

FY08 NSTX RUN LOG

FY 08 Run started on February 18, 2008 and completed on July 14, 2008.
 FY 2008 Joule Milestone: 15 run weeks
 Completed: 16.62 run weeks, producing 2571 plasmas.

<u>Date</u>	<u>Run Time (Daily hrs)</u>	<u>Accumulated FY Run Time (hrs)</u>	<u>Accumulated FY Run Weeks (40 hours / week)</u>	<u>Plasma Attempts</u>	<u>Plasma Achieved</u>	<u>Experimental Topics</u>	<u>XP/XMP #</u>
2/18/07	7.37	7.37	0.18	25	23	Startup Evaluation	XMP-48
2/19/08	9.08	16.45	0.41	27	26	FIDA Checkout 2/1 NTM self-stabiliztn 2/1 NTM thresholds EF	XMP-54 XP-801
2/20/08	8.37	24.82	0.62	28	25	sensitivity with rotation	XP-810
2/21/08	7.97	32.79	0.82	28	22	FIDA Checkout Edge Electrode Biasing for SOL control	MP-54 XP-806
2/22/08	7.15	39.94	1.00	34	34	Vertical Stability ELM mitigation using RMP	XP-811 XP-818
Week's End		<u>39.94</u>	<u>1.00</u>				
2/25/08	9.46	49.4	1.24	34	33	Impact of rotation on confinement	XP-812
2/26/08	9.52	58.92	1.47	52	52	HHFW couplling to 6 MW Impact of rotation on confinement	XMP-26 XP-812
2/27/08	8.78	67.7	1.69	32	31	Coire rotation modulation Dependence of ELMs on magnetic balance	XP-820 XP-609
2/28/08	8.88	76.58	1.91	32	31	Comparison of Small ELM regimes on C-Mod, MAST, and NSTX	XP-721
2/29/08	7.7	84.28	2.11	32	29	LM Destabilization by Resonant Magnetic Perturbations	XP-809
Week's End		<u>84.28</u>	<u>2.11</u>				
3/3/08	7.46	91.74	2.29	22	21	ELM mitigation with midplane coils using different RMPs	XP-818
3/4/08	9.15	100.89	2.52	29	29	Intrinsic n=2 EF and RWM critical rotation	XP-805
3/5/08	9.52	110.41	2.76	49	41	HHFW couplling to 6 MW	XMP-26
3/6/08	9.58	119.99	3.00	35	29	NTV with n=2 error fields ELM mitigation with midplane coils using different RMPs	XP-804 XP-818
3/7/08	9.27	129.26	3.23	37	33		
Week's End		<u>129.26</u>	<u>3.23</u>				
3/10/08	5.59	134.85	3.37	21	21	Inductive drive of transient CHI plasmas	XP-817
3/11/08	9	143.85	3.60	45	43	Inductive drive of transient CHI plasmas	XP-817
3/12/08	9.07	152.92	3.82	42	40	Inductive drive of transient CHI plasmas	XP-817
3/13/08	7.33	160.25	4.01	24	23	Momentum transport using n=3 braking	XP-813
3/14/08	6.88	167.13	4.18	26	24	Modulation of core rotation using beam blips	XP-820
Week's End		<u>167.13</u>	<u>4.18</u>				
3/24/08	8.45	175.58	4.39	31	29	ELM mitigation with midplane coils using different RMPs	XP-818
3/25/08	8.31	183.89	4.60	34	27	Electron transport field sacling in NBI H-mode	XP-822
3/26/08	8.5	192.39	4.81	34	30	Divertor heat flux reduction and detachment in highly-shaped high performance plasmas	XP-814
3/27/08	6.14	198.53	4.96	21	18	Edge Characterization in highly- shaped discharges	XP-816
3/28/08	9.35	207.88	5.20	29	26	Robustness of improved error field suppression in long-pulse discharges	XP-823

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<u>Week's End</u>		<u>207.88</u>	<u>5.20</u>				
3/31/08	9.67	217.55	5.44	48	45	Inductive flux savings of a transient CHI-started plasma	XP-817
4/1/08	6.6	224.15	5.60	32	31	HHFW coupling	XMP-26
4/2/08	9.55	233.7	5.84	51	51	High-k turbulent fluctuations in HHFW heated plasmas	XP-821
4/3/08	6.34	240.04	6.00	31	28	HHFW Phase Scan & Current Drive in Deuterium L-Mode	XP-825
4/4/08	2.57	242.61	6.07	11	9	Fast ion transport induced by Alfvén avalanches	XP-819
<u>Week's End</u>		<u>242.61</u>	<u>6.07</u>				
4/7/08	0	242.61	6.07	0	0		
4/8/08	8.96	251.57	6.29	34	34	Divertor heat flux width and midplane SOL widths	XP-815
4/9/08	8.93	260.5	6.51	48	45	Inductive drive of transient CHI plasmas	XP-817
4/10/08	9.5	270	6.75	34	33	Fast ion transport induced by Alfvén avalanches	XP-819
4/11/08	9.38	279.38	6.98	37	37	Active RWM stabilization optimization	XP-802
<u>Week's End</u>		<u>279.38</u>	<u>6.98</u>				
4/21/08	8.82	288.2	7.21	31	29	Vertical NPA scan	XP-807
						Investigation of ion transport with beam modulation	XP-831
4/22/08	8.07	296.27	7.41	31	30	Dependence of the H-mode Pedestal on Aspect Ratio	XP-529
						Edge Characterization in highly-shaped discharges	XP-816
4/23/08	9.33	305.6	7.64	36	34	HHFW Phase Scan & Current Drive in Deuterium L-Mode	XP-825
4/24/08	9.39	314.99	7.87	33	32	RWM stabilization physics	XP-830
4/25/08	8.11	323.1	8.08	29	28	Spatial profile of beam ions accelerated by HHFW	XP-832
<u>Week's End</u>		<u>323.1</u>	<u>8.08</u>			X-point limiter	XP-826
4/28/08	8.54	331.64	8.29	34	30	Divertor heat flux width and midplane SOL widths	XP-815
						Divertor detachment with deuterium and impurity gas injection	XP-814
4/29/08	8.67	340.31	8.51	37	36	Investigation of ion transport with beam modulation	XP-831
4/30/08	9.34	349.65	8.74	35	35	Magnetic Shear and Transport intrinsic n=2 error fields and RWM critical rotation	XP-829
						NTV with n=2 error fields	XP-804
5/1/08	9.35	359	8.98	34	33	Robustness of improved error field suppression in long-pulse discharges	XP-823
5/2/08	9.33	368.33	9.21	33	32	Vertical NPA scan	XP-807
<u>Week's End</u>		<u>368.33</u>	<u>9.21</u>			Gas balance	XP-824
5/5/08	4.5	372.83	9.32	21	16	High-k turbulent fluctuations in NSTX	XP-821
5/6/08	9.54	382.37	9.56	31	30	LITER Characterization and ELM Mitigation	XP-827
5/7/08	8.68	391.05	9.78	24	24	LITER Characterization and ELM Mitigation	XP-827
5/8/08	9.7	400.75	10.02	38	35	LITER Characterization and ELM Mitigation	XP-827
						Robustness of improved error field suppression in long-pulse discharges	XP-823
5/9/08	8.92	409.67	10.24	47	47	HHFW coupling	XMP-26
<u>Week's End</u>		<u>409.67</u>	<u>10.24</u>			Magnetic Shear and Transport	XP-829
5/19/08	8.2	417.87	10.45	34	27	LITER Characterization and ELM Mitigation	XP-827
5/20/08	7.32	425.19	10.63	29	22	ELM mitigation with midplane coils using different RMPs	XP-818

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							High elongation plasmas	XP-836
5/21/08	8.6	433.79	10.84	44	44		High-k turbulent fluctuations in NSTX	XP-821
5/22/08	9.35	443.14	11.08	44	41		Magnetic Shear and Transport Dependence of the H-mode Pedestal on Aspect Ratio	XP-829
							Edge Electrode Biasing for SOL control	XP-529
5/23/08	7.93	451.07	11.28	37	37		Halo Current Dependencies	XP-806
Week's End		451.07	11.28					XP-833
5/27/08	9.55	460.62	11.52	47	45		MPTS Calibration	XMP-55
Week's End		460.62	11.52				Halo Current Dependencies	XP-833
6/2/08	7.6	468.22	11.71	37	33		Inductive drive of transient CHI plasmas	XP-817
6/3/08	9.28	477.5	11.94	50	42		Inductive drive of transient CHI plasmas	XP-817
6/4/08	8.18	485.68	12.14	44	42		HHFW coupling	XMP-26
							HHFW Phase Scan & Current Drive in Deuterium L-Mode	XP-825
6/5/08	10.54	496.22	12.41	38	37		Ohmic H-modes	XP-506
Week's End		496.22	12.41				Gas balance	XP-824
6/16/08	8.4	504.62	12.62	36	22		Halo Current Dependencies"	XP-833
							X-point limiter	XP-826
6/17/08	8.85	513.47	12.84	37	34		High elongation plasmas	XP-836
							SWIFT diagnostic commissioning	XMP-56
6/18/08	8.72	522.19	13.05	37	37		Impact of rotation on energy and impurity confinement	XP-812
							Momentum transport using n=3 braking	XP-813
6/19/08	10.36	532.55	13.31	46	45		Impact of rotation on energy and impurity confinement	XP-812
							Momentum transport using n=3 braking	XP-813
6/20/08	8.39	540.94	13.52	37	34		Magnetic Shear and Transport	XP-829
Week's End		540.94	13.52					
6/23/08	6.67	547.61	13.69	34	28		ELM Destabilization by Resonant Magnetic Perturbations	XP-809
							Dependence of the H-mode Pedestal Structure on Aspect Ratio	XP-529
6/24/08	10.89	558.5	13.96	49	48		Fast ion transport induced by Alfvén avalanches	XP-819
							Transmission Grating Spectrometer Commissioning	XMP-58
6/25/08	8.97	567.47	14.19	38	37		Alfvén cascades and associated transport	XP-808
6/26/08	10.98	578.45	14.46	40	39		2/1 NTM self-stabilization	XP-801
							Error field sensitivity of 2/1 NTM thresholds	XP-810
6/27/08	7.75	586.2	14.66	31	29		RWM stabilization physics	XP-830
							Active RWM stabilization optimization	XP-802
Week's End		586.2	14.66					
6/30/08	9.05	595.25	14.88	34	32		Study of the 3/2 NTM	XP-834
							Edge turbulence and intermittency	XP-839
7/1/08	9.47	604.72	15.12	32	30		Initial shake-out of the lithium powder dropper	XMP-62
							GAEs and e-transport"	XP-840
7/2/08	10.13	614.85	15.37	41	35		GAEs and e-transport"	XP-840
							Injection of lithium powder	XP-828

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7/3/08	9.82	624.67	15.62	42	42	Impact of density reduction on long-pulse discharges	XP-838
<u>Week's End</u>		<u>624.67</u>	<u>15.62</u>				
7/7/08	3.12	627.79	15.69	13	12	Inductive drive of transient CHI plasmas	XP-817
7/8/08	9.23	637.02	15.93	49	47	Inductive drive of transient CHI plasmas	XP-817
7/9/08	0	637.02	15.93	0	0	MSE calibration	XMP-3
						Characterization of NB fractions for FIDA	XMP-59
						Operation of the beams from the PCS	XMP-60
7/10/08	11.35	648.37	16.21	54	49	HHFW Phase Scan & Current Drive in NB Deuterium H-Mode	XP-835
						Active RWM stabilization optimization	XP-802
7/11/08	9.11	657.48	16.44	46	42	ELM Destabilization by Resonant Magnetic Perturbations	XP-809
<u>Week's End</u>		<u>657.48</u>	<u>16.44</u>			Divertor heat flux width and midplane SOL widths	XP-815
						Effect of Rotation on the L-H Threshold	XP-841
7/14/08	7.32	664.8	16.62	37	35	Effect of Rotation on the L-H Threshold	XP-841
						Fast ion transport induced by Alfvén avalanches	XP-819
						NTV with n=2 error fields with CHERS	XP-804
							XMP-57
<u>End of Run Total</u>		<u>664.8</u>	<u>16.62</u>	<u>2760</u>	<u>2571</u>		
		Run Hours	Run Weeks	Attempts	Plasmas		