

PHENIX WEEKLY PLANNING



6/25/2009

Don Lynch

PHENIX WEEKLY PLANNING

Shutdown '09 Major tasks (expect 5 month shutdown):

- End run, remove wall, MuID collars down, EC to AH (3 weeks)
- RPC Factory Operations (in progress and continuing beyond Shutdown '09)
- RPC Station 3 North (entire shutdown)
- Install Station 1 South scaffolding (1 week)
- Install Station 2/3 scaffolding (2 weeks)
- Install stations 1, 2 and 3 south MuTrigger FEE's (12 weeks)
- MuTr decapacitations: station 3 south (3 weeks)
- PC1 East repair (4 weeks)
- Mechanical/Electrical Plumbing installation of (4) new DCM racks
- Add Ar Dewar and expand gas pad to add storage (12 weeks)
- Prep for future upgrades/existing equipment maintenance & Repair (as necessary)

Expected IR Configuration During Shutdown '09

- 7/6 - 7/17 Run configuration EC and WC can be moved east/west ~3 ft
- 7/17-7/22 MMS moved south, CM in run position EC & WC can be moved east/west ~3 ft
- 7/22-7/28 MMS north, Run configuration EC and WC can be moved east/west ~3 ft
- 7/28-10/1 MMS south, CM in run position, EC in AH WC in west position (against wall), scaffolding in station 1 and station 2/3 south
- 9/25-11/10 MMS, CM & WC positions TBD, EC in AH
- 11/10-12/1 MMS & CM in run position, EC and WC can be moved east west ~3 ft

These dates are approximate and subject to change

June Schedule

Task

- MMS Sta 1 & 2/3 scaffolding concept, design, acquisition, fabrication
- Design of PC1 East repair fixture
- Order RPC3N racks and rackcomponents (2 racks)
- PC1 East repair fixture: order raw materials, order off-the-shelf components & hardware, receive and inspect components
- Prep RPC3 N racks for installation
- End of Run Party (Rain Date 6/24)
- Complete RPC3 N Support drawings for RPC3N base, pitch support, lifting fixtures, $\frac{1}{2}$ octant 7&8 vertical support and work above MuID steel platform, send to CS
- Fabricate RPC3 N base, pitch support, lifting fixtures and $\frac{1}{2}$ octant 7&8 vertical support
- All Mutrigger cables and connectors ordered
- All RPC & MuTrigger cable tray ordered



Start Date End date

Done Done

Done Done

Done Done

5/1 8/1

5/1 8/14

Done Done

Done Done

5/20 7/10

6/1 7/1

6/1 7/1

June Schedule

Task

Start Date End Date

- | | | |
|--|------|------|
| • All MuTrigger FEE plumbing hardware ordered | Done | Done |
| • Move tilt table to RPC factory | Done | Done |
| • Aerogel: shutdown work planning
(None yet defined) | 6/1 | 7/1 |
| • BBC: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • DC: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • EMCal: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • HBD: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • MPC: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • MuID: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • MuTr: shutdown work planning | 6/1 | 7/1 |
| • PC: shutdown work planning
(PC1 repair only work defined yet) | 6/1 | 7/1 |
| • RICH: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • RXNP: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • TEC: shutdown work planning (None yet defined) | 6/1 | 7/1 |
| • TOF: shutdown work planning (None yet defined) | 6/1 | 7/1 |

PHENIX TECHNICAL SUPPORT NOON

June Schedule

TECHNICAL SUPPORT ROOM

Task	Start Date	End Date
• TOF West: shutdown work planning (None yet defined)	6/1	7/1
• Gas System: shutdown work planning (None yet defined)	6/1	7/1
• DAQ & general electronics: shutdown work planning	6/1	7/1
• Safety System: shutdown work planning (None yet defined)	6/1	7/1
• 1008 Utilities: shutdown work planning (None yet defined)	6/1	7/1
• 1008 Facility Issues: shutdown work planning (None yet defined)	6/1	7/1
• Rack room re-organization plan	6/1	7/1
• MMS sta 1 & 2/3 pre-assembly	6/1	7/1
• Receive and test MuTrigger FEE's	6/1	7/24
• Receive MuTrigger FEE's cable and connectors, prep and bundle for installation	6/1	7/24

June Schedule

TECHNICAL SUPPORT ROOM

Task	Start Date	End Date
• Prepare specs for RPC3N thermal vapor barrier	6/15	6/19
• Review PHENIX RPC3 N plans for CAD support and prep (incl barrier) (2 days)	6/15	7/1
• Review PHENIX RPC3 N lifting fixture design and run acceptance test in RPC Factory (3 days)	6/15	7/15
• Plan and install 2 new PHENIX gas pad expansion pads	6/15	9/4
• Order tilt table lifters	6/16	6/16
• Get list of RPC3N installation hardware and place orders	6/16	6/16
• Complete RPC3N lifting fixture engineering analyses and submit to CAD Eng'g and LSC	Done	Done
• Evaluate & accept PC1 spare module	Done	Done
• Review RPC3 N support base grout requirements with masons	Done	Done
• Review placement of thermal/vapor barrier in relation to ODH fans 8EF0 and 7EF3	Done	Done



June Schedule

TECHNICAL SUPPORT ROOM

- | Task | Start Date | End Date |
|--|------------|----------|
| • Review beampipe protection in RPC3 N&S lift areas | Done | Done |
| • Review RPC3 above MuID work platform Carpenters | Done | Done |
| • Order Tent/ Burn-in test stand cover | 6/17 | 6/17 |
| • Order portable AC (9,000 BTU) for burn-in test stand | 6/17 | 6/17 |
| • Meet with Frank Karl to discuss RPC3N survey | 6/17 | 7/1 |
| • Assemble HV, experimental gas and N2 gas distribution and install tent | 6/17 | 7/15 |
| • Receive $\frac{1}{2}$ octant cases from UIUC | Done | Done |
| • Finalize gap 5 N cable and pipe reorganization | 6/18 | 6/19 |
| • Install electric circuits to burn-in test stand for AC and heaters & to storage racks for humidity control | 6/18 | 7/1 |
| • Revise and Issue RPC3N Installation procedure from concept. | 6/19 | 6/19 |
| • Field Fit $\frac{1}{2}$ octant retaining arm/clamps design to fit | 6/19 | 6/26 |
| • Fan Tray replacement evaluation and Priority plan | 6/19 | 6/26 |



June Schedule

PHENIX

Task	Start Date	End Date
• Order & receive parts for MuTrigger FEE cable Management	6/19	7/2
• Prepare Work Permit for MMS access (MuTrigger FEE & MuTr decapacitations)	6/19	7/13
• Prepare Work Permit for MMN access (MuTrigger FEE & MuTr decapacitations)	6/19	7/13
• Assemble Dummy $\frac{1}{2}$ octant and test with tilt table and Burn-in test stand field fit	6/19	7/13
• Order & receive parts for gap5 N cable management	6/19	7/24
• Evaluate Gap 5 grout at Factory	6/22	6/26
• Design concept for Base locking/Installation fixture for RPC3N	6/22	7/1
• Design RPC3 adjustable $\frac{1}{2}$ octant cradle	6/22	7/1
• Design RPC3N Survey fixture	6/22	7/1
• Submit Work Permits for RPC3 N	6/26	6/26



July Schedule

TECHNICAL SUPPORT ROOM

Task



- July 4th Holiday - no work
- End of Run 9
- Remove interlock from Shield Wall (1 hr)
- Purge Flammable gas from IR detectors
- Disassemble and stow Wall & Base (3 -4 days)
- Fabricate Base Locking/Installation fixture
- Fabricate RPC3 N survey fixture
- Fabricate RPC3 adjustable $\frac{1}{2}$ octant cradle
- Install MuTrigger FEE Sta 2/3 cable Management and cable runs behind MMS
- Move PHENIX-North tunnel shielding, remove PHENIX-North vapor barrier and crystal palace, repair/replace area lighting
- Move MuID piping, piping supports out of Gap 5 to temporary store area
- Move MuID cables and cable tray out of Gap 5 to temporary store area
- Design supports for Beampipe upgrade

Start Date End Date

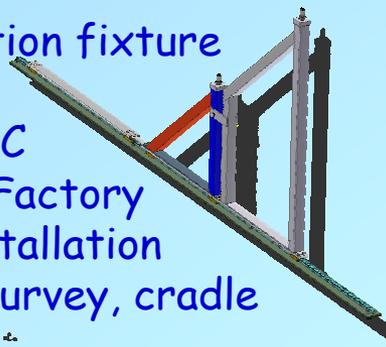
Start Date	End Date
7/2	7/3
7/6	7/6
7/6	7/6
7/6	7/7
7/6	7/9
7/6	7/10
7/6	7/10
7/6	7/10
7/6	7/28
7/6	7/31
7/6	7/31
7/6	7/31
7/6	11/30

July Schedule

Task

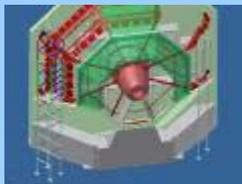
Start Date End Date

- Design & Fabrication support for VTX 7/6 11/30
- Design support for FVTX 7/6 11/30
- Design support for FOCal 7/6 11/30
- Fan Tray replacements (as time permits) 7/8 11/30
- Remove ladder & dumb waiter from EC (1/2 day) 7/10 7/10
- Receive RPC3 N lifting fixture parts at factory 7/13 7/13
- Fold up EC platforms (1/2 day) 7/13 7/17
- Test base RPC3 N locking/installation fixture 7/13 7/17
- Test base RPC3 N survey fixture 7/13 7/17
- Test RMC higher comm speed on EC 7/13 7/17
- Simulated RPC installation at RPC Factory (practice/tests) commission all installation components base, locking/install, survey, cradle 7/13 7/31
- Remove MuID collars 7/15 7/15
- Receive complete RPC3 N base, pitch support, lifting fixtures & $\frac{1}{2}$ octant 7&8 vertical support 7/15 7/15
- Test and commission RPC3N lifting fixtures at factory with S. Kane/designee as witness 7/15 7/15
- Move MMS South 7/17 7/17
- Disconnect EC and Move to AH 7/20 7/22



TECHNICAL SUPPORT TROUBLESHOOTING

Task



July Schedule

Start Date End Date

Task	Start Date	End Date
• Open MMN hatch and O2 check atmosphere	7/20	7/24
• Install ladder/access platform and work platforms for work above MuID steel (3 days)	7/20	7/24
• Move MuID plumbing rack on pedestal away From gap 5	7/20	7/30
• Move MMS North	7/22	7/22
• Install IR floor plates, 12 ton cart & manlift	7/22	7/22
• Move MuID collars to AH	7/23	7/23
• Remove 4 MMS lampshades (2-3 days)	7/24	7/28
• Reinstall ladder and dumb waiter on EC in AH and fold down EC platforms (1 day)	7/24	7/31
• ID/label gap 5 N cables & pipes and move out of gap 5	7/27	7/30
• Troubleshoot MUTrigger FEE's in MMN	7/27	8/31
• Troubleshoot MUTr decaps in MMN	7/27	8/31
• Move MMS South	7/28	7/28
• Install Station 1 Scaffolding (3 days)	7/28	7/30
• Inspect Station 1 Scaffolding (1/2 day)	7/30	7/31
• Install MuTrigger Station 1 S FEE cable management	7/30	7/31



900N 1200P 5 SCALPOT 7 AC 12 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99

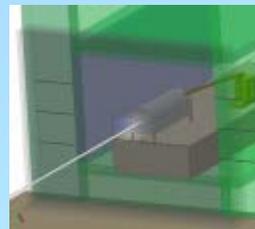
August Schedule

Task

Start Date End Date

TECHNICAL SUPPORT NOON

Task	Start Date	End Date
• Reconnect EC utilities for shutdown mode	8/3	8/7
• Survey tapped holes on MuID5 steel and survey east and west RPC3 N support bases (3 days)	8/3	8/14
• Drill and tap MuID gap 5 steel top and north	8/3	8/14
• Install RPC3 N support base & grout (4 days)	8/3	8/14
• Install Station 3 N pitch control (unistruts rails) on pedestal and east and west gap 5 north walls and attach to support bases (tall column)	8/3	8/14
• Install MMS station 2/3 scaffolding	8/3	8/14
• Install Station 1 FEE's & Electronics and connect cables	8/3	8/28
• MuTr decapacitations & MuTr FEE trouble-Shooting in MMS Sta 1&3	8/3	8/28
• MuTr Rack 2 troubleshooting	8/3	8/28
• Vendor install Ar dewar & vaporizer	8/3	8/28
• Install rails and fences on gas pad	8/3	8/28
• DCM rack electric prep	8/3	8/30
• MuTr HV and FEE test and evaluation as MuTrigger FEE's & RPC's are installed	8/3	11/30
• Set up PHENIX "stage" for Summer Sunday Tour	8/5	8/7
• Tear down and remove PHENIX "stage" for Summer Sunday Tour	8/10	8/11

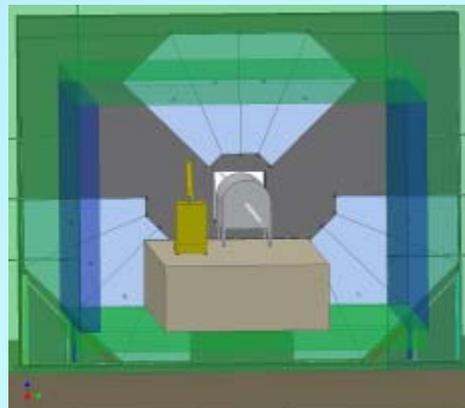
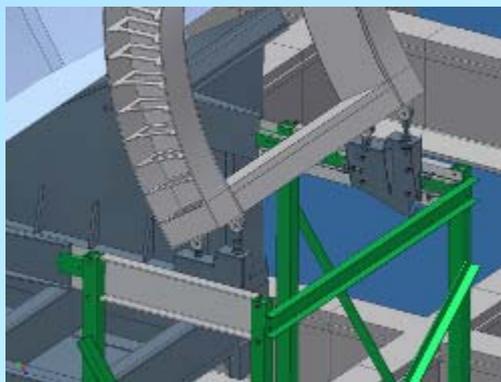


August Schedule

Task

Start Date End Date

- Erect PC1 repair tool 8/12 8/14
- First $\frac{1}{2}$ octant ready for installation 8/17 8/17
- Disassemble DC/PC1 cables & piping 8/17 8/28
- Install Station 1 MuTrigger FEE air & water and test 8/17 9/11
- Install new gap5 N cable & pipe supports, cables and piping and leak test piping 8/17 9/30
- Install RPC3 N $\frac{1}{2}$ Octants (16 days) 8/17 9/30
- Final leak test new Ar dewar/vaporizer and Closeout job 8/28 9/4
- Move DC on EC to access PC1 east 8/31 9/4
- Install Empties racks on gas pad 8/31 9/4
- Install MuTrigger FEE station 2/3 FEE's & Electronics & connect cables 8/31 9/25



October Schedule

- Disassemble and store PC1 east repair fixture 10/1 10/2
- Attach cables to RPC3 N racks and to Detector $\frac{1}{2}$ octants 10/1 10/9
- Install new PHENIX north tunnel thermal/vapor barrier replacing crystal palace (1 week) 10/1 10/30
- DCM rack supply & Return plumbing 10/5 10/16
- Remove MMS Sta 2/3 scaffolding 10/12 10/23
- Commission RPC3 N racks and detectors 10/12 10/30
- DCM rack internal plumbing 10/19 10/30
- Reinstall MMS lampshades (2 days) 10/26 10/30



PHENIX TECHNICAL SUPPORT NOON

November Schedule

900N 120P07C6 SCAP07C6 7AACHUC7 LEUCIHZCET

- Install heaters and thermostat(s) for RPC3N thermal control 11/2 11/6
- Reinstall PHENIX North tunnel shielding (3 days) 11/2 11/6
- Cooldown for Run 10 Starts 11/7 11/7
- Move MuID Collars to IR 11/7 11/7
- Remove ladder & dumb waiter from EC & Fold up EC platforms in AH (1 day) 11/9 11/10
- Veterans Day Holiday - no work 11/11 11/11
- Remove IR Floor plates and move 12 ton cart to AH 11/12 11/12
- Move EC to IR 11/12 11/13
- Reconnect electric and fiber to EC 11/16 11/20
- Reinstall ladder & dumb waiter on EC & Fold down EC platforms in IR (1 day) 11/16 11/20
- Pink sheets, white sheets, blue sheets 11/16 12/1
- Move MMS north, Install MuID Collars 11/23 11/25
- Assemble shield wall base and wall in AH 11/23 11/30
- Thanksgiving Holiday - no work 11/26 11/27
- Roll in shield wall 11/30 11/30
- Start Run 10, All shutdown activities completed 12/1 12/1





6/25/2009

Upgrades Support:

New Beampipe sections (non-Be)

New Beampipe supports

FOCAL prototype design support

VTX fabrication tooling design

VTX installation design

FVTX design/eng'g support

Summer Sunday Prep

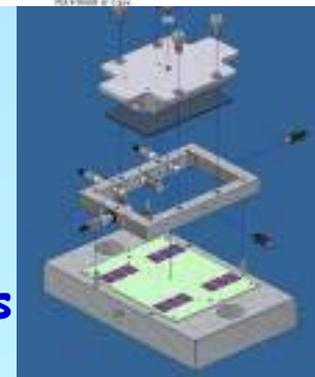
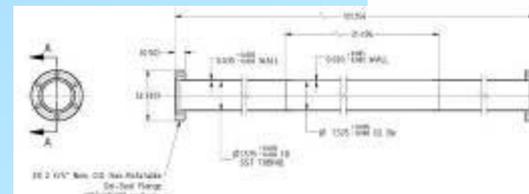
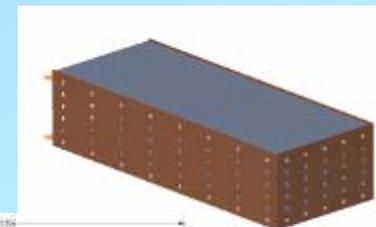
TBD Existing Detector Maint & Repairs

Maintenance & Overhead Tasks

Rack Room Reorganization

Fan Tray replacements

C-A-D AC, Water System, Electrical system work which may impact shutdown schedule: *Tasks, schedules, priorities TBD*



2009 Building Maintenance Issues

- Roof leaks in utility bathroom at northwest corner behind tech offices and over door between rack room and assembly hall.
- Heat wrap tape for trailer bathroom toilet drains to prevent freeze/clogging in winter.
- Improved Rack Room AC performance (This item has been addressed time and again but unsatisfactorily. Currently the AC fails periodically and is repaired only to fail again. On-condition maintenance is not adequate...an engineered solution is needed.)
- Icy conditions at mixing house north stairs
- Mixing House loose board ?



Today & Tomorrow is the EMS/OSH registration audit for the lab. This will include random interviews with anyone at the lab, possibly including PHENIX.

Everyone should know BNL's ESSH polic, which is stated By Sam Aronson as follows:

BNL is a world leader in scientific research and strives to demonstrate excellence in protecting people, property, and the environment. I expect every employee, contractor, and guest to take personal responsibility for adhering to the following principles:

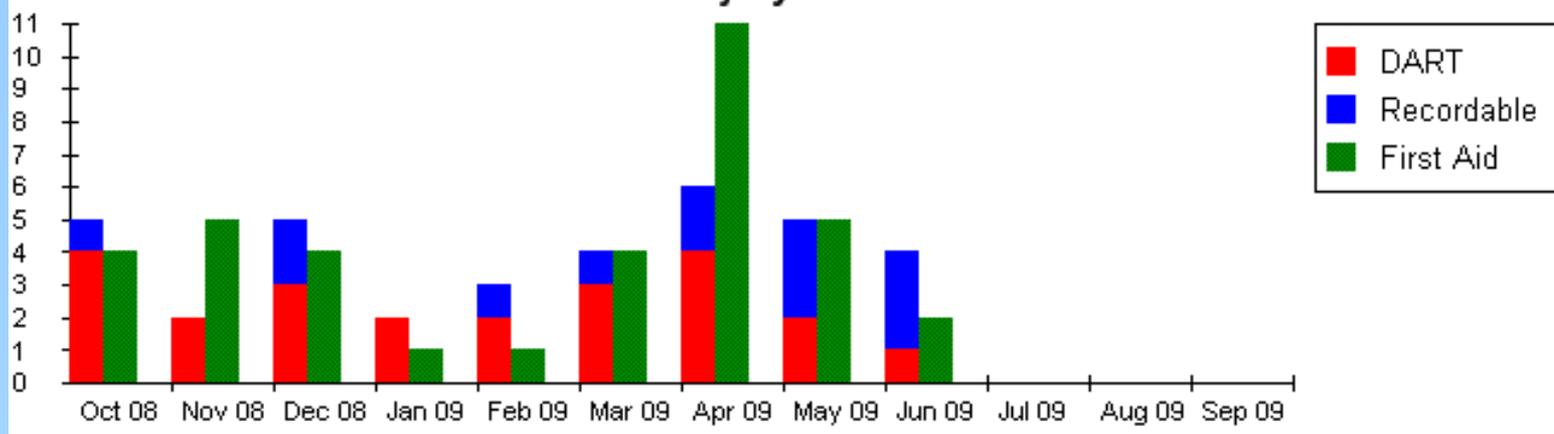
- Environment:** We protect the environment, conserve resources, and prevent pollution.
- Safety:** We maintain a safe workplace and we plan our work and perform it safely. We take responsibility for the safety of ourselves, coworkers, and guests.
- Security:** We protect people, property, information, computing systems, and facilities.
- Health:** We protect human health within our boundaries and in the surrounding community.
- Compliance:** We achieve and maintain compliance with applicable ESSH requirements.
- Community:** We maintain open, proactive and constructive relationships with our employees, neighbors, regulators, DOE, and our other stakeholders.
- Continual Improvement:** We continually improve ESSH performance.

In addition to my annual review of BNL's progress on ESSH goals and adherence to this policy, I invite all interested parties to provide me with input on our performance relative to this policy, and the policy itself.

*Samuel Aronson, Director
September 6, 2006*

BNL Occupational Injury Statistics

Fiscal Year 2009 Injury Cases



YTD

DOE TARGET

	Cases	Rates	Cases	Rates
DART:	23	1.24	6	0.25
Recordable:	36	1.81	16	0.65
First Aid:	37	N/A	N/A	N/A

Recent cases (May) : (Proc)
 (Site Svcs)
 (Proc)
 (Lab Prot)
 (Staff Svcs)
 (CAD)
 (Maint & Fab)
 (Lab Prot.)

Unloading a truck, slipped & fell:
 Struck forehead on table:
 pushing pallet, strained calf:
 Strained shoulder lifting water bottle:
 Strained shoulder moving table:
 Discarding wooden drawer-splinter:
 Lifting ladder, injured shoulder:
 Injured back reaching into back seat of vehicle

First aid
 Recordable (dermabond)
 Recordable (prescript)
 DART (surgery)
 Recordable (therapy)
 First aid
 First aid

6/25/2009 (Moderniz. Proj.)
 (Lab Prot.)

Dropped roll of plotter paper on foot:
 Slipped on wet floor

DART (missed work)
 First aid
 First aid

Recent cases (June) :

(Staff Svcs)	Struck on head and arm with plexiglas:	First aid
(CAD)	Cut thumb with razor knife	Recordable (dermabond)
(OEP)	Cut finger handling glass tube	First aid
(Mag. Div.)	Lacerated finger using hand tools	Dart (surgery)
(Waste Mngmt)	Injured finger handling a barrel lid	Recordable (splint)
(Maint. & Fab.)	Lacerated forehead while working on ladder	Recordable (stitches)

Where To Find PHENIX Engineering Info

Next week is 4th of July week - Thursday & Friday are Holidays
No Thursday meeting. Those of you taking the week off, enjoy and we'll
See you on July 6 when the wall comes down.

Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm

