

# PHENIX WEEKLY PLANNING



Technical Support 2008

12/5/2008  
Don Lynch

# IR Configuration for remainder of shutdown

October	November	December	January
5 12 19 26	2 9 16 23 30	7 14 21 28	4 11 18 25
<DONE>			

**Run Position 10/20 - 10/31**  
(CM & MMS moved north WC west)

**Station 1 south access 11/3-12/12**  
(MMS moved south WC west)

**Station 1 north access 12/15-12/31**  
(CM moved south, WC west)

**East Carriage Install 1/2-1/15**  
(CM moved north, EC & WC opt.)

**Run Position 1/16-1/19**  
(MMS moved north, EC & WC opt)

**Ready for run 9 1/19-2/1**  
(MuID Collars Installed, EC & WC opt.)

<Current IR Configuration>



# Shutdown '08 Schedule



October    November    December    January  
5 12 19 26    2 9 16 23 30    7 14 21 28    4 11 18 25

Station 1 south access 11/3-12/12  
(MMS moved south WC west)



HBD Installation (west) 11-6-11/7 <Mechanical Install Done Electrical Continues>  
(east) 12/17-12/31 <Mechanical Install Done Electrical Continues>

Install/test cards 10/2-11/30 <nearing completion>  
sta 2&3 N and sta 1, 2 & 3 S

Install Lead absorber 11/17-12/12 <shelf in, lead next week>

Install FEE S rack platform 11/17-11/26 <Done>  
And racks

FEE S Cabling & Testing 11/24-12/12



MuTr sta 1 S Decaps 12/1-12/12 <nearly complete>



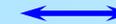
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# Shutdown '08 Schedule



October    November    December    January  
 5 12 19 26    2 9 16 23 30    7 14 21 28    4 11 18 25

Station 1 north access 12/15-12/31  
 (CM moved south, WC west)



Remove Sta 1 S        12/8-12/18  
 And Sta 2/3 N scaffolds



Move CM south        12/17



Install MMS lampshade 12/18-12/21



Install MMN lampshades 12/18-12/31



Re-install MMN walk-over supports 12/22-12/31  
 and platforms



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# Shutdown '08 Schedule

October    November    December    January  
 5 12 19 26    2 9 16 23 30    7 14 21 28    4 11 18 25

**East Carriage Install** 1/2-1/15  
 (CM moved north, EC & WC opt.)

**Install EC** 1/2-1/15

**Run Position** 1/16-1/19  
 (MMS moved north, EC & WC opt)

**Move MMS North** 1/16

**Ready for run 9** 1/19-2/1  
 (MuID Collars Installed, EC & WC opt.)

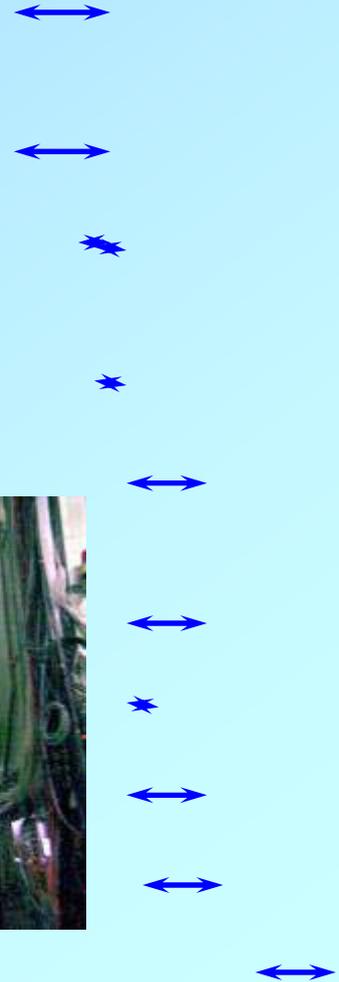
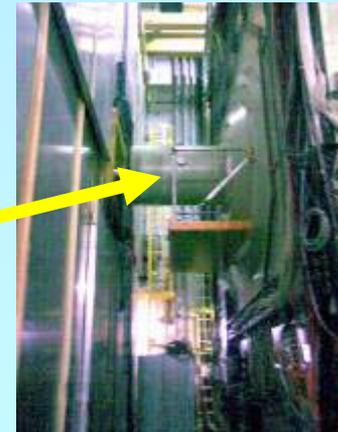
**DC East/West Repairs** 1/16-2/1

**Install MuID Collars** 1/19-1/21

**Pink/Blue/White Sheets** 1/16-2/1

**Close Shield Wall** 126-1/30

**Cryo Start Up, Start Physics** 2/1-2/18



October    November    December    January  
 5 12 19 26    2 9 16 23 30    7 14 21 28    4 11 18 25

## Other On going Tasks

Fan Tray Maintenance (fill in)



RPC3 Prototype install (11/15-12/31)  
 (including assembly at factory,  
 Moving tunnel shielding, modify  
 Crystal palace & vapor barrier,  
 RPC3 install, rack, install  
 scintillators, services & testing)



RPC Factory Support

Dark Current test stand

Storage Racks with humid. Cntrl



Prep for 2009 Shutdown  
 (as time permits)



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October    November    December    January  
5 12 19 26    2 9 16 23 30    7 14 21 28    4 11 18 25

Rack room electronics, etc.

Build new storage 10/1-12/15  
crates

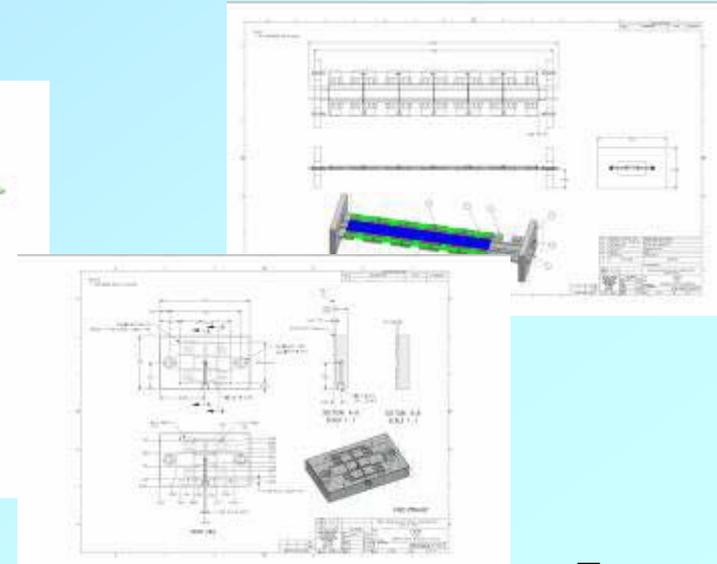
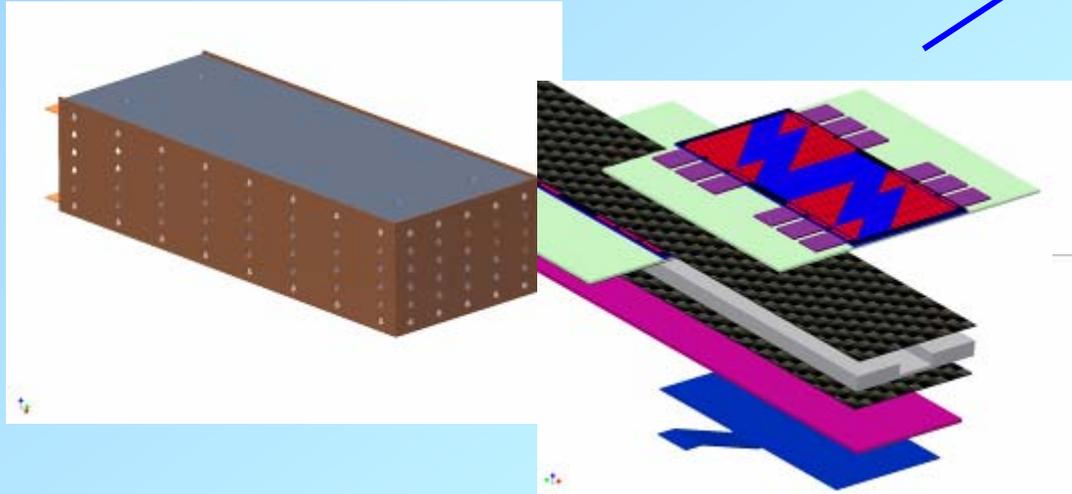


NCC prototype design support  
HBD support  
VTX fabrication tooling design  
VTX installation design  
FVTX design/engineering support



As Required

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12/5/08

# Shutdown '08 Electrician Work

- \* Run Power to new MuTrgr FEE racks on MMS. *by 10/31 Wiring completed...temporary power to be provided for South FEE tests*
- \* Re-wire ToF Rack power distribution bucket in Gas Mixing House. This is to correct minor wiring errors. *Done. Mixing house UPS's installed need to be plugged in.*
- \* Walk down PHENIX Electrical Distribution Panels/Breakers and update changes on the electrical one-line drawings. *Complete by ?.*
- \* Install power and signal cable tray (ceiling suspended) for new DCM rack row - north of existing DCM racks. *To Be Scheduled*
- \* Assist in signal and LV cable installation for MuTr/RPC upgrades as necessary. *Installation of RPC prototype rack needed...held up by tunnel shielding→held up by tunnel crane power → all to be resolved by end of next week*
- \* Repair Duct heaters for Control Room. *Temporary 15 KW Heater installed. To be completed next week?*
- \* Upgrade power capacity of Central Magnet power distribution for future bridge rack loads.
- \* Remove existing 15KVA transformer and install 45KVA unit.



*Lower priority; not required for run 9, to be scheduled when manpower available and operations & projects inconvenience are minimized*

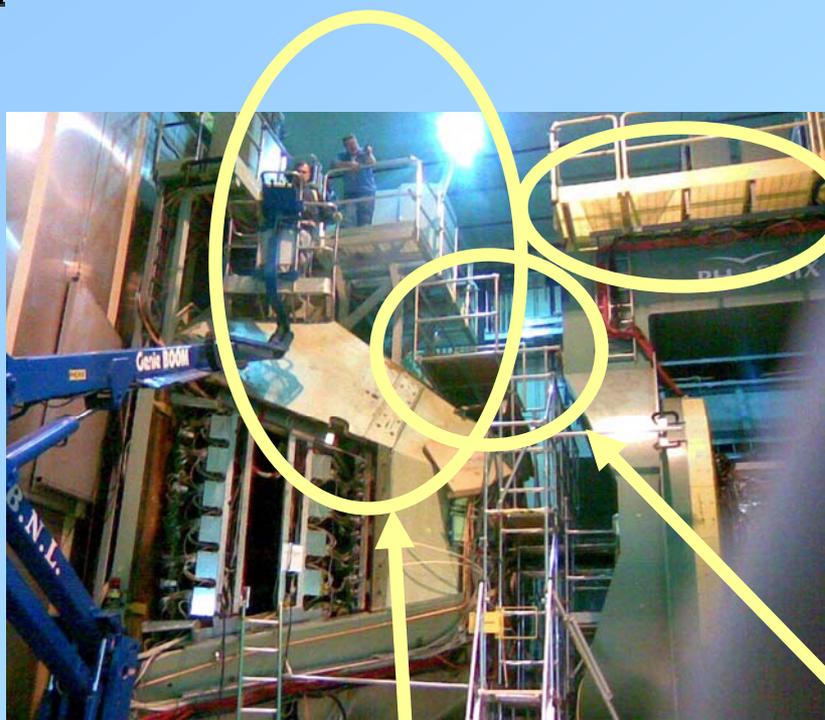
# 1008 Building Maintenance Issues

- Roof leak in utility bathroom at northwest corner behind tech offices.
- Roof leak over door between rack room and assembly hall.
- Trailer bathroom slop sink (for Custodians).
- Heat wrap tape for trailer bathroom toilet drains to prevent freeze/clogging in winter.
- New duct heater (In progress)
- Improved Rack Room AC performance (In Progress)



# MuTrigger FEE South Rack

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MuTrigger South Rack Platform & racks installed, power hooked up cabling and rack cooling in progress

Bridge water manifolds have been reworked...need to be reinstalled

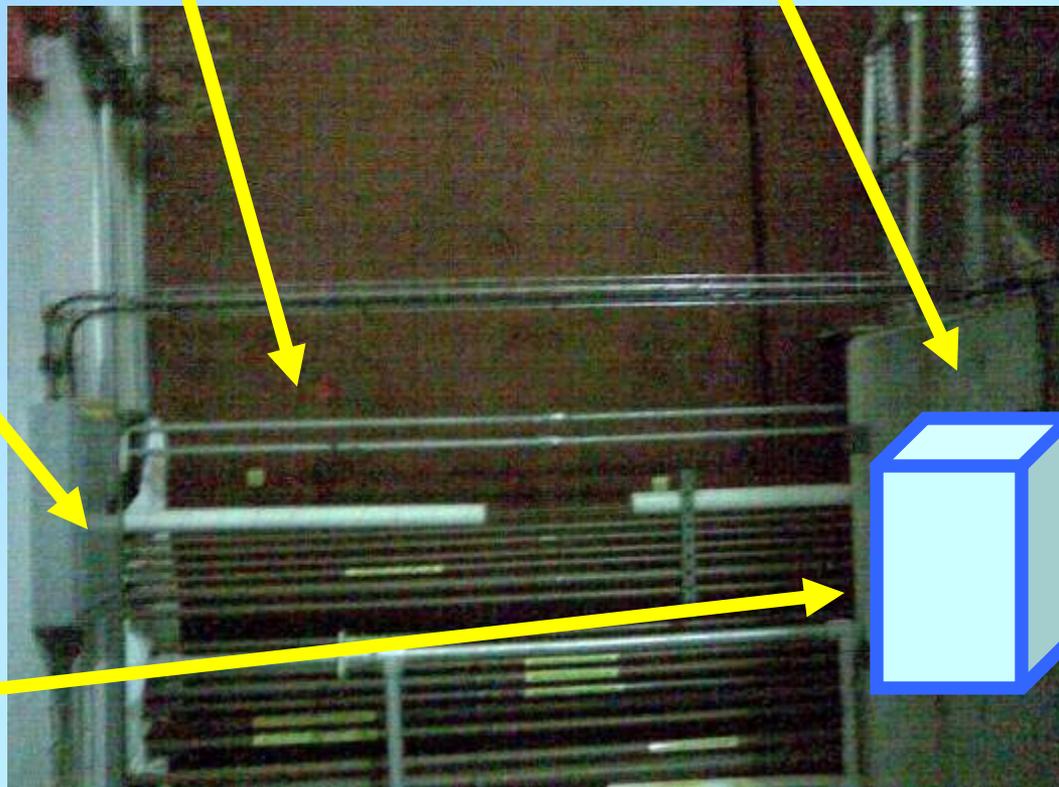


Station 1 South Scaffold modified.. will remain in place until 12/12

# RPC2&3 Prototype Rack

Power bridges across to Rack

Cable tray runs on edge of pedestal floor to rack



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Rack ready waiting for shielding to be re-stacked which is waiting for crane to be re-powered

## RPC3 Prototype Installation

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**RPC3 prototype: mechanical installation is complete; services (gas, signal, electric), and environmental control installation is complete**

# RPC Absorber

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All Lead cut,  
painted and  
ready for  
installation

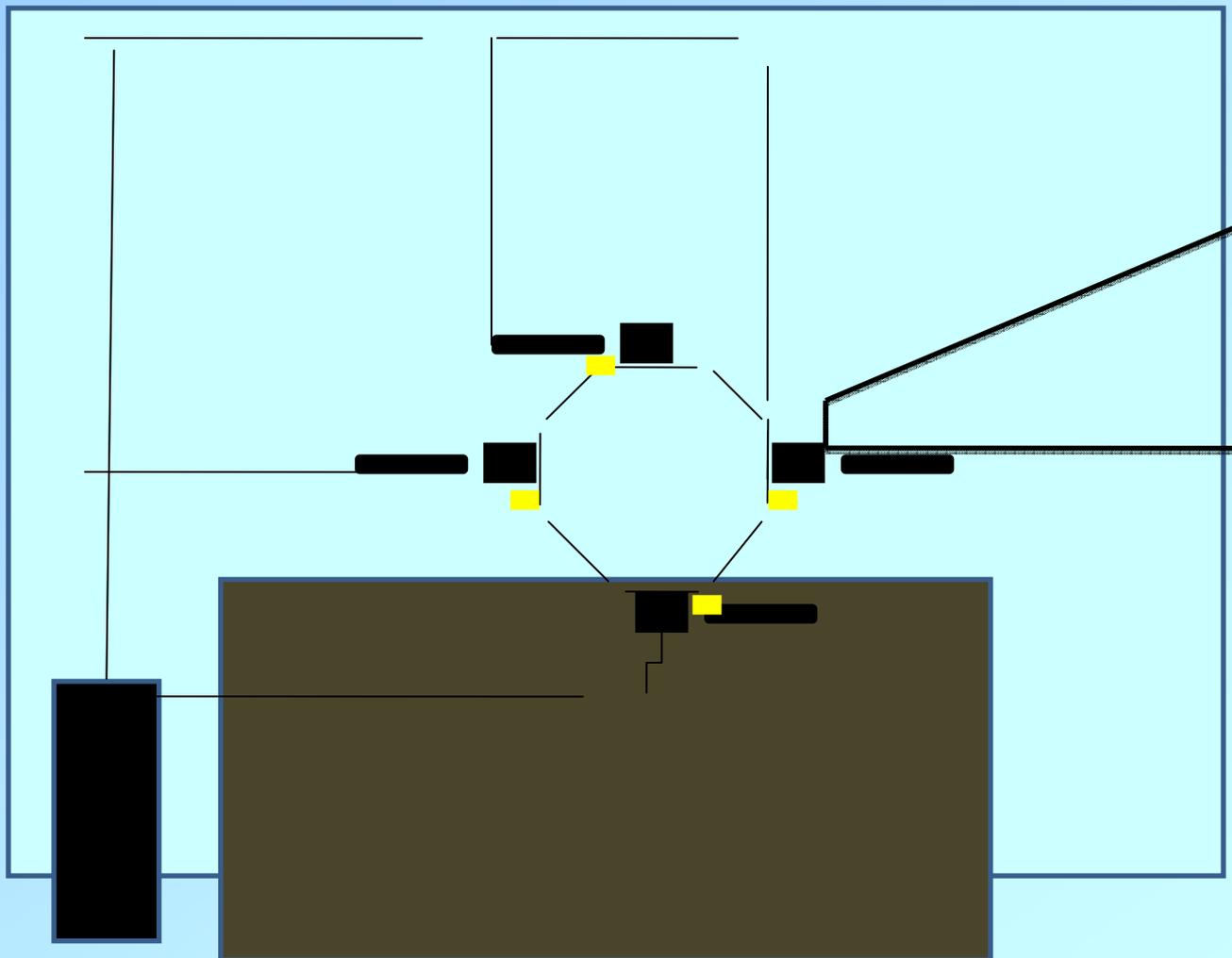


## RPC3 Prototype Installation: Scintillators

- 4 pairs of scintillation counters
- each pair consists of 2 ~1" thick scintillators; active area ~ 2" x 2" ; Length ~10" with phototube and shielding; light guide cylinder ~ 1" dia. With 1" dia PMT's; Weight is ~ 4 lb per pair.
- TLD's: Change and read weekly (quantity and location TBD)
- To be positioned in South tunnel uniformly distributed around the beam pipe at approximately 3, 6, 9 and 12 O'clock at a radially convenient location which overlaps the RPC3 prototype
- Z location is south of RPC3 as close as possible but at most 12" away (for the 3 O'clock pair, others to match z-position)
- Detectors require 2.5 kV to be run from IR.
- 16 channel signal, also to be run from IR
- Rack support is TBD

# RPC3 Prototype scintillators

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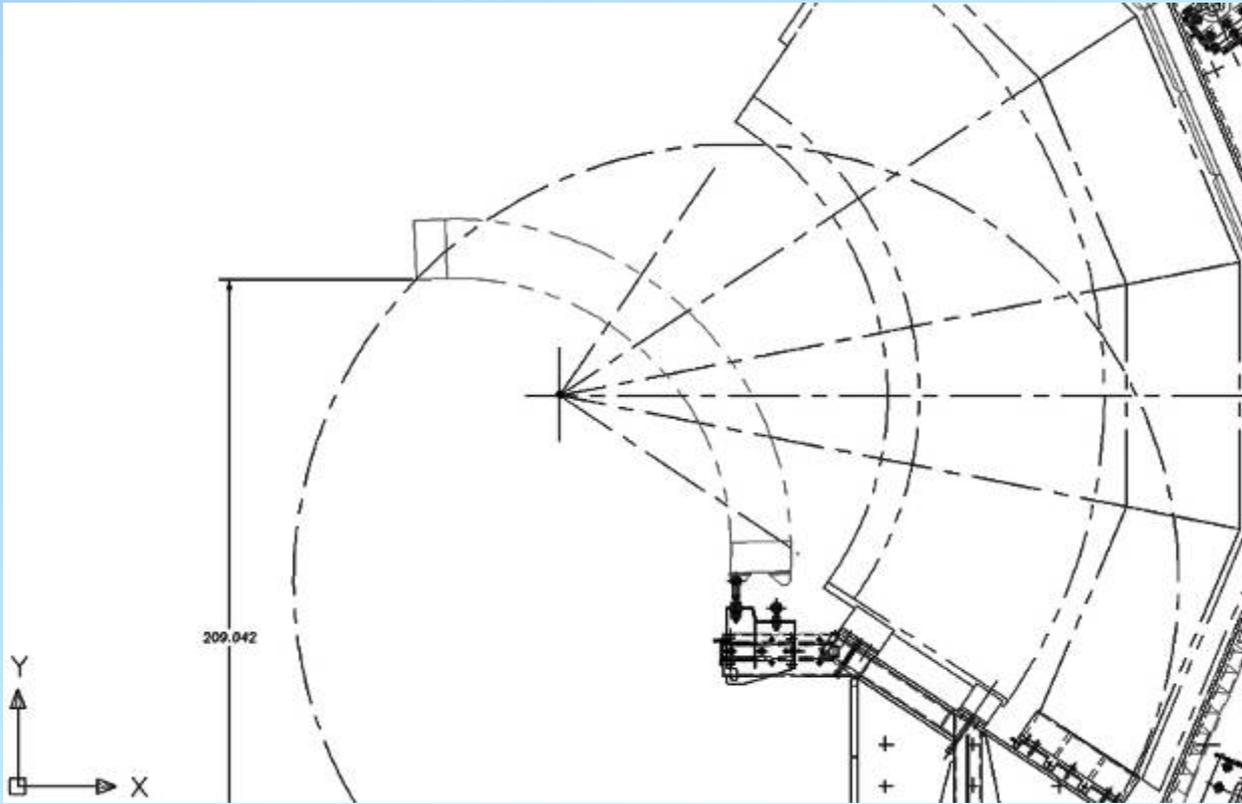
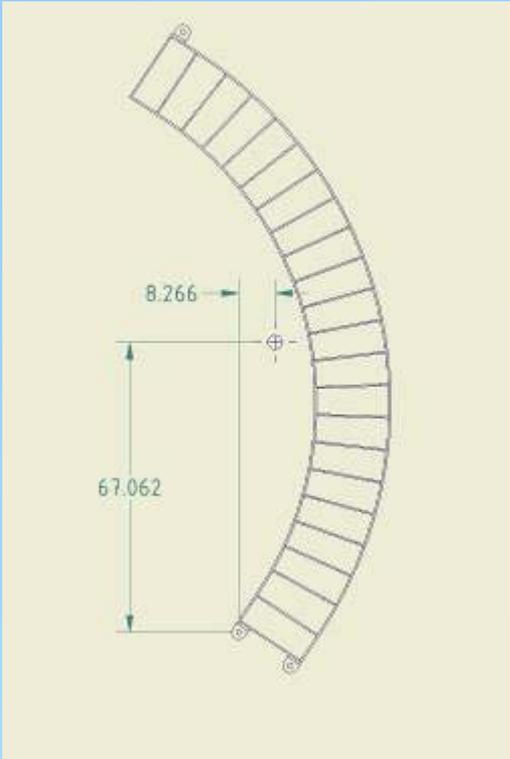


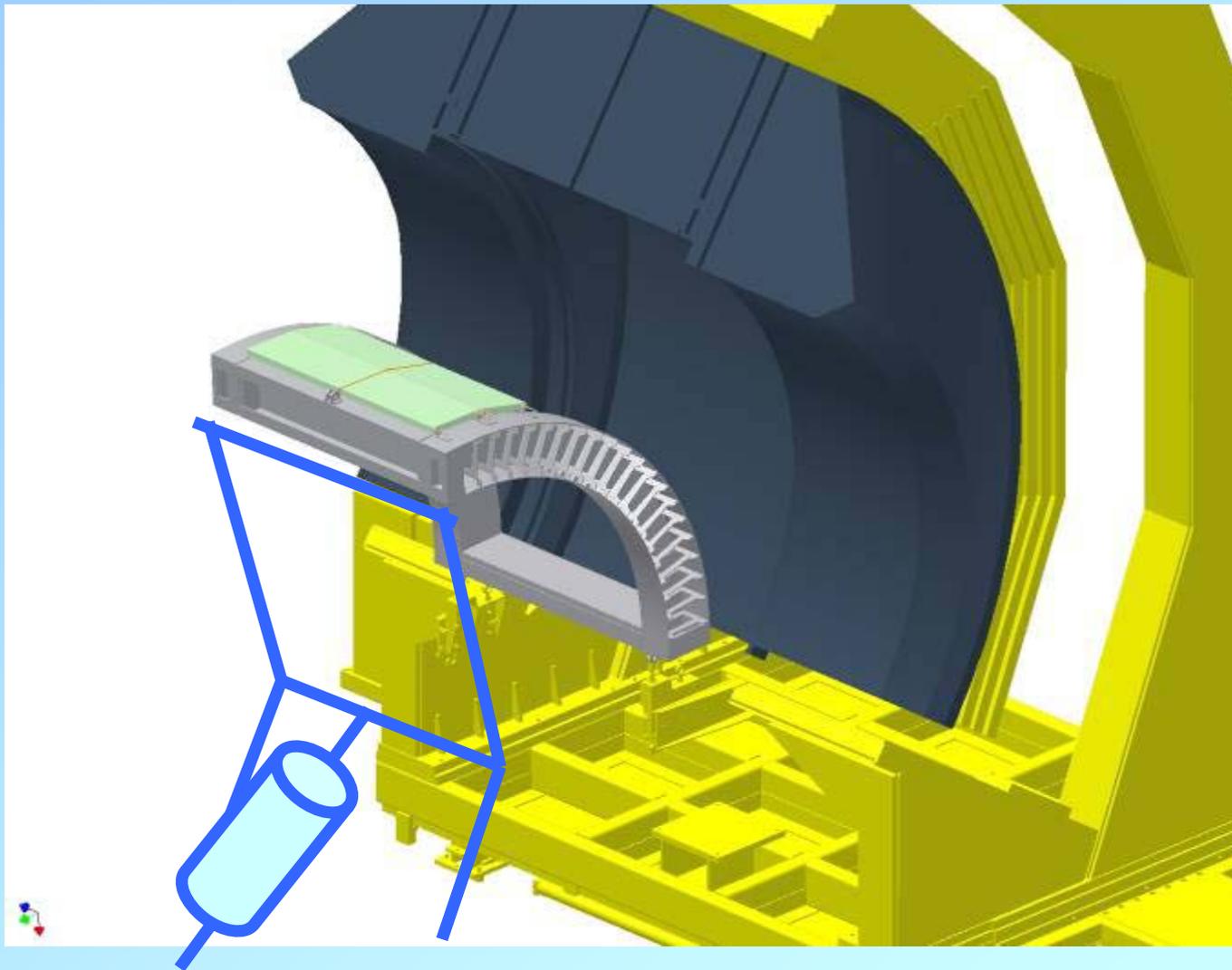
Planning is in progress

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# PC1 East Broken Wire Repair





# PC1 East Broken Wire Repair

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PC1 East Spare in Bldg 510



*The Prodigal detector returns!  
Let's slaughter the fatted calf!*

**HBD**

### HBD Installation Schedule:

West (Bill): 11/6 (Done)

East (Ted): 12/4 (Done)  
Positioning, Cabling and  
commissioning to follow

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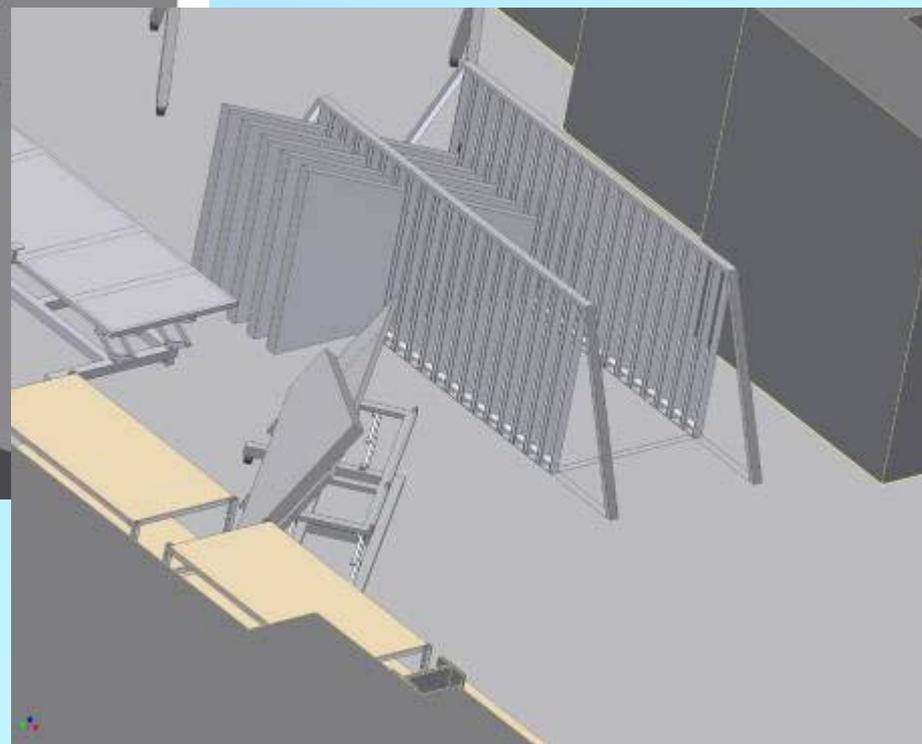
# RPC Factory Support



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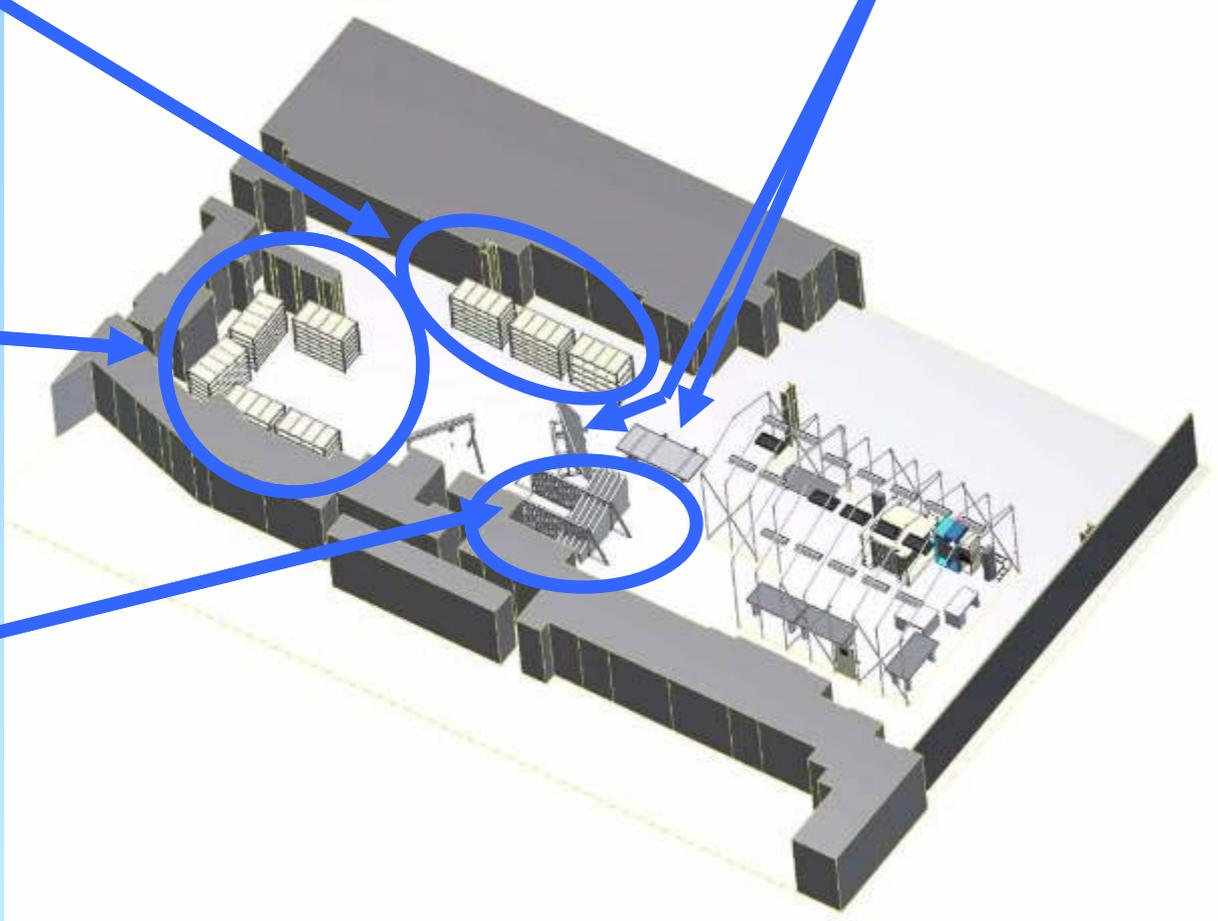
12/5/08



# RPC Factory

Detail parts storage for Module and  $\frac{1}{2}$  octant structural parts

Tilt Tables (2) for Assembly and Handling Gaps modules and  $\frac{1}{2}$ -octants



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Module and Gap Storage with humidity Control

Burn-in test stand (bicycle rack)

## Dark Current Test Stand under construction



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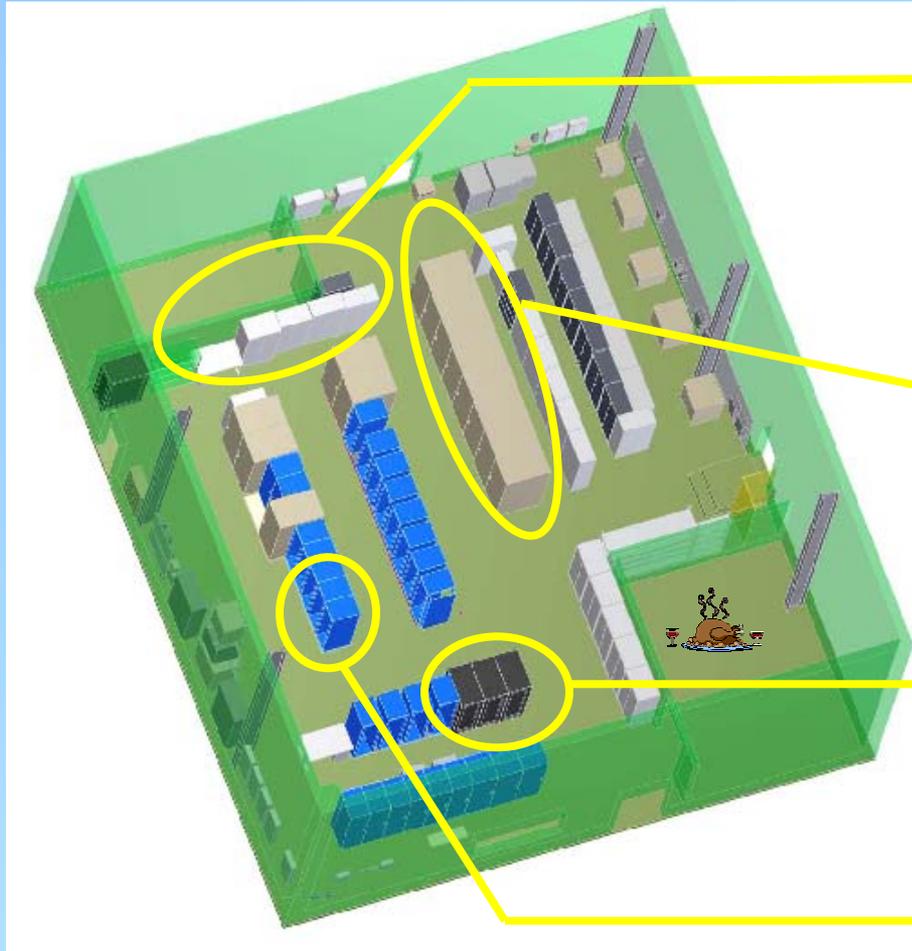
Also working on:

- a burn-in test stand for  $\frac{1}{2}$  octants



- additional storage for gaps modules and structural detail parts
- transport table/cart

# Proposed Reorganization



Relocated file & storage cabinets, & desk

Added 2 DCM racks to east end of row 5 and 2 DCM racks to west end of row 5

Moved 2 large black racks from row 4 and added a third large black rack to row 2

Moved tall blue (open) rack from north end of row 2 to east end of row 3 and added another of the same to row 3

# Scaffolding Crates

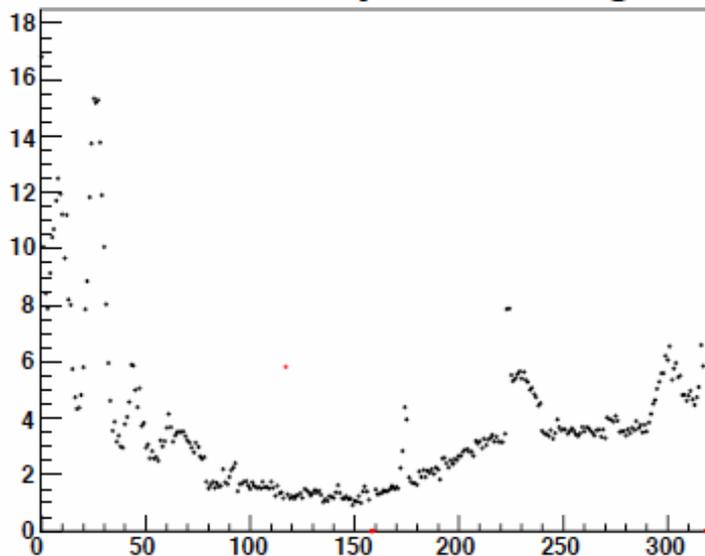


New Crates for Sta 2/3N scaffolds and Sta. 1 scaffolds are in progress.

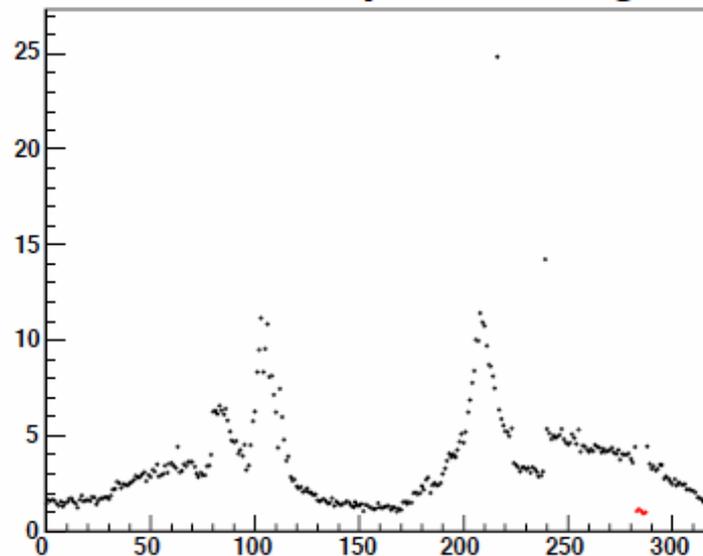
Towards St.2 Scaffold  
Disassembly  
&  
South Arm Installation

RIKEN/RBRC  
Itaru Nakagawa

**Rms vs Strip - Pla1 Flag0**

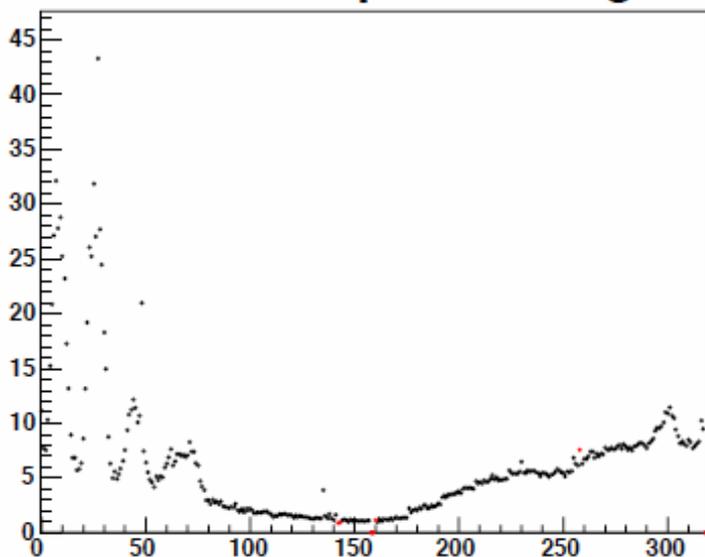


**Rms vs Strip - Pla2 Flag0**

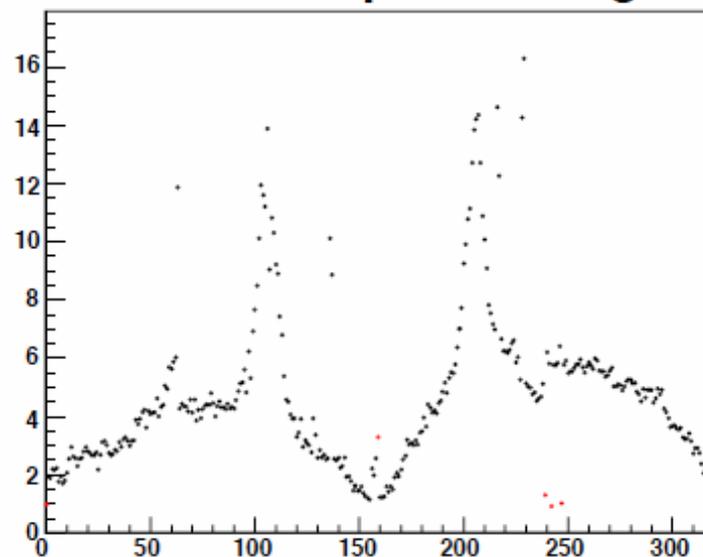


**Arm2 Sta3 Oct6**

**Rms vs Strip - Pla3 Flag0**



**Rms vs Strip - Pla4 Flag0**



# Noise Source



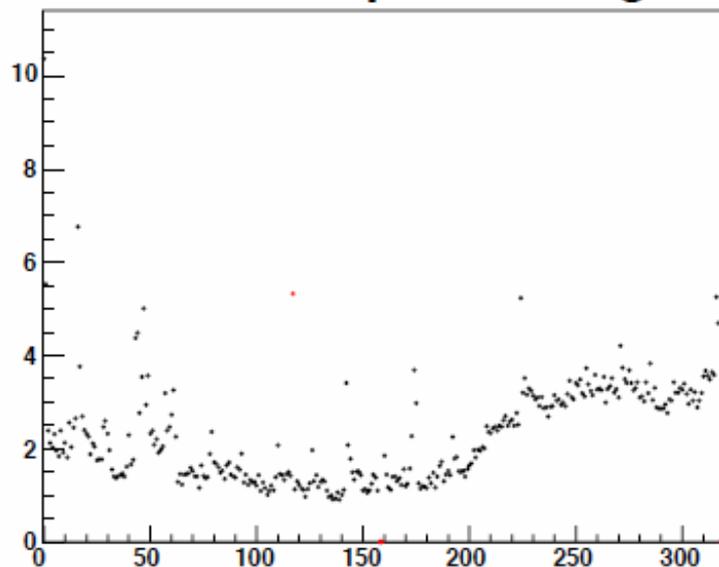
ARCnet card

12/5/08

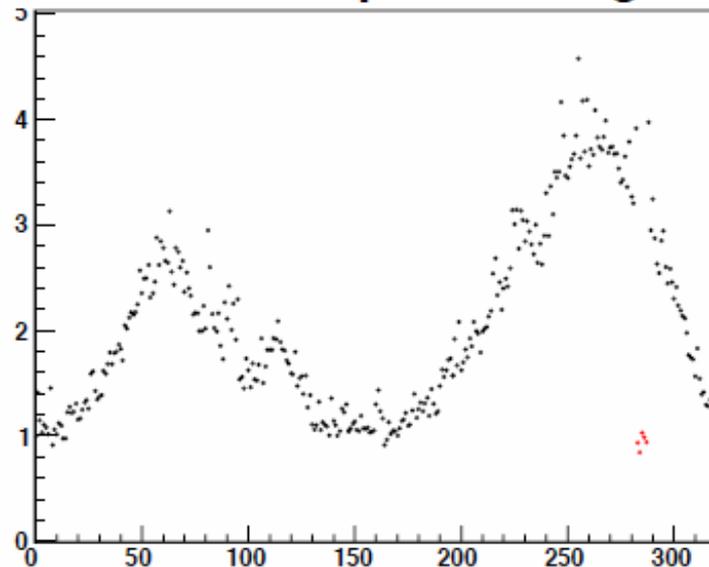
ARCnet

29

**Rms vs Strip - Pla1 Flag0**

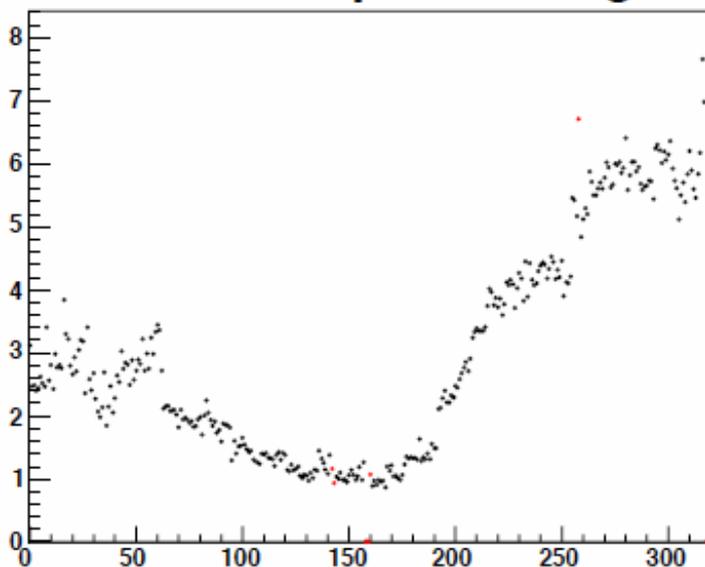


**Rms vs Strip - Pla2 Flag0**

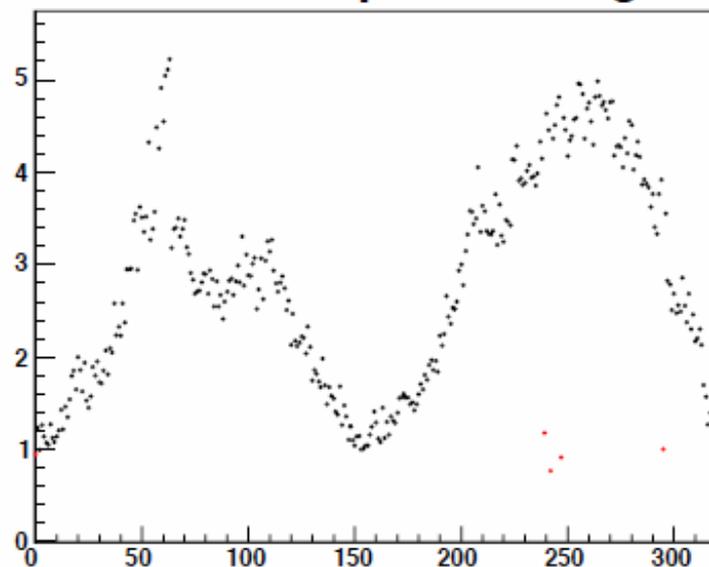


**Arm2 Sta3 Oct6**

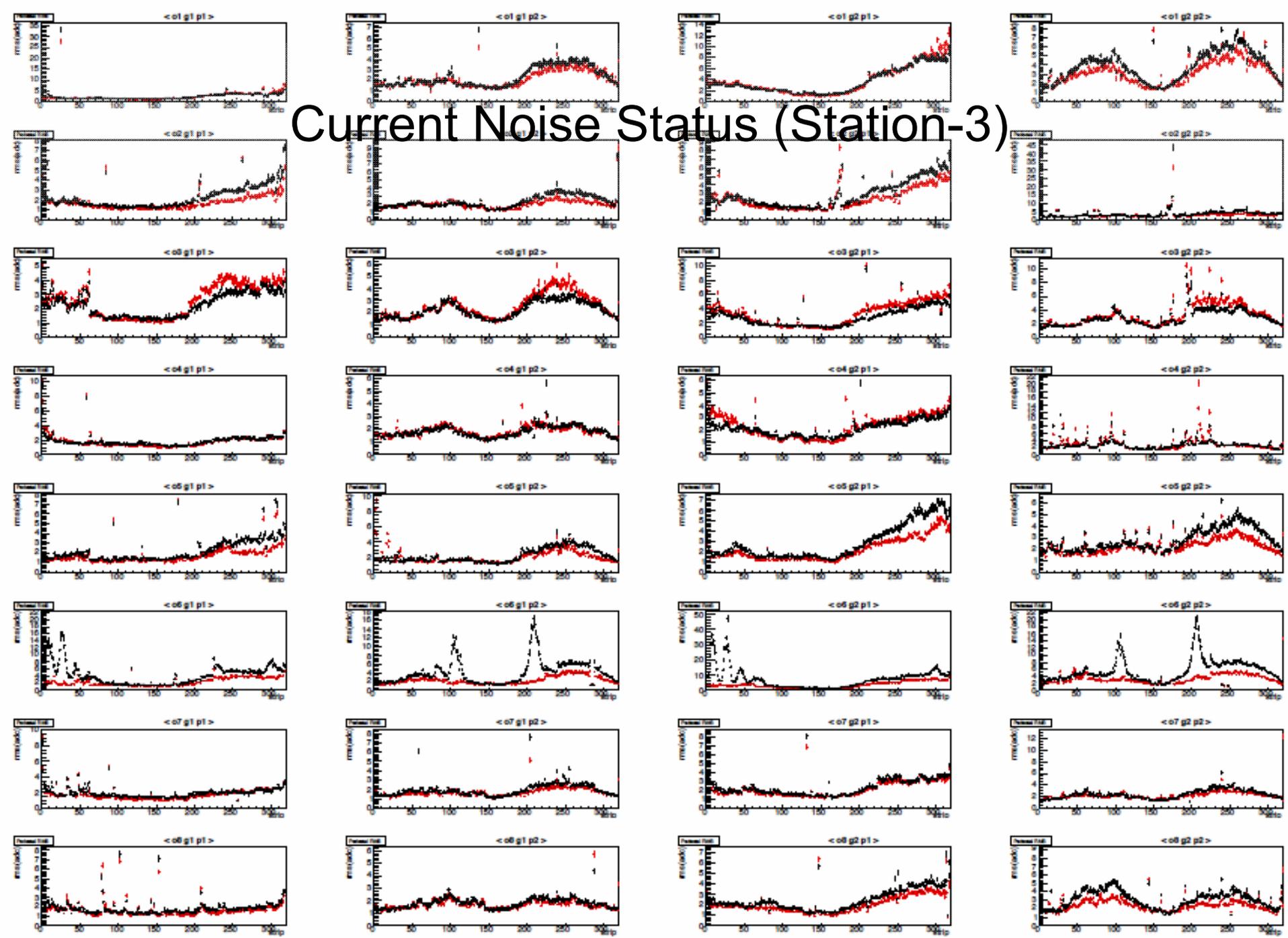
**Rms vs Strip - Pla3 Flag0**



**Rms vs Strip - Pla4 Flag0**



# Current Noise Status (Station-3)



# Installation Check List (St.2&3)

- Miscabling
  - Visible inspection
  - Data consistency check (by running calibration)
- ADTX Performance
  - Slow control ✓
  - PROM Download → In Progress
  - Efficiency ✓
  - Fake hit ✓
  - Timing ✓
- MuTR FEE Performance
  - Noise w/o HV off ✓ (Some strips remain high)
  - Noise w/ HV on ✓
  - Gain → stereo ~ 1, non-stereo~0.9 ✓
- LV
  - Miscabling ✓

12/5/08 LV measurement at Chassis with all other power on ✓

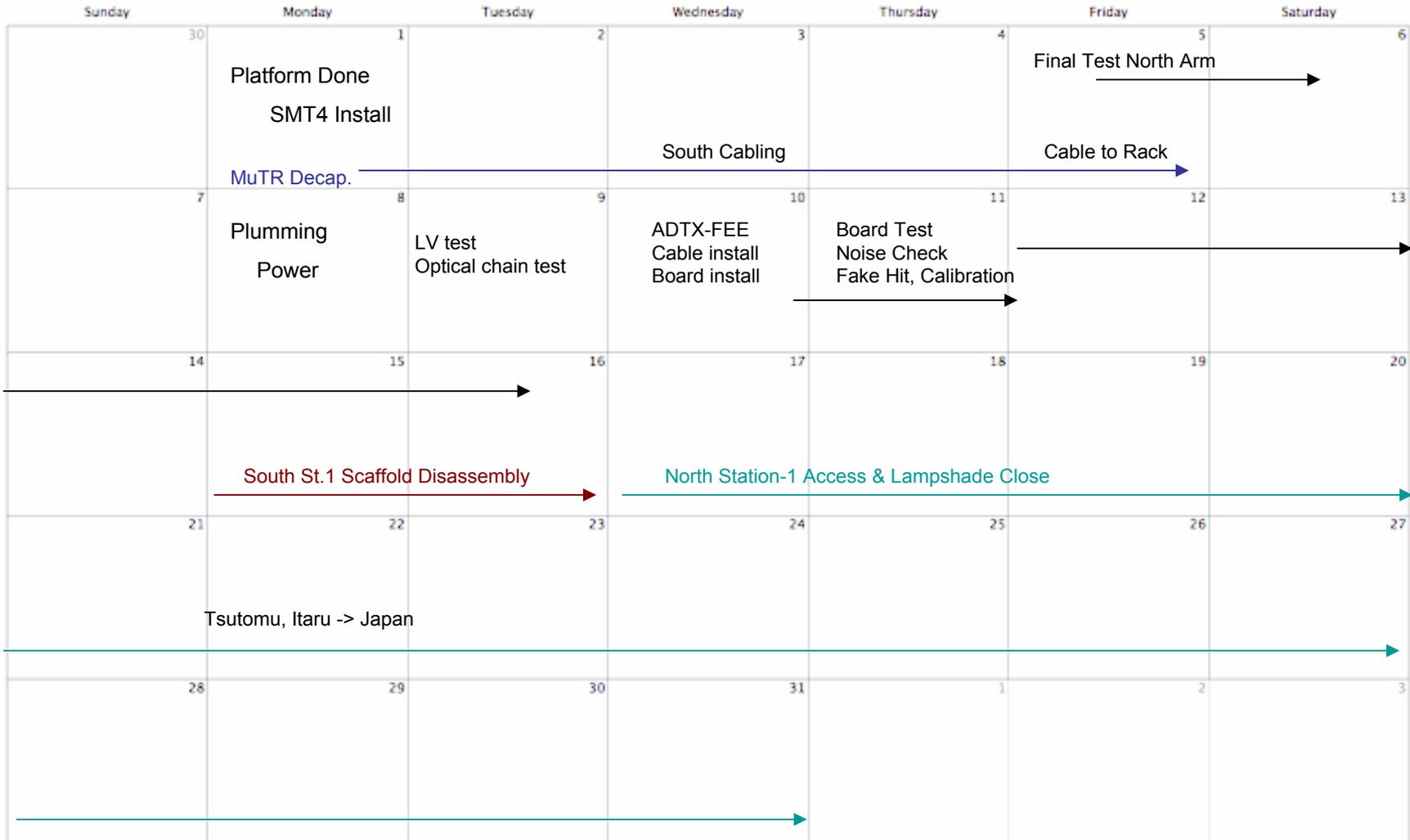
# December 2008

## South Station-1 Scaffold Activity

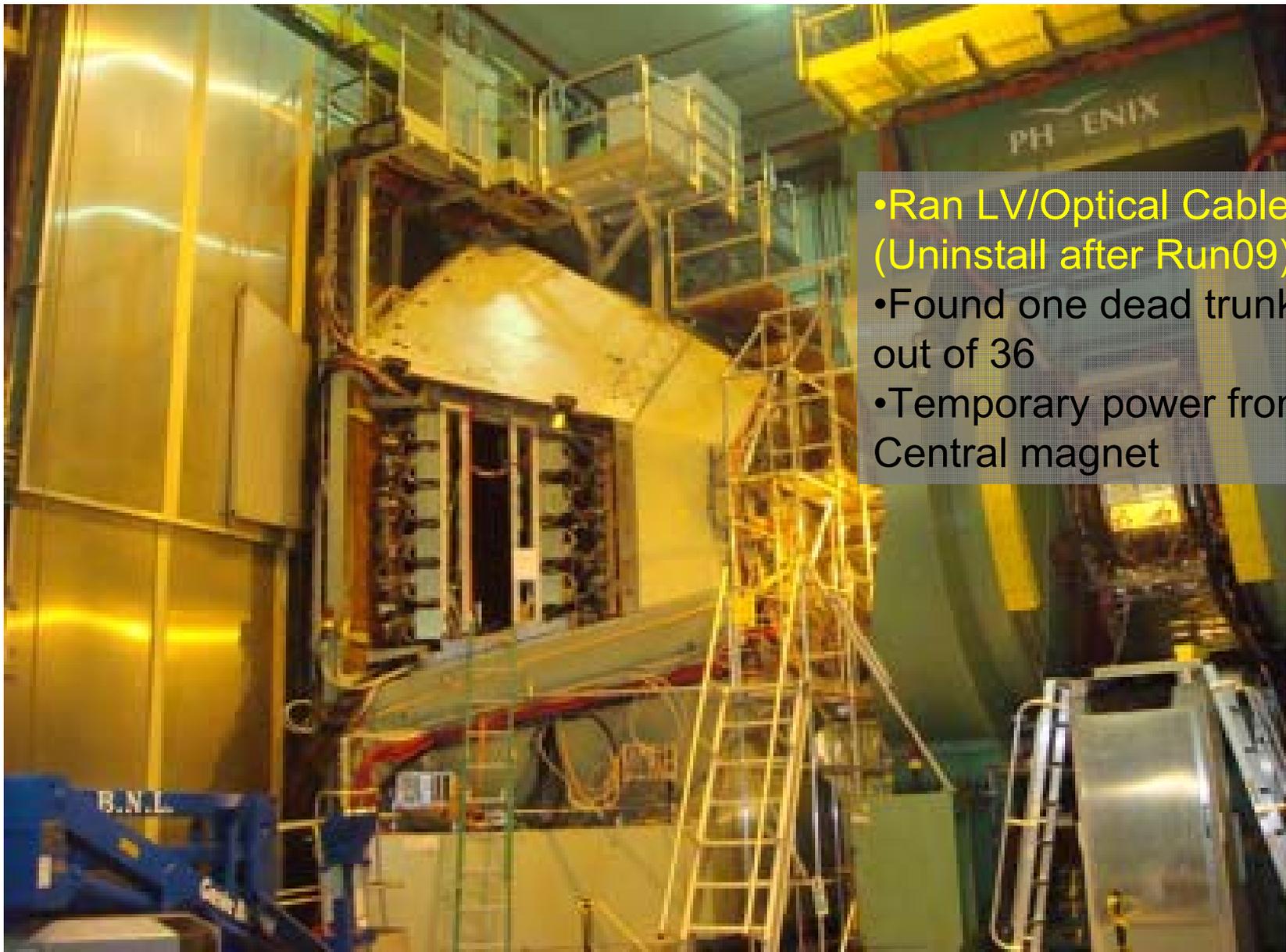
- MuTRG
- MuTR decapacitation
- Absorber Install



出張



# South Arm Installation

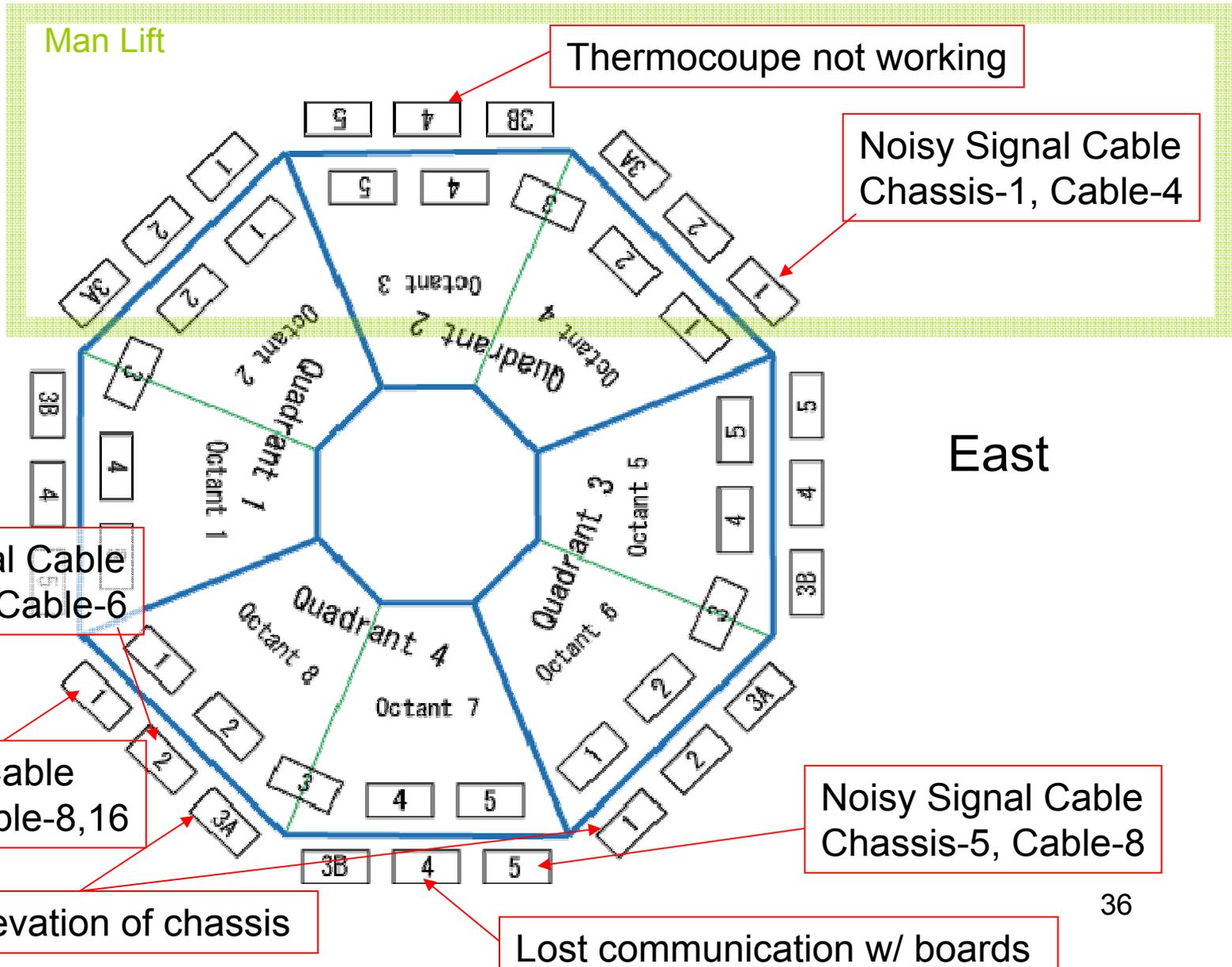


- Ran LV/Optical Cables (Uninstall after Run09)
- Found one dead trunk cable out of 36
- Temporary power from Central magnet

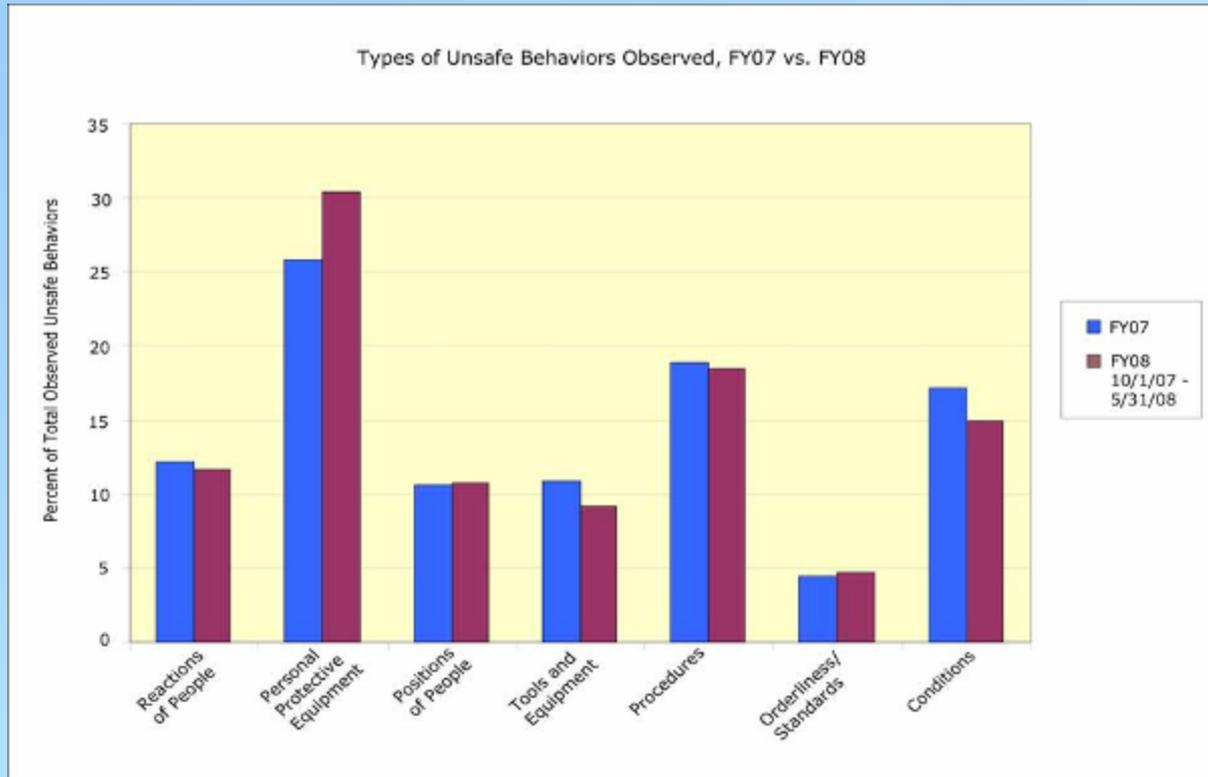
# Infrastructures

- Power
  - Temporary power source from central magnet (Mike)
- Water plumbing (Mike Lenz)
- LV (Steve, Frank)
  - Cabling
  - Distributor
  - Control GUI
- Optical (Steve)
  - BCLK fanout
  - PECL fanout

# To be done for Station-1



1.



2. Site wide emergency drill sometime next week. If at PHENIX follow directions of Paul Giannotti (CAS Watch is our LEC, Paul is backup)

Emergency Information website: <http://www.bnl.gov/lpd/oem/SiteInfo.asp>

Emergency Preparedness brochure: <http://www.bnl.gov/oem/files/pdf/EmergBrochure.pdf>

The office of Emergency Management will conduct a briefing

Mon. Dec 8 at 11:00 AM in Berkner. Also webcast at <http://www.bnl.gov/video>

# 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)