

FY09 NSTX RUN LOG

FY 09 Run started on March 9, 2009.

FY 2009 Operation Targets: Base - 11 run weeks, ARRA - 5 run weeks

Completed: Base - 10.95 run weeks producing 1705 plasmas

Completed: ARRA - 5.55 run weeks produceing 974 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>
3/9/09	9.47	9.47	0.24	30	28	Startup Evaluation	XMP-48
3/10/09	9.33	18.8	0.47	31	31	Startup Evaluation	XMP-48
3/11/09	9.07	27.87	0.70	28	26	Strike point dynamics	XP-904
3/12/09	9.23	37.1	0.93	26	26	Strike point dynamics	XP-904
3/13/09	8	45.1	1.13	23	23	Error Field Threshold Study	XP-903
Week's End		45.1	1.13				
3/30/09	7.19	52.29	1.31	22	21	Shot development	XP-923
3/31/09	3.43	55.72	1.39	9	9	Thermal Transport in the NSTX Boundary	XP-923
4/1/09	8.78	64.5	1.61	29	25	Thermal Transport in the NSTX Boundary	XP-923
4/2/09	9.46	73.96	1.85	32	32	Thermal Transport in the NSTX Boundary	XP-923
4/3/09	5.68	79.64	1.99	16	14	Li pumping and retention in NSTX	XP-911
Week's End		79.64	1.99				
4/6/09	6.82	86.46	2.16	28	26	Li pumping and retention in NSTX	XP-911
4/7/09	1.49	87.95	2.20	2	2	LITER Characterization and ELM Mitigation	XP-827
4/8/09	10.51	98.46	2.46	32	30	LITER Characterization and ELM Mitigation	XP-827
4/9/09	8.67	107.13	2.68	33	29	LITER Characterization and ELM Mitigation	XP-827
4/10/09	8.1	115.23	2.88	33	33	Error Field Threshold Study	XP-903
						Improved confinement with lithium on scenario development	XP-937
Week's End		115.23	2.88				
4/13/09	9.04	124.27	3.11	40	31	FIDA Red/Blue Doppler Shift	XP-917
						Dependence of L-H power threshold on X-point radius	XP-909
4/14/09	9.37	133.64	3.34	45	41	Dependence of L-H power threshold on X-point radius	XP-909
						Search for the n=3 Error Field Source and Improved EF Correction	XP-902
4/15/09	9.17	142.81	3.57	38	38	TAE and TAE-induced fast ion transport	XP-916
4/16/09	9.33	152.14	3.80	40	39	Current Profile Modifications and Fast Ion Loss from BAAEs/EPMS	XP-905
4/17/09	7.75	159.89	4.00	30	29	H-mode fueling with supersonic gas injector	XP-912
						Halo Current Dependencies on Ip/q95, Vertical Velocity, and Halo Resistanc	XP-833
Week's End		159.89	4.00				
4/20/09	9.57	169.46	4.24	41	41	Search for the n=3 Error Field Source and Improved EF Correction	XP-902
						Improved confinement with lithium on scenario development	XP-937
4/21/09	11.18	180.64	4.52	55	53	Beta scaling of confinement	XP-910
						I _p dependence of L-H threshold	XP-922
						Effect of Rotation on the L-H Threshold	XP-936
4/22/09	7.9	188.54	4.71	37	35	Li pumping and retention in NSTX	XP-911
						Current Profile Modifications and Fast Ion Loss from BAAEs/EPMS	XP-905
4/23/09	10.7	199.24	4.98	50	47	I _p dependence of L-H threshold	XP-922

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						High elongation plasmas	XP-836
						H-mode fueling with supersonic gas injector	XP-912
4/24/09	8.8	208.04	5.20	36	36	Li pumping and retention in NSTX	XP-911
						H-mode fueling with supersonic gas injector	XP-912
Week's End		208.04	5.20				
5/11/09	7.36	215.4	5.39	29	28	ELM pace-making with 3D fields	XP-943
5/13/09	6.27	221.67	5.54	27	25	ELM pace-making with 3D fields	XP-943
						Effect of the active stabilization of RWMs on plasma	XP-931
5/12/09	11.27	232.94	5.82	57	56	Effect of the active stabilization of RWMs on plasma	XP-931
						Influence of Hot Ions on Resistive Wall Mode	XP-932
5/14/09	7.51	240.45	6.01	32	29	Influence of Hot Ions on Resistive Wall Mode	XP-932
5/15/09	9.58	250.03	6.25	40	39	Influence of Hot Ions on Resistive Wall Mode	XP-932
						Search for multiple RWM behavior at high beta_N	XP-935
Week's End		250.03	6.25				
5/18/09	7.91	257.94	6.45	39	37	CHI before Divertor Conditioning	XP-928
5/19/09	8.47	266.41	6.66	34	34	Disruption with CHI	XP-901
5/20/09	8.07	274.48	6.86	28	24	Divertor Conditioning	XP-928
5/21/09	7.6	282.08	7.05	39	34	Flux savings from inductive drive of a transient CHI started plasma	XP-928
5/22/09	8.19	290.27	7.26	41	40	Flux savings from inductive drive of a transient CHI started plasma	XP-928
Week's End		290.27	7.26				
5/26/09	10.21	300.48	7.51	42	41	NTV physics and offset rotation	XP-933
						Search for multiple RWM behavior at high beta_N	XP-935
5/27/09	8.35	308.83	7.72	35	28	Search for multiple RWM behavior at high beta_N	XP-935
						Influence of Hot Ions on Resistive Wall Mode	XP-932
5/28/09	10.65	319.48	7.99	54	52	ELM pace-making with 3D fields	XP-943
5/29/09	7.9	327.38	8.18	31	31	Resonant Field Amplification	XP-930
						NSTX and DIII-D Aspect Ratio Comparison of NTM Physics	XP-914
Week's End		327.38	8.18				
6/1/09	8.6	335.98	8.40	35	33	ELM Pacing via Vertical Jogs	XP-945
6/2/09	11.27	347.25	8.68	46	45	High elongation plasmas	XP-836
						Strike point and Li coatings	XP-919
6/3/09	9.53	356.78	8.92	41	41	NSTX and DIII-D Aspect Ratio Comparison of NTM Physics	XP-914
						Influence of rotation and error fields on tearing mode beta limits	XP-915
6/4/09	11.55	368.33	9.21	51	48	NSTX and DIII-D Aspect Ratio Comparison of NTM Physics	XP-914
						Influence of rotation and error fields on tearing mode beta limits	XP-915
						Effect of Impurities and Wall Conditioning on NTMs	XP-918
6/5/09	8.65	376.98	9.42	38	34	Effect of Impurities and Wall Conditioning on NTMs	XP-918
						H-mode fueling with supersonic gas injector	XP-912
Week's End		376.98	9.42				
6/8/09	3.92	380.9	9.52	13	11	Current Profile Modifications and Fast Ion Loss from BAAEs/EPs	XP-905
6/9/09	10.28	391.18	9.78	43	43	Current Profile Modifications and Fast Ion Loss from BAAEs/EPs	XP-905
						Intermediate triangularity discharge with lithium PFC coatings	XP-919

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6/10/09	9	400.18	10.00	38	37	Current dependence of the L-H threshold	XP-922
6/11/09	9.6	409.78	10.24	38	36	Dependence of metallic impurity accumulation on current and outer gap	XP-950
6/12/09	9.27	419.05	10.48	41	40	Diffusive lithium injection ELM Pacing via Vertical Jogs	XP-951 XP-945
						Intermediate triangularity discharge with lithium PFC coatings	XP-919
Week's End		419.05	10.48				
7/6/09	7.55	426.6	10.67	40	38	HHFW Upgrade Commissioning and Antenna Conditioning	XMP-26
7/7/09	11.45	438.05	10.95	62	56	HHFW Upgrade Commissioning and Antenna Conditioning	XMP-26
7/8/09	8.92	446.97	11.17	40	40	HHFW Heating and Edge Effects in H-mode Plasmas	XP-946
						Dependence of momentum and particle pinch on collisionality	XP-908
7/9/09	9.9	456.87	11.42	42	36	Dependence of momentum and particle pinch on collisionality	XP-908
						Injection of Lithium Powder in NSTX	XP-913
7/10/09	7.49	464.36	11.61	30	28	Dependence of momentum and particle pinch on collisionality	XP-908
						Optimization of long-pulse high-beta_T discharges	XP-948
Week's End		464.36	11.61				
7/13/09	6.8	471.16	11.78	28	25	HHFW Upgrade Commissioning and Antenna Conditioning	XMP-26
7/14/09	9.61	480.77	12.02	40	40	HHFW Heating and Edge Effects in H-mode Plasmas	XP-946
7/15/09	4.48	485.25	12.13	19	19	Commissioning PCS NBI control for beta feedback	XMP-63
						Intermediate triangularity discharge with lithium PFC coatings	XP-919
7/16/09	8.99	494.24	12.36	37	30	Intermediate triangularity discharge with lithium PFC coatings	XP-919
						Intermediate triangularity discharge with lithium PFC coatings	XP-952
						Ultra-high speed GPI measurements of the L-H transition	XP-913
7/17/09	9.5	503.74	12.59	43	41	Intermediate triangularity discharge with lithium PFC coatings	XP-952
						Ultra-high speed GPI measurements of the L-H transition	XP-913
Week's End		503.74	12.59				
7/20/09	9.42	513.16	12.83	42	41	Optimization of long-pulse high-beta_T discharges	XP-948
						Commissioning PCS NBI control for beta feedback	XMP-63
7/21/09	11.49	524.65	13.12	55	51	ELM stability dependence on plasma shape	XP-942
						Characterization of magnetically triggered ELMs in lithium conditioned discharges	XP-926
7/22/09	7.12	531.77	13.29	37	35	HHFW Upgrade Commissioning and Antenna Conditioning	XMP-26
7/23/09	8.8	540.57	13.51	42	37	L-H Threshold Power: D vs He	XP-941
						Influence of Hot Ions on Resistive Wall Mode	XP-932

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7/24/09	8.25	548.82	13.72	44	43	HHFW Upgrade Commissioning and Antenna Conditioning	XMP-26
						NSTX	XP-913
Week's End		548.82	13.72				
7/27/09	9.05	557.87	13.95	46	42	NSTX	XP-913
						Fast-ion transport in L-mode CS limited plasmas	XP-916
7/28/09	9.9	567.77	14.19	43	39	High elongation plasmas	XP-836
						Optimization of long-pulse high-beta_T discharges	XP-948
						Improving average beta_N vs. rotation under RWM control and beta feedback	XP-934
7/29/09	9.12	576.89	14.42	43	40	Snowflake divertor in NSTX	XP-924
						LITER Characterization and ELM Mitigation	XP-827
						Improving average beta_N vs. rotation under RWM control and beta feedback	XP-934
7/30/09	7.63	584.52	14.61	40	39	CHI use of absorber coils	XP-927
						Flux savings from inductive drive of a transient CHI started plasm	XP-928
7/31/09	9.4	593.92	14.85	51	45	CHI use of absorber coils	XP-927
						Flux savings from inductive drive of a transient CHI started plasm	XP-928
Week's End		593.92	14.85				
8/3/09	7.65	601.57	15.04	37	37	HHFW Upgrade Commissioning and Antenna Conditioning	XMP-26
						Dependence of metallic impurity accumulation on current and outer gap	XP-950
						Characterization of GAE modes and their effect on electron thermal transport	XP-921
8/4/09	9.09	610.66	15.27	34	32	Characterization of GAE modes and their effect on electron thermal transport	XP-921
						Diffusive Lithium Injection	XP-951
8/5/09	5.82	616.48	15.41	28	27	Early error-field correction in long-pulse plasmas	XP-954
8/6/09	6	622.48	15.56	25	24	Basic Operation with Reversed TF	XP-955
8/7/09	8.39	630.87	15.77	32	32	Basic Operation with Reversed TF	XP-955
Week's End		630.87	15.77				
8/10/09	8.33	639.2	15.98	41	41	Basic Operation with Reversed TF	XP-955
8/11/09	11.55	650.75	16.27	60	58	"L-H threshold and edge transport and turbulence in NSTX reversed B_T discharges	XP-956
8/12/09	9.43	660.18	16.50	52	52	"L-H threshold and edge transport and turbulence in NSTX reversed B_T discharges	XP-956
8/13/09		660.18	16.50				
8/14/09		660.18	16.50				
End of Run		660.18	16.50				
Totals		660.18	16.50	2831	2679		
		Run Hours	Run Weeks	Attempts	Plasmas		
Base		438.05	10.95	1800	1705		
ARRA Funded Runs		222.13	5.55	1031	974		
Totals		660.18	16.50	2831	2679		