

C-A MAINTENANCE, MODIFICATIONS, AND REPAIRS SCHEDULE

R. Zaharatos –June 26, 2000

Maintenance Period - Begin: July 5, 2000 0800hrs.

End: July 13, 2000 0800hrs.

Machine Areas Access:	RHIC	Restricted Access
	RHIC IR's	Restricted Access
	Booster	Restricted Access
	AGS	Restricted Access
	ATR/U Line	Restricted Access
	Linac	Restricted Access

PRIMARY JOBS

JOBS STATUS CODE: **C** complete **IP** in-process **RS** reschedule **CAN** cancelled

RHIC

1. Power Supplies maintenance, repairs, and component upgrades.
2. Injection Kicker (1007) - replace line 3 hard tube trigger chassis
3. Install two cooling fans in 1004B.
4. Complete the installation of the polarimeter
5. Install loss monitor in Sect. 4
6. Cryo - recalibrations for lead flow thermister manifolds in all sectors (3-4 days)
7. Install temperature monitors in all alcoves
8. 1008B - repair chiller leak
9. Snake - run cables from snake to Bldg. 1010
10. Cryo ice build-up prevention - install 84 fans in IR sections.
11. Survey DX BPM's - IP2, 6, 8, and 10 (4-6 days)

RHIC IR'S

1. Phobos - install silicon into detectors (6 days, including 2 days for survey)
2. Phenix - install silicon into MVD and repair drift chamber (8 days)
3. BRAHMS - TPC survey (3 days)
4. STAR - move 2 Pole Tips out to work on detector (4 days)

AGS RING EQUIPMENT

- CAN**
1. AC Vert. Dipole - replace end connector
 2. RF - remove all gap shorting relays (new relays Sept. shutdown)
 3. C-5 IPM - Test servo valve and replace as required.

AGS EXTERNAL EQUIPMENT

- RS**
1. Siemen's - Install new buss for Westinghouse operation
 2. Clean Cooling Towers 1 and 5
 3. 911 Chiller PM's (offline 1 day)
 5. 913 Fan House A - replace supply fan

BOOSTER RING EQUIPMENT

1. Air supply system - bleed water and change filters (32hrs)

BOOSTER EXTERNAL EQUIPMENT

1. Clean Tower 5

LINAC

1. Polarized Protons Source/transport water cooling upgrade (4-5 days)
2. Clean Linac Tower

ATR Line

1. Replace bag filter for upstream mags.(Tower 1) - (FES)

SEB and SWITCH YD

No Job Requests

TANDEM

1. Reload Stripper Foils for MP7
2. PM - Inspection/cleaning of pulleys, chains, sheaves, resistors, etc.(4-5 days)
3. Radiation System response tests

SYSTEMS TESTING

1. RHIC Main Mag. system ramping(1800-2400)
2. AGS J10 Dump Bump P.S. into ring load
3. RHIC Polarimeter
4. RHIC Injection Kicker

SCHEDULE

5 July

- | | |
|------|---|
| 0800 | Shutdown period begins
All equipment set to off as required. |
| 0830 | AGS Ring Restricted Access LOTO |
| 0900 | HP survey of RHIC Tunnel as required. |
| 1000 | RHIC entries begin (Restricted Access) |

1030 AGS Ring HP surveys for scheduled jobs.
Booster Restricted Access LOTO

1300 AGS Ring Restricted Access
Booster HP surveys for Restricted Access

1430 Booster Restricted Access

12 July

0800 Secure AGS and Booster - prepare for Booster/AGS turn-on for beam
Equipment turn-on check-out(Tandem/Booster/AGS)

1300 Secure RHIC for beam turn-on.

1800 RHIC equipment turn-on.

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: Accelerator Controls – B. Venegas (ext. 3917, BP 7241), W. Buxton (ext. 4053)

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	930 UEB	4 hrs.	Datacon Interface Chassis C repair internal cable timing		None
2	914	4 hrs.	Check signal and cabling at the datacon interface for the F2 extraction bump power supply		None
3	Multipole Room	4 hrs.	Check P2 connections on AGS Tune Chrome controller.		None
4	Multipole Room	4 hrs.	Replace power supply in Sextupole Datacon Interface chassis.		None
5	1003C	1 hr.	Replace AC Reset Module for cfe-3c-ps2		None

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: Access Controls – D. Meany (ext. 5329), BP 0361), N. Williams (ext. 5346, BP 7114)

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	Check, recalibrate ODH	20 hrs.	Check and recalibrate ODH sensors in RHIC		
2	Check UPS'S	8 hrs.	Check status of all RHIC UPS batteries		
3	Install UPS at 1000p, 1004B	8 hrs.	Replace 1000P and 1004B div UPS with new online units.		
4	Install LED displays	30 hrs.	Install LED Displays on 5 GS gates 5GS1, 7GS1, 9GS1, 11GS1, and 1GS1	Electricians	
5	Repair 8GE1 gate	2 hrs.	Secure upper gate bracket at 8GE1		
6	Check all GE gates	8 hrs.	Survey of all GE gates for mechanical alignment		

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: Cryogenics – B. Kollmer (Ext. 4479) [7106]

For Maintenance Period June, 2000

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1	RHIC Cryo	3-4 days	Recalibrations for lead flow thermister manifolds throughout the entire ring (all sextants)		

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: G-2 – J. Benante (ext. 2745) (1207)

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	919	24 hrs.	Disconnect Kicker Chambers		
2	919	80 hrs.	Switch Polarity in Kickers		
3	919	40 hrs.	Modify garage chamber		
4	919	24 hrs.	Disconnect and remove chambers 1 & 2		
5	919	80 hrs.	Install probes in chambers		

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: Instrumentation: D. Lehn (Ext. 4095 [4276], T. Russo (Ext. 7330 [4201]

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	TTB	2 hrs.	MW17058 - Troubleshoot and repair Harp Readback	Tandem MCR	
2	Booster Ring	4 hrs.	Half Cell - Remove spare from ring and transport to 911A High Bay. Lifting Fixture - Remove from Ring and transport to 911A High Bay.	HP - Survey Riggers	
3	AGS Ring	1 hr.	E-15 Camera - Replace/Repair as necessary for Polarized Proton Run.	HP - Survey	
4	AGS Ring	.25 hr.	Inspect Extraction area (C-10 SEC/CST036/ CF100) for upcoming FEB Upgrades	HP - Survey	
5	AGS Ring	4-8 hr.	C-5 IPM - Test servo valve - Replace if necessary.	HP - Survey	
6	V TGT Blockhouse	1 hr.	1) HP Survey/Smears for E951 Equipment removal. 2) Remove/Replace copper cube for dosimetry test. 3) Remove E951 Equipment if approved by HP	HP - Survey	
7	RHIC Ring	120 + hrs.	Polarimeter - Sector 12 1) Terminate remaining cables in Tunnel 2) Install Elastic Scattering Detectors - X & Y including A) fabrication of mounts B) installation of mounts C) installation and setup of PMT's D) Survey of PMT's 3) Install Targets and Silicon detectors in Chamber. 4) Survey of Targets 5) Install Preamplifier Cards on Chamber and hookup all 6) Run and Test Motor Drives/Encoders through control system 7) Test preamplifier electronics from 1012A 8) Setup Camera for motion as necessary 9) Setup necessary cables and electronics	Survey Group Vacuum Group SPIN Group	
8	Bstr Ring	.5 hrs.	BTA/F Sector - Inspection for future magnet rebuilds and BTA Flag/Camera installation.		
9	RHIC		Install Loss Monitor in Sext. 4		
10	AGS		L4 DCCT - Investigate ground		

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: Maintenance Support: R. Zaharatos (Ext. 7205 [4281], J. Benante (Ext. 4498(1207)),

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	RHIC roofs	16 hrs.	Place radiation signs and barriers on roofs - Radiation Control Group	Ray Z.	
2	911 Pump Room	16 hrs.	Chiller PM (PE- B. McKay) P085304	Ray Z.	
3	Cooling Twr. 1	8 hr.	PM's - Fan motor, spray headers, level float, etc. P083433	Ray Z.	
4	RHIC	16 hrs.	Repair 1008B Chiller (PE - B. McKay)	John B.	
5	913A-E		AGS Ring Fan Houses PM's	Ray Z.	
6	AGS Ring Road	6 hr.	Grass cutting - escape areas and cable trays. 928 subyard.	Ray Z.	
7	Booster Berm	8 hrs.	Grass cutting - tree trimming, and brush removal	Ray Z.	
8	ATR Berm	8 hrs.	Grass cutting - tree trimming, and tree removal	John B.	
9	914	6 hrs.	Tree trimming around cable trays.	Ray Z.	
10	913A Fan House	5 hrs.	Replace supply fan #1 (PE - B. McKay)	Ray Z.	
11	AGS Ring	4 hrs.	Inspection of enclosure and equipment	Ray Z./John B.	
12	Booster	2 hrs.	Inspection of enclosure and equipment	Ray Z./John B.	
13	RHIC	12 hrs.	Inspection of enclosure and equipment	John B.	
14	1010A	1 hr.	Relamp 2 nd floor stairwell	John B.	
15	1012A	1 hr.	Relamp 2 nd floor stairwell	John B.	
RS 16	1004A	16 hrs.	Install outdoor gate at right side of fenced area	John B.	
RS 17	1004A	40 hrs.	Install stairway down hill in rear	John B.	
18	1004A	12 hrs.	Install reheat in Air Cond. unit (PE- B. McKay)	John B./Ray Z.	
19	RHIC	12 hrs.	Survey DX BPM's - IP2, 6, 8, and 10	John B.	

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JOBS SCHEDULING REQUEST

GROUP: POWER DISTRIBUTION: D. Bastedo (Ext. 2555) [0274], T. Nehring (Ext. 5275) [4246]

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	RHIC Access Gates		RHIC Tunnel - Connect security lights by gates		
2	RHIC		Add 120 power to security gates, B alcoves except at 4 0'clock		
3	C-A Complex		Relamp where needed		
4	RHIC IR's		Install additional 120 vac outlets for RHIC Tunnel as required, ice buildup fans and heaters.		

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: POWER SUPPLY: M. Bannon (Ext. 7704) [4224], I. Marneris (Ext. 7027) [4255]

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	Siemens	4 hrs.	Look into LB1 Controls Rack problem. Something causes set to trip when door is closed sharply.		
RS 2	Siemens	5 days	Install bus work at Siemens for running of Westinghouse MG	Water systems J. deBoer	
3	J13 House	2 days	Test new J10 PS into the real load in the AGS Ring.		
4	914	8 hrs.	Do test on DH1, DH2&3 and DH5 in BTA Line for Woody Glenn		
5	L18A House	4 hrs.	QH8 P.S. in L18A House - Replace fan		
6	Siemens	8 hrs.	Siemens MG Set brush inspection and replacement as needed.		

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: PULSED POWER: R. Zapasek (Ext. 2189) [4263], A. Zhang (Ext. 5369) [7248]

For Maintenance Period June, 2000

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1	RHIC	2 hrs.	Abort Kickers, Inspect PFN, A. Zhang		Check
2	L18A House	1 hr.	L20 Septum, depending on run add choke? R. Lockey		
C 3	1007	2 hrs.	Injection Kicker, replace line 3 hard tube trigger chassis, A. Zhang		
4	AGS Ring	.5 hr.	Repair AC Dipole termination		

LIST FOR COLLIDER ELECTRICAL POWER SUPPLY - R. Zapasek & J. Sandberg

1	Service Bldgs.	3 days	Clean QPA and PS Filters
2	RHIC	1 hr.	Test and Replace if necessary BI9-TH15

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JOBS SCHEDULING REQUEST

GROUP: RF: N. Laloudakis (Ext. 7177, 7417 [4261], A. Zaltsman (Ext. 2967[4259])

For Maintenance Period June, 2000

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BOOSTER					
1		8 hrs.	The Pump Room is to change the water filters for both tube water and cavity water on all four RF Systems.		
2		6 hrs.	The RF group will change all the filters (tube & flushing air) on all four booster systems.		
3		8 hrs.	Also both the P.A. & Cavity will be looked over just to spot any potential problems if one exists.		
AGS					
1		12 hrs.	The Air Filters for both the feedback amp & the main power tube air are to be changed on all ten systems.		
2		24 hrs.	The gap short relays (four per system) are to be removed now and be replaced with new relays at a later date but before the next high intensity proton run. This is to be done on all ten systems.		
3		16 hrs.	Also as in all systems will be looked over for potential problems (water leak, lose connection etc.).		
RHIC					
1		8 hrs.	Check air flow SW on one of the 28 Mhz systems (to do this we may have to remove the amplifier from under the cavity and turn them over) to gain access to the SW.		
2		2 hrs.	Check mode damper shield on cavity 3.1 Blue for we still have some RF leakage when this system is on.		
3			Do some work on the storage cavities in the common area. (Work on completing the installation of these four systems).		

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: TANDEM: C. Carlson (Ext. 5261) [5604], J. Alessi (Ext. 7563)

For Maintenance Period June, 2000

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1		4-5 days	Maintenance in the accelerator (pulleys, chains, sheaves, resistors, etc.).		
2		8 hrs.	Reload the stripper foils in MP7		
3		6 hrs.	Radiation system response tests		

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: Vacuum - S. Gill (Ext. 4627) [4164], M. Mapes (Ext. 2841)[4277]

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u> Beam Comp.	<u>HP SURVEY</u>
1	AGS	5 hrs.	Install C-20 Polarimeter		
2	AGS	8 hrs.	Check/Repair B-7 turbo station		
CAN 3	BLIP (?)	8 hrs.	Possibly make repair to window (?)	BLIP / HP	
4	RHIC / aTr	24 hrs.	Check ALL air line oilers for presence of water		
5	RHIC	3 hrs.	Install pressure relief valves in arcs 4 & 5 (total of 6)		
6	RHIC	2 hrs.	Install relief valve at 12:00 beam shutter		
7	RHIC	1 day	Assist with installation of silicon detector in 12:00 polarimeter		
8	Booster	8 hrs. *	Possible entry --- repair of B-2 sector valve electronics in 930 UEB	Instrumentation	
9	1004B / A Trailer	*	Reset PLC processors (could close valves)		
10	1006B	*	Upload ladder programs from all processors & back-up 1006B PC		
11	A10/E18/H10	*	Replace / Repair ion pump power supplies (list being compiled)		
12	RHIC	4 hrs. *	Remove PPA's: bo3-ppa-pi4 / g4-ppa-pi2 / g6-ppa-pi2 / bi8-ppa-pi4		
13	RHIC	*	Investigate gauges in sectors 4,6,8,10,11,12 (list being compiled)		
14	Booster	1 day	Inspection for BAF project		
15	RHIC P.S. Houses or Tunnel	*	Troubleshoot yo1-tmp-pi21, yi11-tmp-pi21, yo7-tmp-pi21, bi5-tmp-pi13. Bad cc cards or gauges		
16	RHIC		Leak CHK Y04-SV-PW3.1		

* = items marked with asterik can only be done during a shutdown. Could cause valve closings. Some of these tasks may not require a ring entry!

C-A MAINTENANCE, REPAIR AND MODIFICATION PROGRAM

JOBS SCHEDULING REQUEST

GROUP: Water Systems: J. deBoer (Ext. 4668 [4250], R. Grandinetti (Ext. 7186 [4239]

For Maintenance Period June, 2000

<u>JOB#</u>	<u>ACCESS TO</u>	<u>EST. HRS.</u>	<u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u>	<u>ADD'L. SUPPORT</u>	<u>HP SURVEY</u>
1	LINAC Bldg. 930	160 mhrs.	Pol. proton beam source line cooling water upgrade. Incorporate valves to chiller lines.	P.E. AC Shop, P.E. Plumbers, LINAC	N/A
2	LINAC	16 hrs.	Repair domestic water leak, and clean tower		
RS 3	RFMG Bldg. 928	50 hrs.	Install hoses & fittings, test and run new siemens westinghouse buss.	Power Supply Group	N/A
4	Booster Bldg. 914	32 mhrs. 2 people	Maintenance on Booster air lines. Bleed water and change air filters	N/A	Booster Ring Survey
5	TWR 5 Bldg. 919	8 mhrs.	Test or switch pumps. Tasks is for pumps that have been repaired or require switch over for repairs.	N/A	N/A
6	Various Bldgs. 911A, 1000P, 928, 930, 1004	8 mhrs.	Test or switch pumps. Tasks is for pumps that have been repaired or require switch over for repairs.	N/A	N/A
7	Bldg. 911B	16 mhrs.	Repair leak to well tank and tower one piping.	P.E. Welder, F. Kobasiuk	N/A
8	Twrs. Linac, 1,4,& 10005P	4 mhrs.	Have outside contractor review tower work and status of tower.	N/A	N/A
9	TWR1	12 mhrs.	Cleaning		