



# PHENIX WEEKLY PLANNING

9/18/2008

Don Lynch

# Shutdown '08 Schedule



## RPC Factory:

Dark Current test stand design 9/30, fabricate by 1/1  
STORAGE Racks with humid. Cntrl design 9/30, fabricate by 1/1

## Mu Trigger FEE upgrade:

Rack assembly North installed, South by 11/15  
N&S platforms Fabricate & install North installed, South by 11/15 (Pearson)  
Prep work for platforms (water/elec) Done  
FEE Chasis installation N&S sta's. 1,2&3 North done, South 2&3 done, South 1 by 10/31  
FEE water and dry air installation Station 1&2N Done, Station 3N by 9/30, Sta. 2&3S by 10/15, Sta 1 south by 11/15  
Install Elec cards Starting 9/15: sta 1N by 9/30, sta 2 N by 10/15, sta 3N by 10/31, S by 11/15  
Disassemble station1 scaffold complete by 10/15  
Move CM & MMS North complete by 10/17  
Install S rack cooling & electric 10/ 17 - 10/31  
Rack room electronics, etc. In progress, Complete by 11/15  
Move MMS South 10/31  
Install scaffolding in sta 1 south 11/3-11/7  
Remove sta 1 scaffolding 12/1  
Testing Complete by 11/30

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# Shutdown '08 Schedule

RPC external review	Sep. 25
RPC proptotype installation:	
Prep work	wait for final installation design
move (7) MuID pipes	
move gap 5 south cable tray	
Rack prep	In progress complete by Oct.15
RPC prototype gas system	In progress complete by Oct. 31
Move shielding for installation	Oct.1 [Pearson]
RPC prototype cable routing & support	10/1-10/15
Modify crystal palace & vapor barrier	Not req'd for this shutdown [Pearson]
RPC prototype install	1/2 Octants to be ready for inst. by 9/29
(RPC2 - PHENIX)	Install 10/20-10/30
(RPC3 - C. Pearson)	Install 9/29-10/30
Install rack in tunnel south	Install by 10/15
Replace tunnel shielding/Vapor Barrier	After proto RPC3 installed [Pearson]
Connect electronics/gas	10/15-11/15
Install lead absorber	11/10-11/14
MuTr Decapacitations (Sta. 1&3 S)	Sta. 3 completed 2008 work, more in 2009
	Sta. 1: 11/10-11/30
Fan Tray maintenance	in progress (on going fill-in)
PC1 west work (needs planning)	10/20-10/31

# Shutdown '08 Schedule, cont'd

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Build new storage crates for scaffolding (Sta 1 & 2/3N)	10/1-10/31
CM Crane Install	[postponed indefinitely?]
HBD Install	11/3-11/14
DC East?/West Repairs	12/15-1/1
Gas mixing house UPS	complete by 11/30
Remove all inst'n equipment	
Sta 1 (from south)	Remove by 12/1
Sta 2/3 scaffolds	Remove by 12/15
all other testing equipment	Remove by 12/15
Prep for shutdown 2009	
Gap 5 N piping and cable tray re-loc.	Oct. - Dec
Gap 2 N cable tray & crate re-mounts	Not req'd until RPC2 re-instated
Prep for run 9	
Begin run 9 Prep	12/1/09
Install all lampshades	Complete by 11/26
Roll in EC	12/22
Pink/White/Blue sheets	12/29
Install MuID collar	12/30
Close shield wall	12/31
Cryo Start up	1/1/09
Flammable Gas/start shifts	1/11/09
Start physics	1/18/09
End Run 9	6/30/09

## Other Work

NCC prototype design support

HBD support

VTX fabrication tooling design

VTX installation design

FVTX design/engineering support

Done? (for now)

as required

11/23-?

Waiting for specs

as required

# Shutdown '08 Electrician Work

- 1) Run Power to new MuTrgr FEE racks on MMN and MMS. *North done, South by 10/31*
- 2) Install power feeds to RPC north & south tunnel racks from IR power panels. *Done*
- 3) Install new UPS in Gas mixing house. *By 11/30*
- 4) Install power and signal cable tray (ceiling suspended) for new DCM rack row – north of existing DCM racks. *To Be Scheduled*
- 5) Assist in signal and LV cable installation for MuTr/ RPC upgrades as necessary. *MuTrgr North Done, MuTrgr South & RPC Prototype to be scheduled*
- 6) Install 120 volt AC power drops into new control room annunciator alarm rack (rack room). *Planning in progress, to be completed by 12/31*
- 7) Upgrade power capacity of Central Magnet power distribution for future bridge rack loads. *Lower priority not required for run 9, to be scheduled when manpower available and operations & projects inconvenience are minimized*
  - a) Remove existing 15KVA transformer and install 45KVA unit.
  - b) Install new (larger size) power cable from rack room to Central Magnet distribution breaker panels.



MuTrgr FEE  
South Rack

Ready to be  
installed  
after CM  
moves north

# Scaffolding Crates

Existing Crates for Sta 2/3N scaffolds are severely rotted and need to be replaced with weather resistant materials.

Sta. 1 scaffolds do not have storage crates. These need to be built of similar materials. All dimensions of crates are available.



# MuTrigger FEE Installation

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Station 1 & 2 Cooling water and dry air are done. Station 3 is ~2/3 done



LV cable installation in Mutrgr North rack is in progress → top priority req'd to get sta 1. North done and remove sta. 1 scaffolding



# MuTrigger FEE Installation

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New transformer  
for North arm  
done



Power for MuTrgr  
North Rack is  
done

# MuTrigger FEE South & RPC Prototype Racks

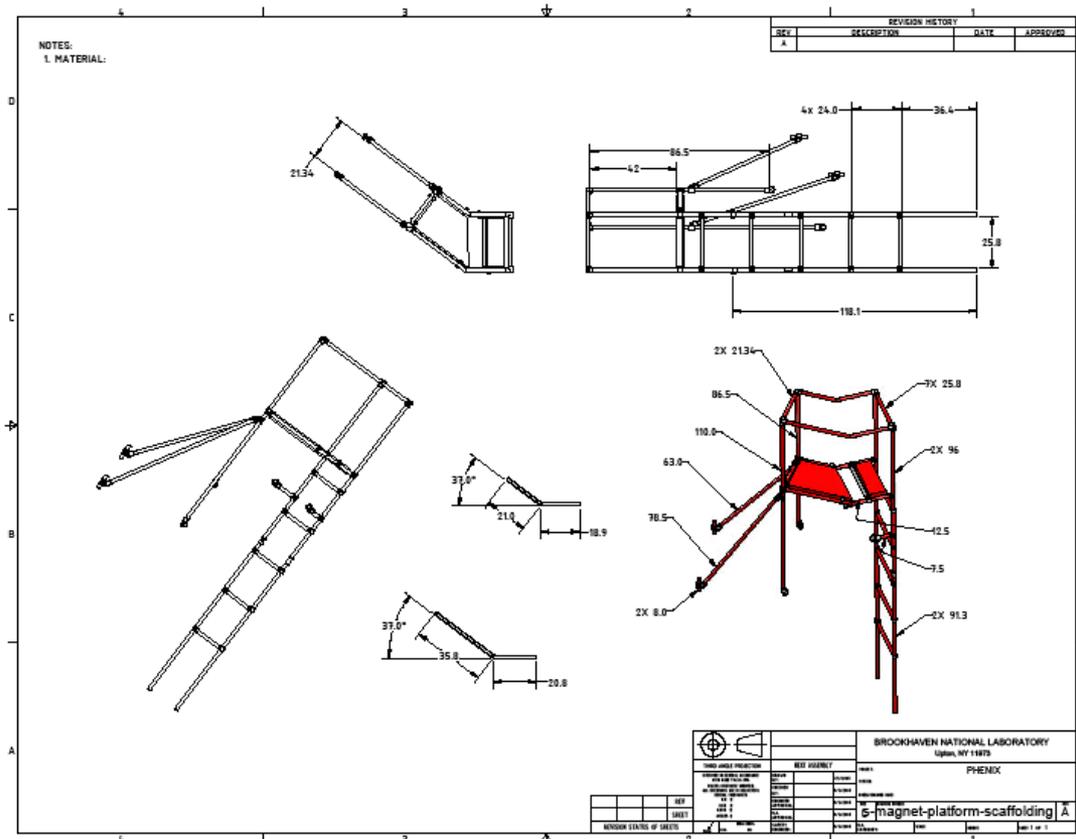
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Work on these racks is temporarily on hold while MuTrgr North LV Cables are installed in North rack

# MuTrigger FEE upgrades in MMS in support of RPC prototypes

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Not needed techs  
can access easier by  
manlift

Design is done,  
material is available  
if we decide we  
need to do this

# MuTr FEE upgrade status

Tsutomu Mibe (KEK)  
for the onsite upgrade team

# Remaining tasks for completion of North station 1

- Infrastructure
  - LV prep (cables to the rack, testing, tuning)
  - Beam clock distribution
  - Signal cable installation
- ADTX boards prep
  - QA
  - Shipping from Japan to BNL
  - Installation
- Chain test
  - Read out by Ad-hoc local DAQ (>1wk)

# Status of ADTX board

- First 20 boards arrived at 1008 yesterday
  - Final check up being done
  - Will be ready for installation from next Tuesday
- Need total 40 boards to cover whole station 1
- Next 20 boards arrived at RIKEN
  - QA being done
  - Scheduled to leave Japan in Sep 25. → will arrive here in early oct.

# LV preparation plan

- LV testing from next week
- Voltage drop measurement (1-2 days)
  - Put the ADTX board(s) to chassis
  - Estimated voltage drop = 0.3 – 1.5 V
- Tuning supply voltage to chassis (1 day)
  - Try to set the voltage at the chassis as close as +6.5 V
- Testing temperature monitor

# Connecting analog cable to new chassis

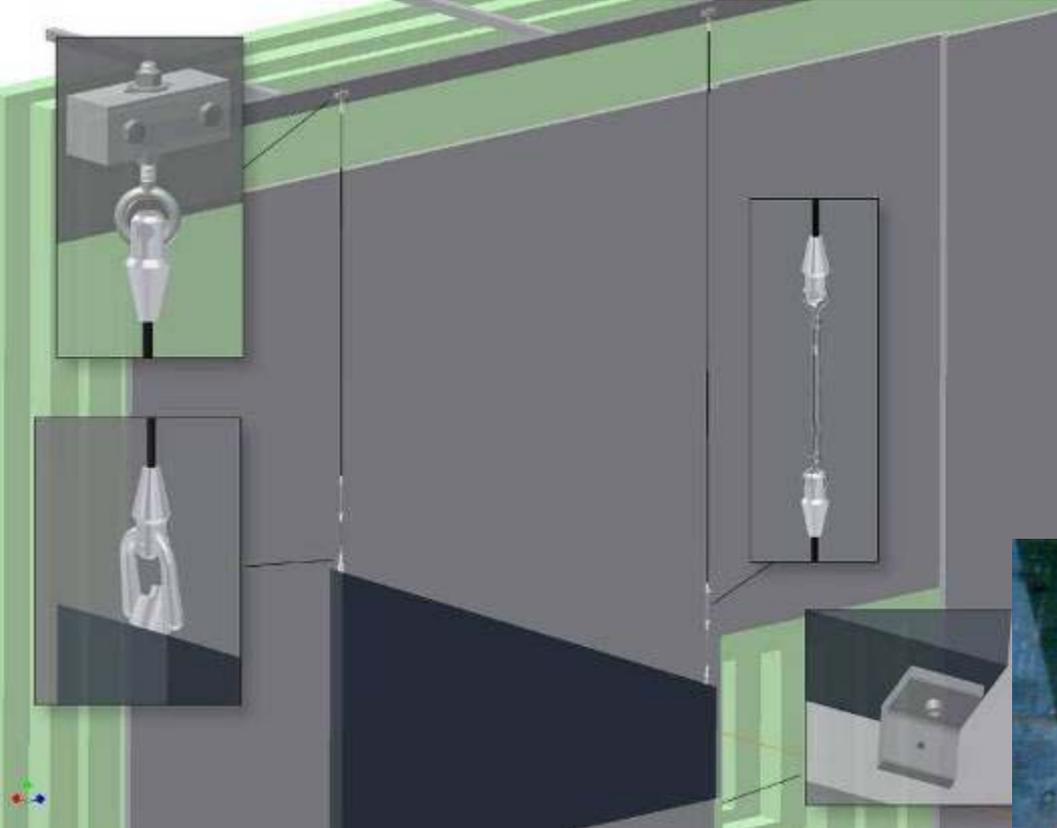
- Completed
  - Station 2 octant 7
  - Station 3 octant 5 (2 chassis)
  - Station 1 octant 3 (2 chassis)
- ~1 octant per evening
- Could be speed up after John's plumbing work is done (next week?).

**Remaining 2008 work: Station 1 South to be done during latter part of November simultaneously with MuTrgr South and RPC absorber installations.**

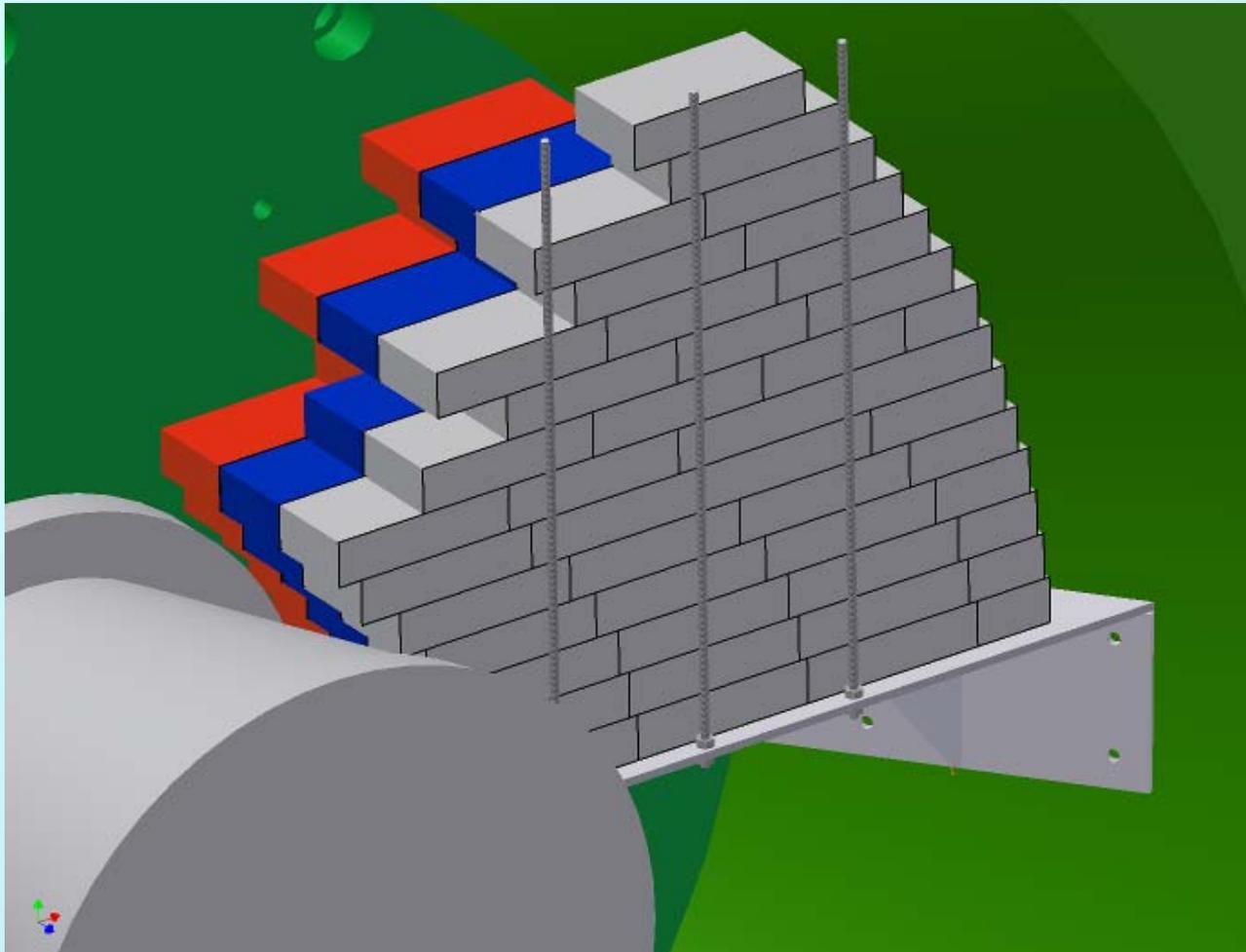
# RPC2 Prototype Installation

Survey reviewed with Frank Karl after CM moves north he will located suspension points from IP

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# RPC Absorber Concept



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RFQ placed with CS

J. Scott will deliver 120 2x4x8 rad clean and painted lead bricks, on skid to 1008 by 10/15

Don, Jimmy, Kenny, Carter, John and Mike L. must take TQ-LEAD1 (web course) by 10/15

Lead cutting under eval.

Work permit req'd



## RPC2 Prototype Installation



RPC prototypes will be ready for installation 9/29. Final electronics check to be performed over next 2 weeks.



Met with Joe Levesque on storage concept... we will send email with description, he will approve. RPC group to consider fire monitoring.

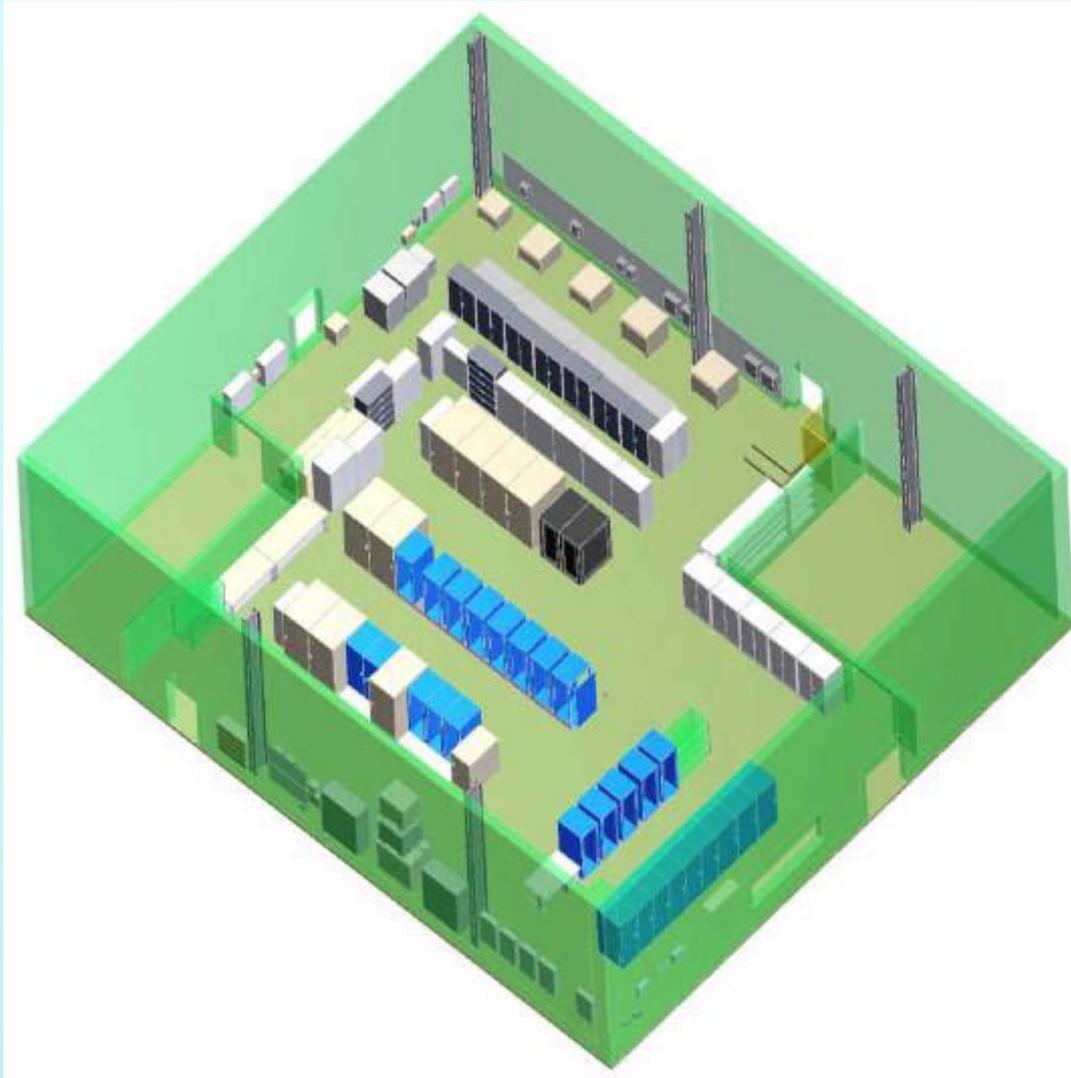


RPC group to dispose of shipping containers and left over equipment to keep storage area uncluttered.





# Rack Room Reorganization



Fairly accurate model  
of the current rack  
room configuration

Plumbing, HVAC and  
cable management,  
items in machine shop  
and items in laser  
room omitted

# Safety, Security, etc.

## Human Performance:

When planning work, always think about what is the worst thing that could happen and pre-plan what your response will be.

Sort of like "Murphy's Law"



# Where To Find PHENIX Engineering Info

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Summer ends on Sunday

Time to get serious.

Links for the weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found on the 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)