

# PHENIX WEEKLY PLANNING

TECHNICAL SUPPORT ZONE



7/19/2012  
Don Lynch

TECHNICAL SUPPORT ZONE

- Move EC to AH
- Move MuID collars to AH
- Remove MPC North
- Continue de-cabling VTX/FVTX
- Prep for MuTr/MuTrigger work
- Check out requested new shielding in N & S tunnels for RPC
- Finalize DC West upgrade design
- Electrical upgrade and temporary electric in AH
- sPHENIX design support
- MPC-Ex design support
- Chris P. Wedding

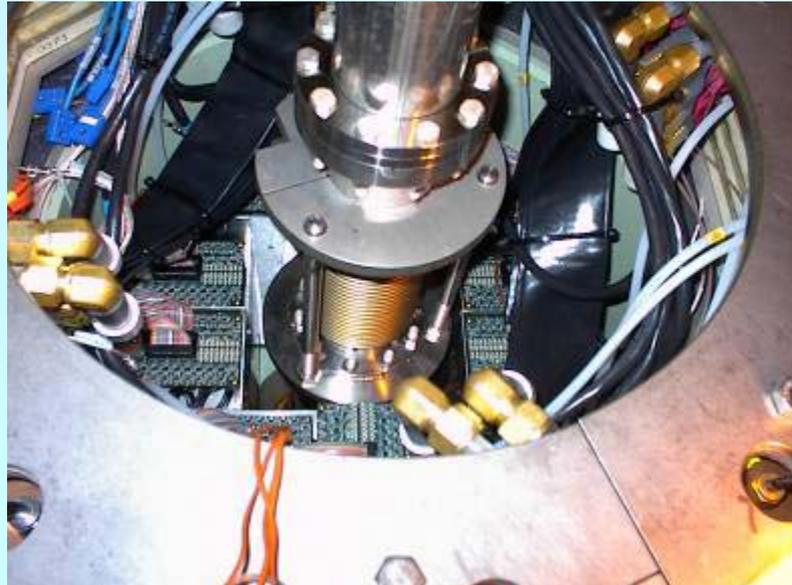
## Next Week

- Finish MPC North Removal
- Move VTX/FVTX to Chemistry
- MPC-Ex measurements
- Move CM north
- Prep for MuTr Station 1 South & Stations 2&3 N&S
- Prep for DC West
- sPHENIX design support
- MPC-Ex design support

### MPC repairs

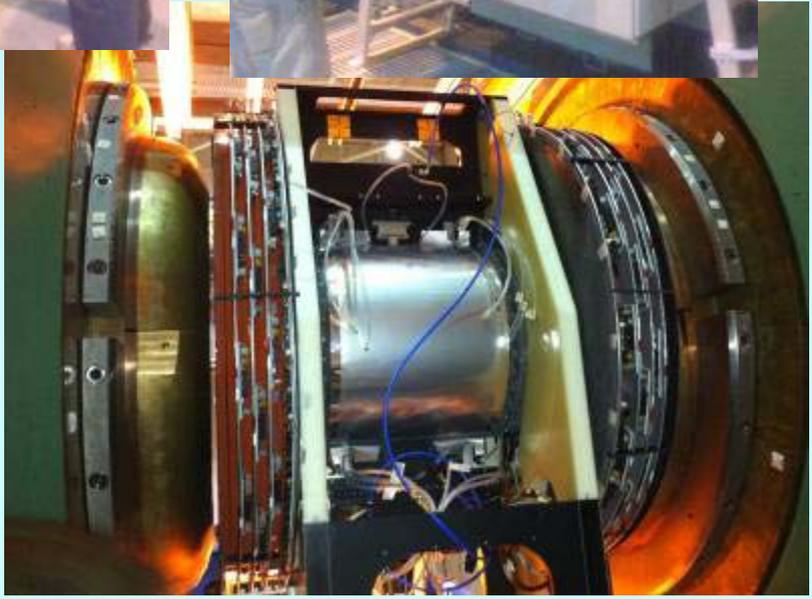
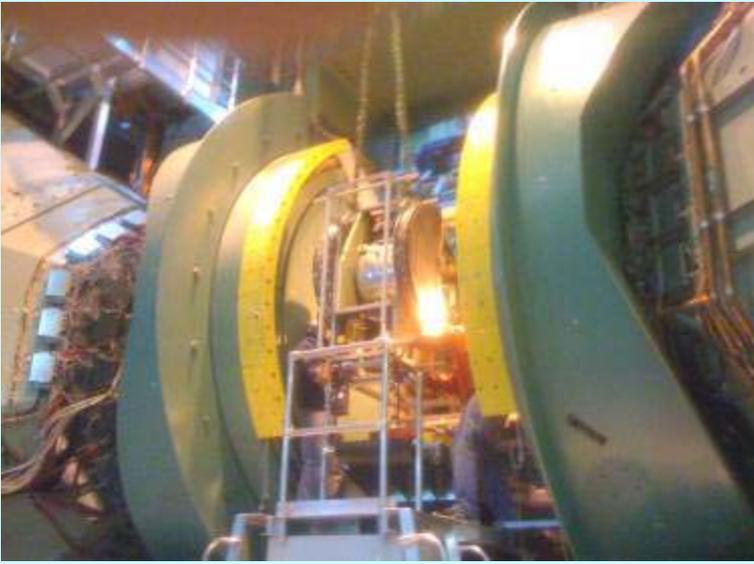
Need CAD manlift week of 7/9 - Asked for at CAD coord meeting

WP Approved



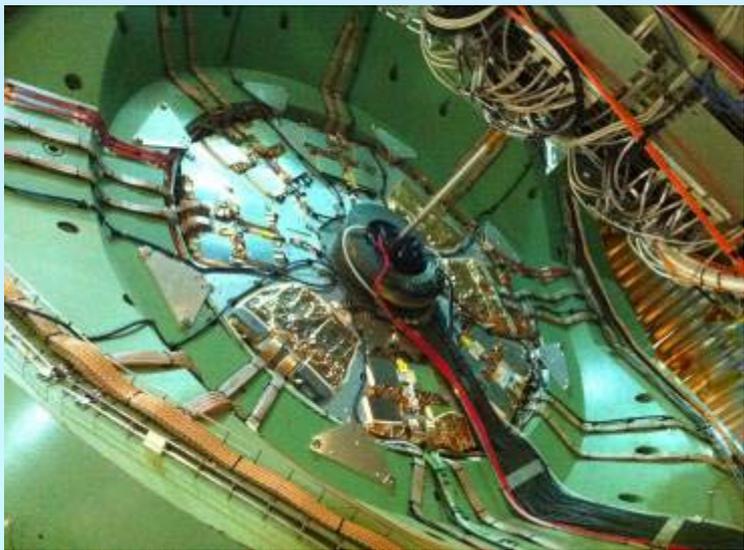
VTX Installation 2010 & 2011. 2012 Removal and re-installation will be same.

TECHNICAL SUPPORT NON



# RPC Station 1 North and South Cooling Upgrade

TECHNICAL SUPPORT



North



South

Work Permit Done

# RPC Work

Rusty Towell

July 19, 2012

# Incoming Shielding

east



**North**

west

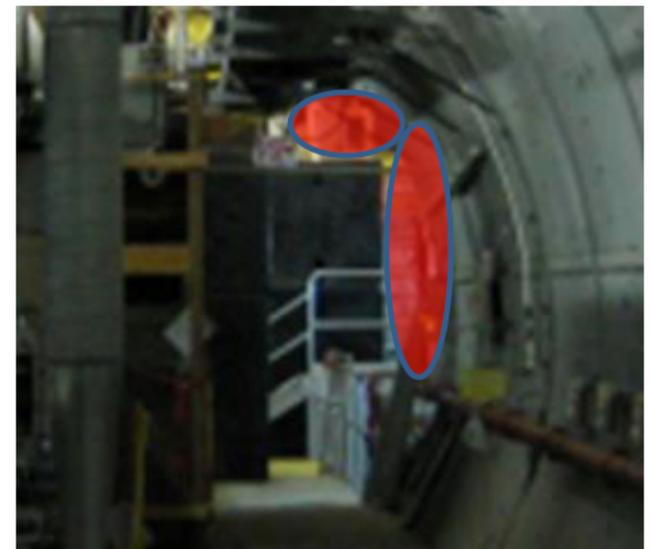


west



**South**

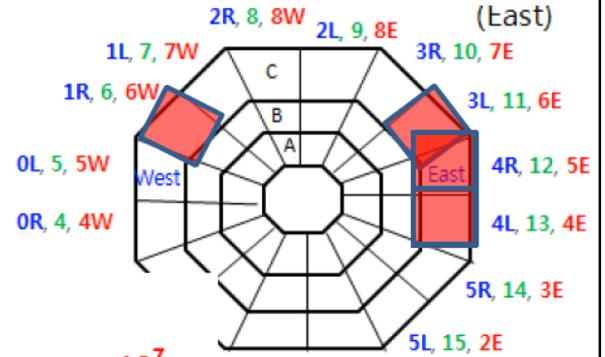
east



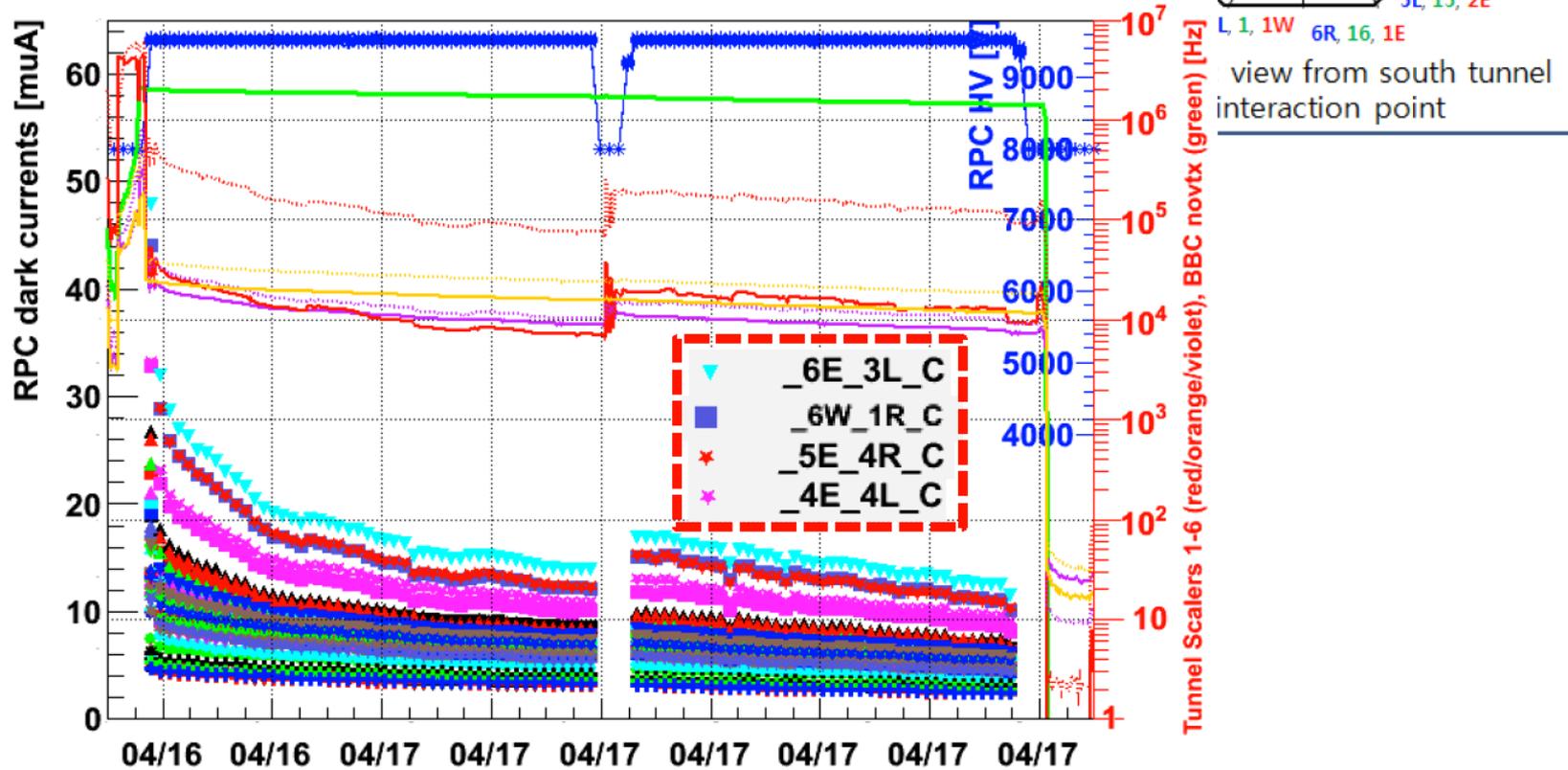
 : open area from Q2/spin rotator

# 1c) Run12 pp510 Fill, RPC3 South dark currents

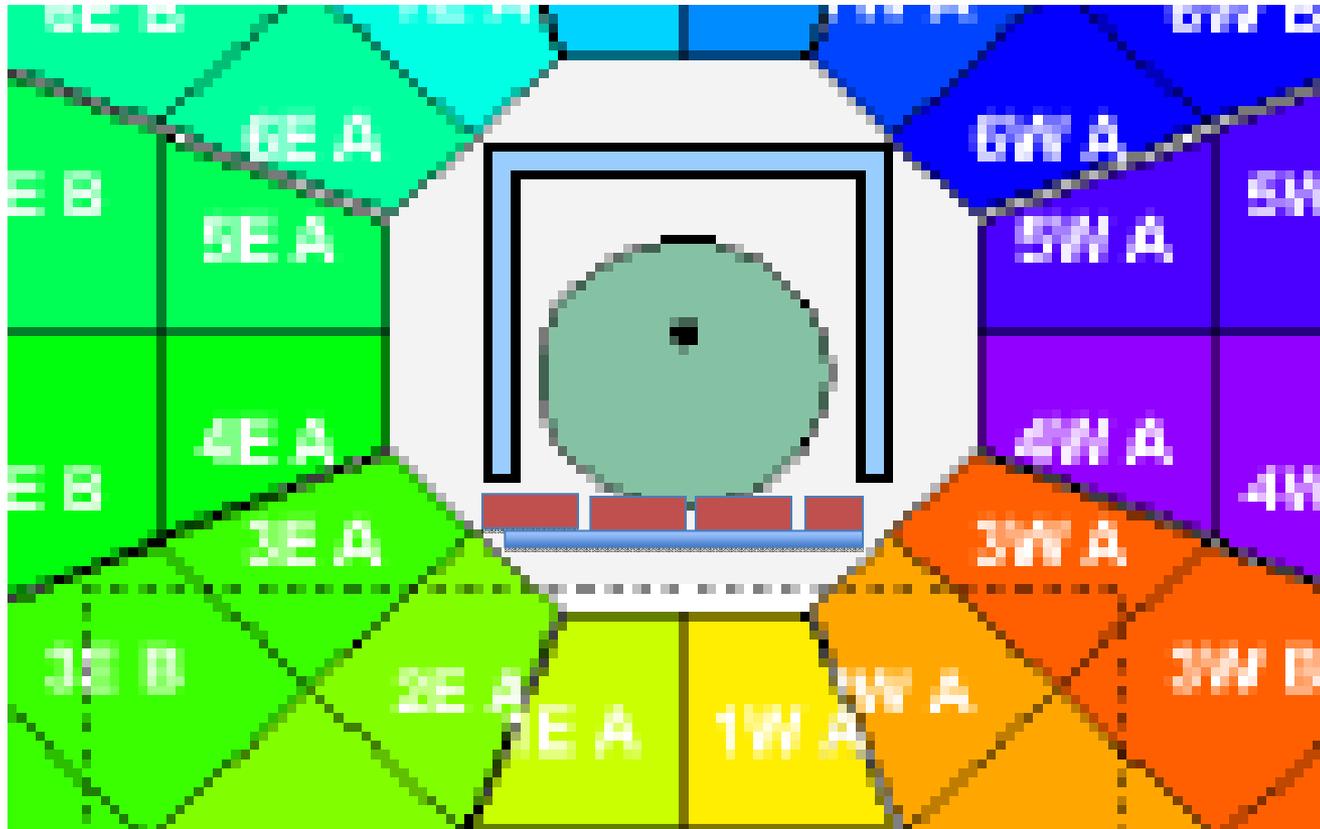
- Highest dark currents at areas where shielding open from Q2/spin rotator



RPC1,3 South Dark Current and High Voltage by Channel, Scaler Rates



# Outgoing Shielding



# Other RPC Requests

- Thanks for the new AC unit, but we need another unit and/or fix other old unit.
  - The RPC factor temperature is always 26-29 C without cosmic stand powered.
  - Maximum safe limit for our spare RPC1s is 26.
- Gas system turned on. Thanks. Need a sample taken.
- List of dead/hot RPC1 channels from run 12 have been made. We'd like access to RPC1N to work on this. ~ half a day.
  - Need manlift and power to CM racks.
- Thanks for all the help!

TECHNICAL SUPPORT ZONE



Looking towards RPC3 North  
← East                      West →



Looking towards RPC3 South  
← West                      East →

# RPC Background Attenuation Project

TECHNICAL SUPPORT NON

Under DX at RPC3 North  
← East                      West →



Under DX at RPC3 South  
← West                      East →





TECHNICAL SUPPORT NON

• Station-1 South re-capacitation and termination



WP Submitted



vacuum lifting fixture



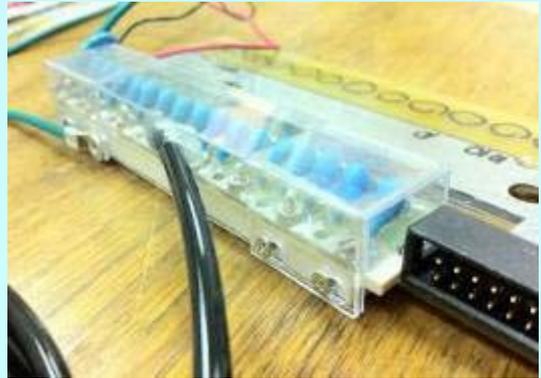
view when sta-1 removed (south)

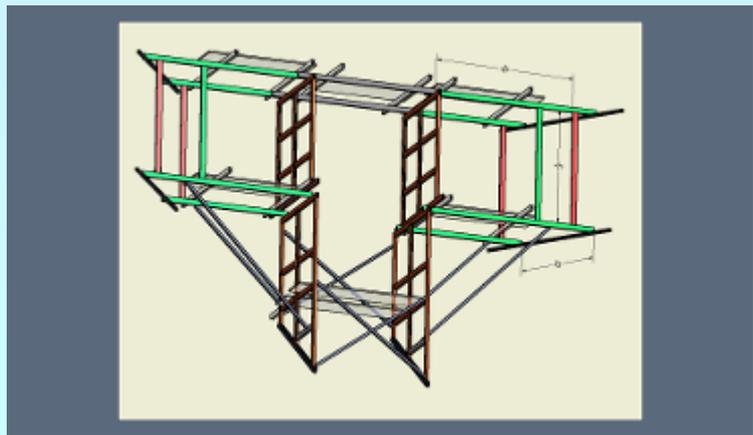
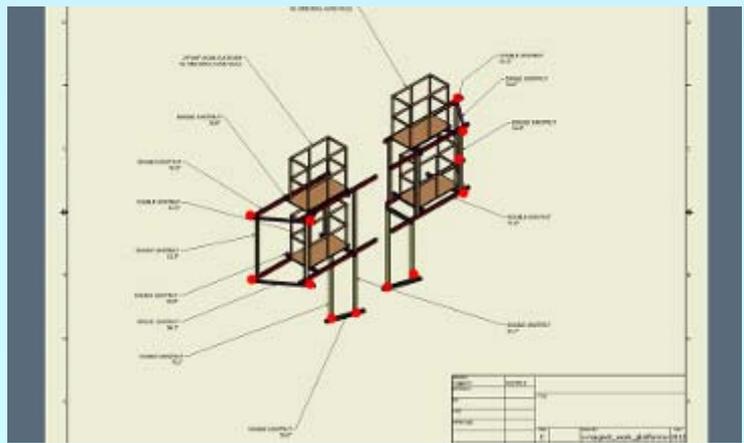
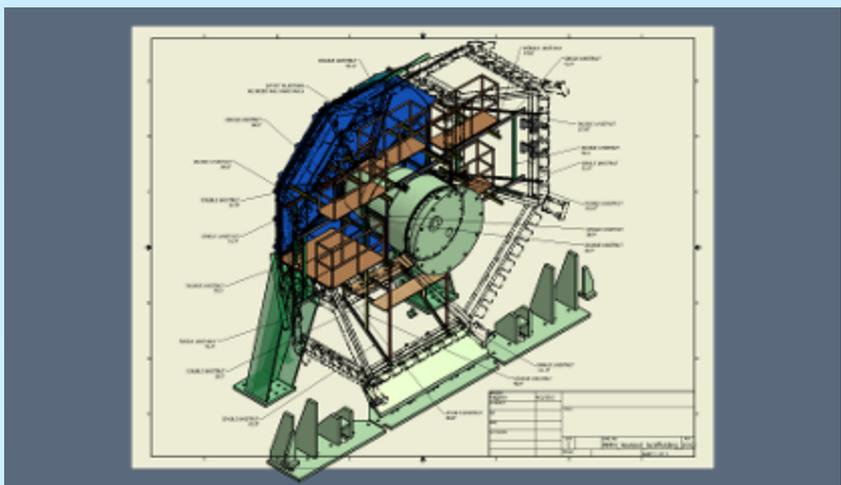
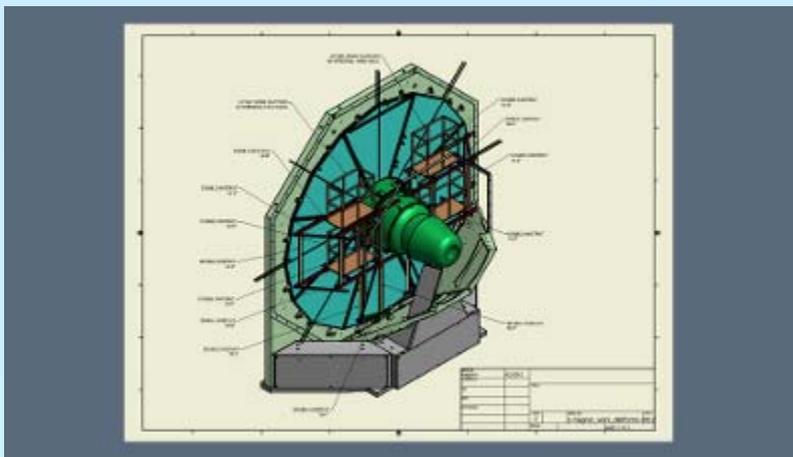


# Clamp-on Terminator Installation on North & South Station-3

- 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.
- WP Submitted

2 WP's Submitted (N & S)

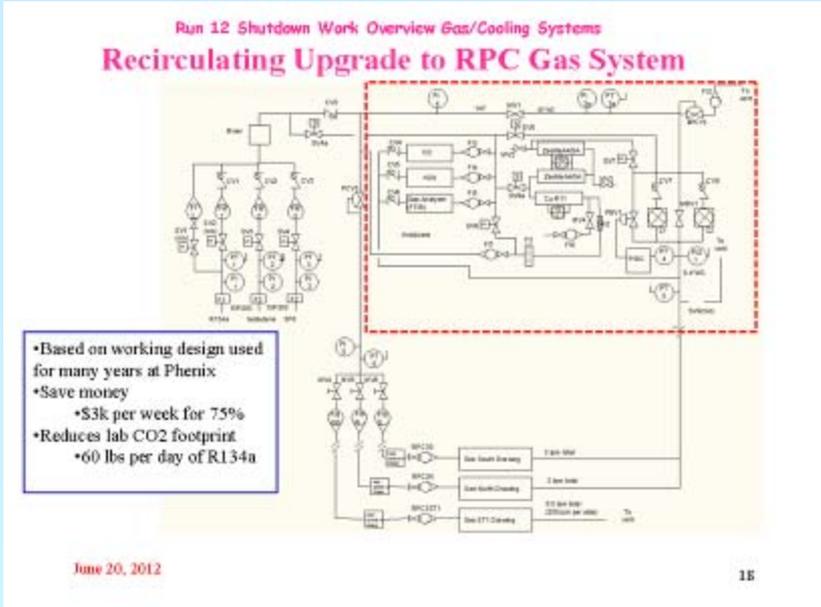




MMS Work Platforms

MMN Work Platforms

Design Approval Done, Bargaining Unit Agreement (Almost)



RPC Recirculation Upgrade

VTX/FVTX Cooling Upgrade



TECHNICAL SUPPORT ROOM

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

- 1. Support CAD replacement of Assembly Hall 480V Fused Switch Panels #8H-1, 8H-2, and 8 EMH1. Coordinate temporary power patch while work is being performed and minimize impact on shutdown work.
- 2. Add the Assembly Hall Crane lockout/contactors/ indicator light key switch circuit - similar to IR Crane.
- 3. Add Transient Surge Suppressor to 3 phase power panel on the Central Magnet Bridge.
- 4. The Gas Mixing House Breaker Panel for the Gas Mixing side is almost out of spare breaker slots and needs to be reviewed for increased capacity panel to replace it.
- 5. New computer rack replacements/additions for upcoming Run 13 & Rack Room computer infrastructure changes involving power distribution circuit (UPS and normal AC power) re-work

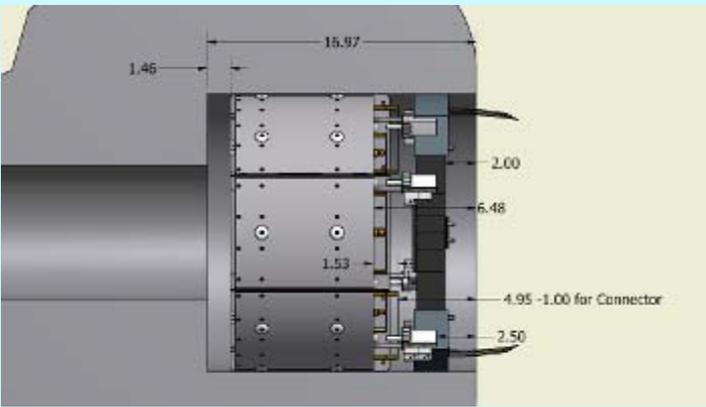
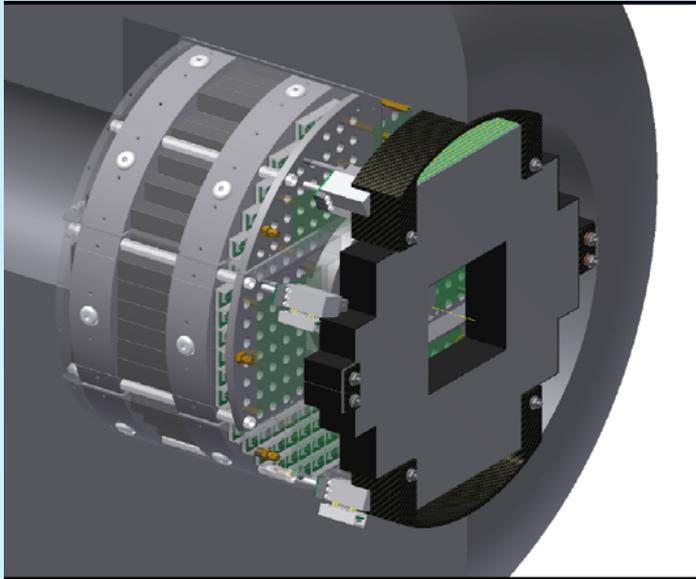
Additional Work for 2012, not yet scheduled, to be fit in as available

- 1. Replaced aging magnet hoses (CM only)
- 2. identify obsolete services passing through sill and remove them.
- 3. Cover for services coming from IR through sill.
- 4. Plan for stripping out TEC electronics and services to free up TEC racks.
- 5. Add limit switch and improved spooling control for window washer cable.

# PHENIX Shutdown 2012 Electronics Upgrade /Repair

TECHNICAL SUPPORT ZONE

- Replace remaining RS-485 type ADAMs on West carriage with MODBUS/TCP type.
- Install Ethernet switches and MODBUS/TCP ADAMs on Central Magnet arm.
- Install second MODBUS server in counting house.
- Install MTP patch bay and jumpers for FVTX in counting house.
- Add several backup MTP fibers from CH to IR



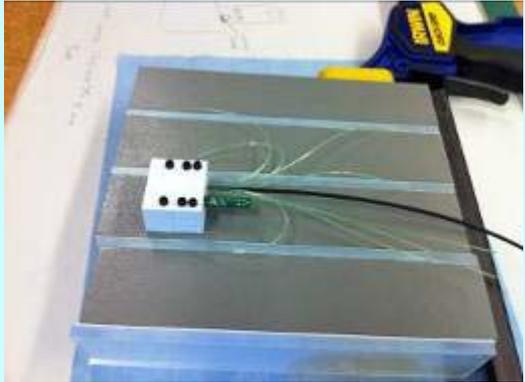
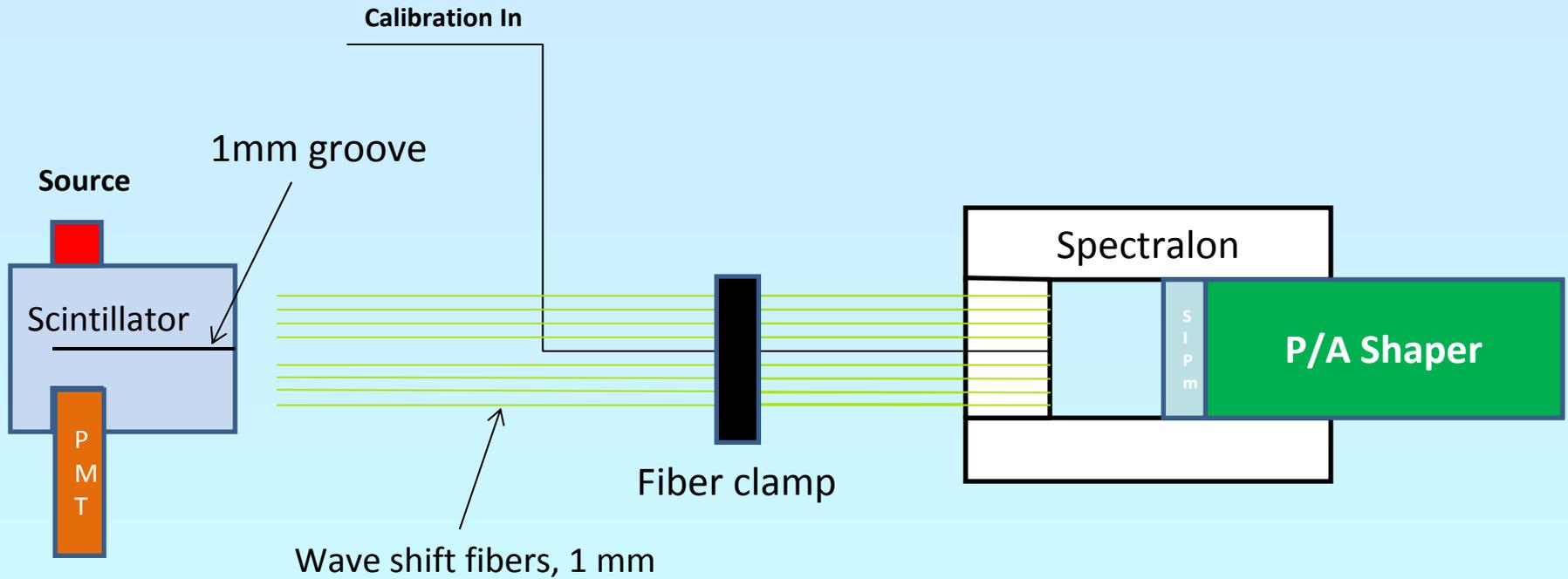
### MPC-Ex Upgrade

*We will be making measurements and test fitting mockups this summer in preparation for design and fabrication next fall, if proposed upgrade is approved*



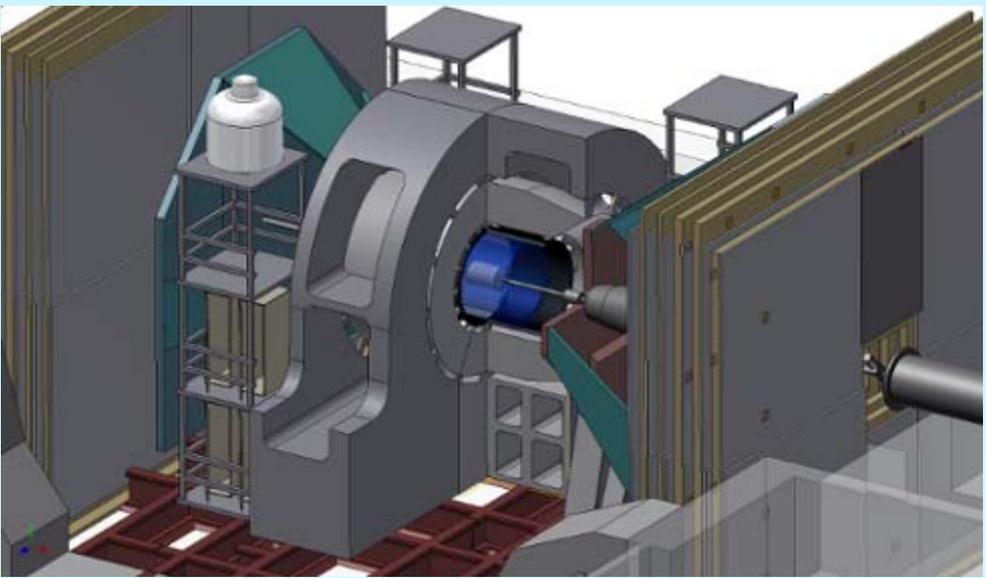
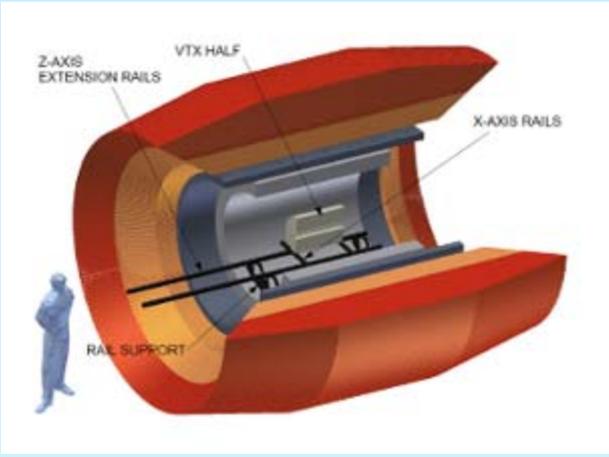
sPhenix H-Cal reverse integration cavity test

TECHNICAL SUPPORT NON



# sPHENIX Proposed Upgrade

We will be making measurements and observations to develop information concerning decommissioning and removal of some existing PHENIX subsystems, and integration of sPHENIX into retained PHENIX subsystems.



## Requested CAD Support for 2012 Shutdown

TECHNICAL SUPPORT PERSONNEL

Riggers - Disassemble and stow moveable shield wall and plug door - week of June 25

Riggers and Carpenters - remove dumbwaiter and ladder from EC - week of July 2

Carpenter - Assist with Station 1, MMS, MMN and DC West scaffolding and work platforms  
- -7/23-Oct. 26 (2 weeks at beginning, 1 week at end, 1/2 days at various intervals between)

Articulated manlift - For removal and re-installation of MPC N - weeks of 7/9 and 10/16

CAD Mech techs - remove and restore MMS and MMN lampshades - week of 7/23

Survey - VTX/FVTX at Chemistry and PHENIX IR - 10/8-11/9

Riggers - transport VTX/FVTX to IR from Chemistry - week of 10/29

Carpenters and Riggers - erect and disassemble Summer Sunday dance floor - 8/1-8/7

Riggers and Carpenters - restore dumbwaiter and ladder to EC - week of 11/26

Riggers - Assemble shield wall and Install plug door - 12/26-12/28

Blue Sheets and White Sheets - 12/3-12/21

A/C evaluation and repairs, IR and rack room A/C's - complete by start of run 13

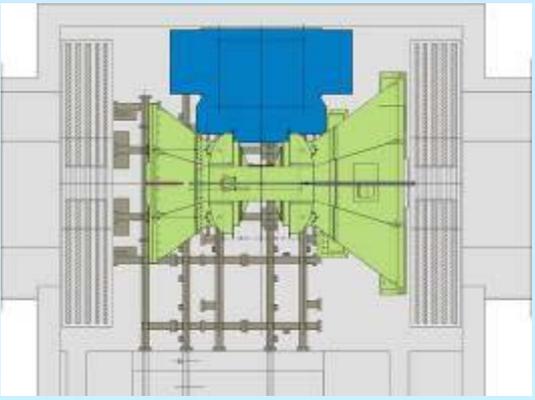
### Procedures for Shutdown 2012

- Existing PHENIX General Purpose Recurring Task procedures - on line
  - VTX Removal - Done
  - FVTX/VTX installation - Done
  - VTX Survey - Done
  - FVTX Survey - Done
  - FVTX Cooling System Upgrades - Done
  - MuTr Maintenance & Upgrade (stations 1 2 & 3) - Done
  - MuTrigger Maintenance and Upgrade - Done
  - DC Repair - Incl. in WP
  - MPC removal and re-installation - incl in WP - Done
- Procedures will be part of 1 WP for VTX and FVTX
- Incl. in separate WP's for MMN and MMS entry

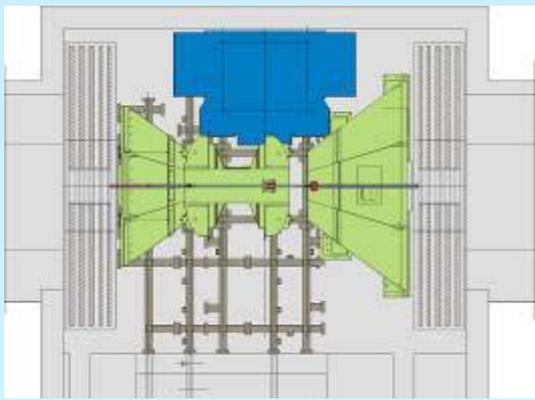
### Work Permits for Shutdown 2012

- Start of Shutdown (PHENIX) - Done
- VTX Removal/FVTX/VTX Installation - Approved
- MuTr/MuTrigger Maintenance and Upgrade 3 WP's: Station 1, MMN and MMS work - at CAD for Approval
- RPC1 Cooling Upgrade (PHENIX) - Done
- DC West Repairs - in Design
- MPC repairs - Approved
- End of Shutdown (PHENIX)

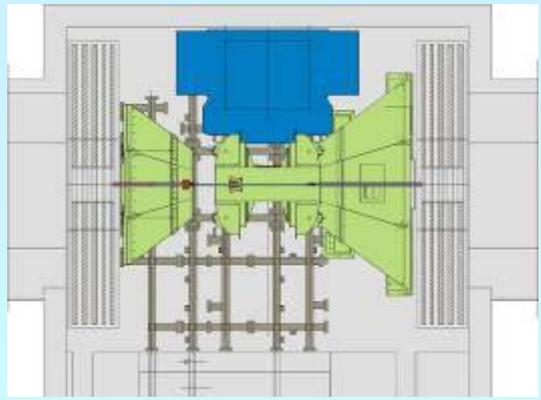
TECHNICAL SUPPORT ZONE



IR is currently in this (Run) configuration. (MuID collars not shown)



After MuID collars are removed and EC is moved to AH, MMS is moved south. CM is then moved south to gain access to Station 1 North. MPC North to be removed, RPC1 North to be addressed. (1 week)



CM is then moved north to gain access to station 1 south. Work on RPC1 South, DC West, MPC South and MuTr Station 1 South. After all work finished move CM south, reinstall MPC complete RPC1 North work, survey step 1 for beampipe, then move CM north complete beampipe and CM survey. Move MMS North to run position. VTX/FVTX work may be done in any configuration.

TECHNICAL SUPPORT ZONE

Shutdown Standard Tasks

- Open wall, disassemble wall, Remove MuID Collars,
- Move EC to AH, etc.

In Progress

VTX Strip-pixel post run tests

Done

FVTX post run tests

Done

Disassemble VTX/FVTX services

In Progress

Open Station 1 North, remove MPC North for repairs

7/9-13/2012

RPC1 North Cooling Upgrade

7/9-13/2012

Remove VTX/FVTX and transport to Chemistry Lab

7/30/2012

Remove MMS & MMN vertical East lampshades

7/23-7/27/2012

Summer Sunday (8/5) Prep and teardown

8/1-8/7/2012

Summer Sunday (RHIC)

8/5/2012

TECHNICAL SUPPORT ZONE

MuTr South Station 1 work	
Install access (Sta. 1 work platforms)	7/30-8/3/2012
Disconnect Cables, hoses etc, ID/label all	8/6-8/10/2012
Remove FEE plates and chambers	8/13-8/17/2012
Station 2 Terminators and manifold upgrade through access opened by station 1 removal	8/20/-8/31/2012
MPC South repairs	8/20-9/15/2012
RPC 1 South cooling upgrade	8/20-9/15/2012
Labor Day Holiday	9/3/2012
MuTr South Station 1 work (Cont'd)	
Clean/install new MuTr Sta. 1 chamber parts and upgrades (concurrent At RPC Factory)	8/20/-9/7/2012
Re-install chambers and FEE plates	9/10-9/14/2012
Re-cable, re-hose and test	9/10-9/28/2012
re-capacitation and air manifold upgrades	
Station 3 North and South (upper half)	7/23-9/30/2012
Repair upgrade, reassemble VTX/FVTX	7/23-10/5/2012
Test, survey (at Chemistry and IR) and re-install VTX/FVTX	10/8-11/9/2012
Substation breaker upgrade/test (CAD)	8/20-9/30
AH utility power distribution upgrade	8/20-9/30
DC West maintenance (replace window)	9/15-10/15
RPC stations 1 and 3, north and south maintenance	As required
Other detector maintenance as required	As required
Infrastructure maintenance as required	As required
TBD prototype tasks	As required
Open Station 1 North, re-install MPC North	10/16-10/26/2012
RPC1 North Cooling upgrade (if not completed earlier)	10/16-10/26/2012

T  
E  
C  
H  
N  
I  
C  
A  
L  
S  
H  
A  
D  
O  
W  
I  
N  
G

Veterans Day Holiday	11/12/2012
Pre-run commissioning and prep for run 13	11/1-12/31/2012
Prep for EC roll in	11/12-11/16/2012
Roll in EC	11/19-11/23/2012
Thanksgiving Holidays	11/22-23/2012
Prep IR for run	11/26-12/3/2010
Pink/Blue/White sheets	12/3-12/21/201
Christmas Holidays	12/24-25/2012
Start run 13	1/1/2013

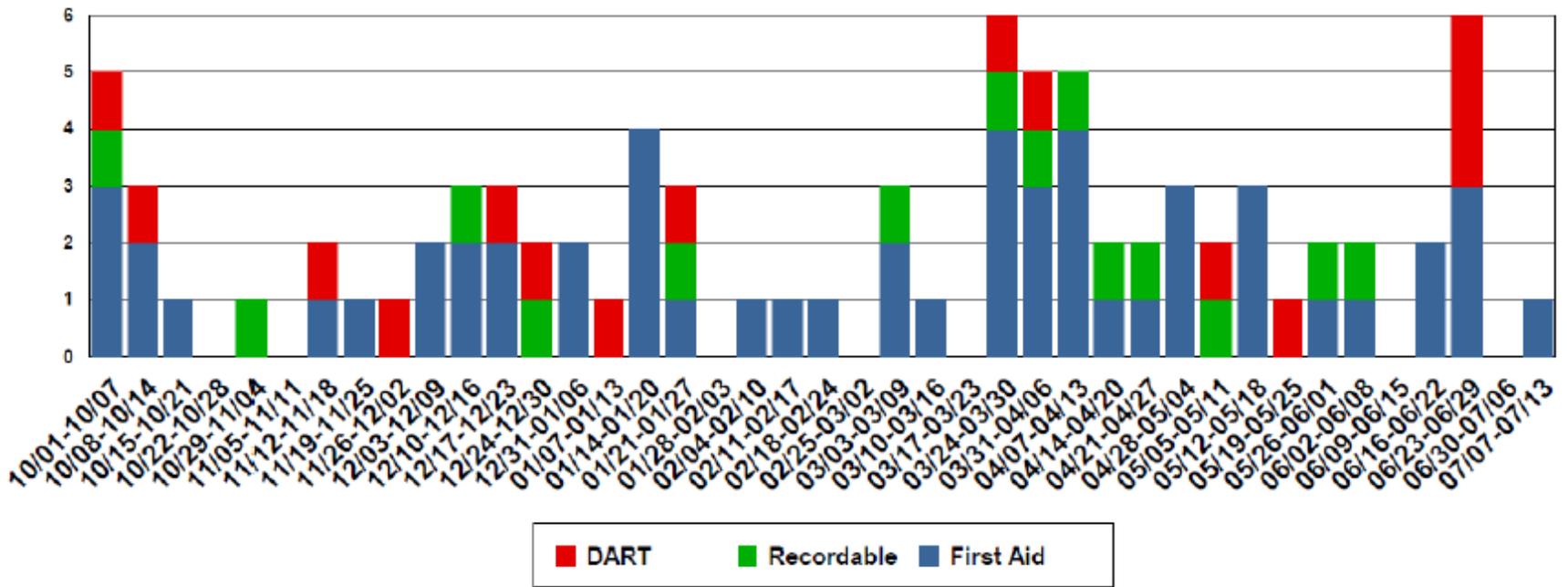
TECHNICAL SUPPORT ZONE

1. Recent Incidents: Ladder fall, chipped tooth, machine shop near miss
2. From Pete Cirnigliaro: *When using cars on site (and off site) the number of people transported in a vehicle is limited to the number of seats and seat belts available. Designated seating capacity means the number of designated seating positions provided. You should not "improvise" additional seating, no passengers in truck beds or in the back of vans or panel trucks that are not appointed with manufactures approved installed seating. These "improvvised" seating conditions can lead to very serious injuries to people in the vehicle even in a minor accident..*
3. Training - Anyone and everyone should make sure they have the proper training before doing any work at PHENIX this summer. Everyone should have current PHENIX Awareness, CA Access or CA User training (annual renewal), ladder training and scaffold training (one time web courses) and specific (confined space, working at heights, etc.) if needed for the work. Our tech staff does spot check and if you are found to be deficient in your training you will be told to stop work until your training is up to date. No exceptions.
4. Atta Boy award to Jimmy for checking a visitor's training and finding him deficient>



TECHNICAL SUPPORT NON

### Injuries Per Week (FY) As of 7/13/2012



**Injury Status:**

FY12 YTD: DART – 15, TRC – 29, First Aid – 54  
 FY11: DART – 27, TRC – 42, First Aid – 45  
 FY10: DART – 19, TRC – 33, First Aid – 52

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

Recent Injuries

TECHNICAL SUPPORT NON-

Recent Events		
7/12/12	Non-Reportable	A Grounds keeping truck w/trailer contacted a parked Kubota while turning/moving in the Parking Lot outside Bldg. 422. Minor damage to Kubota. ( <a href="#">Event Link</a> )
7/12/12	Non-Reportable	F/R responded to Bldg. 912 Roll-up Door #1 for a C-AD Laboratory Vehicle that leaked less than 1 gallon of brake fluid on the pavement. F/R mitigated the leak and secured representatives from Grounds and Environmental groups to respond for remediation and clean-up. ( <a href="#">Event Link</a> )
7/10/12	SC-BNL	A PPM worker offloaded an estimated 300 # piece of material [solid cylindrical object about 4 ft long by 6 in. dia.] improperly using the sling which was already wrapped around the object when it arrived (not a certified BNL sling) and the front tine of a forklift to lift and move it. ( <a href="#">Event Link</a> )
7/10/12	SC-3	A Machine Operator turned on a lathe that had been left set on high speed and a piece of metal in the lathe was bent by the sudden impetus and in rotation struck a loose collet, sending it into a nearby window and breaking it. This event has been categorized as a Management Concern; Significance Category 3. Update: On 7/11/2012, after further investigation, management has elected to re-categorize this event, as a Near Miss to a serious Occupational Injury, Significance Category 3. ( <a href="#">Event Link</a> )
7/6/12	Non-Reportable	An employee entered bldg 535 room A-135 and smelled a burning smell. The employee was advised to pull the fire alarm, resulting in building evacuation. Fire/Rescue responded and found the overheated UPS. There was no smoke and no fire. Electricians shut down the unit and building ventilation removed the smell. ( <a href="#">Event Link</a> )
7/6/12	Non-Reportable	An unusual odor was reported behind Bldg 488. SHSD and Environmental responded to investigate. The odor emanated from the dumpster where rags were discovered with an unknown solvent. Further investigation revealed an apparent clean up attempt (by unknown person/s) on the carpet inside the front door of 488. SHSD and Fire/Rescue monitored the area and determined that there are no hazardous exposure levels at this time. The area was barricaded and the ventilation system adjusted to pull in more fresh air. Fire/Rescue also placed a portable fan in the area to alleviate odors. ( <a href="#">Event Link</a> )

# Where To Find PHENIX Engineering Info

TECHNICAL SUPPORT ZONE



Danielle  
and  
Chris

Getting Hitched tomorrow

[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)

