



**PHENIX  
WEEKLY PLANNING**

9/11/2008

Don Lynch

# Shutdown '08 Schedule



## RPC Factory:

Dark Current test stand

in design due 9/30

## Mu Trigger FEE upgrade:

Rack assembly

installed in North by, South by 9/30

N&S platforms Fabricate & install

install South by 9/30 (Pearson)

Rebuild Bridge & Eyebrow

Done

Prep work for platforms (water/elec)

water done, elec. By 9/17

FEE Chasis installation N&S sta's. 1,2&3

Station 1 & 2N Done, Sta 3N by 9/15,  
Sta. 1,2 & 3S by 10/31

FEE water and dry air installation

Station 2N Done, Station 1N by 9/15,  
Station 3N by 9/30, Sta. 1,2&3S 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

Install S rack cooling & electric

Oct.after CM moves north

Rack room electronics, etc.

Sep.- Oct.

Disassemble station1 scaffold

complete by Oct 15

Testing

Sep.-Nov. Complete by 11/30

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# Shutdown '08 Schedule



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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 Sep 30
RPC prototype gas system	In progress complete by Sep 30
Move shielding for installation	July - Sep [Pearson]
RPC prototype cable routing & support	Aug - Sep
Modify crystal palace & vapor barrier	July - Sep [Pearson]
RPC prototype install	1/2 Octants to be ready for installation by 9/29
(RPC2 - PHENIX)	
(RPC3 - C. Pearson)	
Install rack in tunnel south	Install by 10/15
Replace tunnel shielding/Vapor Barrier	Nov. [Pearson]
Connect electronics/gas	Sep. - Nov.
MuTr Decapacitations (Sta. 1&2 S)	Mike Leitch will be back 9/8/08
	Decaps to be performed as sched permits in progress (on going fill-in)
Fan Tray maintenance	
PC1 west work (needs planning)	Oct. 15-Dec 15

# Shutdown '08 Schedule, cont'd

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CM Crane Install	[postponed indefinitely?]
HBD Install	Oct. 27 - Nov. 14
DC East?/West Repairs	Nov. 15-Jan. 1
Gas mixing house UPS	Nov. 30
Remove all inst'n equipment	
Sta 1 (from south)	Remove by 1/15
Sta 2/3 scaffolds	Remove by 11/15
all other testing equipment	Remove by 12/1
Prep for shutdown 2009	
Gap 5 N piping and cable tray re-loc.	Oct. - Dec
Gap 2 N cable tray & crate re-mounts	Oct. - Dec.
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
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

VTX prototype design support

NCC prototype design support

HBD support

VTX fabrication tooling design

VTX installation design

FVTX design/engineering support

Support review 9/11 w/Walt

In progress finish in Sep

as required

Sep - Oct

Oct - Nov

as required

# Shutdown '08 Electrician Work

- 1) Run Power to new MuTrgr FEE racks on MMN and MMS. *Wiring Done, power to be ready by 9/17*
- 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**

# MuTrigger FEE Installation

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**Station 1 & 2 Cooling water and dry air are done. Station 3 is in progress**

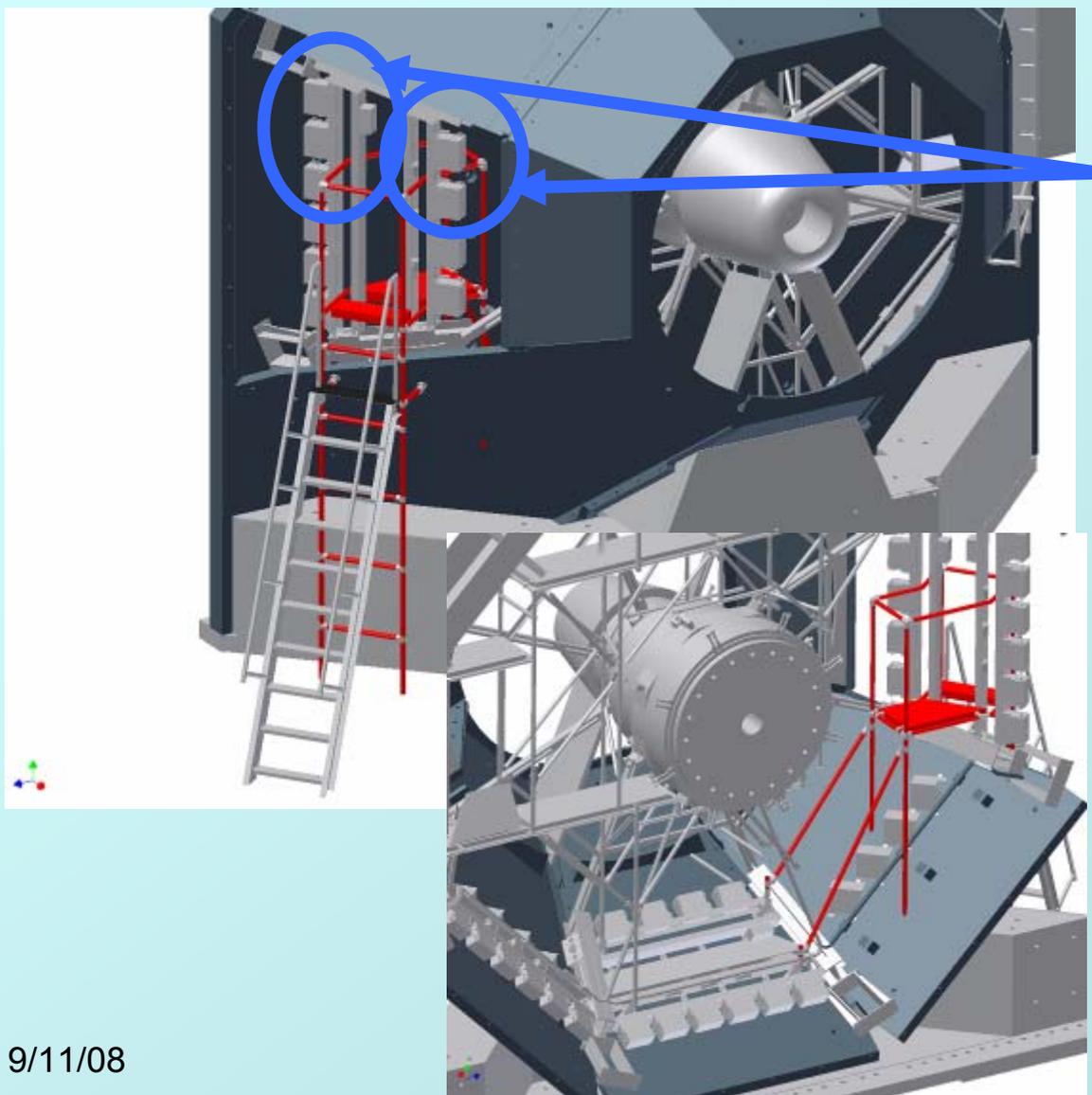
# MuTrigger FEE Installation

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New transformer  
for North arm  
ready for  
installation 9/16

## 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

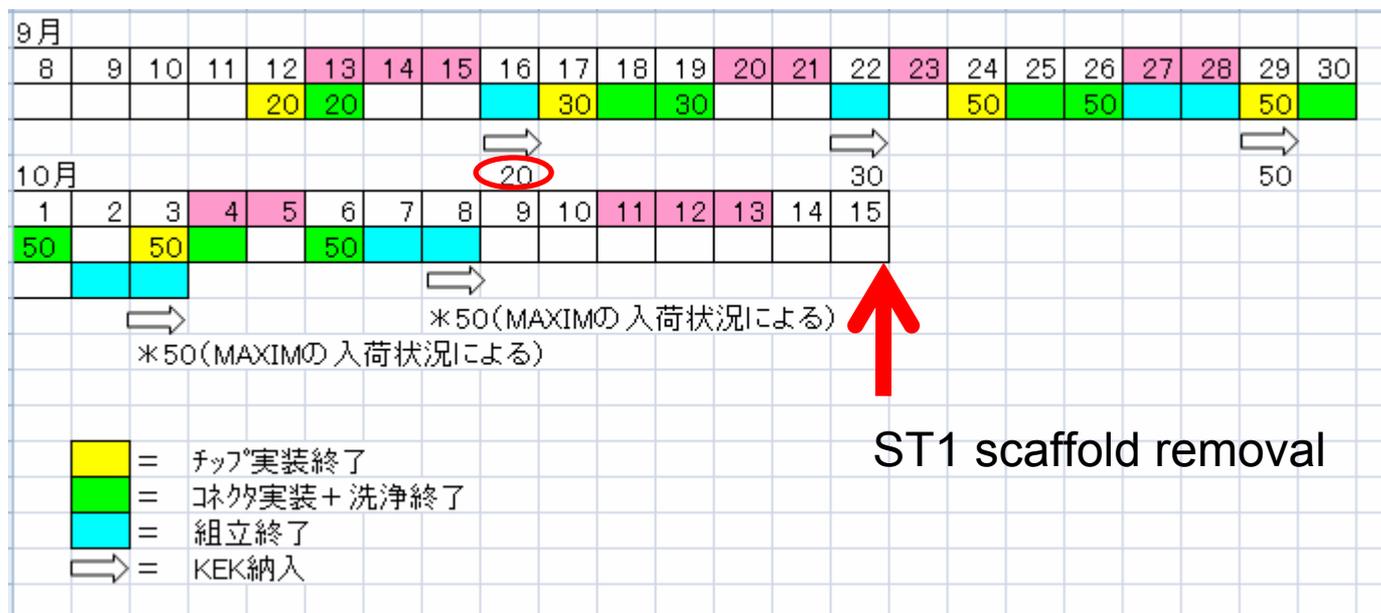
# MuTr FEE upgrade status

Tsutomu Mibe (KEK)  
for the onsite upgrade team

# Production status of ADTX board

- Mass production is ongoing.
- First 20 boards arrived at RIKEN
  - QA being done
  - Will be shipped on Sep 12<sup>th</sup>.
  - Start installation from the week of **Sep 22**
- Need total 40 boards to cover whole station 1
- Latest mass production schedule:

All prep and testing has to be finished by then



# Chassis Status

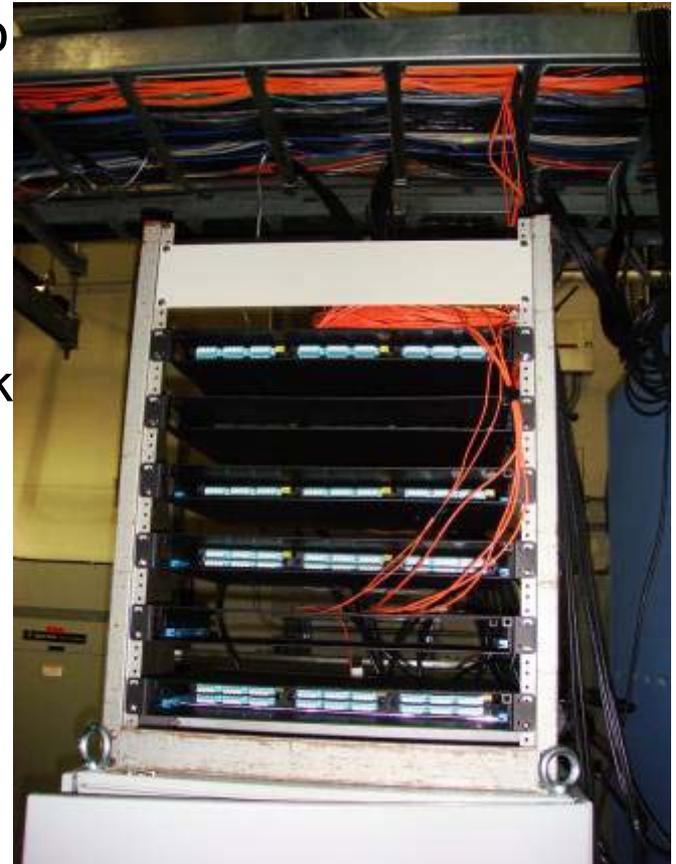
- Chassis Mount :
  - All chassis were mounted in North arm.
  - Station 2 and 3 chassis were mounted in South (Jimmy)
- Water plumbing :
  - John T + Mike L
  - Working on station 3
  - All MuTr.N power locked out during plumbing work.

# LV status

- LV test (from next Tuesday to Friday)
  - Voltage drop measurement
    - Estimated voltage drop = 0.3 – 1.5 V
  - Tuning supply voltage to chassis
    - Try to set the voltage at the chassis as close as +6.5 V

# Optical Cable

- Completed connecting all fibers to patch panels
- Completed chain test
  - Most of them are ok.
  - Total 3 bad fibers (1 new)
- Borrowed TEC's cables between rack room and test bench (Achim)
  - 1 G-Link, 6 data
- Waiting for more fibers for
  - 10 ADTX-Patch (South)
  - 10 Patch-MRG (South)
  - 40 MRG-LL1 (North+South)
  - Delivery by the end of Sep.



# Connecting analog cable to new chassis

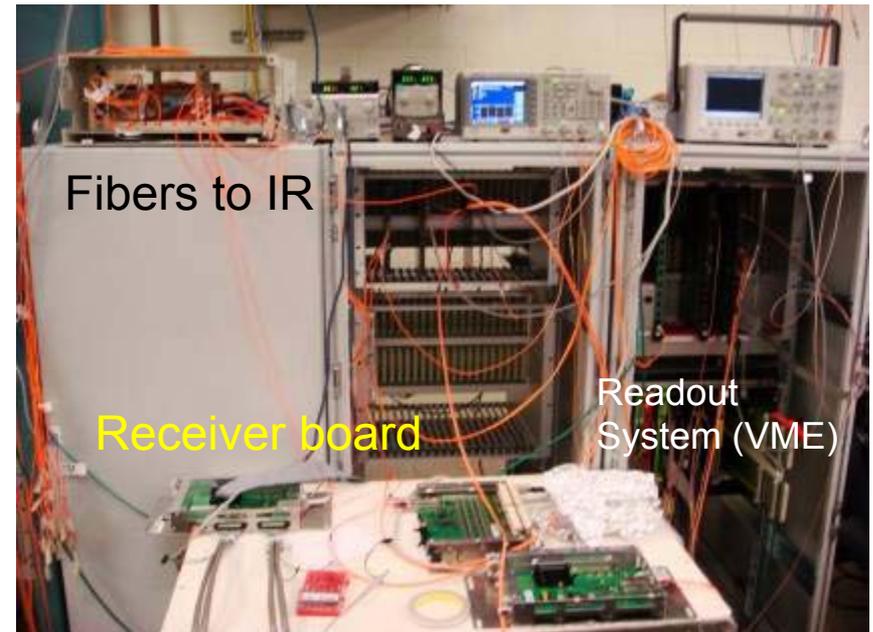


- Started connecting FEE-ADTX cable and noise measurement
- Completed
  - Station 2 octant 7
  - Station 3 octant 5 (2 chassis)
- Noise increase is as expected ( $< \sim 10-15\%$ )
- Studying noise in station 3
- Plan to start station 1 from this week

# Test bench for MuTRG-ADTX board

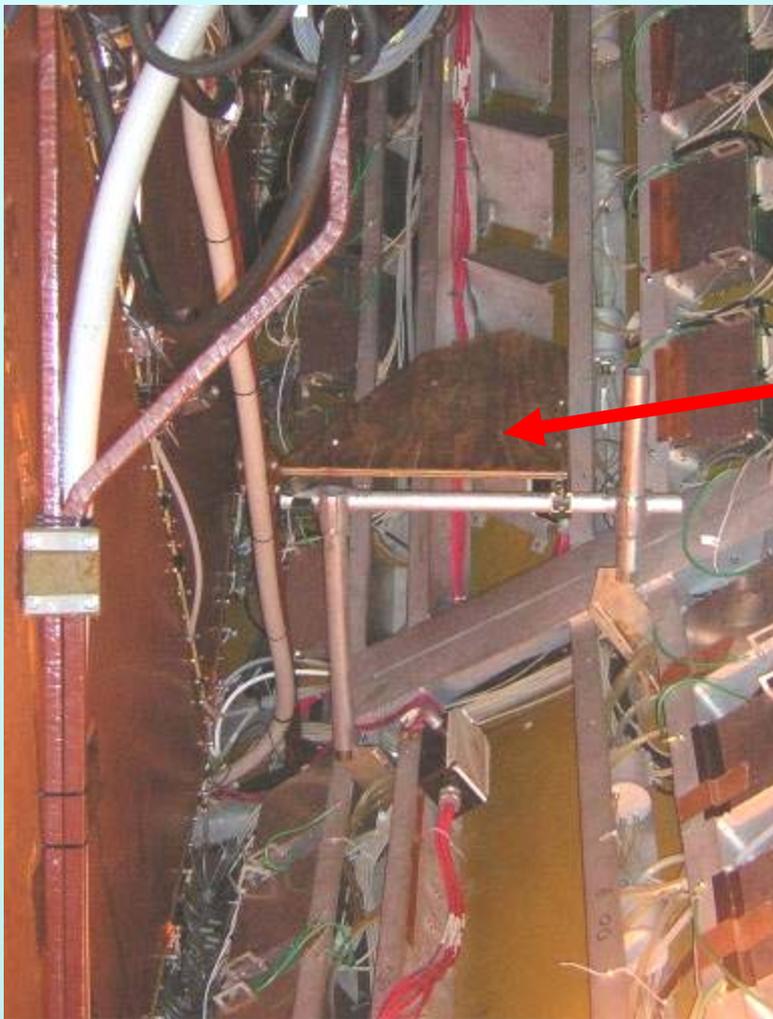
Ken'ichi Karatsu, Yoshi Fukao

- QA (Ready)
  - Voltage/Current
  - Slow control
    - Threshold setting
    - FPGA configuration
    - Mode bits
  - Dead channel/cross talk
  - ~30 min/board
- Ad-Hoc readout after installation (Ready)
  - Slow control
  - Calibration pulse
  - Noise rate



# MuTr Decapacitations

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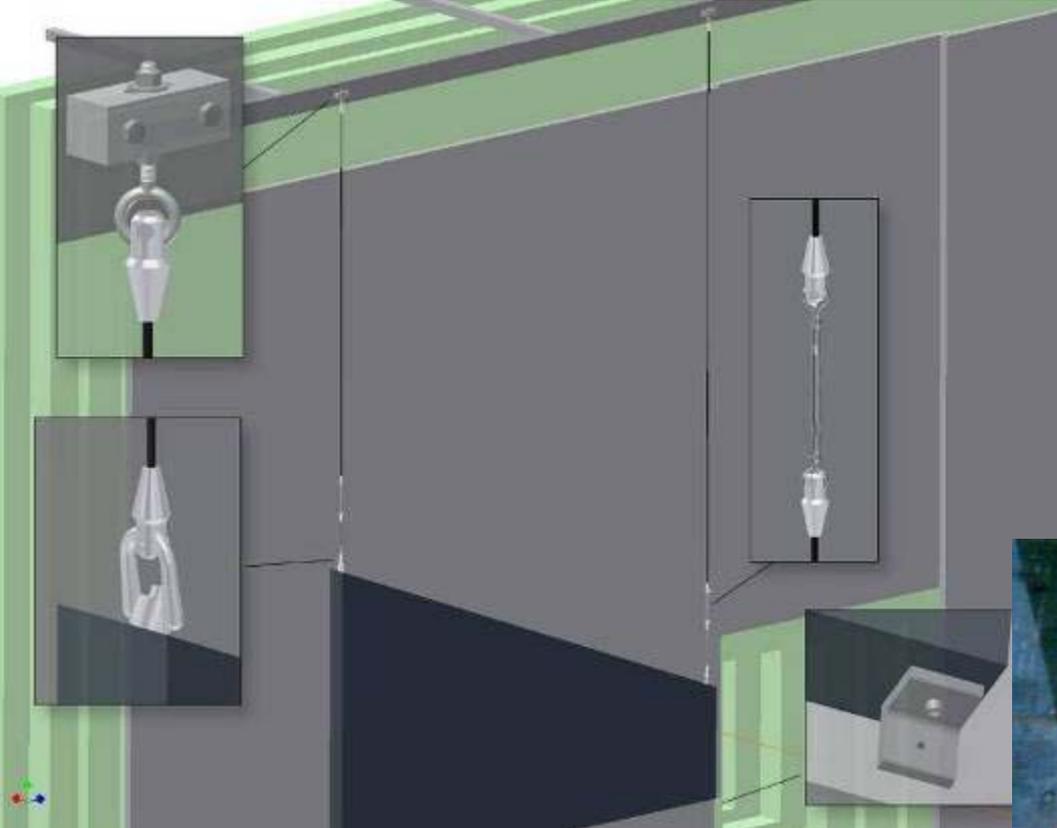


MuTr group currently working on station 3 south

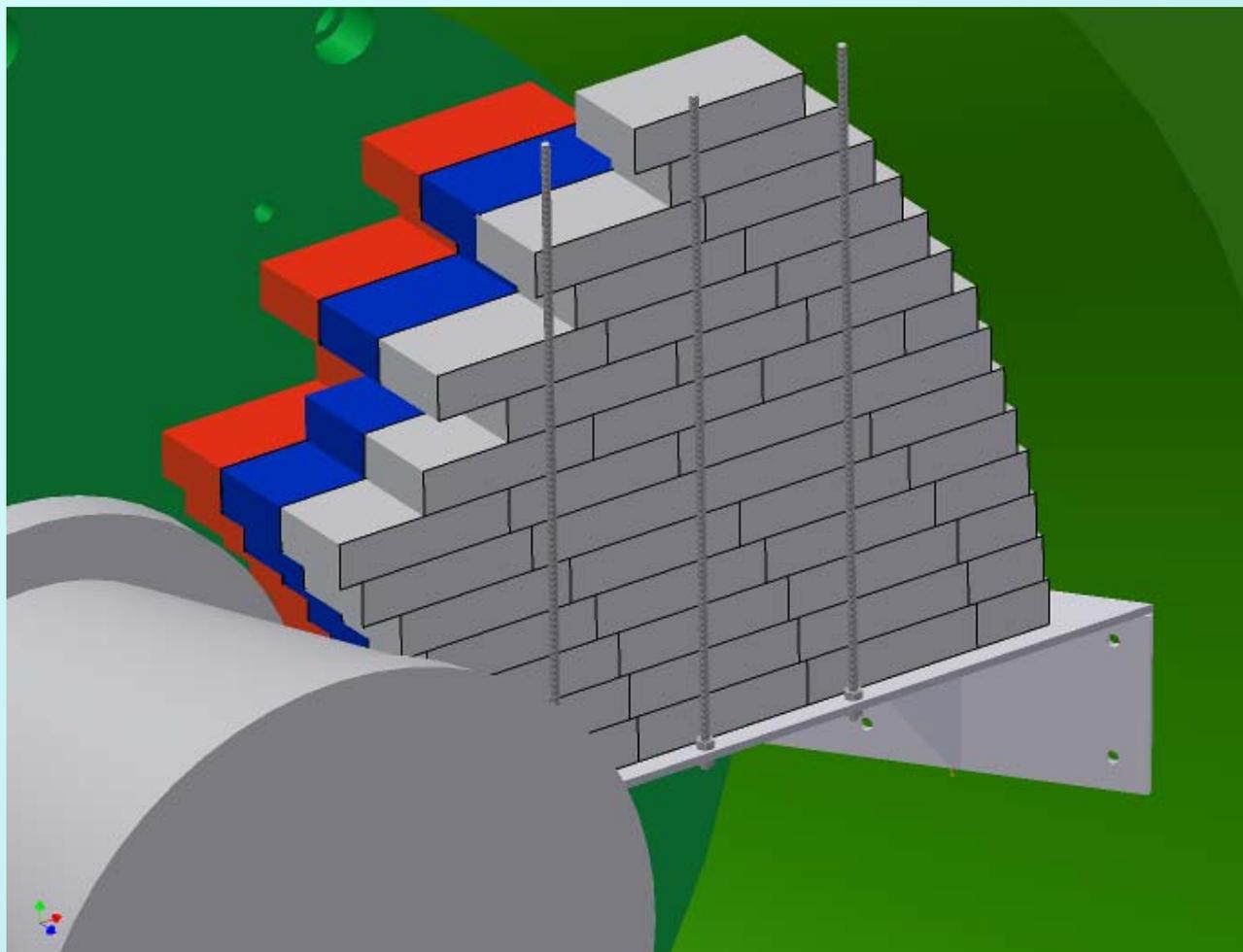
# RPC2 Prototype Installation

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

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# RPC Absorber Concept



RFQ placed  
with CS

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# RPC2 Prototype Installation

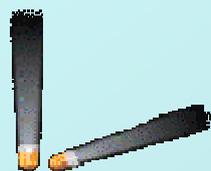


RPC prototypes will be ready for installation 9/29. Final electronics check to be performed over next 2 weeks.

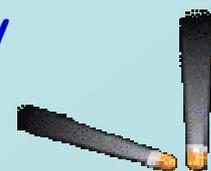




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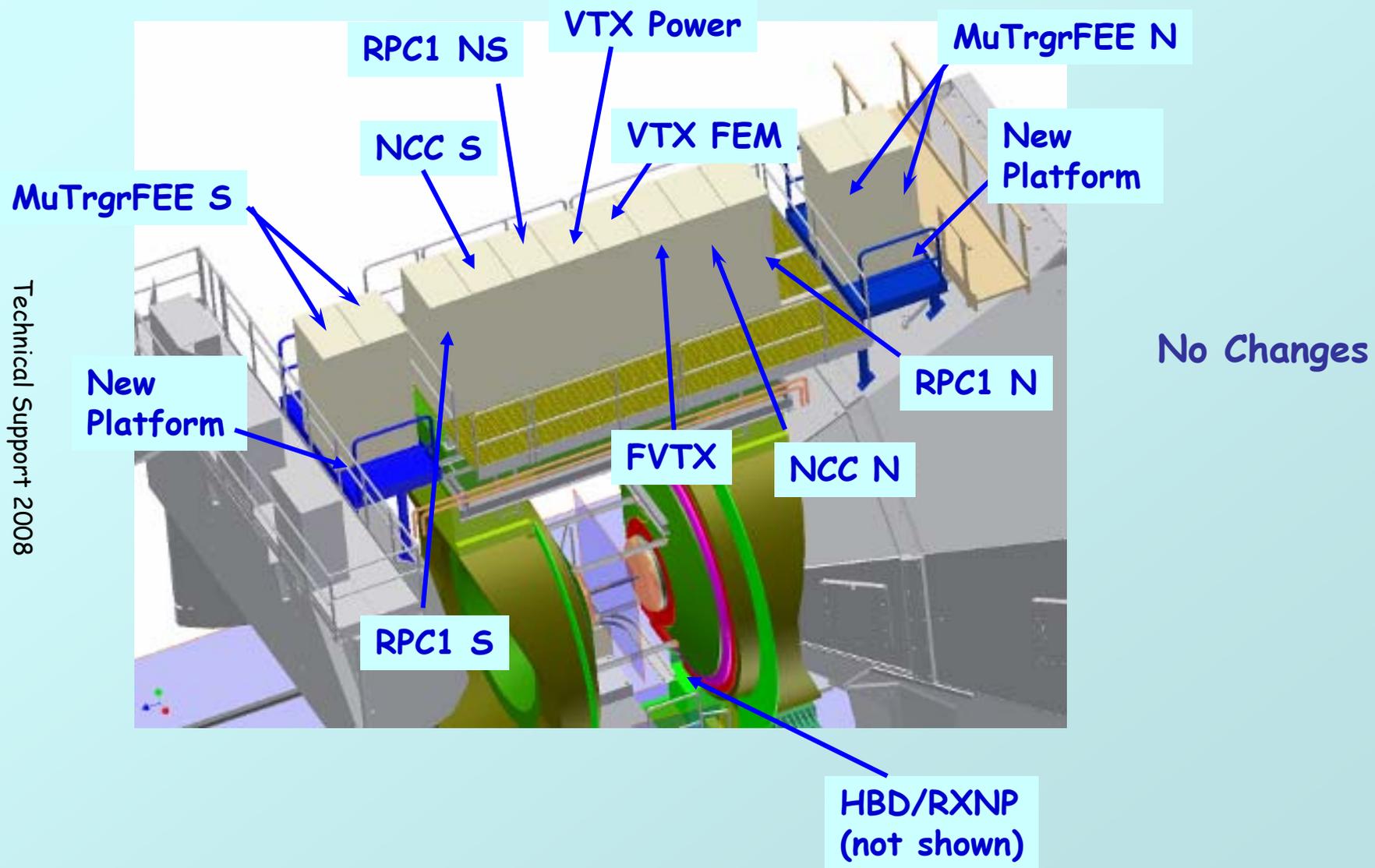


*Congratulations to John T. and Kenny! Each received a Spotlight award for their efforts in support of the RPC/Muon Trigger projects*



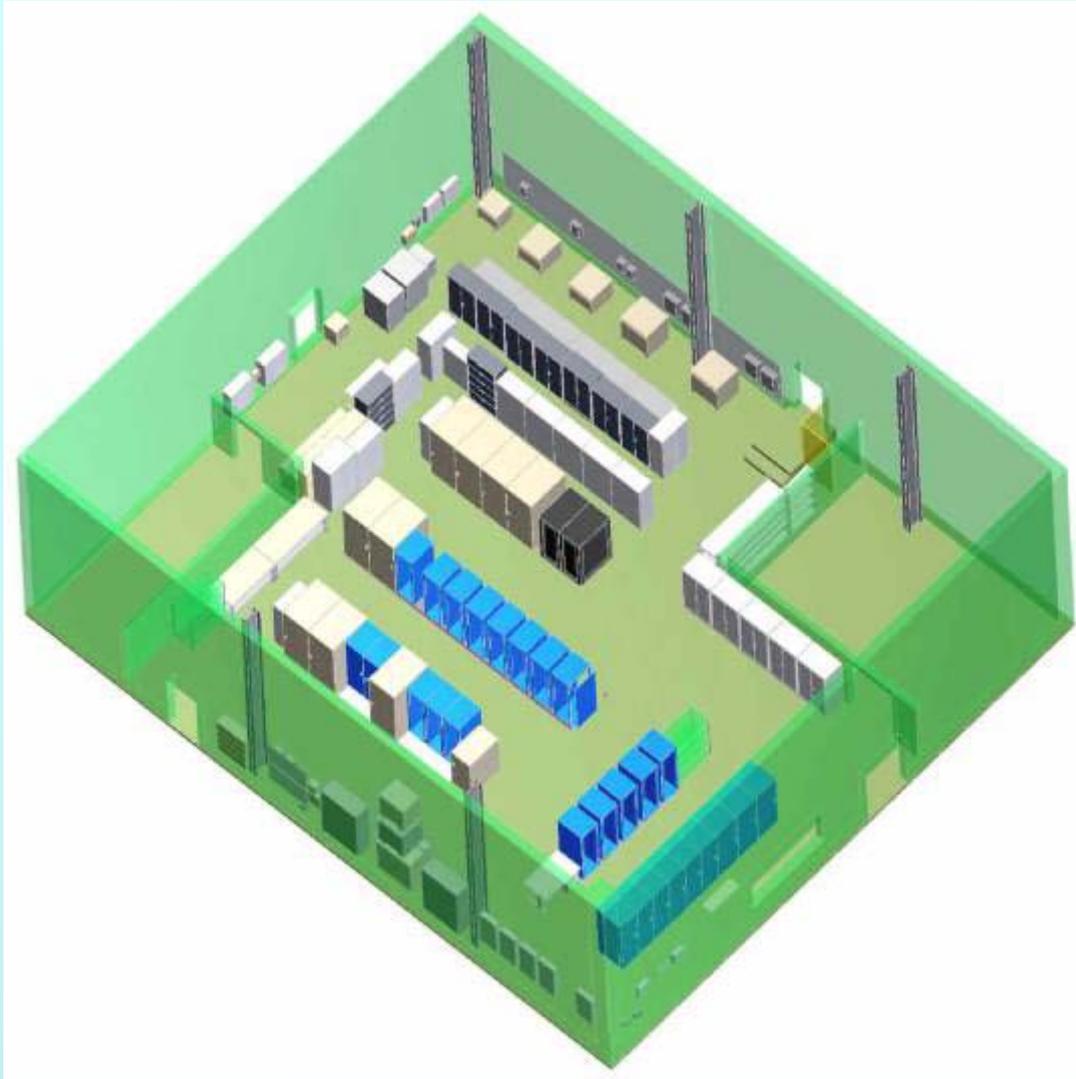
9/11/08

# Detector upgrade Rack allotments



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# 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

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2 C-A QA assessments assigned to PHENIX from recent management safety walkthru:

“Evaluate need for more Flammable Gas Signs by gas shed”

And

“Check postings on outside doors for consistency”

Details require password into QA action item computerized system.

# Where To Find PHENIX Engineering Info

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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)