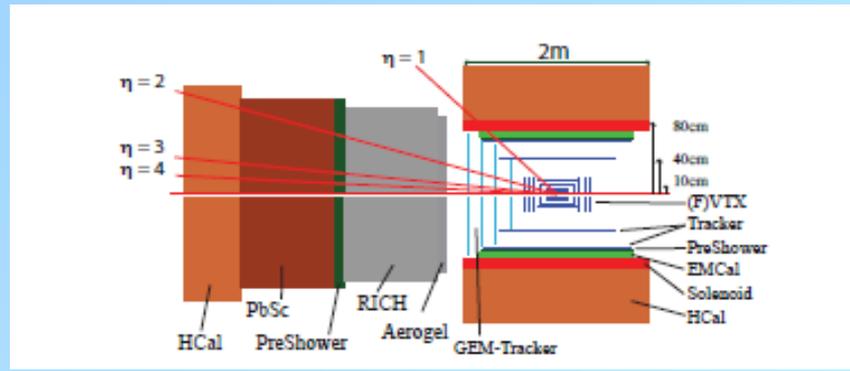


# PHENIX WEEKLY PLANNING

TECHNICAL SUPPORT



2/10/2011  
Don Lynch

## This Week:

Restricted Access Yesterday (Controlled access to tunnel):

- DC: removed 2 FEM Cards for repairs to be replaced next access
- Additional problems required later controlled access for HV mainframe swap
- Aerogel board replaced
- ERT loose connection fixed.
- RPC adjusted gas

Next Access : February 16<sup>th</sup>

Continuing support for new detector commissioning

Continuing mechanical, electrical and gas system support for Run 11

Plan for shutdown 2011

Future upgrades support

## Next Week

Next: Scheduled Maintenance Access: Wednesday Feb 16

No Plans defined yet

Continuing mechanical, electrical and gas system support for Run 11

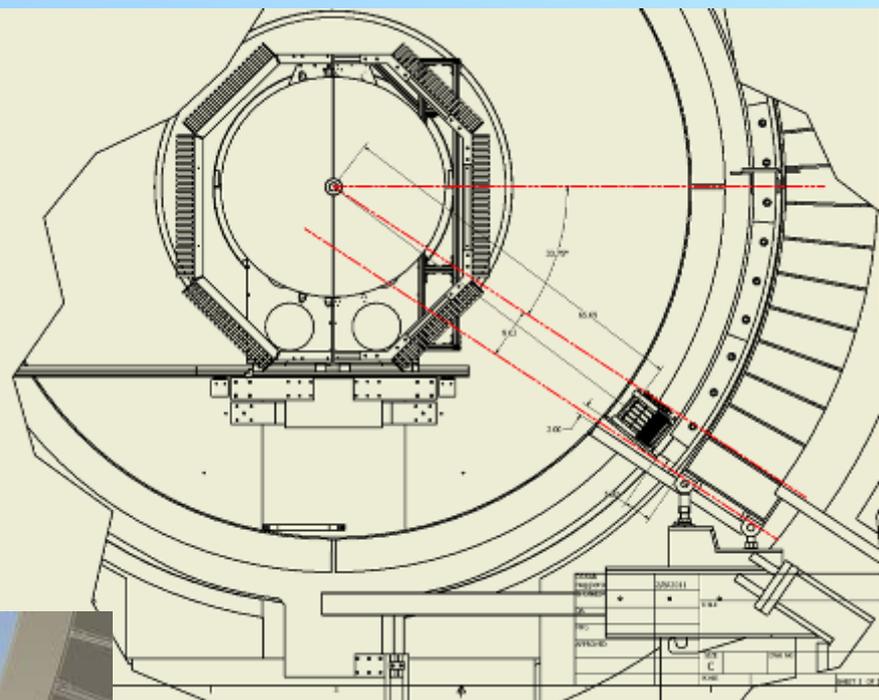
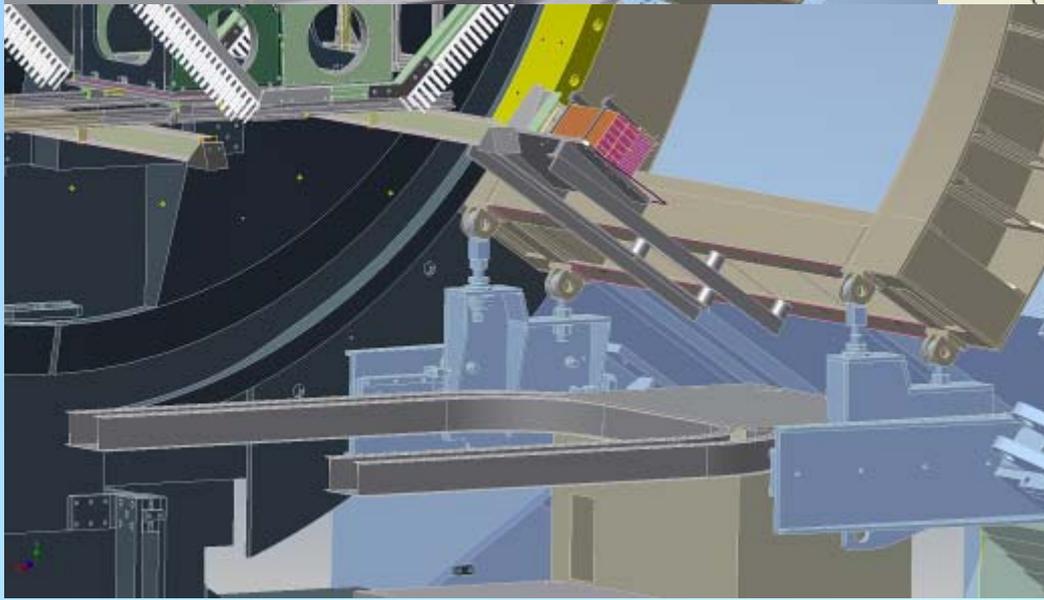
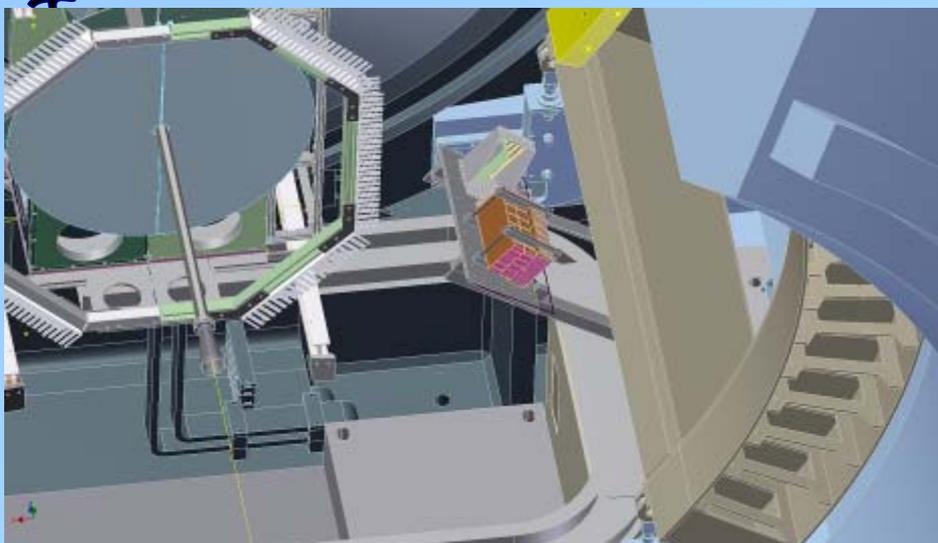
Continue planning for shutdown 2011

Future upgrades support

TECHNICAL SUPPORT

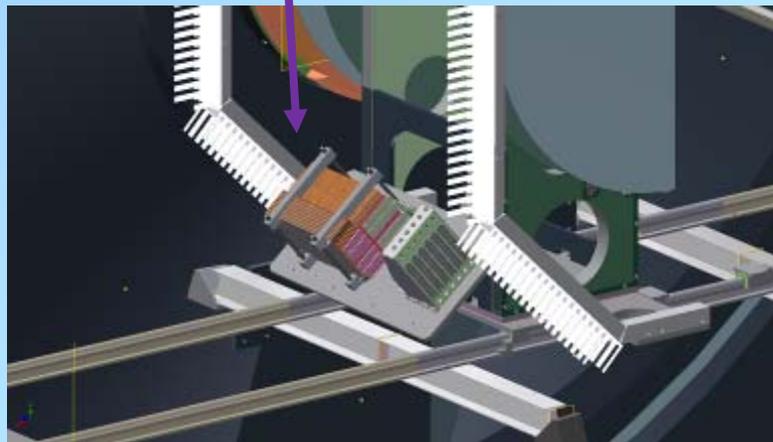
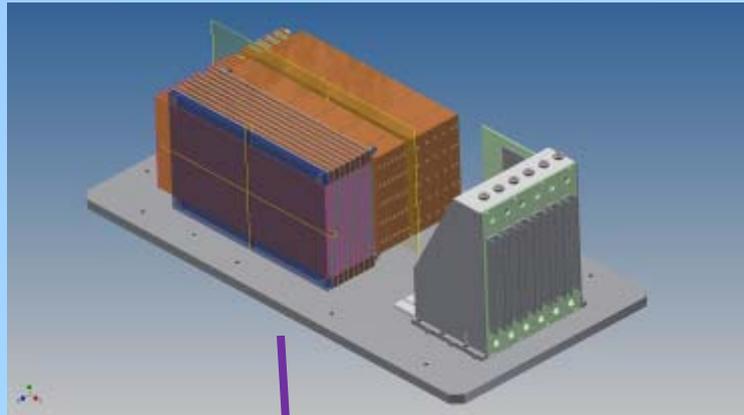
EAVR Class 1 (basic representation)  
mockup of FoCal prototype



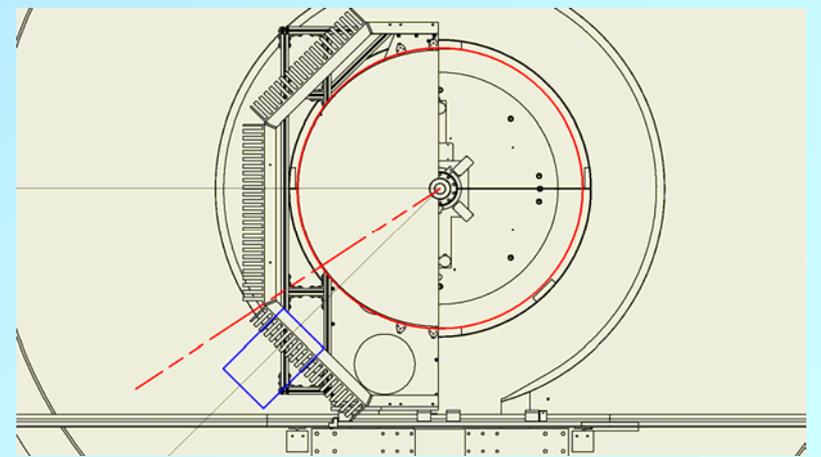
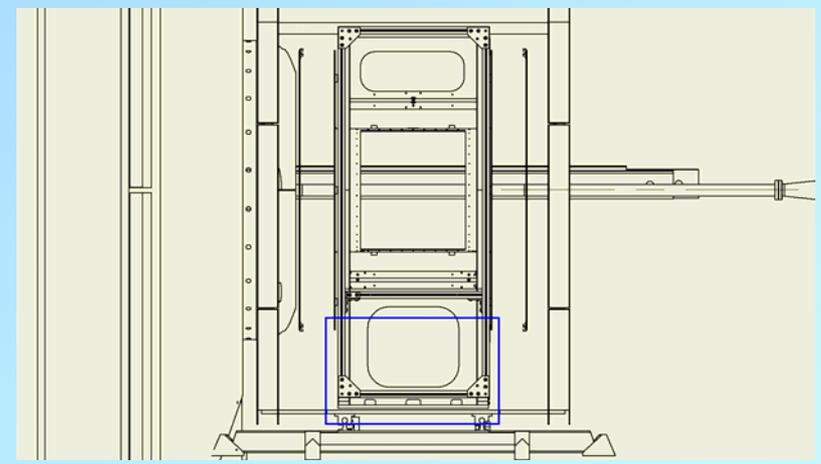


Proposed FoCal prototype installation

# FoCal Prototype Alternate Installation Plan



- Scout possible installation locations today
- Assembly fixtures and parts design complete
- Materials received and delivered to CS
- Assembly components placed with CS
- Installation ~ end of March



# Planning For the 2011 Shutdown

- Prep for shutdown 2/1-6/30/2011
  - Define tasks and goals
  - Analysis and design of fixtures, tools and procedures
  - Fabricate/procure tools and fixtures
  - Tests, mockups, prototypes
  - Receive, fabricate, modify, finish installables (bigwheels, tubing, etc.)
  - Review and approval of parts, tools, fixtures and proceures
  - Assembly and QA tests
- Run 11 Ends 6/30/2010
- Shutdown Standard Tasks 7/1-7/21/2010
  - Open wall, disassemble wall, Remove MuID Collars,
  - Move EC to AH, etc.
- Disassemble VTX services 7/11-7/22
- Remove VTX and transport to Chemistry Lab 7/25/2011
- BBC North maintenance 7/22-7/29/2011
- MuTr North Station 1 work 7/25-9/30/2011
  - Install access (scaffold) (1 week)
  - Disconnect Cables, hoses etc (1 week)
  - Remove FEE plates and chambers (1 week)
  - Station 2 Maintenance/upgrade through access opened by station 1 removal (3 weeks concurrent with next task)
  - Clean/install new parts and upgrades (3 weeks, concurrent)
  - Re-install chambers and FEE plates (1 week)
  - Re-cable, re-hose and test (3 weeks)

# Planning For the 2011 Shutdown (cont'd)

TECHNICAL SUPPORT 2011

- VTX maintenance/upgrade and integration of FVTX onto VTX support structure 7/25-9/25/2011
  - Disassemble/repair/upgrade/test/reassemble VTX (3 weeks)
  - Resurvey as necessary (1 week)
  - Install FVTX (3 weeks)
  - VTX/FTX survey and QA tests (2 weeks)
- RPC1 and Absorber upgrades 7/25-10/28/2011
  - Install north absorbers (1 week)
  - Install north RPC1 (3 weeks)
  - Install south absorbers (1 week)
  - Install south RPC1 (3 weeks)
- Install VTX&FVTX (2 weeks) 9/26-10/7/2011
- Undefined detector subsystem maintenance and repairs 7/25-10/7/2011
- Prep for EC roll in 10/3-10/7/2011
- Roll in EC 10/10/2011
- Prep IR for run 10/10-10/17/2010
- VTX, FVTX and RPC1 Services and commissioning 9/16-10/31/2011
- Pink/Blue/White sheets 10/17-10/31/2011
- Run 12 cooldown 11/1/2011

## Removing, Repairing and Replacing Muon Tracking Station-1 (North)

- Purpose - to install new coupling caps and terminators for anodes**
- **reduces cross-talk problems by about 1/3**
  - fixes any remaining HV problems
  - does not address large pulses, which are real source of problem

### Steps:

- Preparation of needed parts & procedures
- Documentation of present connections
- Disconnect cables, water cooling, etc.
- Remove FEE plate & chambers; take chambers to lab
- **Clean & install new caps and terminators**
- Reinstall chambers & FEE plates
- **Re-cable & test**

### Largest Issues:

- **manpower - physicists, techs and expert soldering, students?**
- **fitting into shutdown - est. ~9-11 weeks de-cabled (includes 3-4 wks recable/test)**
- **replacing caps is difficult, even on bench**
- **correct re-cabling & restore low noise; testing**

### Other Muon Tracking worries:

- 2 bad HV chans on station-2; will there be more with caps still there?
- sta-3 cross-talk or anode termination not addressed here

UPDATE  
VACUUM LIFTER  
FOR  
STATION 1  
MAINTENANCE



**Anver** 36 Parameter Rd. Hudson, MA 01749  
1-800-654-3500 [www.anver.com](http://www.anver.com)  
Lifter Model- ET100M8-MR-SP  
Serial Number- 974808

# Replace Vacuum Cups

Old Vacuum cups are warped and cracked



© ANVER Corp. www.anver.com Part #: VC95Q

# Replace Wire Reinforced Hose

Old hose has a couple of pinched points



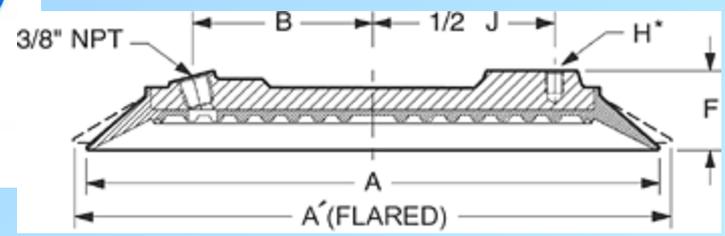
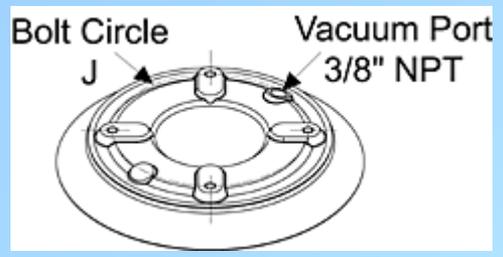
© ANVER Corp. www.anver.com Part #: HS45

# TCost and Specifications

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© ANVER Corp. www.anver.com Part #: VC95Q



\$136.00 ea  
(8)= \$1088.00  
In stock as of 2/8/11  
(Standard Shipping)



© ANVER Corp. www.anver.com Part #: HS45

Clear PVC Steel, Reinforced  
3/8 I.D.

\$1.10 per ft  
(30ft)= \$33.00  
In stock as of 2/8/11  
(Standard Shipping)

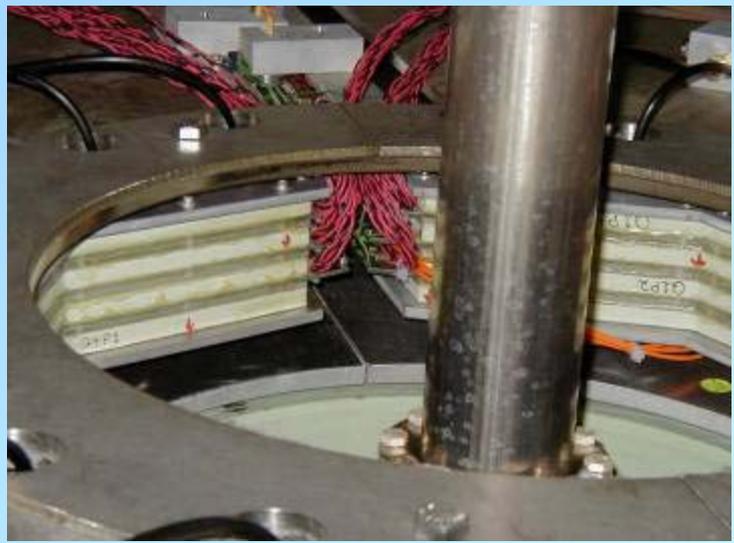
## Approval Instructions as per Mike Gaffney

- 1. Calculate dynamics of load
  - A. Center of Gravity
- 2. Critical lift form
  - A. Weights to be lifted
- 3. Work procedure
  - A. All equipment rated and tested
    - 1. Test load
- 4. Contact John Hynan (5456; [jdh@bnl.gov](mailto:jdh@bnl.gov))
  - A. Inspection of fixture (Date on inspection tag 1/30/09, signed by Hynan)

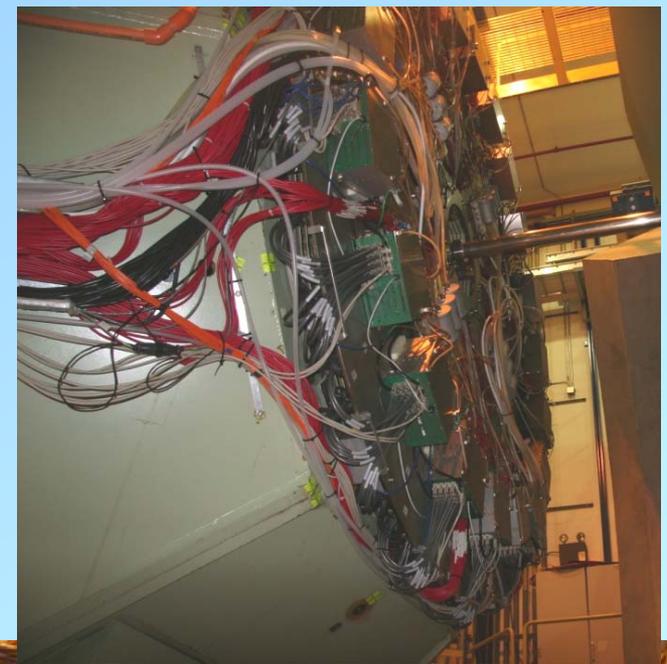
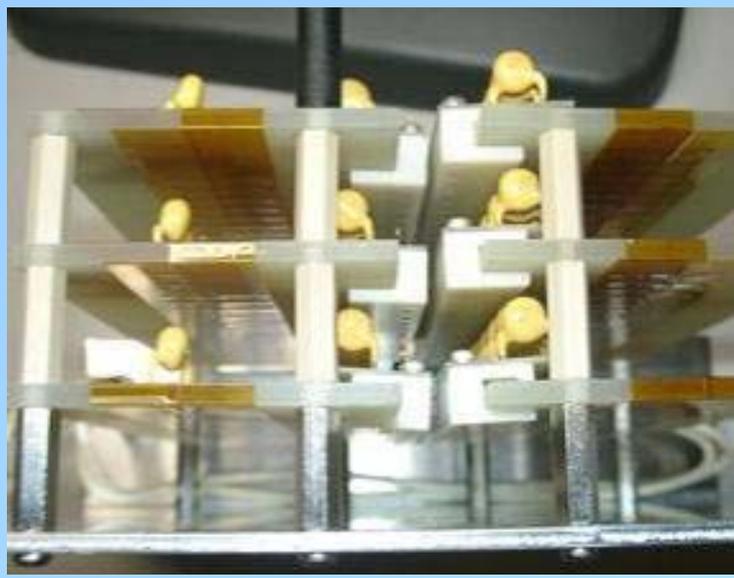
## Things to Consider

- 1. Understanding of the lift
  - A. Rotation?
  - B. Safe area to place the load
- 2. Protection of the beam pipe
- 3. Riggers to do the lifting? (as mentioned by Mike Gaffney)

TECHNICAL SUPPORT NO. 1



TECHNICAL SUPPORT NO. 1



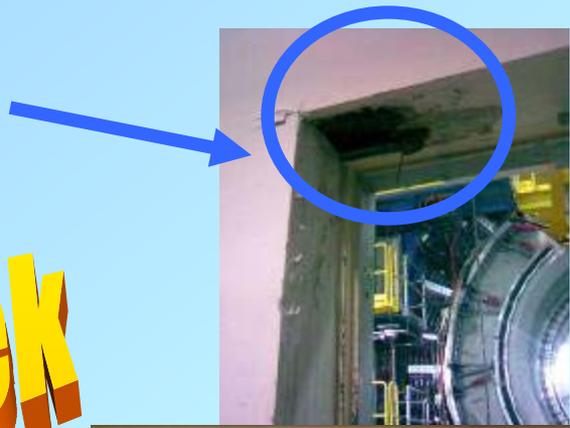
2/3/2011

# 2010 Building Maintenance Issues

TECHNICAL SUPPORT - 2011

- Roof leaks in utility bathroom at northwest corner behind tech offices, over door between rack room and assembly hall, over door between control room and elect. ass'y room, southeast corner of IR and laser room.
- General maintenance for Trailer Offices (in progress)
  - Repair replace floor tiling as needed
- Flooding in AH/ Driveway
- New [unclear] connection

## Nothing New This Week



## PHENIX Procedure Review Current Status:

147 Procedures Identified

87 Made Inactive (not currently in use, will require revision to re- activate if and when necessary, available for reference purposes)

9 CAD procedures relevant to PHENIX are up to date and available on the CAD web site

**Nothing New This Week**

Procedures (never previously formalized) (3 are ready for review) will be addressed during next few months.

Web retrieval of latest procedures now available from PHENIX Internal:

[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_procedures.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_procedures.htm)

TECHNICAL SUPPORT ZONE

1. C-AD Worker Safety Observations dated 01/19/20

a) **Observations:** In the Experimental Hall, a 55-gallon drum of coolant makeup is stored on top of shield block.

**Action:** Please ensure the 55-gallon makeup drum is relocated off the shield block and located in a safer work area.

b) **Observations:** There are blocked circuit breakers and horizontal work surfaces are cluttered with materials of all types. A 208 V box and control button in the Experimental Hall required a level of PPE to operate that seemed excessive. The Office Modular has a blocked breaker panel, a broken refrigerator, and one electronics work area poorly equipped with lighting.

**Action:** Please ensure circuit breakers are not blocked and clutter is removed from horizontal surfaces. Please replace broken refrigerator and ensure lighting is sufficient for precise electronics work in the Office Modular.

2. Internal BNL Environmental, Safety Audits Feb. 14 to 25

What you should know:

- BNL has an ESSH Policy (it is accessible on SBMS)
- All should know the specific hazards we have in our work and how we deal with them (PHENIX Awareness training, CAD access training, daily informal planning discussions, weekly planning meetings, design and safety reviews, formal procedures and enhanced work permits, each as appropriate to the specific task.
- All should know how to report an emergency (2222 or 911 from a lab phone, 631-344-2222 from a cell phone or off site.)

# Where To Find PHENIX Engineering Info



Valentine's Day next week

Don't forget your loved ones!

Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering 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)

