50	25	15	XMP-128: Increase the Elongation in L-Mode	Time spent on NB Conditioning. Missed shots on fizzles/FCPC
1/14/16	6.55	66.58	1.66	22	19	XMP-128: Increase the Elongation in L-Mode XMP-116: Initial H-mode Development	Additional test time for FCPC/NB. Missed shots on fizzles/FCPC
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		69.77	1.74				
1/18/16	3.58	73.35	1.83	15	10	XMP-101: Inductive Start-Up Scenarios XMP-106: Magnetic calibration XMP-116: Initial H-mode Development	Delayed start for GIS. Extra testing for Mag Diag. Down for PCS/FCPC. Missed shots on DCPS/FCPC
1/19/16	7.27	80.62	2.02	25	23	XMP-116: Initial H-mode Development	Delayed start/Down for ECS. Missed shots on disrupts
1/20/16	0	80.62	2.02	0	0		Investigate PF1CU electrical insulation
1/21/16	4.04	84.66	2.12	12	11	XMP-116: Initial H-mode Development XMP-121: Six SPA and RWM coil checkout XP-1506: Low-beta locked mode studies	Down for water/SPA's. Missed shot on fizzle

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1/22/16	8.43	93.09	2.33	29	27	XMP-116: Initial H-mode Development XP-1506: Low-beta Low-desntiy Locked Mode Studies	Down/CA for NB. Missed shots on level 1 Faults
Week's End		93.09	2.33				
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 Ip and Kappa in L- and H-modes. XMP-138: Vertical Control Checkout	Extra Test time for Controls/FCPC. Missed shots on Aborts
2/10/16	0.75	97.12	2.43	1	1	XMP-137: Increase Ip and Kappa in L- and H-modes. XMP-138: Vertical Control Checkout	Extra test time for NB. Down for GIS
2/11/16	7.06	104.18	2.60	19	19	XMP-137: Increase Ip and Kappa in L- and H-modes. XMP-138: Vertical Control Checkout XMP-115: Isoflux Commissioning	Extra test time for Controls. Down for Controls
2/12/16	3.32	107.5	2.69	10	9	XMP-115: Isoflux Commissioning	Delayed/down start for MG. Missed shot on Abort (NB)
Week's End		107.5	2.69				
2/15/16	2.66	110.16	2.75	7	6	XMP-137: Increase Ip and Kappa in L- and H-modes.	Delayed start for TVPS. Delayed/down for FCPC. Missed shot on Com
2/16/16	2.45	112.61	2.82	6	3	XP-1506: Low-beta Low-desntiy Locked Mode Studies	Delayed start/Down for FCPC/Con. Early End/CA for TOR. Missed shots on Aborts, Fizzles.
2/17/16	0	112.61	2.82	0	0		Only testing/troubleshootingGIS, FCPC & Controls
2/18/16	3.98	116.59	2.91	7	5	XMP-115: Isoflux Commissioning XP-1506: Low-beta Low-desntiy Locked Mode Studies	CA/Down for GIS/NB/Control. Missed shots on DCPS
2/19/16	9.13	125.72	3.14	25	23	XMP-115: Isoflux Commissioning	Missed shots on DCPS
Week's End		125.72	3.14				
2/22/16	1.8	127.52	3.19	5	4	XMP-115: Isoflux Commissioning	Delayed start for NB1A/GIS. Delayed/down for DCPS/Penning
2/23/16	4.63	132.15	3.30	15	15	XMP-115: Isoflux Commissioning	Delayed start for NB1A.
2/24/16	8.03	140.18	3.50	18	17	XMP-115: Isoflux Commissioning	Delayed start for NB1A.
2/25/16	6.58	146.76	3.67	21	20	XMP140: PF-5 Proportional EFC Test	GIS Work
2/26/16	7.68	154.44	3.86	22	18	XMP-137: Increase Ip and Kappa in L- and H-modes.	Down for Con/FCPC
Week's End		154.44	3.86				
2/29/16	6.9	161.34	4.03	23	16	XMP-121: Six SPA and RWM Coil Checkout XMP-137: Increase Ip and kappa in L- and H-modes.	Down for water PLC/Controls.Missed shots on DCPS/Fizzle/Con
3/1/16	7.78	169.12	4.23	24	23	XMP140: PF-5 Proportional EFC Test XMP-137: Increase Ip and Kappa in L- and H-modes.	Delayerd start for water PLC. Missed shot on fizzle.
3/2/16	6.88	176	4.40	17	17	XMP-137: Increase Ip and Kappa in L- and H-modes.	Delayed start for controls. Down for Water PLC/FCPC PLC
3/3/16	8.46	184.46	4.61	25	24	XMP-111: MPTS Commissioning XP-1506:Low-Beta Error Field Correction	Prob. with Con glitches/NB reliability. Missed shot on abort.
3/4/16	8.19	192.65	4.82	26	24	XMP-115: Isoflux Commissioning XMP-138: Vertical Control Checkout XMP-137: Increase Ip and Kappa in L- and H-modes.	Down for Water PLC. Early NB trips. Miss shots on Aborts
Week's End		192.65	4.82				
3/21/16	0	192.65	4.82	0	0	XMP-143: Access Machine Conditions	Recovery plasmas from Vessel quick Ar Vent. No accrued Ops
3/22/16	9.55	202.2	5.06	21	21	XMP-120: X-Point and Strike-point Control	Break for Controls/Tech coverage

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3/23/16	6.69	208.89	5.22	19	17	XMP-120: X-Point and Strike-point Control	Conclude early for NB Conditioning. Missed shots on fizzes
3/24/16	5.27	214.16	5.35	12	10	XP-1506: Low-beta Error Field Assessment	Down for ECS (Multiple) & Controls. Missed shots on Con/ECS
3/25/16	7.31	221.47	5.54	21	17	XMP-142: Reduced MHD H-mode Development	Delayed start for FCPC. CA for Tour. Missed shots on NB/Abort/Fizz
Week's End		221.47	5.54				
3/28/16	8.84	230.31	5.76	29	28	XMP-143: Access Machine Conditions XMP-142: Reduced MHD H-mode Development	Delayed start for NB/TVPS. Missed shot on abort (NB)
3/29/16	8.64	238.95	5.97	27	24	XMP-142: Reduced MHD H-mode Development XMP-145: Development of Scenarios with	Down/CA for TVPS. Missed shots on aborts (NB)
3/30/16	3.48	242.43	6.06	8	8	XMP-110: Diagnostic Checkout of NB Injection Fast Ions	Delayed start for FCPC. Early stop for Boronization
3/31/16	6.55	248.98	6.22	22	21	XMP-143: Access Machine Conditions XMP-142: Reduced MHD H-mode Development	Delayed start for NB. Missed shot on Abort (NB)
4/1/16	9.07	258.05	6.45	26	26	XP-1506: Low-beta Error Field Assessment XMP-146: Initial n=2,3 Error Field Correction XMP-110: FIDA/ssNPA/sFLIP checkout	Down for water sys trip.
Week's End		258.05	6.45				
4/4/16	8.33	266.38	6.66	23	23	XMP-143: Access Machine Conditions XMP-142: Reduced MHD H-mode Development	Early stop for FCPC water leak.
4/5/16	4.79	271.17	6.78	15	15	XMP-143: Access Machine Conditions XMP-142: Reduced MHD H-mode Development XMP-147: Development of L-mode fiducial shot	Delayed start for FCPC/vessel loop fault
4/6/16	4.93	276.1	6.90	11	11	XMP-143: Access Machine Conditions XMP-147: Development of L-mode fiducial shot	Early shutdown for chilled water leak
4/7/16	4.07	280.17	7.00	12	11	XMP-147: Development of L-mode fiducial shot XMP-142: Reduced MHD H-mode Development	Delaye start on leak recovery. Missed shot on Ops error.
4/8/16	8.83	289	7.23	24	24	XMP-142: Reduced MHD H-mode Development XMP-148:BEAST Validation	Extra Test time for GDC. Down for Water trip
Week's End		289	7.23				
5/2/16	0.07	289.07	7.23	1	1		Test/Recovery day only. One D2 fiducial plasma at end of the day
5/3/16	4.43	293.5	7.34	11	11	XMP-150: Helium Density Scan for Zeff Calibration XMP-152: Improved dr-sep control and reEFIT checkout XMP-106: Magnetic Calibration	Down for PCS/Snap in TC. Test time for XMP-106
5/4/16	6.03	299.53	7.49	17	17	XMP-150: Helium Density Scan for Zeff Calibration XMP-152: Improved dr-sep control and reEFIT checkout	Extra test time. Down for RTC. Time for NB conditioning
5/5/16	8	307.53	7.69	21	20	XMP-151: L-Mode development	Down for RF/PCS/Water/Cat 4 to 2 Loop Fit. Missed shot on DCPS
5/6/16	8.95	316.48	7.91	28	26	XMP-142: H-mode scenario development XMP-151: L-Mode development	PCS AM reset. Missed shots on fizzle/DCPS
Week's End		316.48	7.91				

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5/9/16	8.66	325.14	8.13	28	27	XMP-142: Reduced MHD H-mode Development XMP-141 Error field correction proportional to loop voltage	Missed shot on fizzle.
5/10/16	5.87	331.01	8.28	16	14	XMP-149: MSE Diagnostic Neutral Beam Checkout XMP-142: Reduced MHD H-mode Development	Subtract for MSE-LIF. Down for GIS/Water. Missed shot for Fizzle/FCPC.
5/11/16	8.53	339.54	8.49	27	26	XMP-142: Reduced MHD H-mode Development XP-1506: Low-beta error field correction	Controlled access for NB-1A source isolation valve. Missed shot on Level 1 Fault.
5/12/16	6.52	346.06	8.65	18	18	XMP-153: H-mode access and control development XMP-151: L-Mode development	Down for Water/ECS. End early for SPA2 repair
5/13/16	9.22	355.28	8.88	28	26	XMP-153: H-mode access and control development XMP-151: L-Mode development	Missed shots on DCPS trip/Controls
Week's End		355.28	8.88				
5/20/16	2.76	358.04	8.95	6	6	XMP-154: Plasma Gap Control	Ended operation early to investigate PF1A U lead area movement
Week's End		358.04	8.95				
Totals		358.04	8.95	1040	940		
		Run Hours	Run Weeks	Attempts	Plasmas		