

# PHENIX WEEKLY PLANNING



6/18/2009  
Don Lynch

PHENIX WEEKLY PLANNING

## Yesterday's Controlled Maintenance Access Day

- RPC3N Measurements
- MuID Square hole scintillator paddles modified
- HBD Troubleshooting?
- Reviewed Above-MuID steel temporary access and work platforms

Last Full Maintenance Access Day before end of run?

TECHNICAL SUPPORT NOON

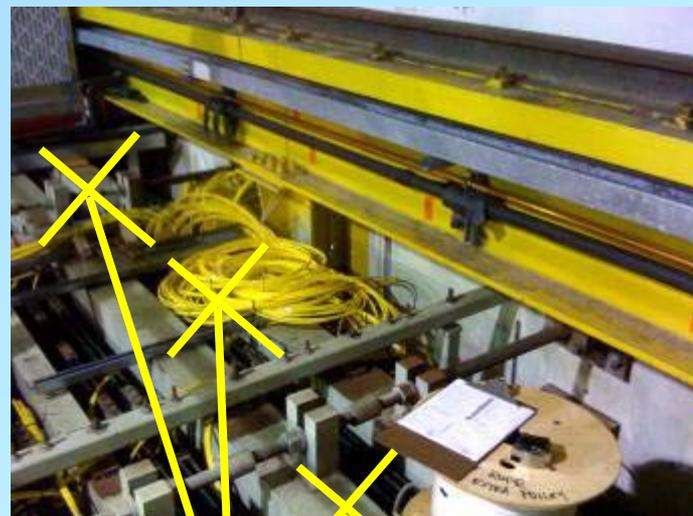
Met with Dave and carpenters to review "above-MuID steel" access and work platforms



Access goes here

This rail to be removed

PHENIX  
 9000-1702075-SCAPORT-NOOR



Access to area above MuID steel. We want a ladder/platform to bridge from aluminum platform over MMN to 1<sup>st</sup> MuID steel. Ladder is 30" wide and 42" high. Platform is 30" wide and 52" deep. Appropriat handrails on both sides

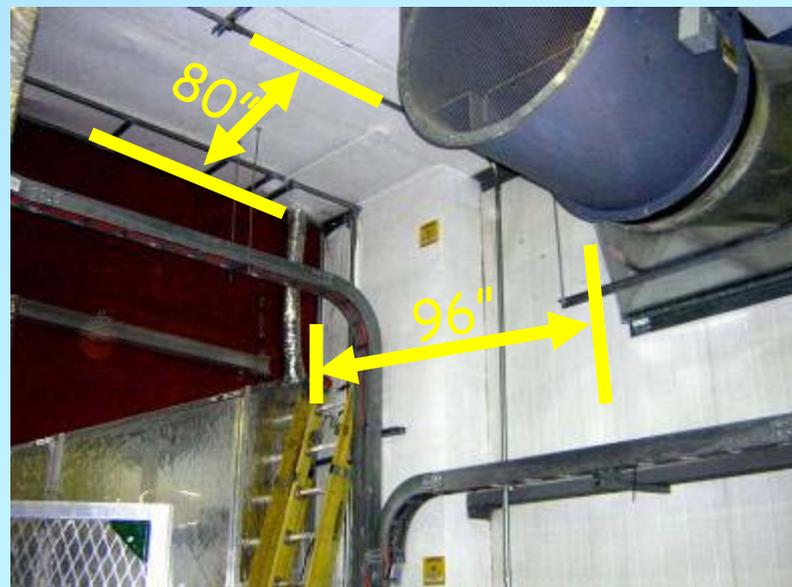
On top of MuID steel we want 3 platforms for techs to work on each 43" wide by 72" long

Action item from RPC3 Installation Review: determine if new thermal vapor barrier interferes with tunnel cryo-exhaust fans:

Plan is to attach barrier wall to unistrut imbedded in ceiling in both north and south tunnels. This will leave us with a minimum of 16" to clear the exhaust fans. Therefore this is not a problem.



North



South

Action item from RPC3 Installation Review: Determine if beampipe requires additional protection against lifting of  $\frac{1}{2}$  octants during RPC3N installation.

The beampipe is protected by the DX magnet cryostat for a full 17 feet beyond the gap 5 steel. Therefore no additional beampipe protection is required.



At Gap 5 steel DX Cryostat is Adjacent: no beampipe exposure



DX cryostat extends through crystal palace to 17 feet beyond gap5 steel

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

- EOR party June 19/2009 shutdown Begins July 6
- 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

- 7/1 - 7/17 Run configuration EC and WC can be moved east/west ~3 ft
- 7/17-7/24 MMS moved south, CM in run position EC & WC can be moved east/west ~3 ft
- 7/24-10/1 MMS south, CM in run position, EC in AH WC in west position (against wall), scaffolding in station 1 and station 2/3 south
- 10/1-11/1 MMS, CM & WC positions TBD, EC in AH
- 11/1 - 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

# Shutdown Prep Now to July 6

TECHNICAL SUPPORT NOON

Task	Complete By
MuTrigger FEE Cable Management plan	June 15
RPC3 N Cable and Piping relocation Plan	June 15
RPC Electronics Rack Prep	June 20
RPC parts and Tools Fabrication	July 6
MuTrigger FEE Parts and Tools ready for install	July 13
RPC Factory Tools complete and commissioned	July 7

# End of Run, Start of Shutdown

TECHNICAL SUPPORT NOON

Task	Completion Date
• End of Run Party	6/19
• End of Run 9	7/4
• Flammable Gas Purge	7/7
• Open Wall and Disassemble	7/9
• MuID Collar Removal	7/15
• Move MMS South	7/17
• Test RMC Higher comm speed on EC before disconnecting	7/17
• Disconnect EC and move to AH	7/22
• Install IR floor plates, rolling cart & manlift in IR	7/29
• Move MuID Collars to AH	7/27
• Reconnect EC for shutdown mode	7/31
• Remove East/West vertical & Upper Bias MMS lampshades	7/31

PHENIX  
TECHNICAL  
SUPPORT  
ROOM

- Gap and Module assembly and testing (continues through shutdown) in-progress
- Gap and Module Storage with humidity control (need to get permanent elec., 2<sup>nd</sup> humidity controller & covers for last 3 storage racks) Nearly complete
- Tilting transport Table (now at factory need to field fit stability clamps and tilt assist springs/drives) Nearly complete
- Burn in test stand (Bike rack section) Done
- Burn-in test stand gas system and controls (ready for 1<sup>st</sup> half octant) 6/29
- Assembly of half-octants for station 3 north 6/1-9/1

# RPC Factory Burn In Test Station For Octant and Half Octant Burn-in Tests

Environmental control cover,  
gas and HV distribution  
needed to complete



PHENIX TECHNICAL SUPPORT

# RPC3 North Installation Schedule

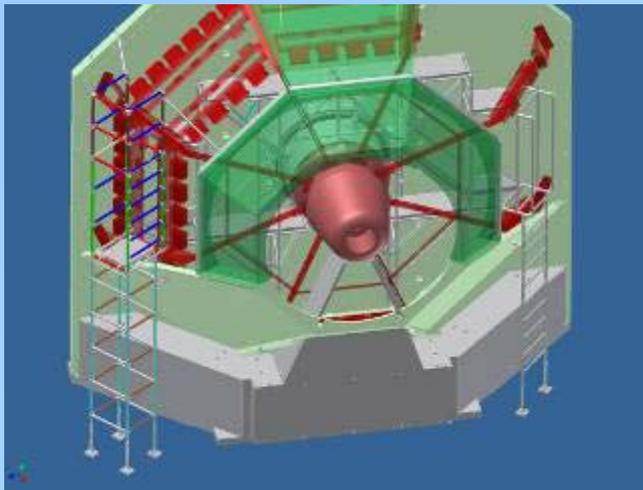
TECHNICAL SUPPORT ROOM

Task	Completion Date
Installation Concept Finalized	Done
Half-Octant Brackets, Connecting Blocks, under detector translating support design	Done
Installation Fixturing and Tooling Design	Done
Redesign crystal palace/IR Gas Barrier	June 19
End of Run 9	July 6
Fixturing/Tooling, Brackets/Block/support Fabrication	July 6
Move Shielding/Remove Crystal Palace	July 6-July31
Move cable trays and piping in gap 5	July 6-July 31
Simulated (practice) installation with new fixturing/tooling	July 13-July 31
Install, level & survey support structure	Aug. 3 - Aug 14
Half Octant Testing and Assembly Complete (1 <sup>st</sup> half Octant ready by Aug.17, 16 <sup>th</sup> by Sep.18)	Aug. 17- Sep. 18
Mechanical Install Align & survey RPC3 N	Aug 17 - Sep. 30
Install 2 elect. Racks, all cables & gas system	Oct. 1 - Oct. 30
Commissioning	Nov. 1 - Nov. 30
Install new crystal palace/IR Gas Barrier & Shielding	Nov. 1 - Nov. 30
Start Run 10	Dec. 1

## MuTrigger FEE South

Task	Completion Date
• Install station 2 & 3 cable mngment	7/28
• Install Station 1 South Scaffold (carpenters)	7/31
• Install Station 1 cable management	8/7
• Install station 2/3 scaffolding (Techs)	8/14
• Install station 1 FEE's & Electronics	8/28
• Station 1 plumbing	9/11
• Install station 2/3 FEE's & electronics	9/25
• Station 2/3 plumbing	10/9

TECHNICAL SUPPORT NOON



## MMS scaffolding

Sta 1 and Sta 2/3

Ready for installation



# MuTr Decapacitations

TECHNICAL SUPPORT NOON

Task	Completion Date
Station 2/3 Decaps	8/14-8/28
Testing/verification	9/4

# MuTr 2009 Shutdown Work Planning

## Main Jobs:

1. Decapacitate top half of South station-3
  - Need South interior scaffolding (Aug 14<sup>th</sup>?)
2. Revisit decapacitation of South station-1
  - Need South station-1 scaffolding (July 31<sup>st</sup>?)
3. Repair FEE problems in South arm, especially those up high inside
  - South interior scaffolding
4. Recondition North HV transition box in Rack-2
  - Accessable anytime during shutdown
5. Check operation of FEE and HV as RPC installed in North and muTrig upgrade installed in South

## General needs:

- HV operation (servers, power, etc.) - south & north
- Standalone RC & calibrations for FEE repairs/board changes

\*\*\* dates for scaffolding being ready "subject to change"

<u>Task</u>	<u>Completion Date</u>
• Design Repair support fixture	Done
• Review and approval	Done
• Fabrication	7/1 (order placed)
• <b>Replacement module evaluation</b>	<b>7/1</b>
• Prep for Summer Sunday	8/7
• Restore order after summer Sunday	8/12
• Install support fixture	8/14
• Remove cables and plumbing	8/28
• Roll out DC/PC1	9/4
• Replace failed PC1	9/11
• Roll DC/PC1 in	9/18
• Restore cables and plumbing	9/25
• Test/commissioning	10/2



Task	Completion Date
• Proposal	Done
• Review and <b>Approval</b>	5/1
• Design	6/1
• <b>Site Preparation</b>	7/1
• <b>Install Empties racks</b>	8/1
• <b>Install Ar Dewar</b>	9/1
• <b>Test and Commission</b>	10/1



# New DCM Rack Plumbing

(Not Scheduled Yet)



4 new DCM racks need cooling water plumbing

PHENIX TECHNICAL SUPPORT NOON

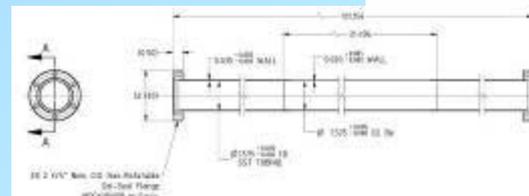
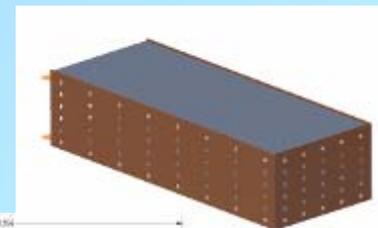
## Upgrades Support:

- 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*



TECHNICAL SUPPORT NOON

- 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 ?



Next week 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*

# Where To Find PHENIX Engineering Info



*Believe it or not the astrological start of summer is this Sunday at 1:25 AM EDT*

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

