

# PHENIX WEEKLY PLANNING

TECHNICAL SUPPORT ZONE



11/15/12  
Don Lynch

## This Week

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- Complete MuID Collar IR staging area support - Done
- Remove Station 1 North Scaffolding - Done
- Move CM to run position - Done
- Finish RPC1 North cooling upgrade
- Begin removing and storing station 2/3 north scaffolding
- Install VTX/FVTX
- Continue VTX Cooling System Upgrade
- Continue RPC3 Gas Recirculation Upgrade
- RPC1 South Cooling Upgrade
- Continue working on RPC3 shielding
- Window Washer safety upgrades
- Substation breaker upgrade/test (CAD) (Dec 1)
- sPHENIX design support
- MPC-Ex design support
- Install MTP patch bay and jumpers for FVTX in counting house.
- Add several backup MTP fibers from CH to IR

## Next Week

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- Short Week - Thanksgiving and Black Friday Holidays
- Complete removing and storing station 2/3 north scaffolding
- Continue installing VTX/FVTX
- Continue VTX Cooling System Upgrade
- Continue RPC3 Gas Recirculation Upgrade
- RPC1 South Cooling Upgrade
- Continue working on RPC3 shielding
- Continue window Washer safety upgrades
- Substation breaker upgrade/test (CAD) (Dec 1)
- Continue sPHENIX design support
- Continue MPC-Ex design support
- Install MTP patch bay and jumpers for FVTX in counting house. - November
- Add several backup MTP fibers from CH to IR - November
- Start prep for moving EC to IR

### Substation breaker upgrade/test (CAD)



Upgrade & Test to be performed ~Dec 1. Drawings/wiring schemes by P. Giannotti have been reviewed and approved by CAD. Paul will be present and work with line crew to install and with CAD to test (blue sheet test)



Ready for Installation this week (today?)

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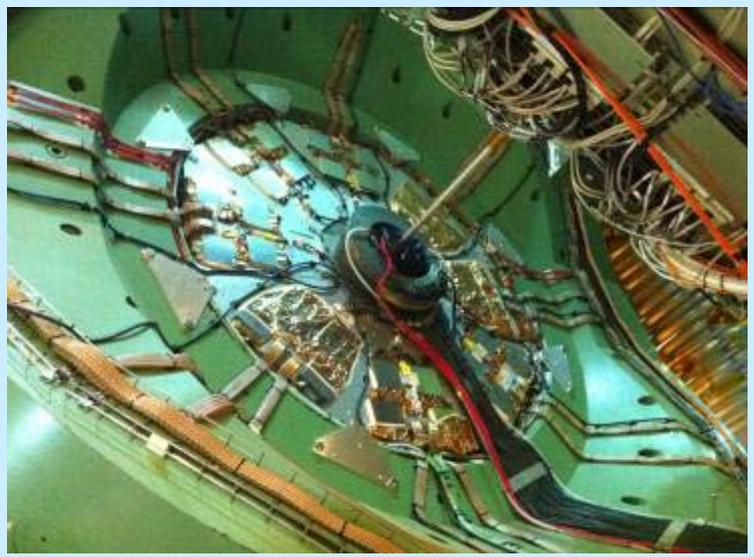
11/15/2012

# RPC Station 1 North and South Cooling Upgrade & Monitoring



South

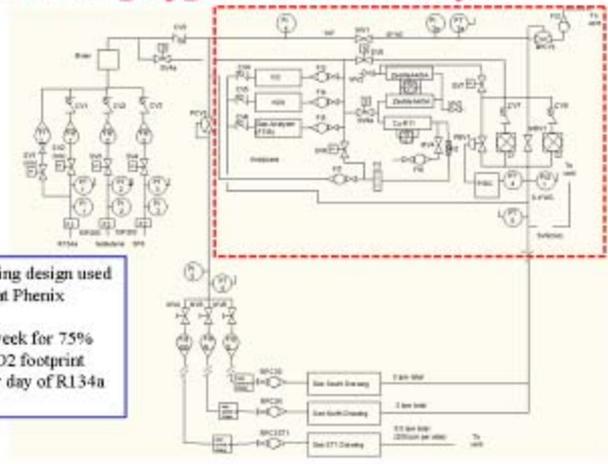
South thermocouples installed, cabled and calibrated; cooling upgrade to be completed after North Upgrade and monitoring are completed and CM is moved north to run position



North

Cooling Upgrade to be completed this week

### 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 - D. Northacker to finish in December

PC upgrade - November

Analyzer procurement in process (~4 months)



### VTX/FVTX Cooling Upgrade

- Piping ~ done
- New filtration system in place, mostly connected
- Big Wheel manifolds assembled ready for installation at 1008
- Chiller 1 repair done



# RPC Background Attenuation Project

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Looking towards RPC3 North  
← East                      West →

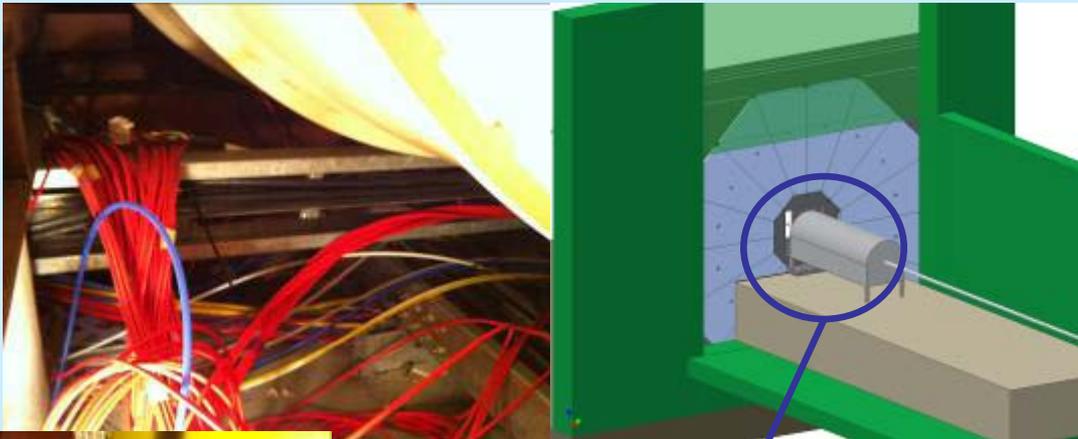
Looking towards RPC3 South  
← West                      East →

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

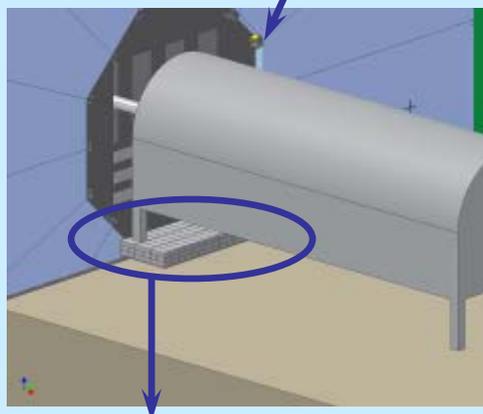
# RPC Background Attenuation Project

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



# MuID Collar IR Holding Area Support

Structural support improvements designed

Installation in progress



# Window Washer Remote Pin Removal and Winch/spooler safety upgrades

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



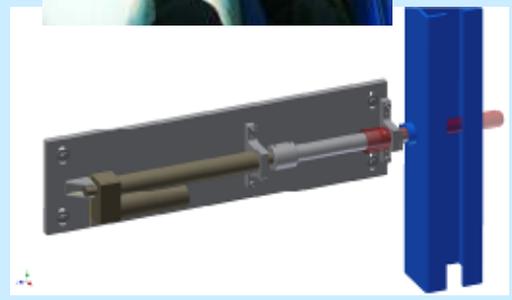
**COLUMBIA** WINCH & HOIST  
Manufactured by Allied Power Products, Inc.

**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.**



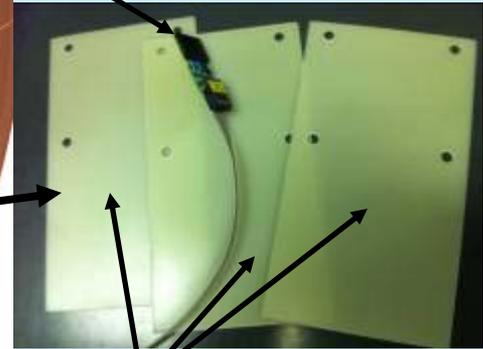
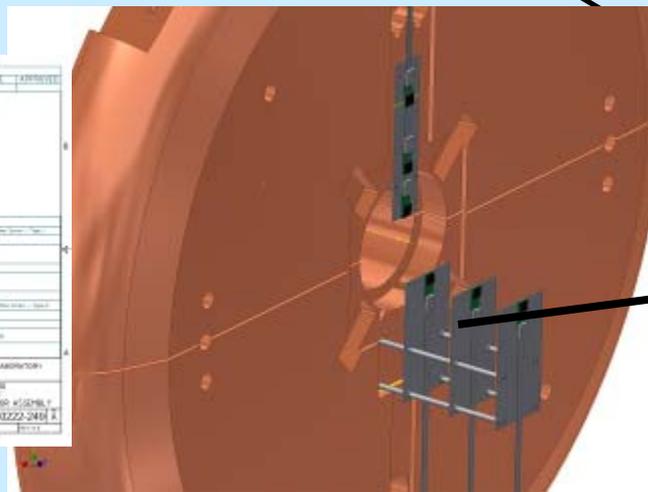
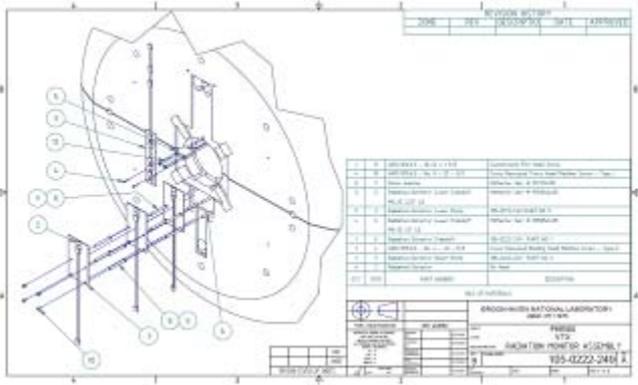
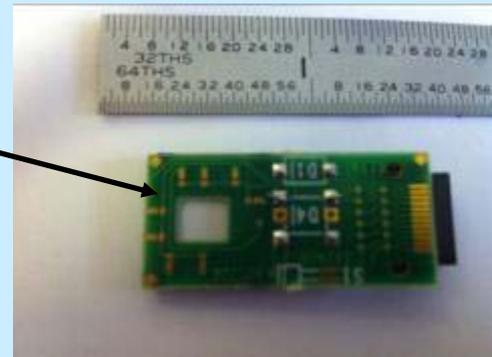
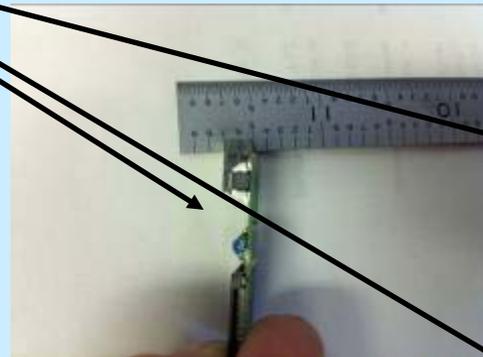
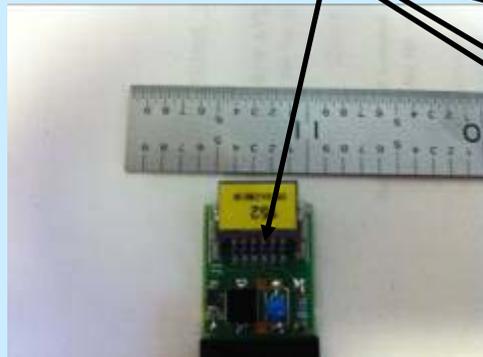
# Scaffolding Storage Boxes

TECHNICAL SUPPORT



Rad monitor sensors

VTX/FVTX Radiation Monitoring Test



G-10 Sensor mounting pads

Mount 6 Rad monitor sensors in the south nosecone cavity, 2 sets of 3, 1 set at 3.5, 8.5 and 16.2 mm radially from nominal beam axis and adjacent to the nosecone, the other 3 at 3.5 mm radially and varying z coinciding with FVTX disks

Other Subsystem Work and Future Upgrades related Work

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

- 1. Remote breaker switch - parts ready install partially completed. Repaired broken breaker installation and blue sheet test of breaker scheduled fore Dec. 1

PHENIX Electronics Upgrades

- 1. Install second MODBUS server in counting house. - TBD

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

- 1. Replaced aging magnet hoses (CM only) - Done
- 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



## Remaining Work Permits/Procedures for Shutdown 2012

- RPC Background Attenuation Shielding @ DX Magnets - Done, at CAD for approval
- Window Washer autospool and remote pin removal upgrade
- MuID Collar IR Holding Area Support - Done
- End of Shutdown (PHENIX) - Done
- FVTX Radiation monitoring test

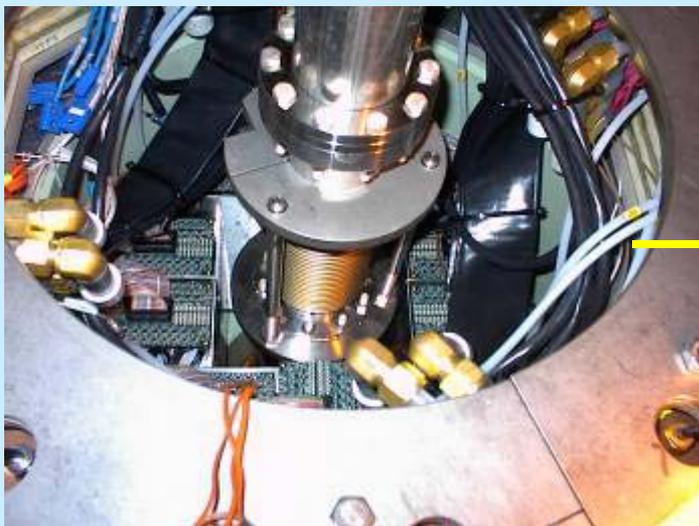
TECHNICAL SUPPORT NON



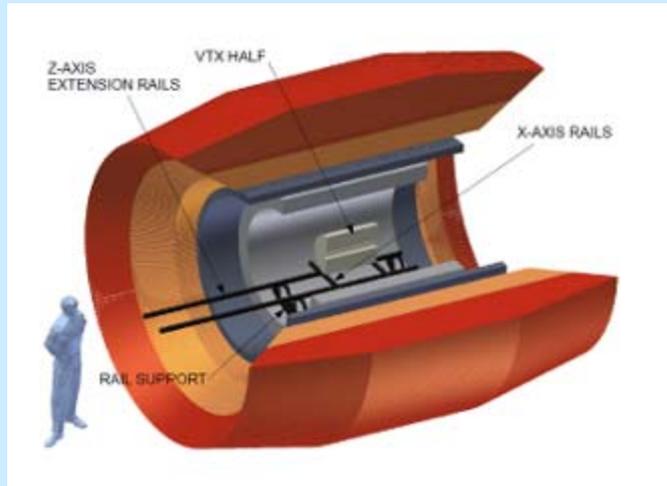
Existing vacuum bellows anti-squirm  
In MPC S Cavity



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



MPCS Flat cables replaced with round cables.

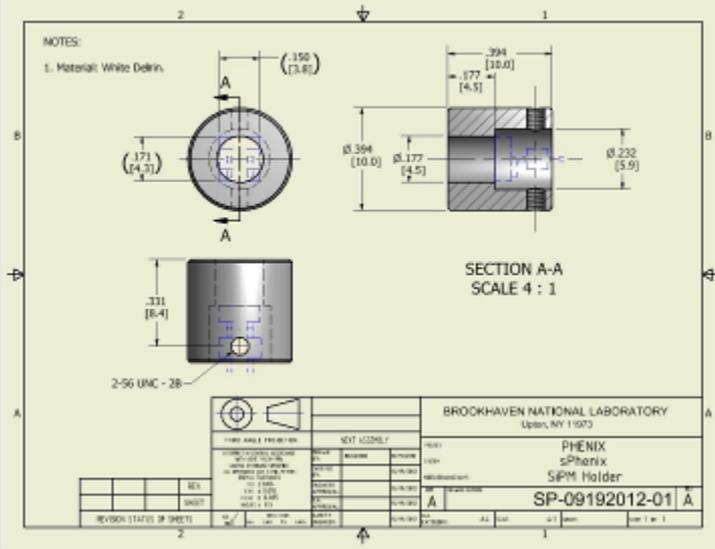
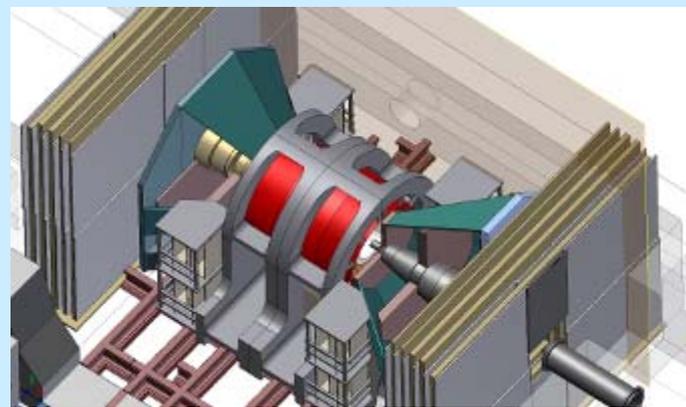


## sPHENIX Proposed Upgrade

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

BNL Review last week

Prototype HCal and EMCal in progress



Silicon Photo Multiplier Holder

TECHNICAL SUPPORT ROOM

Re-cable, re-hose and test	Done
Re-capacitation and air manifold upgrades	
<b>Re-install MMS lampshade</b>	Done
Capacitor Clamps and air manifolds (North)	Done
Remove station 2/3 north scaffolding	11/16/2012
Test, survey (at Chemistry and IR) and re-install VTX/FVTX	<b>10/26-11/12/2012</b>
MuID IR storage support	Done
RPC 1 North cooling upgrade	11/16/2012
Remove station 1 North Scaffolding	Done
Veterans Day Holiday	Done
Move CM To run position, Open station 1 South	Done
RPC 1 South cooling upgrade	11/21/2012
VTX Cooling System Upgrades	12/1/2012
Re-install MMN access panel on lampshade	11/21/2012
Install MTP patch bay and jumpers for FVTX in counting house.	11/21/2012
Add several backup MTP fibers from CH to IR - November	11/21/2012

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Prep for EC roll in	11/12-11/21/2012
Thanksgiving Holidays	11/22-23/2012
Roll in EC	11/26-11/30/2012
RPC Recirculation Upgrade	12/1/2012
Substation breaker upgrade/test (CAD)	12/1/12
RPC Shielding under DX magnets	12/1/2012
Prep IR for run	12/3-12/7/2012
Install VTX/FVTX Rad Monitors	12/14/2012
RPC tunnel Shielding (Dave Phillips)	12/14/2012
Window Washer pin & spool upgrades	12/14/2012
Christmas Holidays	12/21-1/1/2013
Pre-run commissioning and prep for run 13	11/1-1/11/2013
Pink/Blue/White sheets	12/7-1/11/2013
Start run 13	2/11/2013

From Ray Karol:

- 1. In FY11, **23%** of all BNL injuries were due to slips, trips, or falls. Most of these were related to icy and slippery conditions. Use common sense approaches to prevent these injuries. Choices like proper footwear, choosing a safe route to walk, holding onto the car door when exiting the vehicle, and walking with your hands free can make a big difference in the number of folks injured by falls.

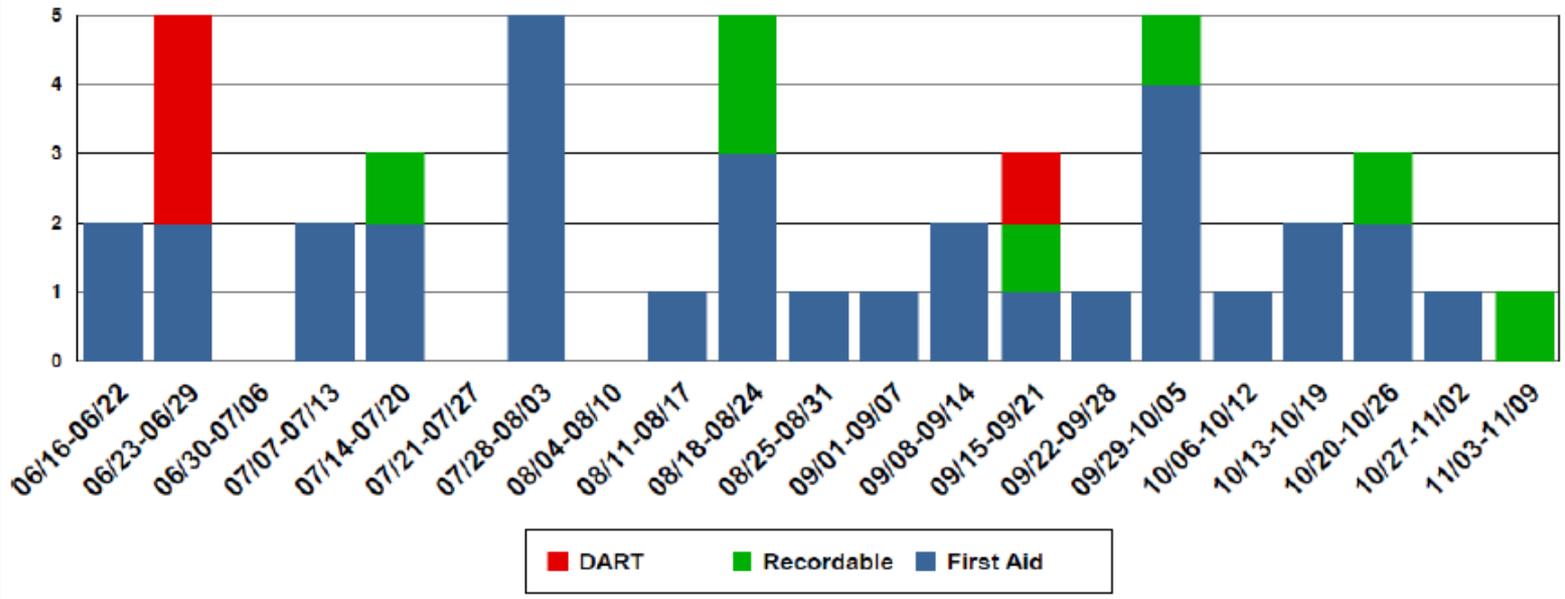
You can reduce winter and other slipping hazards by buying shoe covers at the following websites. Make sure that you only use the covers in the areas that they are intended for as described at the website. Use your group account to order:

<http://www.jordandavid.com/> or <http://yaktrax.com/>

- 2. PPE - make sure you understand the PPE requirements and use the right PPE for the job. This week there were 2 instances at BNL where staff were found without the right PPE. There are 2 possible consequences if you fail to wear the right PPE, injury or discipline. Pay attention and protect yourself.



### Injuries Per Week As of 11/9/2012



**Injury Status:**

FY13 YTD: DART – 0, TRC – 3, First Aid – 10  
 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/Occlnj/BNLInjuries.aspx>

Recent Injuries		
11/4/12	Recordable	An employee's finger was bitten by a laboratory animal. At the OMC, the employee's swollen wound was treated and prescription medication was given. This is recordable. <a href="#">(Event Link)</a>
10/27/12	First Aid	An employee injured a wrist during training. After reporting to the OMC, no treatment was given and the employee returned to normal duties. <a href="#">(Event Link)</a>
10/25/12	First Aid	A non-employee injured a wrist pulling on a wrench. At the OMC, first aid was given. <a href="#">(Event Link)</a>

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Recent Events		
11/8/12	Non-Reportable	Less than 1 quart of fuel oil was spilled to the pavement from a BNL vehicle during snow removal. Cleaned up by 12:30. ( <a href="#">Event Link</a> )
11/6/12	Non-Reportable	A Kubota leaked ~1 gallon of hydraulic oil to street on Renaissance Rd near B120. Nothing on soil. Cleaned up. ( <a href="#">Event Link</a> )
11/5/12	SC-BNL	Fire/Rescue responded to a report of a car fire. Lab vehicle 2001 Dodge Ram 4X4 Pick Up had a fire in the interior heater. The vehicle occupant used a portable fire extinguisher to extinguish the fire. The battery was disconnected and Motor Pool was notified. Damage is limited to the heater motor. ( <a href="#">Event Link</a> )

# Where To Find PHENIX Engineering Info

TECHNICAL SUPPORT ZONE

*No Thursday planning meeting next week due to thanksgiving and black Friday Holidays*



[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)

