

PHENIX WEEKLY PLANNING

TECHNICAL SUPPORT NON-



10/18/12
Don Lynch

This Week

TECHNICAL SUPPORT ZONE

- Disassemble Sta 1 and DCWest work platforms & DC West Tent - Done
- Replace remaining RS-485 type ADAMs on West carriage with MODBUS/TCP type - Done
- Continue Repairs & Upgrades for MuTr Stations 2&3 N
- Finish MPC S re-install - Done
- Continue MPC N Repairs
- Continue VTX/FVTX Repairs
- Continue VTX Cooling System Upgrade
- Continue RPC3 Gas Recirculation Upgrade
- Install MPC North
- Install Thermocouples on RPC1 North
- Upgrade RPC1 North Cooling
- Continue working on RPC3 shielding
- sPHENIX design support
- MPC-Ex design support

Next Week

- Disassemble Sta 1 and DCWest work platforms & DC West Tent - Done
- Replace remaining RS-485 type ADAMs on West carriage with MODBUS/TCP type - Done
- Continue Repairs & Upgrades for MuTr Stations 2&3 N
- Finish MPC S re-install - Done
- Continue MPC N Repairs
- Continue VTX/FVTX Repairs
- Continue VTX Cooling System Upgrade
- Continue RPC3 Gas Recirculation Upgrade

- Install MPC North
- Install Thermocouples on RPC1 North
- Upgrade RPC1 North Cooling
- Continue working on RPC3 shielding
- sPHENIX design support
- MPC-Ex design support
- Window Washer safety upgrades
- MuID Collar IR staging area support

Substation breaker upgrade/test (CAD)



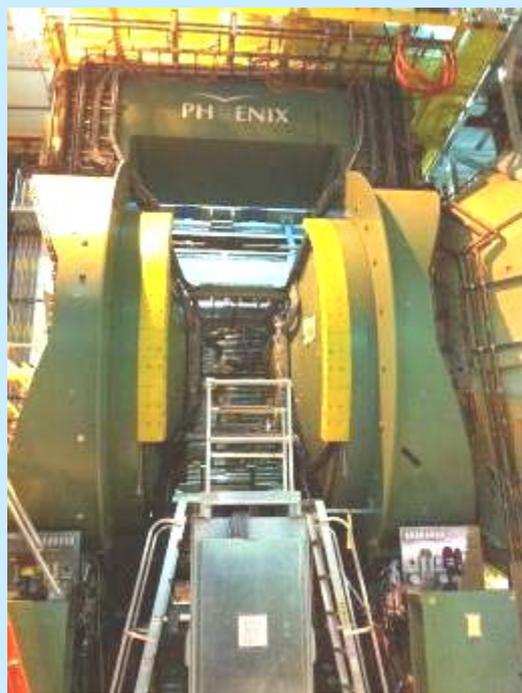
Upgrade & Test to be performed 10/21-22. P. Giannotti to prepare drawings/wiring schemes to CAD for review and config manag. Paul will be present and work with line crew to implement. CAD witness for test?



Scaffolding Storage



VTX/FVTX

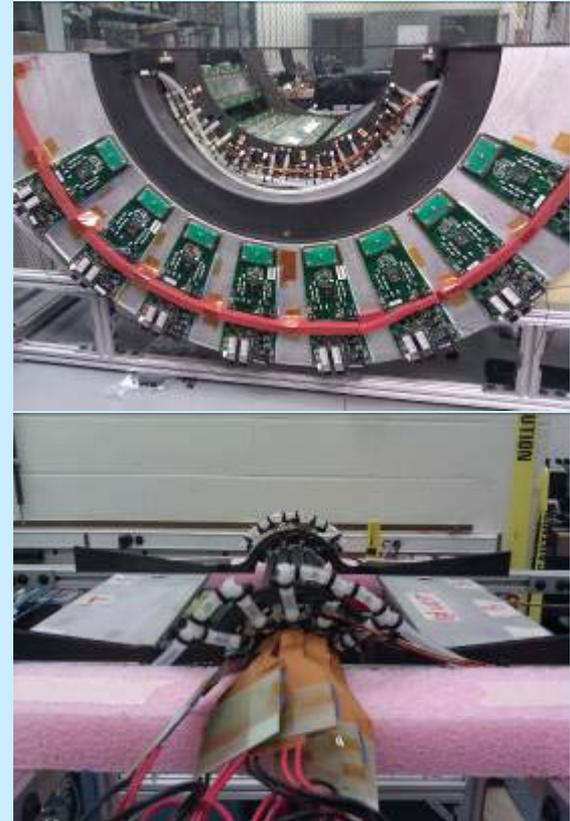


Repairs and testing
in Progress at Chemistry (VTX)
and Physics (FVTX) Departments

TECHNICAL SUPPORT

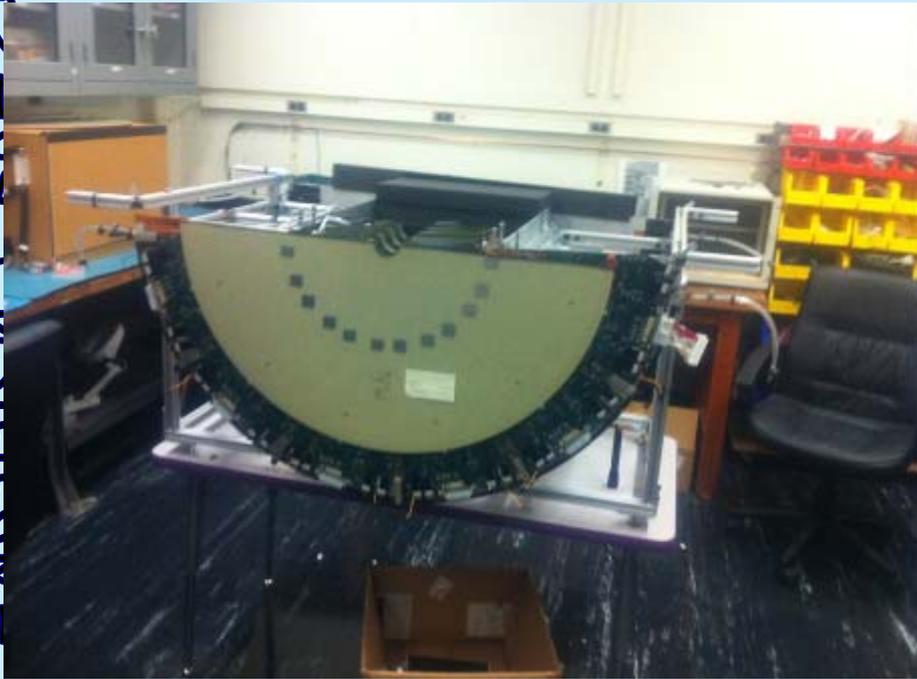
Dates are start dates and the work will be completed over the course of the week Note: would like to improve schedule by 1 week.

- Oct 1: Start B0 West assembly and testing
- Oct 8: Start B1 West assembly, expect to have 2 ladders from RIKEN this week. 1 repaired, 1 class-2
- Oct 15: Test East side detector and receive last 2 repaired ladders from RIKEN
- Oct 22: Complete B1 West assembly and test
- Oct 29: Complete testing east/west sides and prep for VTX/FVTX mating
- Nov 5: Mate VTX and install FVTX
- Nov 12: VTX/FVTX available for survey.
- Nov 19: Ready for installation



WEST
EAST
NON

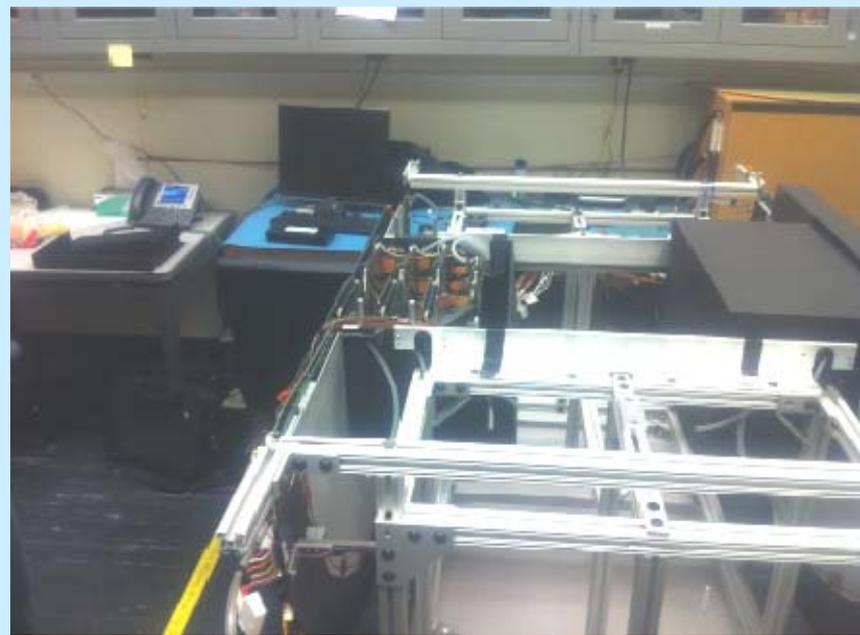
FVTX



FVTX repairs and reassembly on schedule.

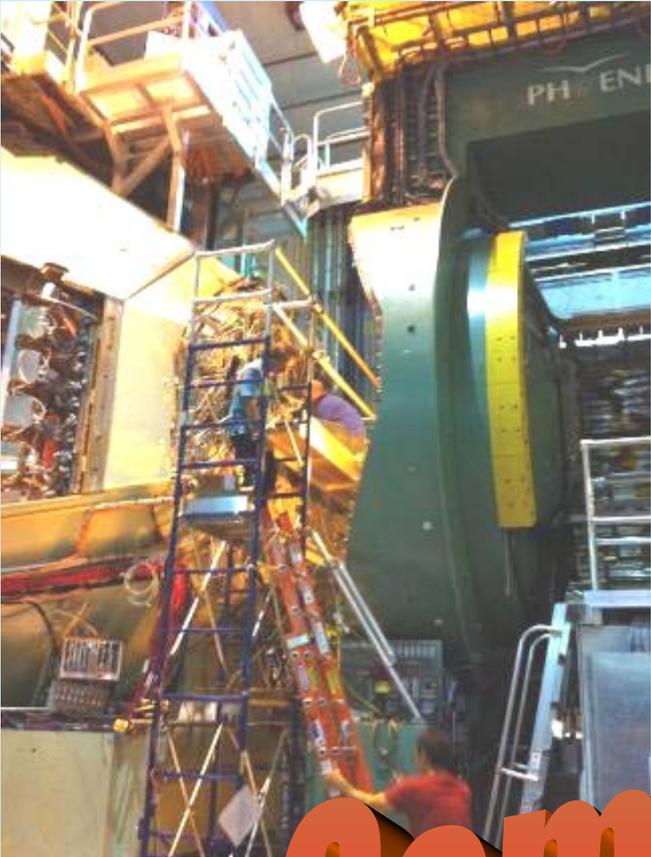
West half is in PHYSICS

East Half is in CHEMISTRY



- Station-1 South re-capacitation and termination

TECHNICAL SUPPORT NON



Completed

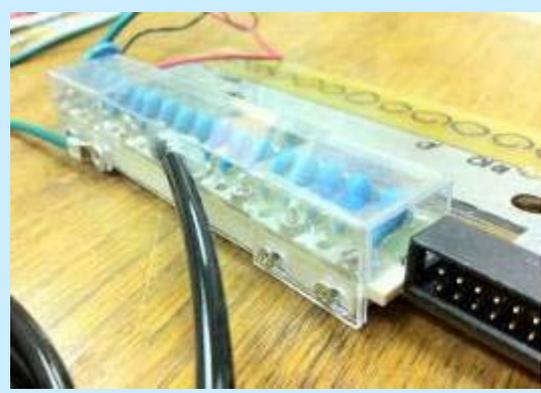
Removed next Monday 10/15

Clamp-on Terminator Installation on North & South Station-3

T
E
C
H
N
I
C
A

Lower clamp-on terminators already installed for both north and south sta-3 (bottom 4 octants)

With new work platforms that reaches all of sta-3; install remaining (upper) clamp-on terminators. **South Done, North In Progress**

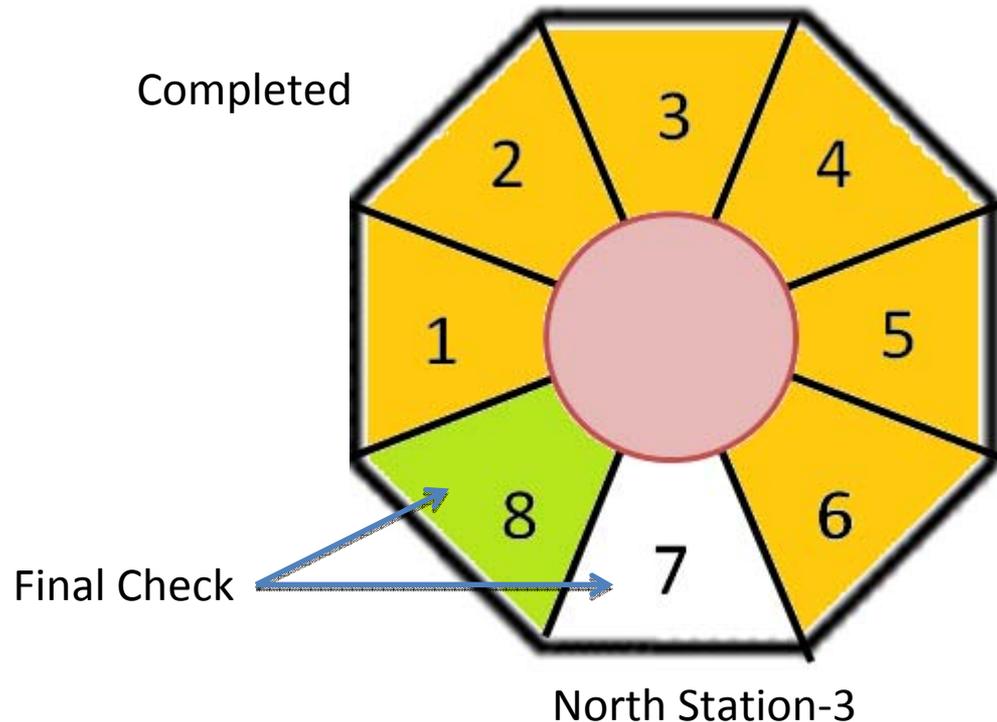


MuTr Recapacitation

MuTr Cross Talk Status

- ☑ Recapacitation to South Station-1 Gap2, Gap3
 - ☑ Anode Terminator Install to South St-2 Top Octants
 - ☑ Cramp Installation to South and North Station-3 Top Octants
- Octants

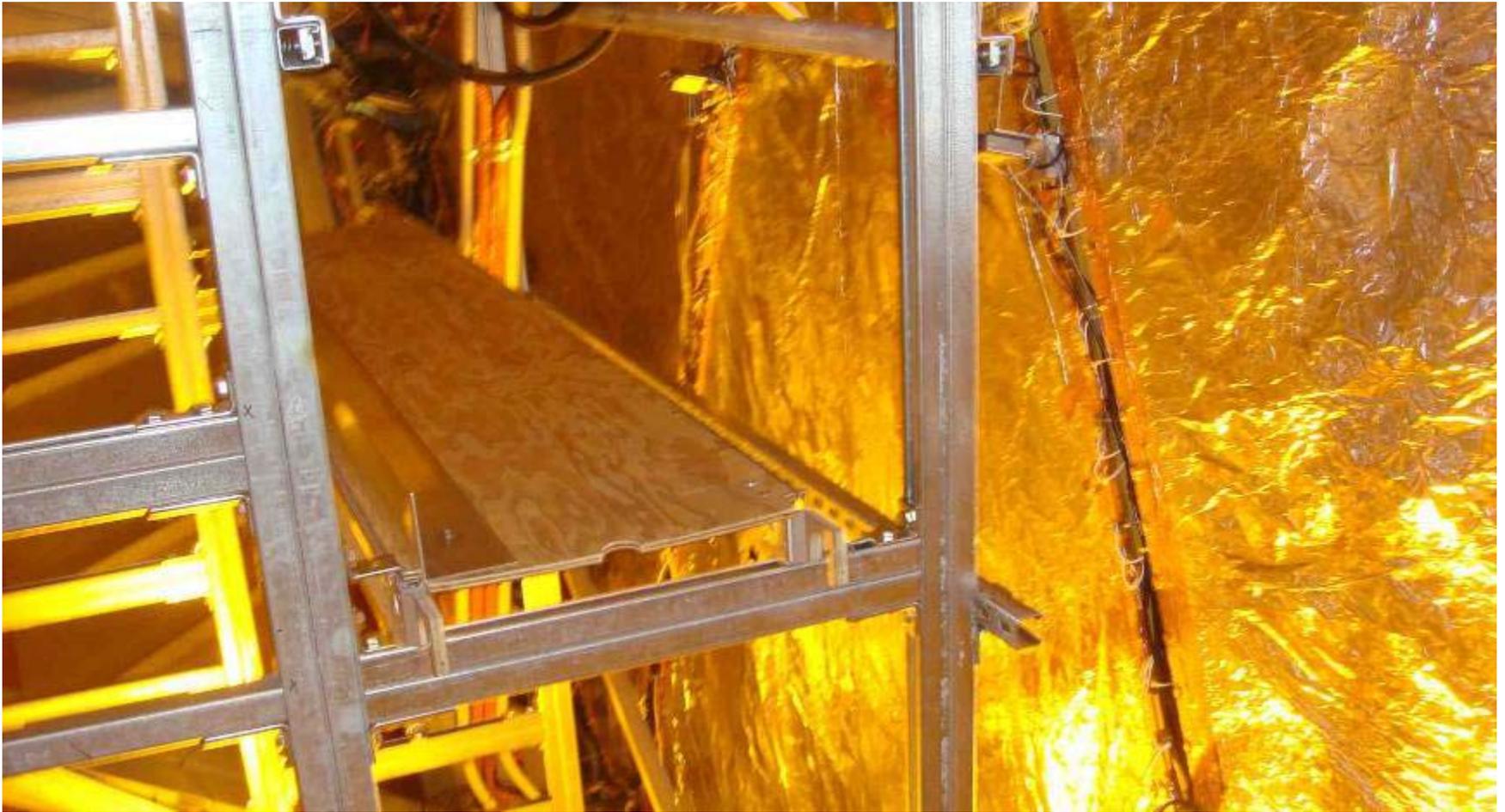
Completed South
Installation on September



Other Achievements

- Fixed Several HV channels (North + South)
- Fixed all North Station-3 HV channels.
- Fixed 3 ADTX boards South and North, respectively.

North Station-3, Octant-7



10/18/2012

Speeded up our work a lot! Thanks Chris.

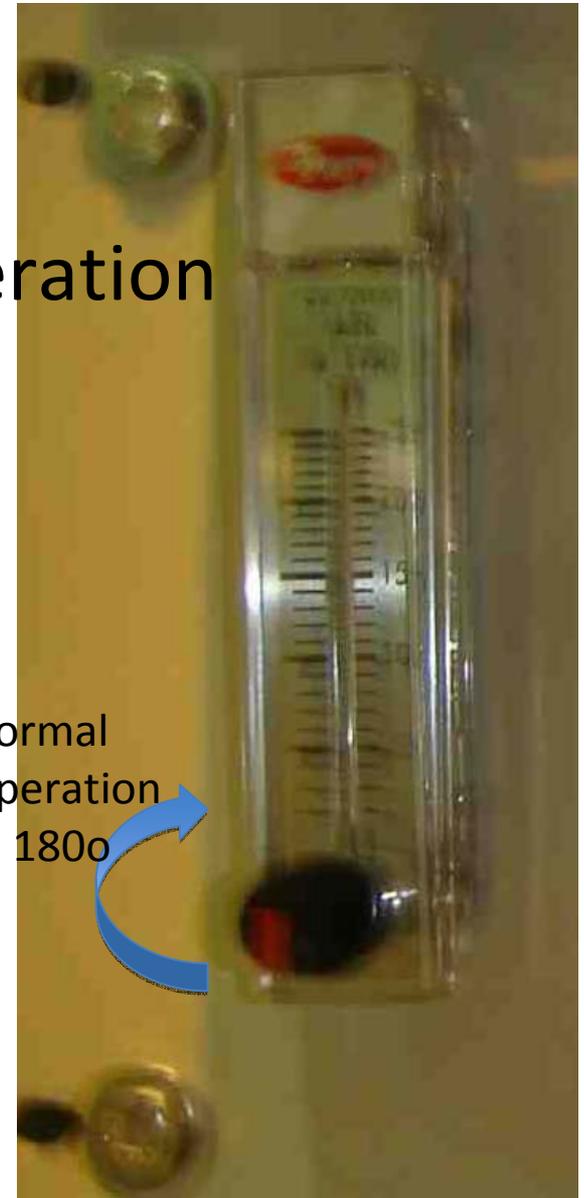
14

Flow Meters

- Optimized flow for normal operation



North order to be re-arranged.



Normal
Operation
-> 1800

Remaining Tasks

- Noise Reduction (South, North) Today, Tomorrow
- HV test North Oct.6,7,8 Oct.27 – Nov. 8
- Optimize Dry Air Flow for Normal Operation today
- Misc ...



MPC Repairs -

- North MPC: At PHYSICS for repairs
To be reinstalled by 10/26
- South MPC: Repairs completed,
reinstalled, testing and new cables in
progress

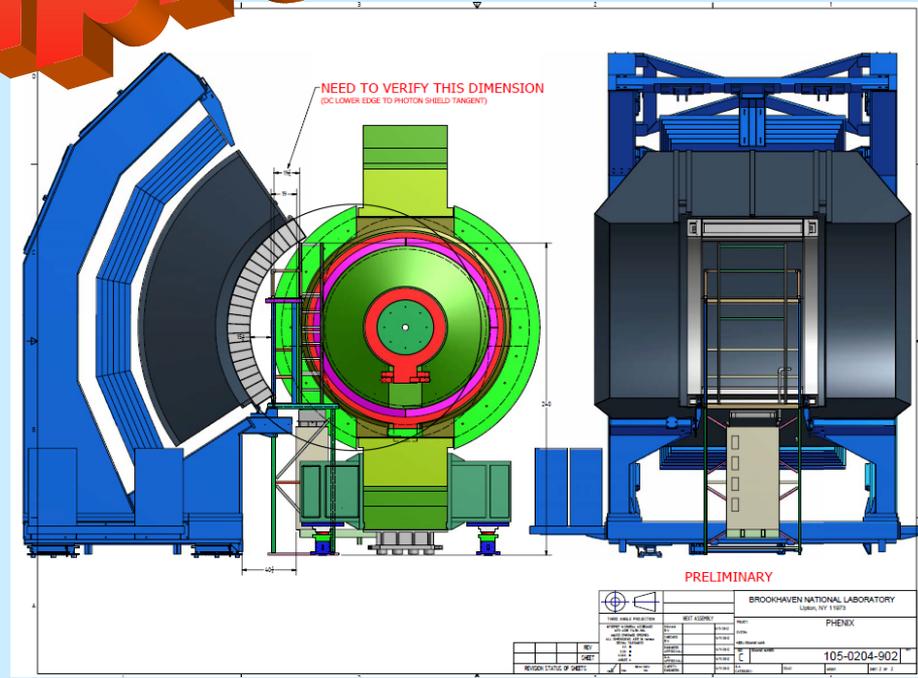
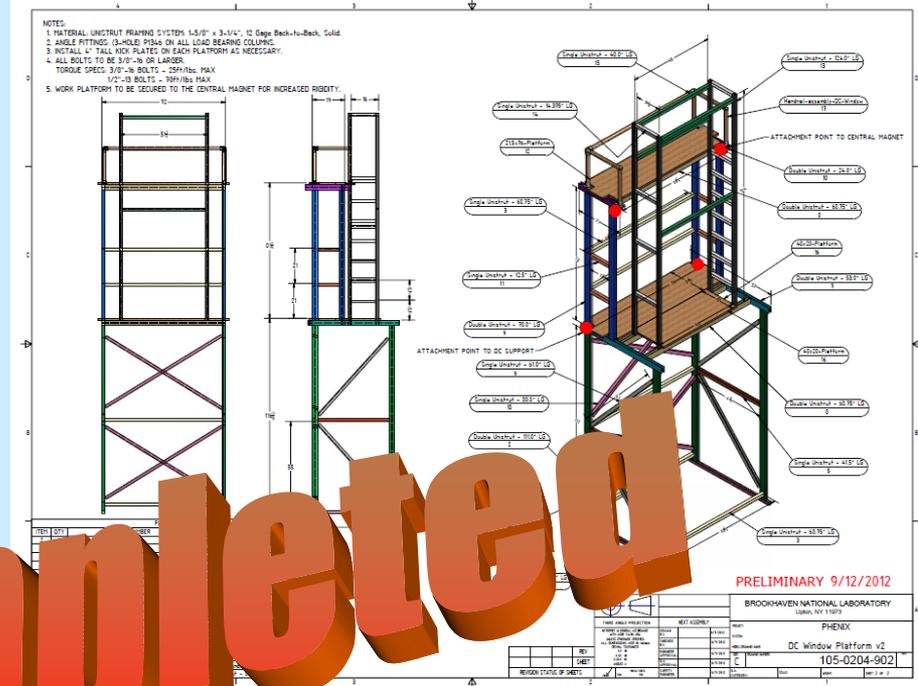


DC West Repairs

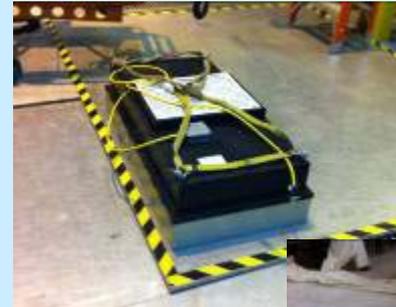
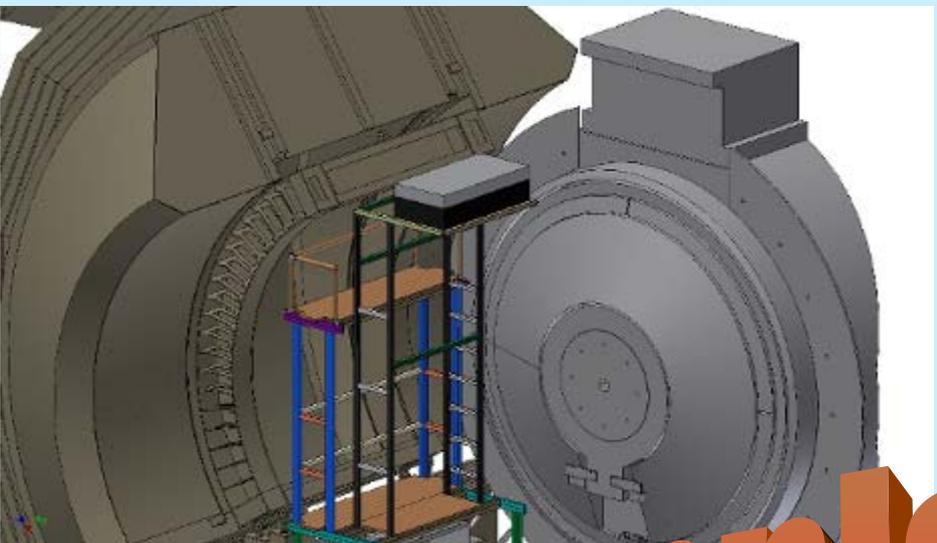
The plan for the DC West Repairs is as follows:

- Gather drawings and materials from DC group - Done
- Make measurements, new drawings and create parts lists as necessary - Done
- Procure/fabricate parts - Done
- Design work platform, protective covering and protect DC west disassembly/ reassembly. All approval received
- Work Permit approved
- Disassemble existing window and sealing components - Done
- Repair/remove broken wires, etc. -Done
- Install new window and seal. - Done
- Leak and functional tests - Done

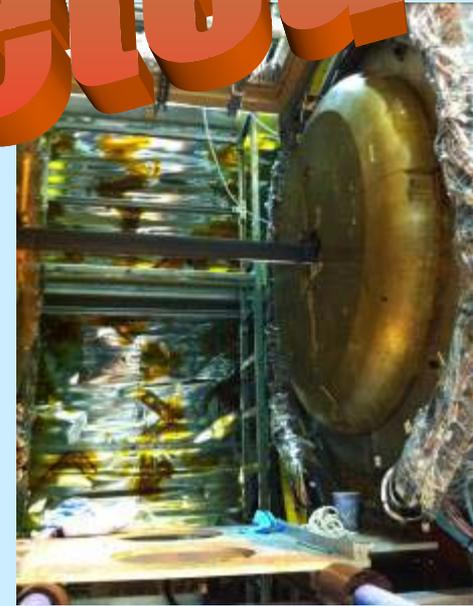
Completed



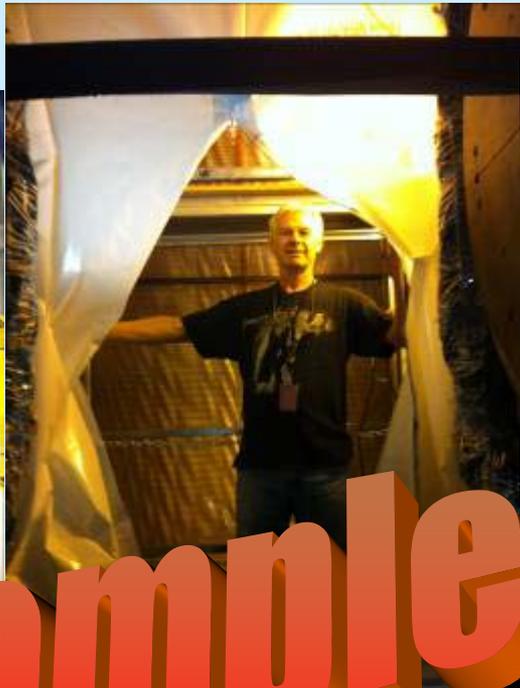
TECHNICAL SUPPORT NON



Completed



TECHNICAL SUPPORT NON



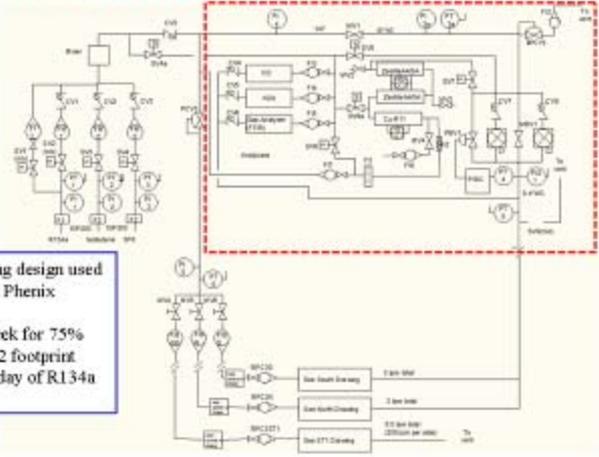
Completed



10/18/2012

TECHNICAL SUPPORT ROOM

Run 12 Shutdown Work Overview Gas/Cooling Systems
Recirculating Upgrade to RPC Gas System



- Based on working design used for many years at Phenix
- Save money
 - \$3k per week for 75%
- Reduces lab CO2 footprint
 - 60 lbs per day of R134a

June 20, 2012

15

RPC Recirculation Upgrade

Recirculation Piping installation - In Progress

GMH rack moving along Purification system controls assembly, installation and testing - November

PC upgrade - November

Analyzer procurement not yet approved



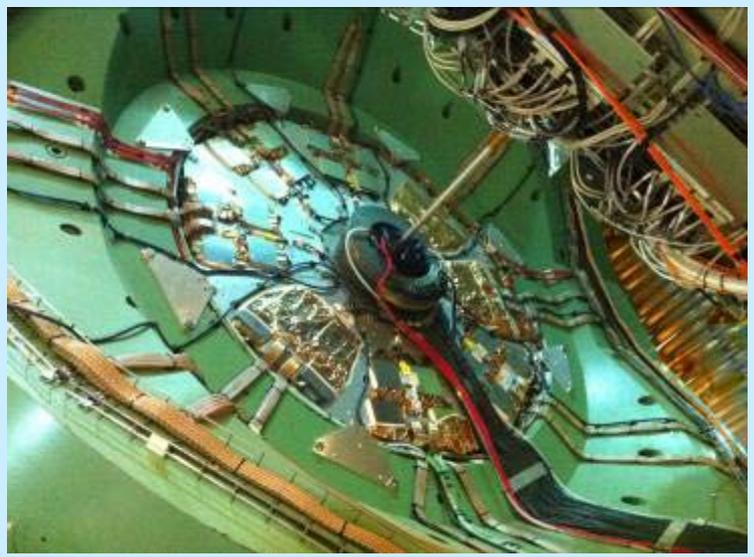
VTX/FVTX Cooling Upgrade

- Piping 90% done
- New filtration system in place, neds to be connected
- Big Wheel manifolds assembled ready for installation
- Chiller 1 repair parts here, need AC tech to Distribution upgrade

RPC Station 1 North and South Cooling Upgrade & Monitoring



South



North

South to be completed this week, Start on North next week

THURSDAY

12:00 PM

RPC1 Cooling

North



South



All components received and ready for installation



10/18/2012

RPC Background Attenuation Project

TECHNICAL SUPPORT ZONE



Looking towards RPC3 North
← East West →



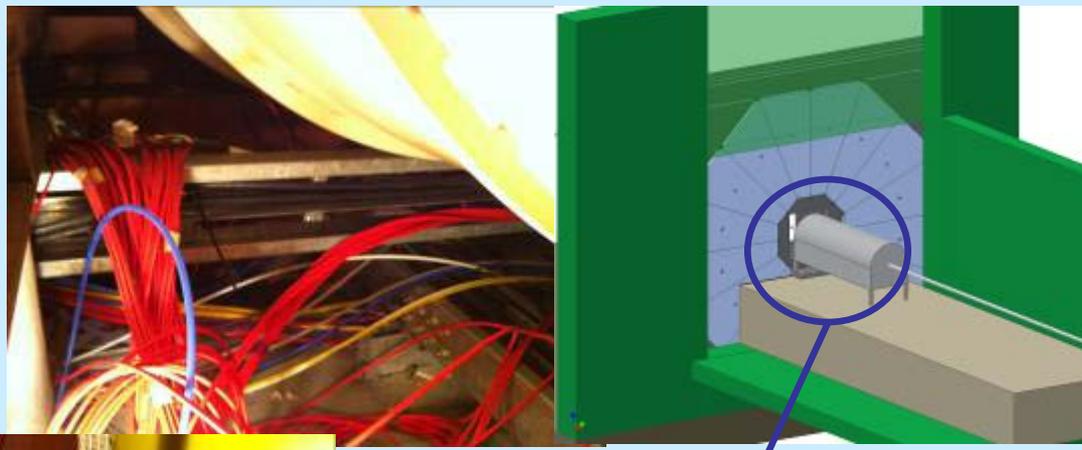
Looking towards RPC3 South
← West East →

Large shielding modifications at Q2 upstream north and south to be planned and installed by CA-D (Dave Phillips) by 12/14/2012

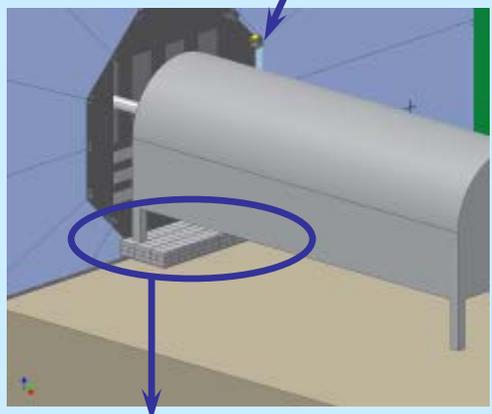
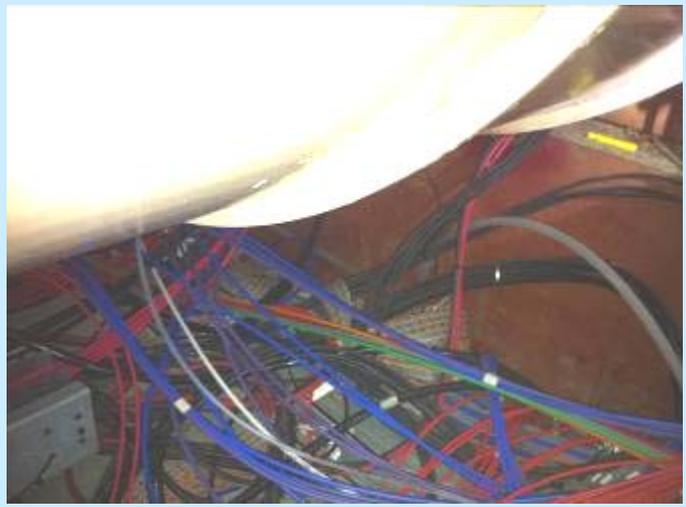
RPC Background Attenuation Project

TECHNICALS

Under DX at RPC3 North
← East West →



Under DX at RPC3 South
← West East →

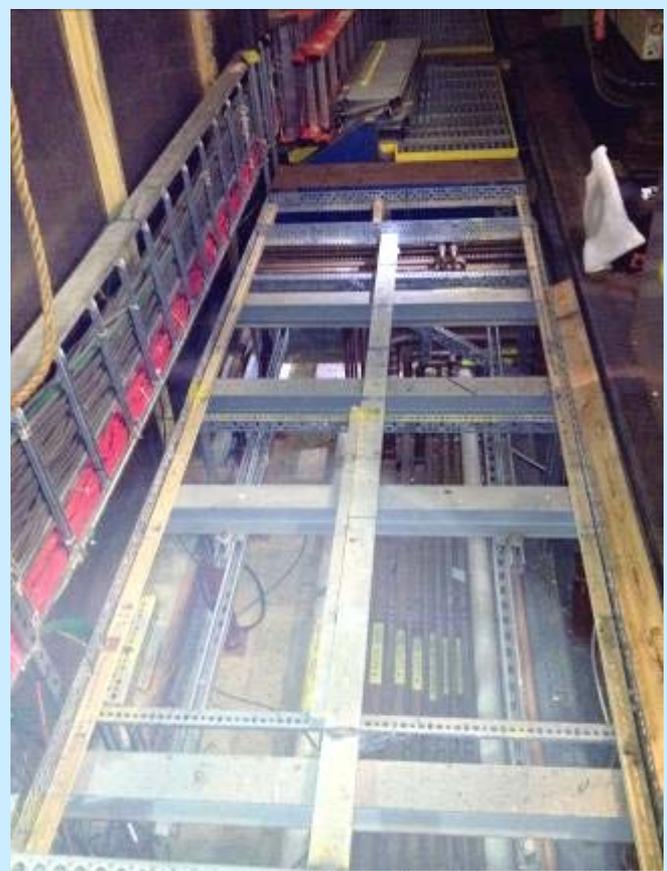


144 Steel bricks, 2x4x8,
stacked in 3 high, 16 wide, 3
rows, respectively by 11/21



TECHNICAL SUPPORT NON

MuID Collar IR Holding Area Support



- Structural support improvements designed
- Parts to be ordered
- Installation this fall prior to EC roll in

Window Washer Remote Pin Removal and Winch/spooler safety upgrades

Space available:
16.5" x 27" x 28" h



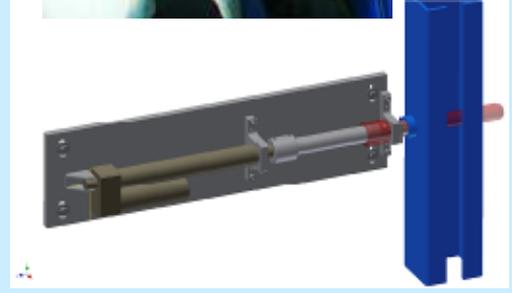
COLUMBIA WINCH & HOIST
Manufactured by Allied Power Products, Inc.

AutoAdvance LINE SPOOLER
ALL FRAME SIZES

Create perfect line spooling for any winch or hoist.

Auto Advance Line Spoilers eliminate the need for a fixed sheave precisely located in relationship to the drum to achieve proper line spooling.

Auto Advance Line Spoilers work with any size of line and even with differing sizes of line on the same drum to create optimal line spooling. Large diameter sheaves in the Auto Advance Line Spooler ensure the line is not damaged by small radius bends.



Other Subsystem Work and Future Upgrades related Work

TECHNICAL SUPPORT

New Electrical Work for 2012 Shutdown, to be accomplished as time is available

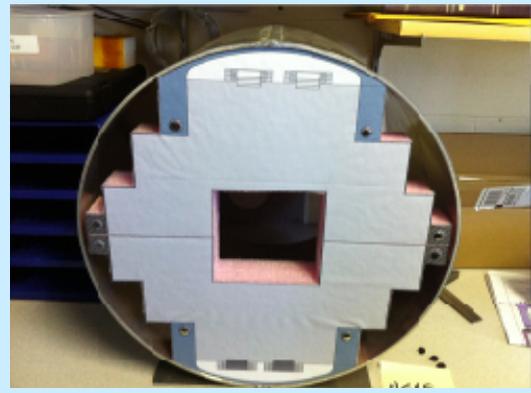
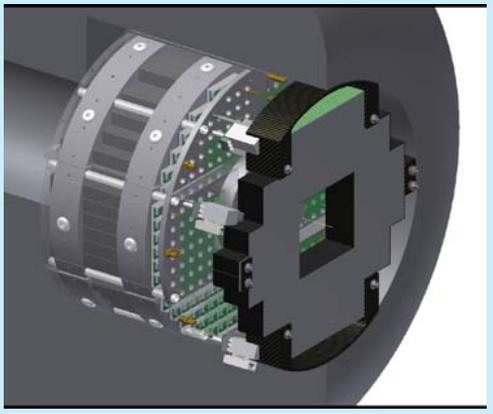
- 1. Add Transient Surge Suppressor to 3 phase power panel on the Central Magnet Bridge. - In Progress
- 2. Remote breaker switch - parts ready install **re-scheduled for 10/21-22/2012**

PHENIX Electronics Upgrades

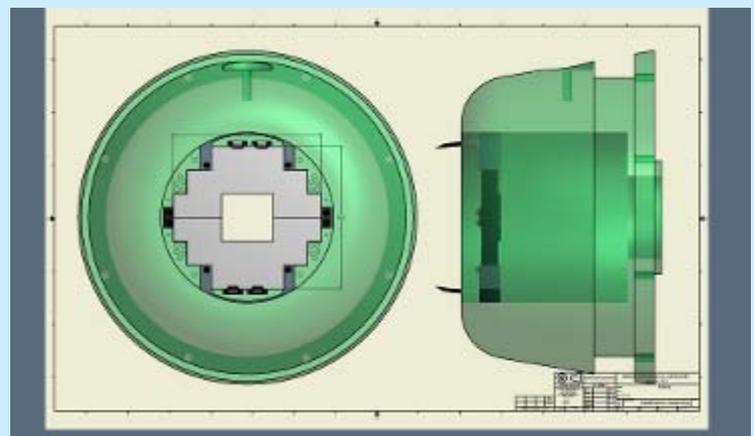
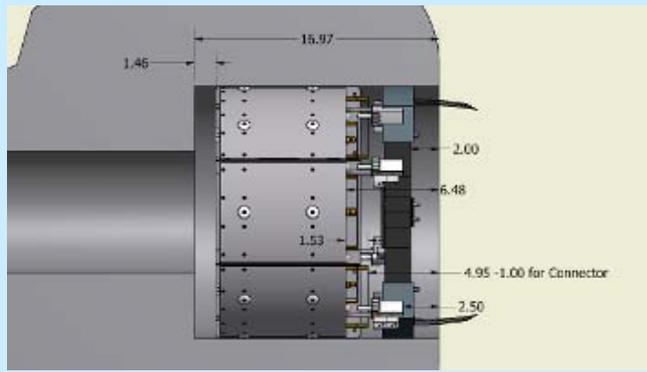
- 1. **Replace remaining RS-485 type ADAMs on WC with MODBUS/TCP type. - Done**
- 2. Install second MODBUS server in counting house. - TBD
- 3. Install MTP patch bay and jumpers for FVTX in counting house. - November
- 4. Add several backup MTP fibers from CH to IR - November

Additional Work for 2012, not yet scheduled, to be fit in as available

- 1. Replaced aging magnet hoses (CM only) - In Progress
- 2. identify obsolete services passing through sill and remove them. - As time is available
- 3. Cover for services coming from IR through sill. - After Shutdown
- 4. Plan for stripping out TEC electronics and services to free up TEC racks. - As time is available
- 5. Add limit switch and improved spooling control for window washer cable. - In progress
- 6. Improve structural support for MuID collars in IR Holding Area - November



Foam Mockup



MPC-Ex approved, design work in progress, new cables for MPC South installed

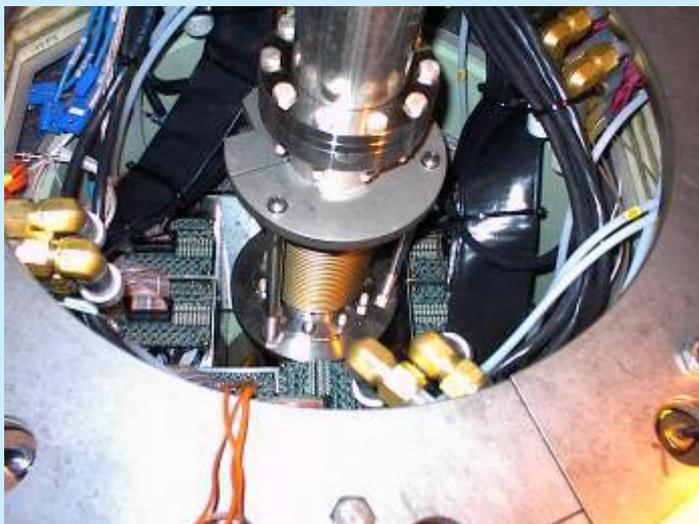
TECHNICAL SUPPORT NON



Existing vacuum bellows anti-squirm
In MPC S Cavity



Proposed vacuum bellows anti-squirm
In MPC S Cavity to accommodate MPC-Ex



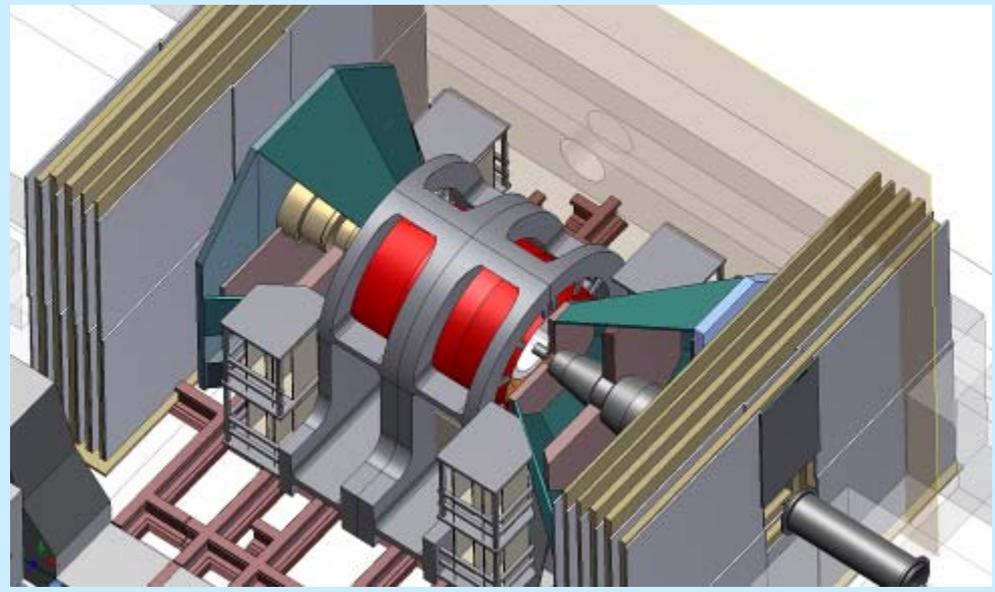
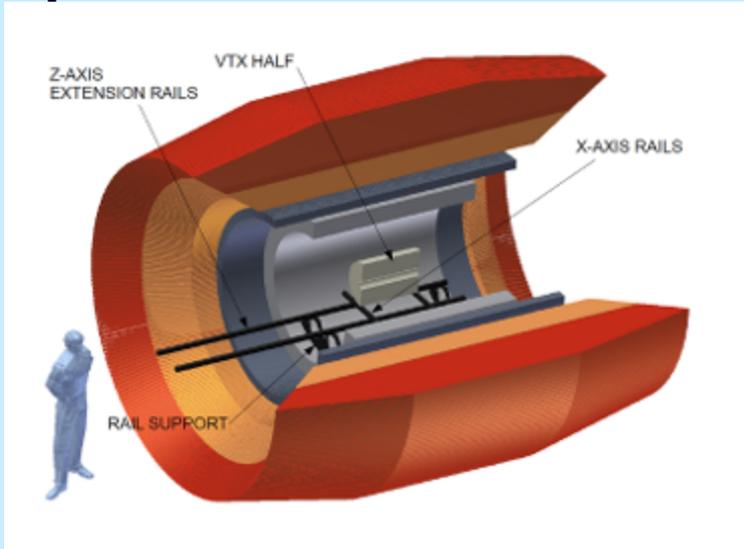
MPCS Flat cables replaced with round cables.

sPHENIX Proposed Upgrade

Work continues evaluating engineering tradeoffs for EMCal and HCal design, materials, etc.

BNL Review last week

Prototype HCal and EMCal in progress



PHENIX

Remaining Work Permits/Procedures for Shutdown 2012

- RPC Background Attenuation Shielding @ DX Magnets - In Progress
- Window Washer autospool and remote pin removal upgrade
- MuID Collar IR Holding Area Support
- End of Shutdown (PHENIX)

TECHNICAL SUPPORT ZONE

MuTr Station 1 Re-cable, re-hose and test
Re-capacitation and air manifold upgrades

Done

Station 3 South (upper half)

Done

Remove Station 2/3 South scaffolding

10/26/2012

Re-install MMS lampshade

10/31/12

Capacitor Clamps and air manifolds

11/9/2012

Remove station 2/3 scaffolding

11/16/2012

RPC 1 South cooling upgrade

11/16/2012

Remove Station 1 Scaffolding

10/15/2012

Move CM South, Open station 1 North

10/16/2012

VTX Cooling System Upgrades

In Progress 10/15

RPC Recirculation Upgrade

11/2/2012

Repair upgrade, reassemble VTX/FVTX

In Progress - 10/26

Test, survey (at Chemistry and IR) and re-install VTX/FVTX

10/26-11/16/2012

Substation breaker upgrade/test (CAD)

10/19-20/2012

DC West maintenance (replace window)

In Progress 10/15

RPC Shielding under DX magnets

11/21/2012

RPC tunnel Shielding (Dave Phillips)

12/14/2012

Reinstall MPC North

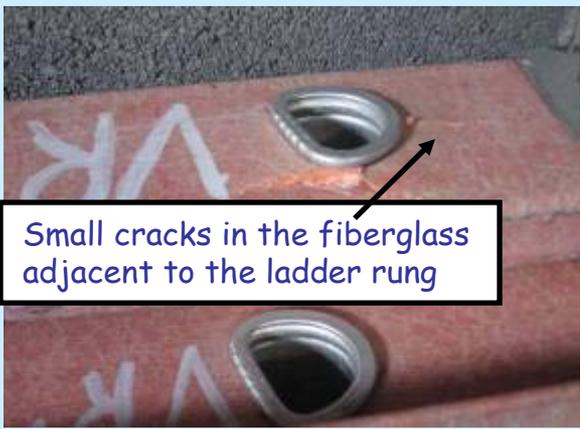
10/26/2012

TECHNICAL SUPPORT ZONE

RPC1 North Cooling upgrade	10/26/2012
RPC1 North Thermocouples	10/26/2012
Window Washer pin & spool upgrades	11/21/2012
MuID IR storage support	11/21/2012
Veterans Day Holiday	11/12/2012
Re-install MMS lampshade	11/9/2012
Re-install MMN access panel on lampshade	11/21/2012
Pre-run commissioning and prep for run 13	11/1-12/31/2012
Prep for EC roll in	11/12-11/21/2012
Thanksgiving Holidays	11/22-23/2012
Roll in EC	11/26-11/30/2012
Prep IR for run	12/3-12/7/2012
Pink/Blue/White sheets	12/7-12/21/2012
Christmas Holidays	12/24-25/2012
Start run 13	1/1/2013

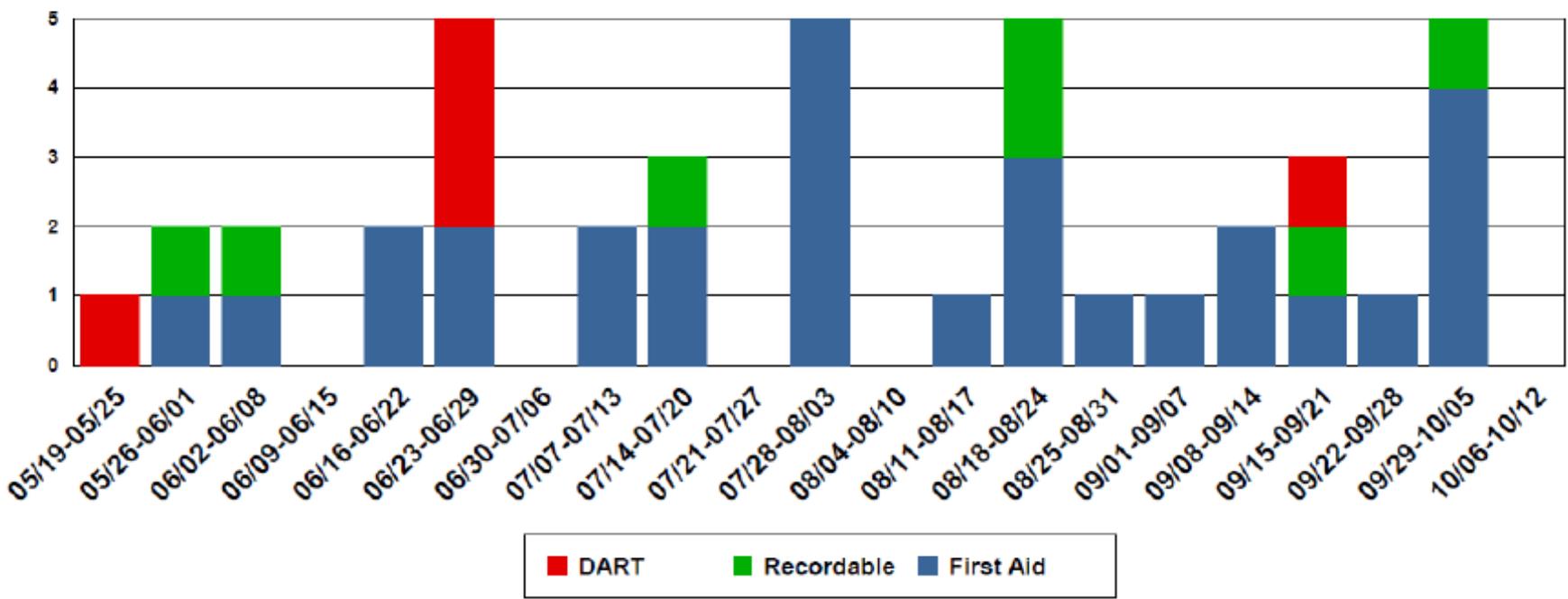
TECHNICAL SUPPORT

From Ray Karol, ladder incident at non-DOE managed location



Small cracks in the fiberglass adjacent to the ladder rung

Injuries Per Week As of 10/12/2012



Injury Status:

FY13 YTD: DART – 0, TRC – 1, First Aid – 4

FY12: DART – 17, TRC – 35, First Aid – 70

FY11: DART – 30, TRC – 44, First Aid – 45

FY12 Injury Listing: <https://intranet.bnl.gov/esh/shsd/seg/OccInj/BNLInjuries.aspx>

Recent Injuries

10/5/12	First Aid	An employee was carrying equipment downstairs, which got hung up and the employee injured their shoulder. At the OMC, first aid was given. (Event Link)
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TECHNICAL SUPPORT NON

Recent Events

10/10/12	Non-Reportable	There was a reported failure of an I/O block used with an interlock system for the laser shutter. There was correct indication of the failure. The system defaulted to a fail-safe condition. (Event Link)
10/8/12	Non-Reportable	A puddle of liquid was found near the Photon Sciences forklift located just beyond the lobby area of Building 740. This substance was determined to be acid from the batteries of the charging forklift. The charging process was shut down, and the BNL emergency number was called. BNL Fire/Rescue responded and neutralized the acid. Representatives from Industrial Hygiene and Environmental Protection Divisions responded to evaluate the spill. The spill was less than a liter, there was no release to the environment, and there were no injuries. (Event Link)
10/7/12	Non-Reportable	A Lab Protection employee used the gas station on Sunday approximately 2pm. After filling the gas tank, the employee drove away prior to removing the nozzle. The nozzle is designed to break away with minimal damage. There was no environmental release, and no injury. (Event Link)
10/6/12	Non-Reportable	Employees were using a propane powered fork truck outside Building 479 and noticed a faint propane smell. They discontinued use of the truck and attempted to isolate the cylinder. They were unable to isolate the leak, and called Fire/Rescue. There was a leak in the hose under the driver's seat. The propane cylinder was turned off and removed. (Event Link)

Where To Find PHENIX Engineering Info

TECHNICAL SUPPORT NON



We are coming down the home stretch, pretty much on schedule. Let's continue to do our work carefully and safely, taking time as necessary to do the job once, right and safely, staying within our limits as we approach run 13.

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

