

PHENIX WEEKLY PLANNING

TECHNICAL SUPPORT



10/2011
Don Lynch

This Week

- RPC1 North Installation continues (Cable routing and rack install)
- Continue CM west side hanging platform installation
- RPC1 survey
- Continue assembly & QA of RPC1S octants at RPC factory
- VTX repairs/upgrades/reassembly continued
- FVTX assembly continues
- Re-install north bridge section
- Begin installing MuTr station 2 & 3 North work platforms in MMN
- Design BP protection for south station 1
- Continue design and procurement for RPC3 shielding, Hodoscope, AH Crane upgrade & repairs, and R134A shed
- MPC North & South electronics upgrade

Next Week

- RPC1 North Installation continues, QA testing
- Complete CM west side hanging platform installation
- RPC1 survey
- Continue installing MuTr station 2 & 3 North work platforms in MMN
- Design for MMS station 2/3 work platforms
- Continue assembly & QA of RPC1S octants at RPC factory
- VTX repairs/upgrades/reassembly continues
- FVTX assembly continues
- Design BP protection for south station 1 and Inside BBC North
- Install BBC North
- MPC North troubleshooting
- Continue design and procurement for RPC3 shielding, Hodoscope, AH Crane upgrade & repairs, and R134A shed

General Tasks

2011 Shutdown

TECHNICAL SUPPORT 2011

- Remaining Work Permits needed: End of Shutdown WP 10/1
- South BP protection 10/24
- Reinstall BBC North 10/10
- MPC N troubleshooting 10/10
- CM alignment stops 11/14
- Reinstall BBC South 11/14
- MPC S troubleshooting 11/21
- Upgrade AH crane 10/15-11/30
- DC/PC1 East/West troubleshooting as required 10/3-11/15
- Undefined detector subsystem maintenance and repairs 7/25-11/7
- RPC3 Shielding 11/21
- RPC Hodoscope 11/21
- Prep for EC roll in, reinstall MMS lampshade 11/28-12/2
- Roll in EC 12/5
- Prep IR for run 12/5-12/9
- VTX, FVTX and RPC1 Services and QA tests 9/16-11/30
(including 4 new racks)
- BP Survey 10/17-12/12
- EC prep & roll-in, IR run prep, Pink/Blue/White sheets 12/5-12/23
- New and upgraded full detector commissioning 9/15-12/31
- Run 12 cooldown 1/1/2012

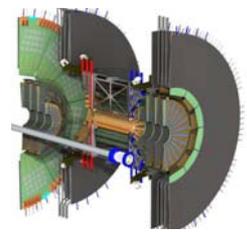
VTX/FVTX Tasks

TECHNICAL SUPPORT NO--

- VTX pixel/strip pixel repairs 10/14
- VTX re-assembly 10/21
- VTX QA tests 10/28
- VTX (w/o FVTX) survey 11/4
- FVTX procurement & Assembly 10/10
- FVTX QA tests 10/17
- VTX+FVTX final installation to start 10/31
- Final VTX+FVTX Integration & Survey in Chem Lab 11/4
- VTX+FVTX move to 1008 11/7

- VTX/FVTX Installation at 1008
 - Build 2 FVTX racks 7/1-10/31
 - Install VTX/FTX, Re-connect VTX services, Install FVTX services, survey and QA tests 11/7-11/23
 - VTX/FVTX Commissioning & Contingency 11/23-12/31
 - Chiller leak/contamination improvements 10/1

FVTX Milestones, Status



ROC Boards

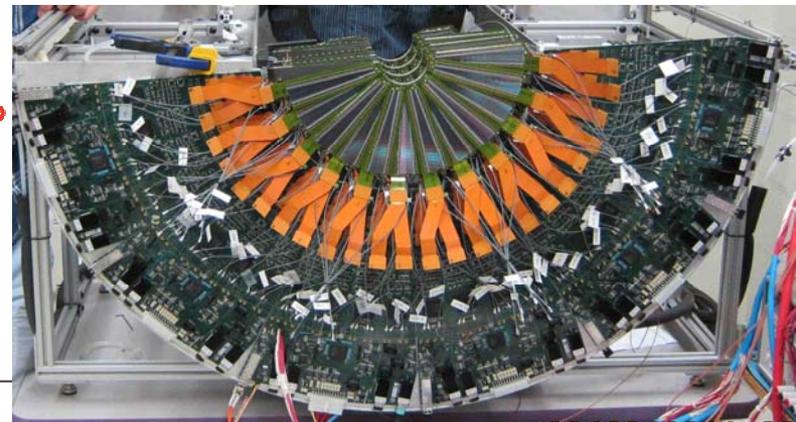
- 6 Boards received at LANL and shipped to assembler Aug 19
- Anticipated date to receive 6 assembled boards ~~Sept 8~~ **Sept 12 – Sep 14**
- Test boards and ship to BNL Sept 16
- 7 More ROC boards received, tested and shipped to BNL Oct 4-5
- Receive remaining 11 ROC boards Oct 7 – Oct 12?

Cage Assembly

- Assembly of first ½ cage COMPLETED
- Assemble second ½ cage Oct. 6 – Oct. 12?
- **Send first two ½ cages to Chemistry** ?????
- Assemble remaining two ½ cages and test present – Oct. 21?
- **Send last two ½ cages to Chemistry** ?????

Dependencies

- **When will VTX be ready to receive a cage(s)?**
- **Will we have space/infrastructure needed for testing after integration into enclosure?**



TECHNICAL SUPPORT NOTES

MuTr North Station 1 work

- Clean/install new parts and upgrades (MuTr (3 weeks, At RPC Factory) Done
- Re-install chambers and FEE plates (1 week) Done
- Re-install north section of bridge Done
- Re-cable, re-hose and test (3 weeks) in progress
- Move CM north 10/21 -24

MuTr Station 2 N (from sta 1 side) terminators and Dry air header mod

- Station 2 Maintenance/upgrade through access opened by station 1 removal Done

MuTr North & South Station 2 & 3 Re-cap clamps

(No internal work platforms to upper octants)

- Install new capacitor clamps and terminators in lower octants (In Progress) 7/25-12/31
- Re-install MMS east vertical lampshade 11/28

RPC Tasks

TECHNICAL SUPPORT NOTES

- Assembly at QA tests at RPC Factory 10/17
- Build 1 new rack, upgrade existing RPC1 prototype rack Done
- Install north RPC1 (including both racks & services) 9/6-10/7
- HV Tests, gas system calibration 9/23-10/21
- Move Station 1 work platforms to south station 1 10/28
- Install south RPC1 10/31-11/23
- Remove all scaffolding and hanging platforms 12/5
- RPC1 north and south commissioning 9/6-12/5
- RPC3 HV Distribution modifications, gas distribution modifications, PS calibration HV and services testing 7/1-12/5

TECHNICAL SUPPORT 2011

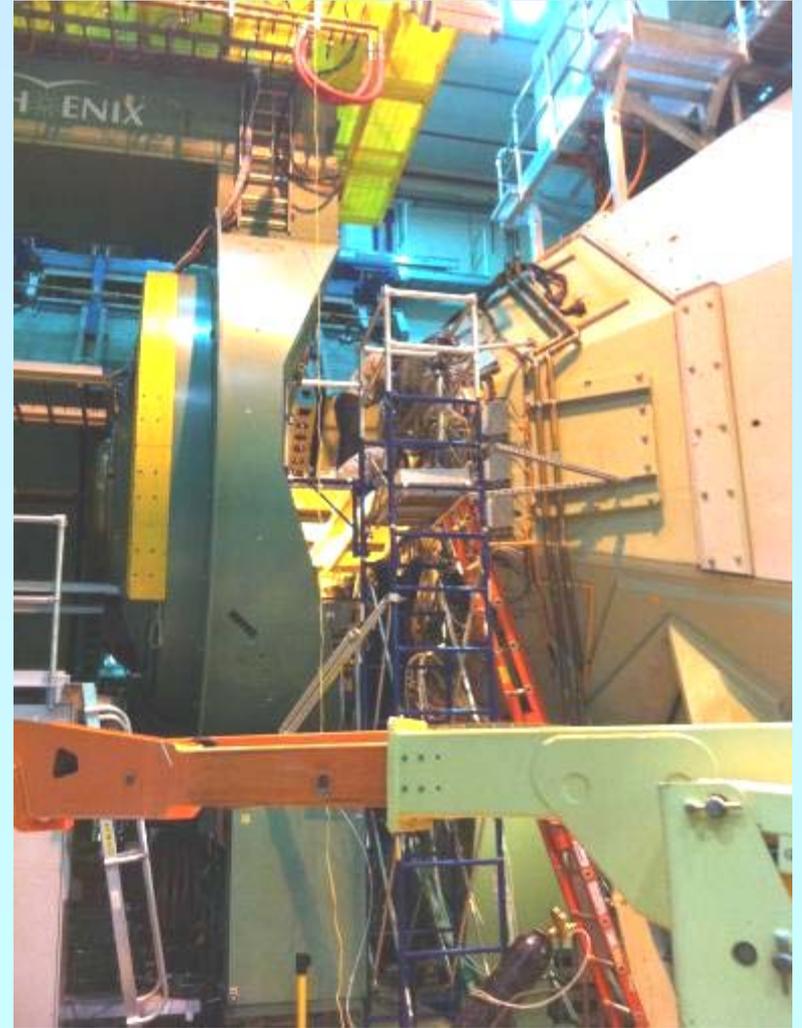
- RPC1
 - HV Cables *Ready for routing*
 - Signal cables *Ready for installation*
 - LV cables *Ready for innstallation*
 - Racks
 - Assembly *Done*
 - Install on bridge *Done*
- RPC3 additional HV boxes *Ass'y in progress*
- FVTX
 - Bias cables *pigtails due 9/26, extensions PO placed*
 - LV cables *PO placed term. of ROC LV cables in-house*
 - Fiber *PO placed, Control & trunk fibers and patch bays ready*
 - Mapper boards *PO placed*
 - CMT3 and CMT4 FVTX racks
 - Assembly *10/31*
 - Install on bridge *11/4*
- VTX Modify thermocouple connections *Procurement Done, installation 11/21*
- PC Board Designs
 - PbSc teminator board production *sent for fabrication*
 - New LV Dist front panels *sent for fabrication*
 - GL1 6X1 Multiplexer assemblies *final checking this week*
 - New MPC junction board *waiting for specs*
 - Dual SVX board for E. Kistenev *waiting for specs*
- West carriage ADAM system performance upgrade *2 new Modbus servers arrived, bench test & install panel upgrade in WCB for single ADAM control*
- LeCroy HV control retrofit testing *Still Waiting for doc. from Debrecen Inst*
- Design/Install FVTX Interlock system. *Design Done ready for installation*

Miscellaneous Gas & Cooling System Tasks

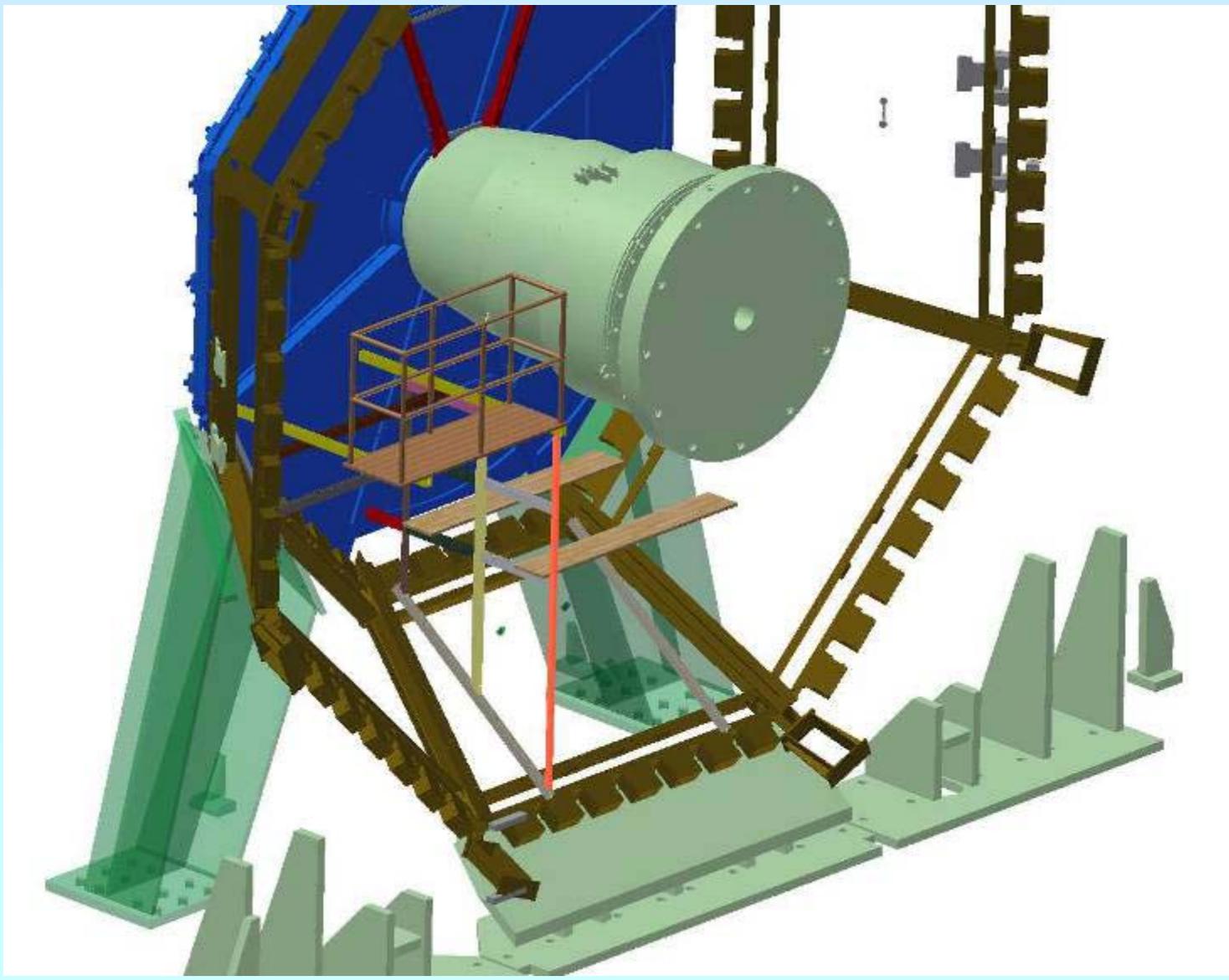
- Redo bypass line on VTX/FVTX spare chiller to remove kink 7/1-12/31
- Move RPC R134A tanks nearer to GMH, install cover, insulated lines 7/1-12/31
- Replace MuTr flowmeters (north and south) 7/1-12/31
- RPC 1/4" copper line from RPC rack to CM 7/1-12/31

TECHNICAL SUPPORT

TECHNICAL SUPPORT NO. 1



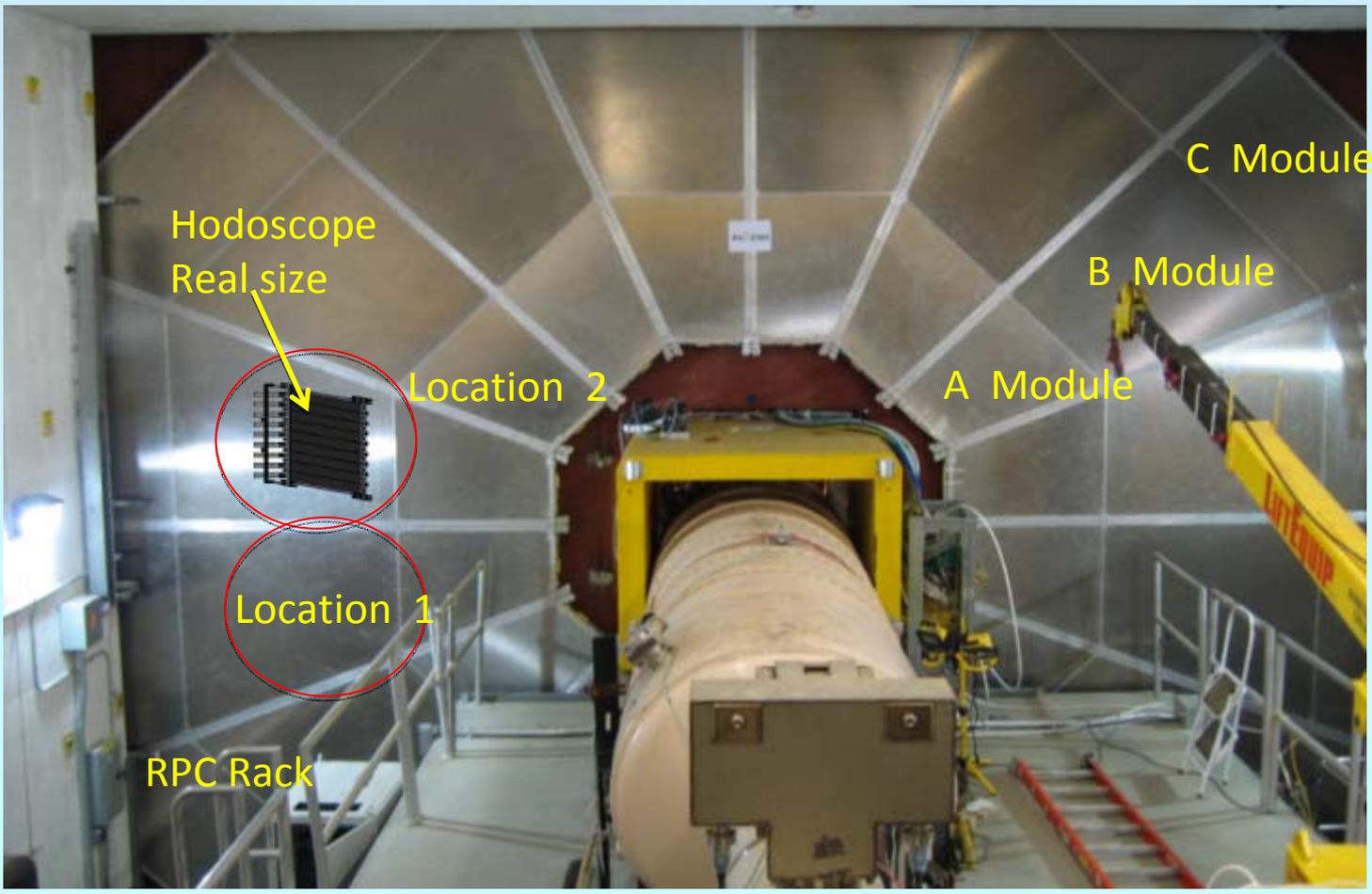
TECHNICAL SUPPORT



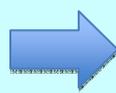
Station 2/3
Access

RPC Hodoscope

TECHNICAL SUPPORT NO. 1



Close to RPC3 electronics rack
Less Beam background region



Location 1 or 2 would be good position

TECHNICAL SUPPORT NOTES

Need shed for R134A bottles close to GMH. No heating in shed (except heating blankets), lines to be insulated. Last year heating blankets kept gas warm but long length of pipe allowed gas to liquify on coldest days.

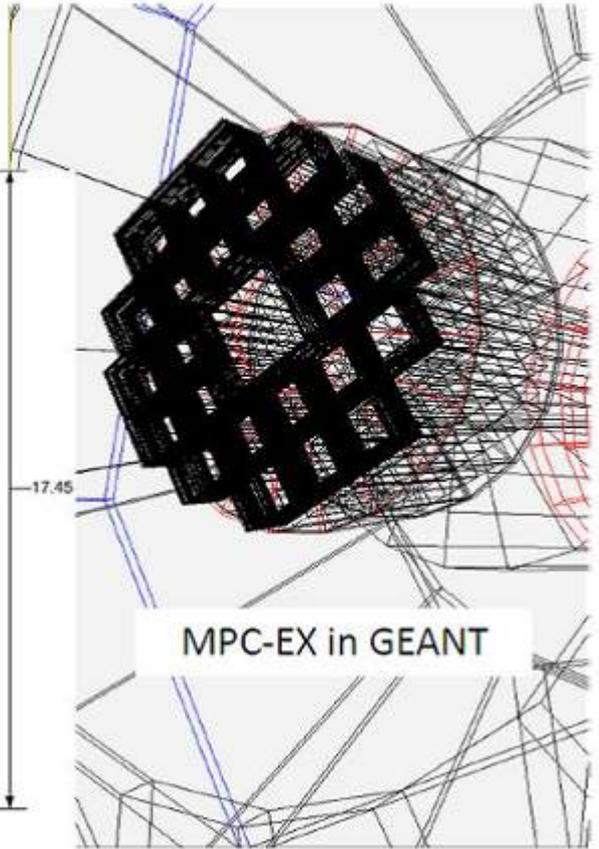
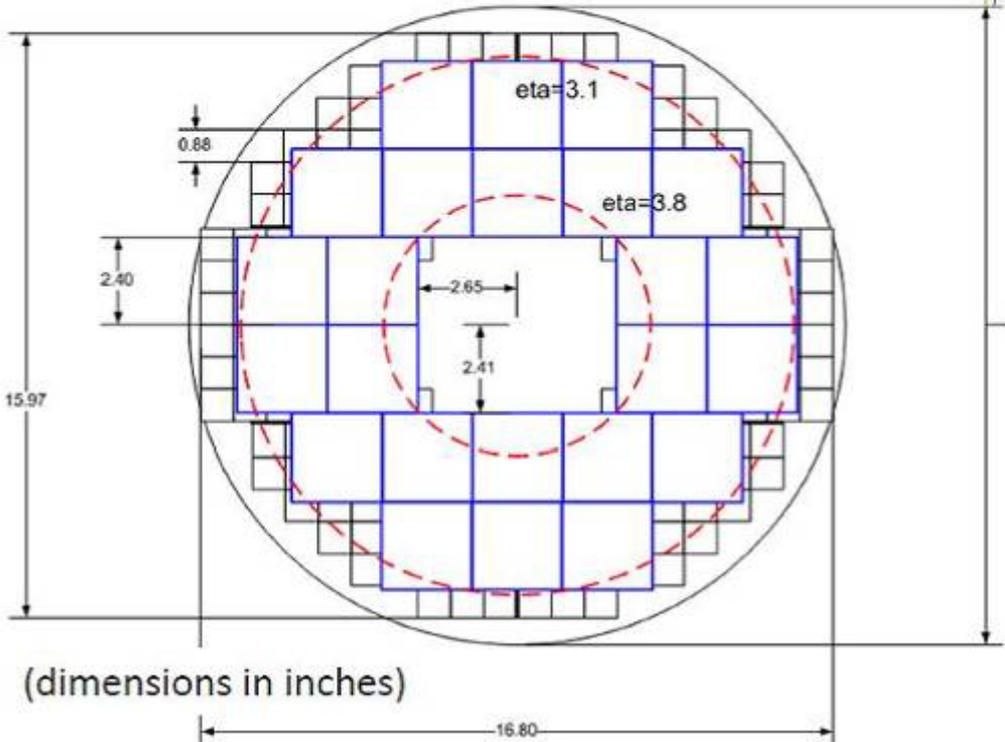


Possible location for shed 8' deep with 10' x 8' doors, and with bottom and top openings.. should satisfy ODH issues ~\$2K.

PHENIX DC SLIDES

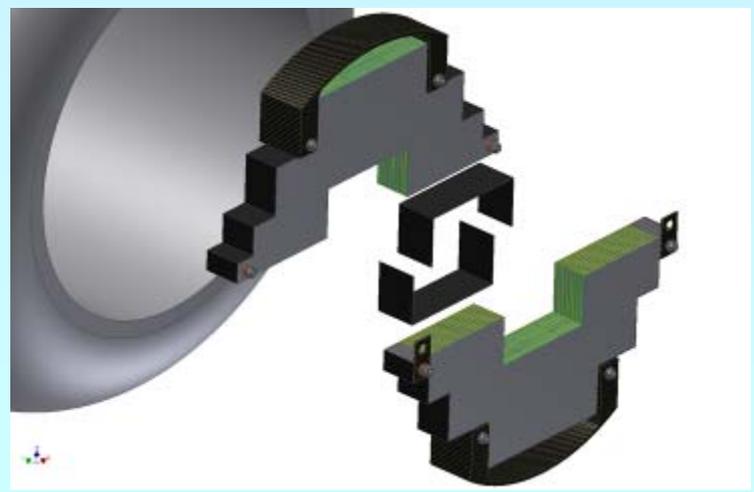
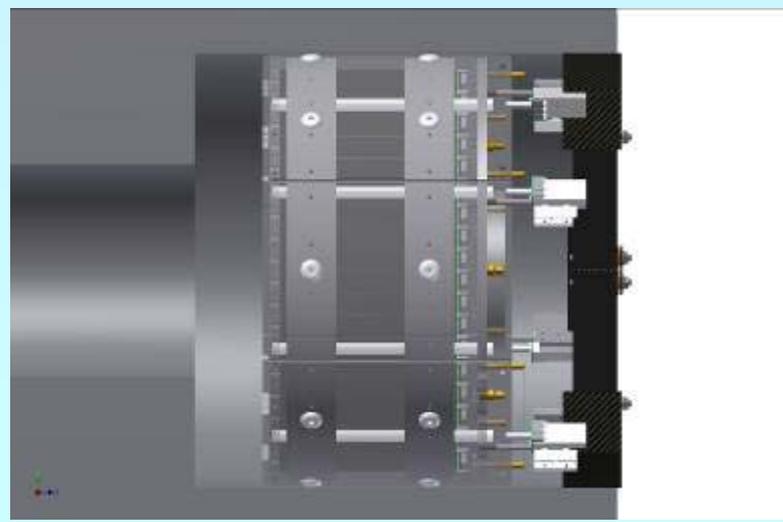
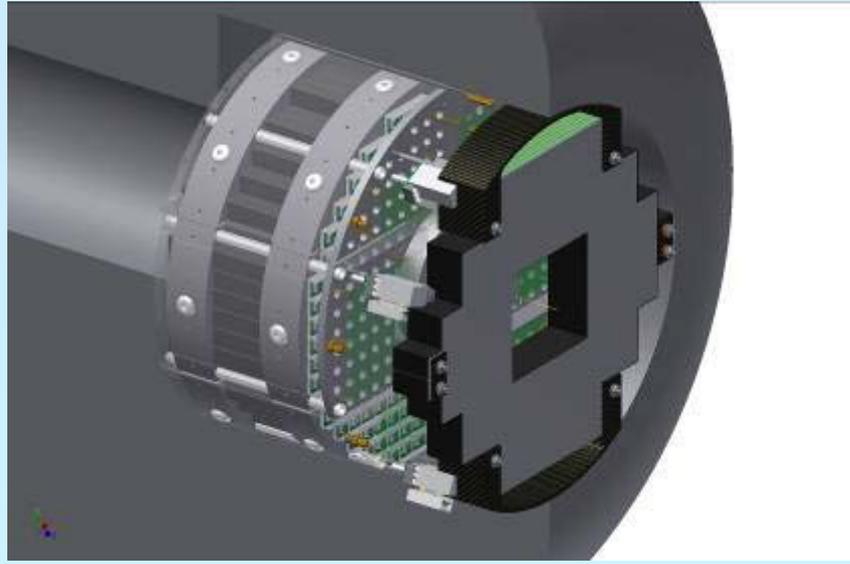
Design of the MPC-EX

Detector is designed around 6.2cm x 6.2cm modules (Si pad or strip detectors) separated by 2mm tungsten plates.



MPC-EX in GEANT

TECHNICAL SUPPORT



- 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.



- Flooding in AH/ Driveway heaving



- Electronics test/assembly room-to-parking lot door (does not open/close/lock properly - needs to be replaced)

- Temperature in utility hall (where new air compressor is installed) is exceedingly high (transformer cases as high as 135 F)

TECHNICAL SUPPORT NOTES

From Ray Karol:

From now on when we get a green permit the following process will take place in order to comply with the new BNL electrical equipment inspection program:

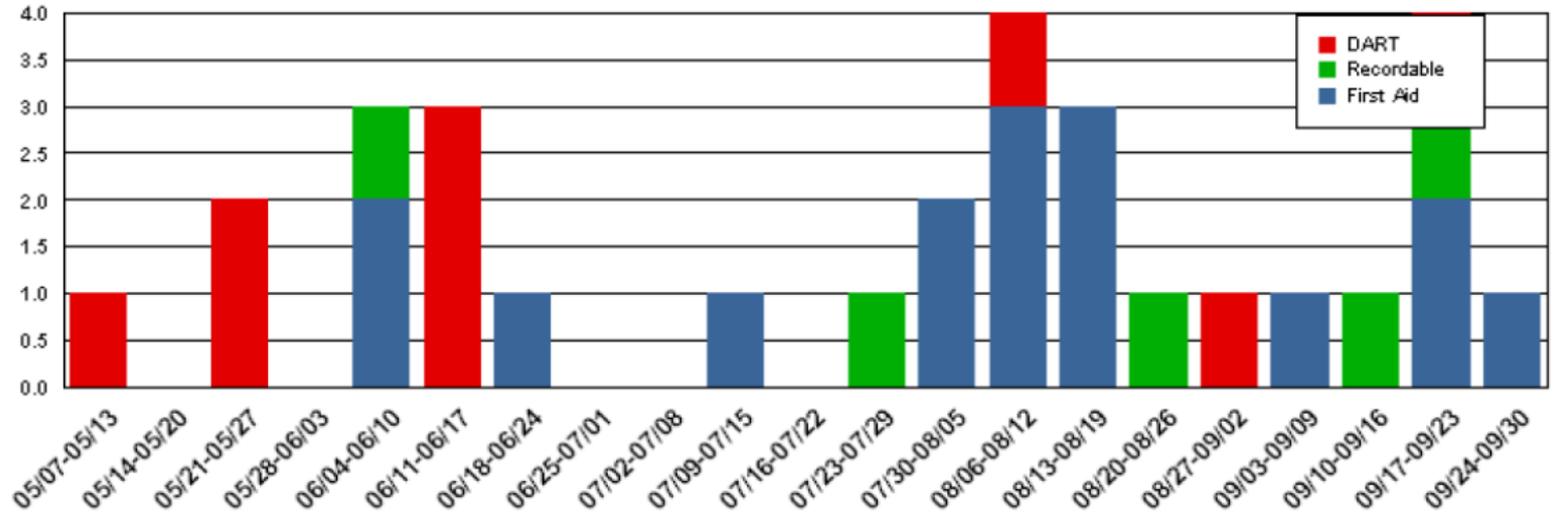
- A. Determine if there is any electrical installation or modification as part of the permit (cable pulling, power distribution, in-house made electrical equipment, new or modified lighting, etc.)
- B. If yes, PK Feng will be contacted to see if an EEI equipment inspection or an electrical installation inspection must be done. PK must sign the permit and schedule the inspections.
- C. On the back of the form **"Post Work Testing, Notification or Documentation Required"** - add the words that apply: either "EEI inspection required for BNL made equipment" or "Electrical Materials and Equipment Installation Inspection Required" as directed by PK or designee.

We cannot close out the permit until this inspection has been completed. In the last section on the bottom of the back page of the permit:

"Post Job Review/Closeout: Work Control Coordinator (authorizing dept.) checks quality of completed permit and ensures the work site is left in an acceptable condition. (WCC can delegate clean up of work area to work supervisor.)"

The WCC ensures that the change process to update drawings, placards, postings, procedures, etc. are initiated , if necessary." **PK or designee will sign that the inspection was completed in the Comments Section so we document completion of the inspection.**

Injuries Per Week As of 9/30/11



Injury Status:

FY11 YTD: DART – 27, TRC – 43, First Aid – 43
 FY10: DART – 17, TRC – 32, First Aid – 52

Recent Injuries

9/27/11	First Aid	An employee lacerated a finger while opening a container. At the OMC, first aid was given.
9/22/11	First Aid	Employee reported arm injury from cutting plastic tubing. At the OMC, first aid was given.

Where To Find PHENIX Engineering Info



Next Week: Columbus Day
(Not a Lab Holiday)

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