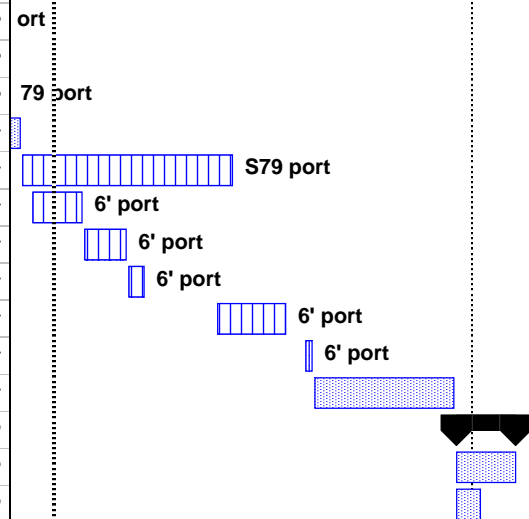


Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

ID	Task Name	Project (Code)	Start	Finish	2004				2005		
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
1	<u>VACUUM FACILITIES</u>										
2	VF 1										
3	Quasi-Steady MPD Thruster (Fy'04)	Energetics (R)	Wed 10/1/03	Thu 9/30/04							
4	VF 2										
5	Helicon Test	JIMO (S)	Wed 7/16/03	Tue 9/23/03							
6	HiPEP Slotted Antenna Checkout	JIMO (S)	Mon 12/15/03	Fri 1/23/04							
7	Helicon Test	Energetics (R)	Mon 12/1/03	Thu 9/30/04							
8	VF 3										
9	PPT Testing	Energetics (R)	Wed 10/1/03	Thu 9/30/04							
10	VF 4										
11	Non Operational		Wed 10/1/03	Wed 10/1/03							
12	VF 5										
13	Hall High Power Plume Thruster Testing	(R/S)	Mon 8/11/03	Fri 10/31/03							
14	N-173 Thermal Characterization	Energetics (R)	Mon 11/3/03	Fri 11/28/03							
15	Alternate Propellants Kryton N-173	Energetics (R)	Mon 12/1/03	Fri 12/19/03							
16	N-120 Version 3 Performance Mapping	Energetics (R)	Mon 12/1/03	Fri 12/19/03							
17	Facility Shutdown for Maintenance		Mon 12/22/03	Fri 1/9/04							
18	N-120 Version 3 Performance Mapping	Energetics (R)	Mon 1/12/04	Fri 6/25/04							
19	NASA-400 Performance Testing	Prometheus (S)	Tue 1/20/04	Fri 2/27/04							
20	NASA-400M Steady State/Erosion Diag	Prometheus (S)	Mon 3/1/04	Fri 4/2/04							
21	NASA-400M Ion Current	Energetics (R)	Mon 4/5/04	Fri 4/16/04							
22	NASA-457 Ver 2 Func & Perf Test	In-Space (S)	Mon 6/14/04	Fri 8/6/04							
23	NASA-457 Ver 2 Post-Vibe Test	In-Space (S)	Mon 8/23/04	Fri 8/27/04							
24	Multi-Thruster Integration Test	NEXT (S)	Mon 8/30/04	Fri 12/17/04							
25	Facility Maintenance		Mon 12/20/04	Fri 2/4/05							
26	EPL Controls (VF-5)	CoF	Mon 12/20/04	Fri 2/4/05							
27	Helium Engine Replacement	RFMF	Mon 12/20/04	Fri 1/7/05							

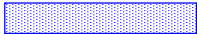
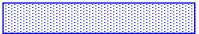












Project: Vacuum Workarea Prepared by: Henry Speier Phone: (216) 977-7420	Task		Rolled Up Task		External Milestone	
	Progress		Rolled Up Milestone		Deadline	
	Milestone		Rolled Up Progress		Partial Occupancy	
	Summary		Split		Test Port	

Vacuum Facilities

Current Schedule Revised: Wed 02/04/04

ID	Task Name	Project (Code)	Start	Finish	2004				2005		
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
28	Window Replacement	CoF	Mon 12/20/04	Fri 1/7/05							
29	NEXT PM Thruster Testing	NEXT (S)	Mon 2/7/05	Fri 5/6/05							
30	ISS-Plasma Contactor Unit	ISS (M)	Tue 3/1/05	Mon 5/2/05							
31	Alt PMAD/Lab EP Demo	JIMO (S)	Mon 8/1/05	Fri 9/23/05							
32	Steady State MPD	Energetics (R)	Fri 10/1/04	Fri 9/30/05							
33	JIMO Engineering Model Test (w VF-6)	JIMO (S)	Tue 10/2/07	Mon 6/30/08							
34	VF 6										
35	BRU Controls (04+)	JIMO (S)	Wed 10/1/03	Fri 9/30/05							
36	EM1 Thruster Wear Test	NEXT (S)	Mon 2/10/03	Fri 11/7/03							
37	Integrated BRU/Ion Thruster Demo	JIMO (S)	Mon 11/10/03	Fri 12/12/03							
38	Sapphire RSC	STP (S)	Mon 1/5/04	Fri 1/30/04							
39	Primary + RSC	STP (S)	Mon 2/2/04	Mon 3/22/04							
40	Graffoil Reinstall	JIMO (S)	Tue 3/23/04	Fri 4/9/04							
41	Thruster Performance Test with PG grids	JIMO (S)	Mon 4/12/04	Fri 4/23/04							
42	Extended Duration Perf Test (600 hrs)	JIMO (S)	Mon 5/10/04	Mon 6/28/04							
43	Long Duration Perf Test (2000 hrs)	JIMO (S)	Mon 9/27/04	Mon 3/21/05							
44	HiPEP Aerojet DM	JIMO (S)	Mon 4/4/05	Fri 4/29/05							
45	HiPEP Thruster Demo at JIMO DP using LM-2	JIMO (S)	Mon 5/2/05	Fri 5/13/05							
46	<u>NEXT EM3 Wear Test</u>	NEXT (S)	Tue 6/1/04	Fri 7/1/05							
47	<u>NEXT EM3 Wear Test Extended Duration</u>	NEXT (S)	Mon 7/4/05	Fri 10/14/05							
48	Inflatable Antenna/Concentrator	(M)	Mon 5/16/05	Fri 8/5/05							
49	Facility Maintenance	CoF	Mon 8/8/05	Fri 10/7/05							
50	EPL Controls (VF6)	CoF	Mon 8/8/05	Fri 10/7/05							
51	Window Replacement (VF6)	CoF	Mon 8/8/05	Mon 9/19/05							
52	Cold Wall Installation	JIMO (S)	Mon 8/8/05	Mon 9/19/05							
53	Radiator Demo Unit	JIMO (S)	Tue 11/1/05	Mon 1/23/06							
54	Inflatable Concen/Antenna with RF	(M)	Mon 10/3/05	Mon 10/2/06							
55	JIMO Engineering Model Test (w VF-5)	JIMO (S)	Tue 10/2/07	Mon 6/30/08							

Project: Vacuum Workarea Prepared by: Henry Speier Phone: (216) 977-7420	Task		Rolled Up Task		External Milestone	
	Progress		Rolled Up Milestone		Deadline	
	Milestone		Rolled Up Progress		Partial Occupancy	
	Summary		Split		Test Port	

Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

ID	Task Name	Project (Code)	Start	Finish	2004				2005		
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
56	VF 7										
57	Rehab VF-7		Wed 10/1/03	Thu 12/30/04							
58	Electrodeless Thruster		Fri 12/31/04	Fri 12/30/05					50%		
59	VF 8										
60	VACO Cross Enterprise	Energetics (R)	Mon 9/22/03	Fri 10/17/03							
61	VF 9										
62	5480 Maintained		Wed 10/1/03	Wed 9/29/04							
63	VF 10										
64	Fuel Cell Condensor/Gas Dryer/Tanks	Energetics (R)	Mon 9/1/03	Fri 2/13/04							
65	Fuel Cell Condensor/Gas Dryer/Tanks	Energetics (R)	Tue 6/1/04	Mon 8/2/04							
66	RTPV System Demonstration	NRA (S)	Mon 1/2/06	Fri 2/3/06							
67	VF 11										
68	Ti Optics Thermal Evaluation	Energetics (R)	Mon 9/8/03	Fri 9/26/03							
69	EM2/BB PPU Testing	NEXT (S)	Mon 9/29/03	Fri 10/10/03							
70	HiPEP Wave Guide/Optics Testing	JIMO (S)	Mon 10/13/03	Fri 11/28/03							
71	Sub-kW discharge Test	Energetics (R)	Mon 12/1/03	Fri 12/12/03							
72	Facility Maintenance	Other	Mon 12/15/03	Fri 1/9/04							
73	HiPEP	JIMO (S)	Mon 1/12/04	Fri 1/30/04							
74	Sub-kW 20 cm discharge test series II	Energetics	Mon 2/2/04	Fri 2/13/04							
75	40 cm thruster/PPU Checkout testing	NEXT	Mon 2/16/04	Fri 2/20/04							
76	HiPEP	HiPEP (S)	Mon 2/23/04	Fri 2/27/04							
77	Sub-kW 20 cm discharge test series III	Energetics	Mon 3/1/04	Fri 3/12/04							
78	TBD		Mon 3/15/04	Fri 3/19/04							
79	Sub-kW 20 cm beam extraction tests	Energetics	Mon 3/22/04	Fri 4/2/04							
80	Ion Related Testing: (misc)	(S/R/M)	Mon 4/5/04	Fri 5/13/05							
84	VF 12										
85	Hall 173GT	Energetics (R)	Wed 10/1/03	Fri 11/28/03							
86	Facility Mainten & Flange Install		Mon 12/1/03	Fri 1/23/04							

Project: Vacuum Workarea
Prepared by: Henry Speier
Phone: (216) 977-7420

Task

Progress

Milestone

Summary

Rolled Up Task

Rolled Up Milestone

Rolled Up Progress

Split

External Milestone

Deadline

Partial Occupancy

Test Port

Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

ID	Task Name	Project (Code)	Start	Finish	2004				2005		
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
87	NASA-173 High Eff Thermal Tests	Energetics (R)	Mon 2/2/04	Fri 2/13/04							
88	NASA-173 High Isp Krypton Perf	Energetics (R)	Mon 2/16/04	Fri 3/5/04							
89	NASA-173 KR Energy/Spacing/Current Densit	Energetics (R)	Mon 3/8/04	Fri 5/28/04							
90	NASA-173 High Thrust Investigation	Energetics (R)	Mon 5/31/04	Fri 7/2/04							
91	VF12 Facility Maintenance		Mon 7/5/04	Fri 8/13/04							
92	EPL Controls (VF 12)	CoF	Mon 7/5/04	Fri 8/13/04							
93	NASA-120EC Demonstration	In-Space (S)	Mon 8/16/04	Fri 9/3/04							
94	Hall Prat Space Act	Prometheus (S)	Mon 9/6/04	Fri 10/1/04							
95	VF 13										
96	CIPT Life Test	Energetics (R)	Fri 2/15/02	Thu 9/30/04							
97	VF 14										
98	CVB Testing	Microgravity	Wed 10/1/03	Thu 9/30/04							
99	Stablcor Vacuum Test	Prometheus	Mon 12/15/03	Fri 1/16/04							
100	VF 16										
101	Build-up Facility		Wed 10/1/03	Tue 6/1/04							
102	NEXT EM3 Wear Test	NEXT (S)	Wed 6/2/04	Mon 7/4/05							
103	NEXT EM3 Wear Test Extended Duration	NEXT (S)	Tue 7/5/05	Mon 10/17/05							
104	CW 19										
105	PPT Testing	Energetics (R)	Thu 1/1/04	Thu 9/30/04							
106	PIF										
107	PIF-H		Wed 10/1/03	Wed 9/29/04							
108	PIF-V		Wed 10/1/03	Wed 9/29/04							
109	VF-67										
110	Facility Relocate		Mon 6/2/03	Fri 1/9/04							
111	Stirling Testing	Prometheus (S)	Mon 1/12/04	Tue 1/10/06							
###	Facility Systems										
113	EPL Facility Tasks										

Project: Vacuum Workarea
 Prepared by: Henry Speier
 Phone: (216) 977-7420

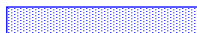
Task		Rolled Up Task		External Milestone	
Progress		Rolled Up Milestone		Deadline	
Milestone		Rolled Up Progress		Partial Occupancy	
Summary		Split		Test Port	

Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

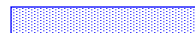
ID	Task Name	Project (Code)	Start	Finish	2004				2005		
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
114	Rehab EPL Controls Fy'04 & Fy'05	CoF	Wed 10/1/03	Thu 9/29/05							
115	Replace Windows and Install Sprinklers	CoF	Wed 10/1/03	Thu 9/29/05							
116	EPRB FacilityTasks										
117	Rehab EPRB Fy'04 and Fy'05	CoF	Wed 10/1/03	Tue 3/28/06							

Project: Vacuum Workarea
 Prepared by: Henry Speier
 Phone: (216) 977-7420

Task



Rolled Up Task



External Milestone



Progress



Rolled Up Milestone



Deadline



Milestone



Rolled Up Progress



Partial Occupancy



Summary



Split

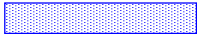
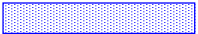












Test Port



Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

ID	Task Name	2006					2007				2008		
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
1	<u>VACUUM FACILITIES</u>												
2	VF 1												
3	Quasi-Steady MPD Thruster (Fy'04)												
4	VF 2												
5	Helicon Test												
6	HiPEP Slotted Antenna Checkout												
7	Helicon Test												
8	VF 3												
9	PPT Testing												
10	VF 4												
11	Non Operational												
12	VF 5												
13	Hall High Power Plume Thruster Testing												
14	N-173 Thermal Characterization												
15	Alternate Propellants Kryton N-173												
16	N-120 Version 3 Performance Mapping												
17	Facility Shutdown for Maintenance												
18	N-120 Version 3 Performance Mapping												
19	NASA-400 Performance Testing												
20	NASA-400M Steady State/Erosion Diag												
21	NASA-400M Ion Current												
22	NASA-457 Ver 2 Func & Perf Test												
23	NASA-457 Ver 2 Post-Vibe Test												
24	Multi-Thruster Integration Test												
25	Facility Maintenance												
26	EPL Controls (VF-5)												
27	Helium Engine Replacement												

Project: Vacuum Workarea Prepared by: Henry Speier Phone: (216) 977-7420	Task		Rolled Up Task		External Milestone	
	Progress		Rolled Up Milestone		Deadline	
	Milestone		Rolled Up Progress		Partial Occupancy	
	Summary		Split		Test Port	

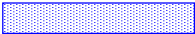
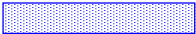










Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

ID	Task Name	2006					2007				2008		
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
28	Window Replacement	10' test port											
29	NEXT PM Thruster Testing												
30	ISS-Plasma Contactor Unit												
31	Alt PMAD/Lab EP Demo												
32	Steady State MPD												
33	JIMO Engineering Model Test (w VF-6)												
34	VF 6												
35	BRU Controls (04+)												
36	EM1 Thruster Wear Test												
37	Integrated BRU/Ion Thruster Demo												
38	Sapphire RSC												
39	Primary + RSC												
40	Graffoil Reinstall												
41	Thruster Performance Test with PG grids												
42	Extended Duration Perf Test (600 hrs)												
43	Long Duration Perf Test (2000 hrs)												
44	HiPEP Aerojet DM												
45	HiPEP Thruster Demo at JIMO DP using LM-2												
46	<u>NEXT EM3 Wear Test</u>												
47	<u>NEXT EM3 Wear Test Extended Duration</u>												
48	Inflatable Antenna/Concentrator												
49	Facility Maintenance												
50	EPL Controls (VF6)												
51	Window Replacement (VF6)												
52	Cold Wall Installation												
53	Radiator Demo Unit												
54	Inflatable Concen/Antenna with RF												
55	JIMO Engineering Model Test (w VF-5)												

Project: Vacuum Workarea Prepared by: Henry Speier Phone: (216) 977-7420	Task		Rolled Up Task		External Milestone	
	Progress		Rolled Up Milestone		Deadline	
	Milestone		Rolled Up Progress		Partial Occupancy	
	Summary		Split		Test Port	

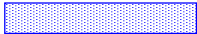
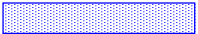










Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

ID	Task Name	2006					2007				2008		
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
56	VF 7												
57	Rehab VF-7												
58	Electrodeless Thruster												
59	VF 8												
60	VACO Cross Enterprise												
61	VF 9												
62	5480 Maintained												
63	VF 10												
64	Fuel Cell Condensor/Gas Dryer/Tanks												
65	Fuel Cell Condensor/Gas Dryer/Tanks												
66	RTPV System Demonstration												
67	VF 11												
68	Ti Optics Thermal Evaluation												
69	EM2/BB PPU Testing												
70	HiPEP Wave Guide/Optics Testing												
71	Sub-kW discharge Test												
72	Facility Maintenance												
73	HiPEP												
74	Sub-kW 20 cm discharge test series II												
75	40 cm thruster/PPU Checkout testing												
76	HiPEP												
77	Sub-kW 20 cm discharge test series III												
78	TBD												
79	Sub-kW 20 cm beam extraction tests												
80	Ion Related Testing: (misc)												
84	VF 12												
85	Hall 173GT												
86	Facility Mainten & Flange Install												

Project: Vacuum Workarea Prepared by: Henry Speier Phone: (216) 977-7420	Task		Rolled Up Task		External Milestone	
	Progress		Rolled Up Milestone		Deadline	
	Milestone		Rolled Up Progress		Partial Occupancy	
	Summary		Split		Test Port	

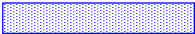
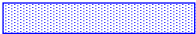









Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

ID	Task Name	2006					2007				2008		
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
87	NASA-173 High Eff Thermal Tests												
88	NASA-173 High Isp Krypton Perf												
89	NASA-173 KR Energy/Spacing/Current Densit												
90	NASA-173 High Thrust Investigation												
91	VF12 Facility Maintenance												
92	EPL Controls (VF 12)												
93	NASA-120EC Demonstration												
94	Hall Prat Space Act												
95	VF 13												
96	CIPT Life Test												
97	VF 14												
98	CVB Testing												
99	Stablcor Vacuum Test												
100	VF 16												
101	Build-up Facility												
102	NEXT EM3 Wear Test												
103	NEXT EM3 Wear Test Extended Duration												
104	CW 19												
105	PPT Testing												
106	PIF												
107	PIF-H												
108	PIF-V												
109	VF-67												
110	Facility Relocate												
111	Stirling Testing												
###	Facility Systems												
113	EPL Facility Tasks												

Project: Vacuum Workarea Prepared by: Henry Speier Phone: (216) 977-7420	Task		Rolled Up Task		External Milestone	
	Progress		Rolled Up Milestone		Deadline	
	Milestone		Rolled Up Progress		Partial Occupancy	
	Summary		Split		Test Port	

Vacuum Facilities
Current Schedule Revised: Wed 02/04/04

ID	Task Name	2006					2007				2008		
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
114	Rehab EPL Controls Fy'04 & Fy'05												
115	Replace Windows and Install Sprinklers												
116	EPRB FacilityTasks												
117	Rehab EPRB Fy'04 and Fy'05												

Project: Vacuum Workarea Prepared by: Henry Speier Phone: (216) 977-7420	Task		Rolled Up Task		External Milestone	
	Progress		Rolled Up Milestone		Deadline	
	Milestone		Rolled Up Progress		Partial Occupancy	
	Summary		Split		Test Port	