

PHENIX WEEKLY PLANNING



4/28/2011
Don Lynch

This Week:

No scheduled Maintenance Access

Access Today for VIP visit cancelled

CPR Training for support staff

Continuing mechanical, electrical and gas system support for Run 11

Plan for shutdown 2011

Future upgrades support

Next Week

Complete Au-Au 18 GeV and switch to 200 GeV

Maintenance Access (day and time ??)

DC broken wire repair (WP in process)

Other work ??

Continue Prep for FoCal prototype installation (waiting for prototype)

Continuing mechanical, electrical and gas system support for Run 11

Continue planning for shutdown 2011

Future upgrades support

AH and IR Crane Corrective Actions



IR Crane 1 ton replacement parts received. Paul and Mike R. planning for upgrade work.

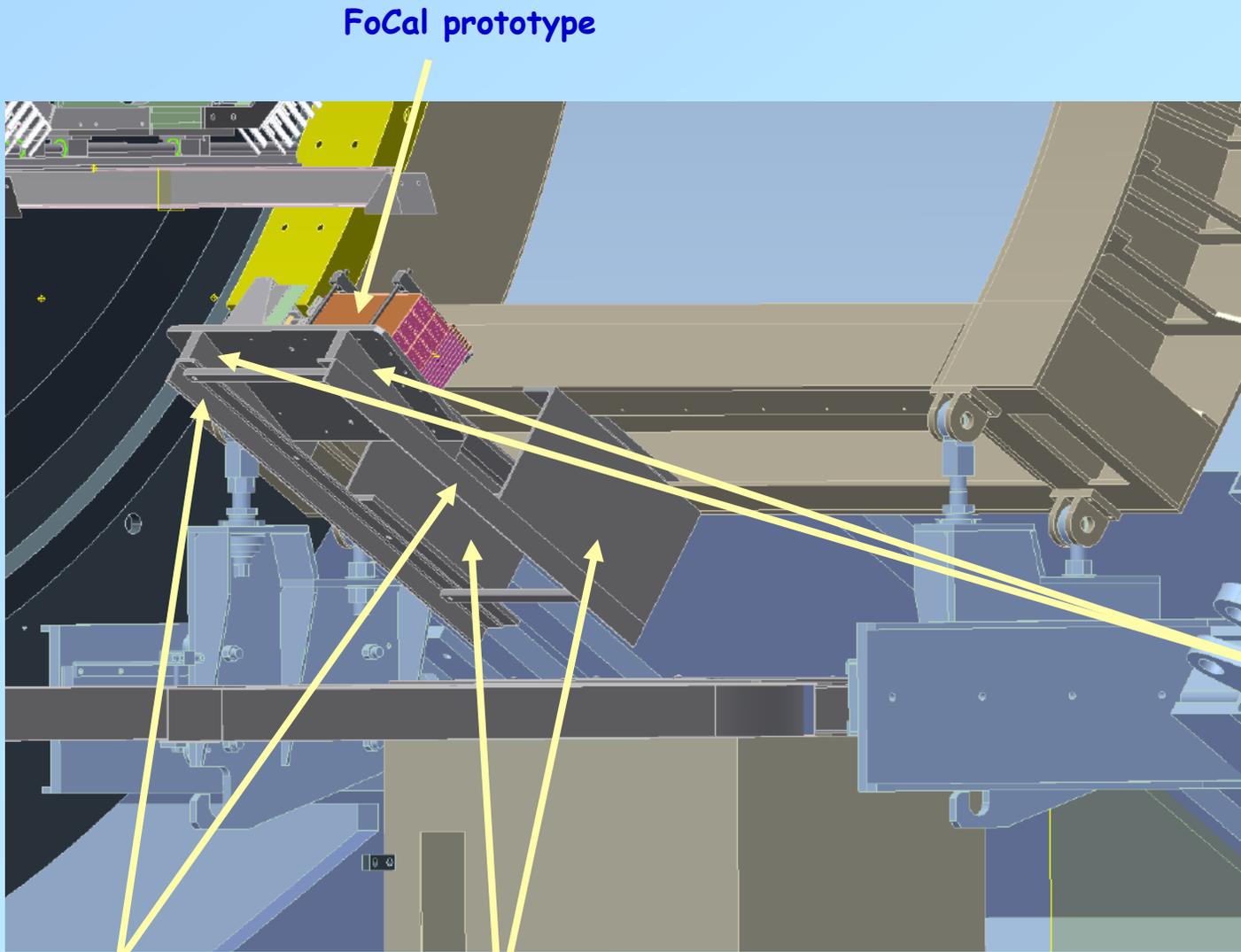
AH Crane (both hooks) out of commission until repaired. CAD engineering evaluating options:

The Plan:

- A. Remove speed reduction and use as originally equipped - **By May 15 THEN...**
- B. Add bracketry to recertify as is - **Feasibility under review - Probably NO GO**
- C. New Drive - cost and lead time **Preferred, but can't be installed for this year**



Expect to have 40 ton Crane back in service by May 15



FoCal prototype

Focal prototype support

Wedges to aim prototype

Angles to position prototype

10" channels clamped to DC support structure

4/28/2011

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 procedures
 - Assembly and QA tests
- AH Crane temporary reconfiguration (crane out of service during reconfig) 4/15-5/15/2011
- 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.
- IR Crane repairs and upgrade 7/21-7/28
- 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)

- 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)
- Upgrade AH crane 8/15-9/15/2011
- DC/PC1 East troubleshooting (DC moved forward on rail for access) 9/15-10/15/2011
- 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 9/16-10/31/201
- Pink/Blue/White sheets 10/17-10/31/201
- Run 12 cooldown 11/1/2011

Tools/Fixtures Needed for Shutdown 2011

- FVTX/VTX modified assembly fixture - in progress
- FVTX inspection tool(s) - not yet specified
- Modified FVTX/VTX installation/transport fixture(s) - not yet specified
- RPC absorber assembly tool(s) - need absorber design first
- RPC absorber installation tool(s) - need absorber design first
- Station 1 North scaffolding - in progress
- RPC1 assembly fixture(s) - In progress
- RPC1 transport/installation fixture(s) - need RPC1 design first
- MuTr vacuum lifter dummy load (for load test) - in progress
- ~~MuTr additional lifting fixture(s) (FEM plate) - in progress~~
- Mu Trigger Stations 2/3 North&South access scaffolding - not yet specified
- Mu Trigger Stations 2/3 North&South Assembly/positioning/holding tool(s) - not yet specified

Parts Needed for Shutdown 2011

- Improved/upgraded VTX part(s) - not yet specified
- VTX assembly(s) - not yet specified
- FVTX support structure - **in progress**
- FVTX big wheels - parts to be fabricated by FVTX group, Brazing to be procured locally - **expect parts next week quote rec'd from brazer**
- FVTX Big wheel mounts - parts to be fabricated by FVTX group
- VTX/FVTX arc cable trays and mounts - **Design done to be fabricated at 1008**
- RPC PE&Pb/Li absorber Components (N & S) - need absorber design first
- RPC PE&Pb/Li absorber assemblies (N & S) - need absorber design first
- RPC PE&Pb/Li absorber mounting structure (N & S) - need absorber design first
- RPC1 components (N & S) - **RPC group design in progress**
- RPC1N & S assembly(s) - **design in progress**
- RPC1N & S mounting structure - **design in progress**
- BBCN wire management modification - in design queue
- ~~RPC1S assembly(s) - need RPC1 design first~~
- ~~RPC1S mounting structure - need RPC1 design first~~
- BBCS wire management modification - in design queue
- MuTr Repair/Upgrade Parts (including scaffolding) - parts to be supplied by MuTr group except scaffolding which is in progress

4/28/2011

Parts Needed for Shutdown 2011

- MuTr Repair/Upgrade Assemblies - to be supplied by MuTr group
- MuTrigger Repair/Upgrade Parts (including scaffolding) - parts to be supplied by MuTrigger group except scaffolding which is in design queue
- Parts for Other Shutdown Work
 - Misc. Subsystem Part(s) - not yet specified
 - Gas Mixing House Maintenance and upgrade parts - not yet specified
 - PHENIX Infrastructure Maintenance and improvement parts - not yet specified
 - Gas Pad maintenance/repair/upgrade parts - not yet specified
 - PC1/DC repairs and improvements parts - not yet specified
 - IR Bridge electrical service upgrade parts - not yet specified
 - FoCal Support parts - not yet specified
 - RPC Factory Support parts - not yet specified
 - Rack room upgrades parts - not yet specified
 - CM Crane parts - project is on hold indefinitely
 - CM Alignment Stop parts - in design queue
 - Gas system maintenance/repair/upgrade parts - not yet specified
 - Future upgrade support parts - not yet specified

Procedures for Shutdown 2011

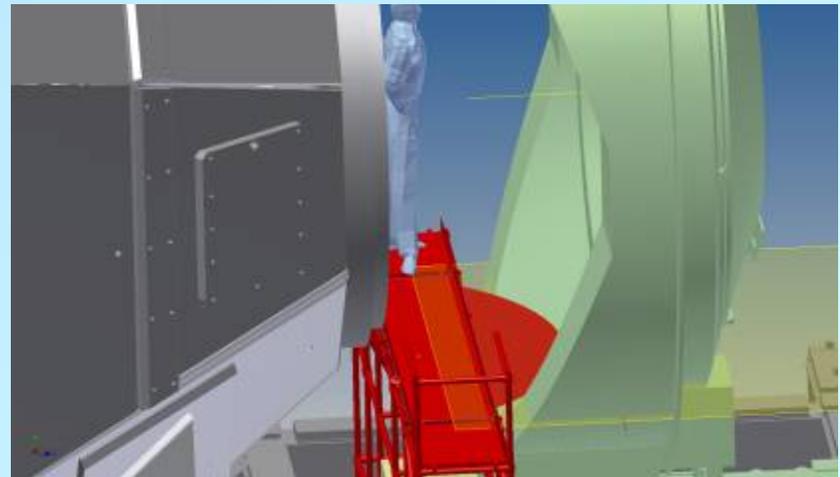
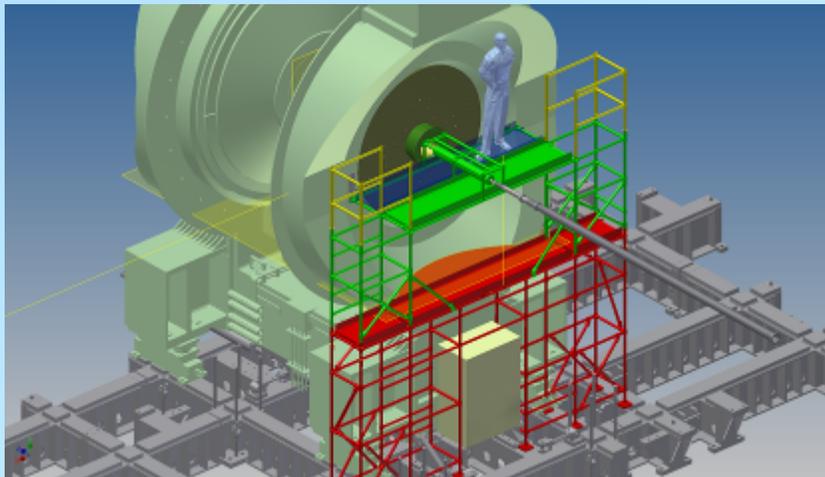
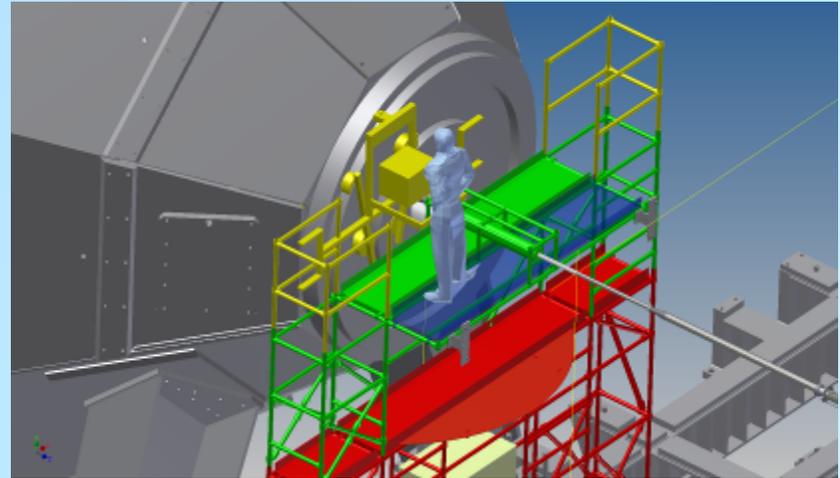
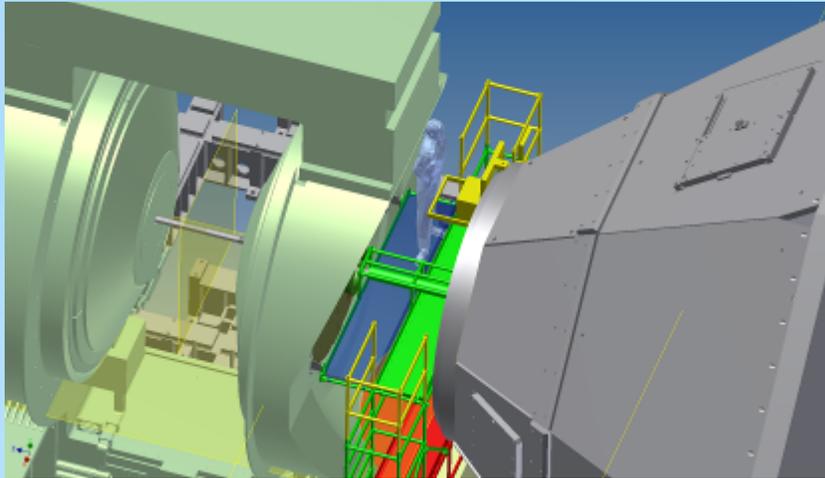
- Existing PHENIX General Purpose Recurring Task procedures
 - VTX Removal
 - FVTX/VTX installation
 - VTX Survey
 - FVTX Survey
 - FVTX Cooling System
 - RPC borated PE/Pb or Li Absorber
 - RPC1 Installation/QA testing/Survey
 - MuTr Maintenance & Upgrade
 - MuTrigger Maintenance and Upgrade
- Procedures will be part of 1 WP for VTX and FVTX
- Procedures will be part of 1 WP for RPC1 & thermal neutron absorber

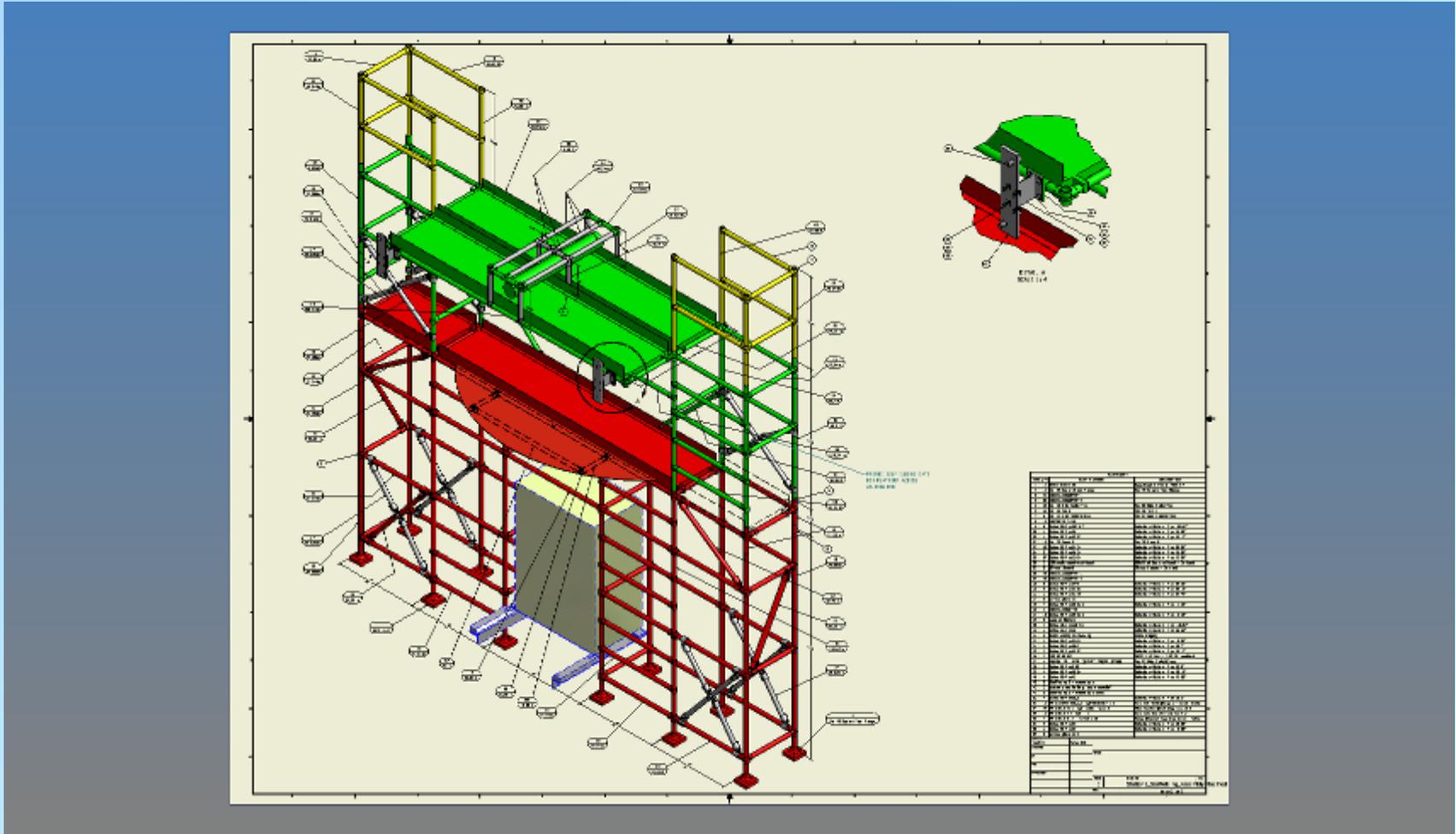
Work Permits for Shutdown 2011

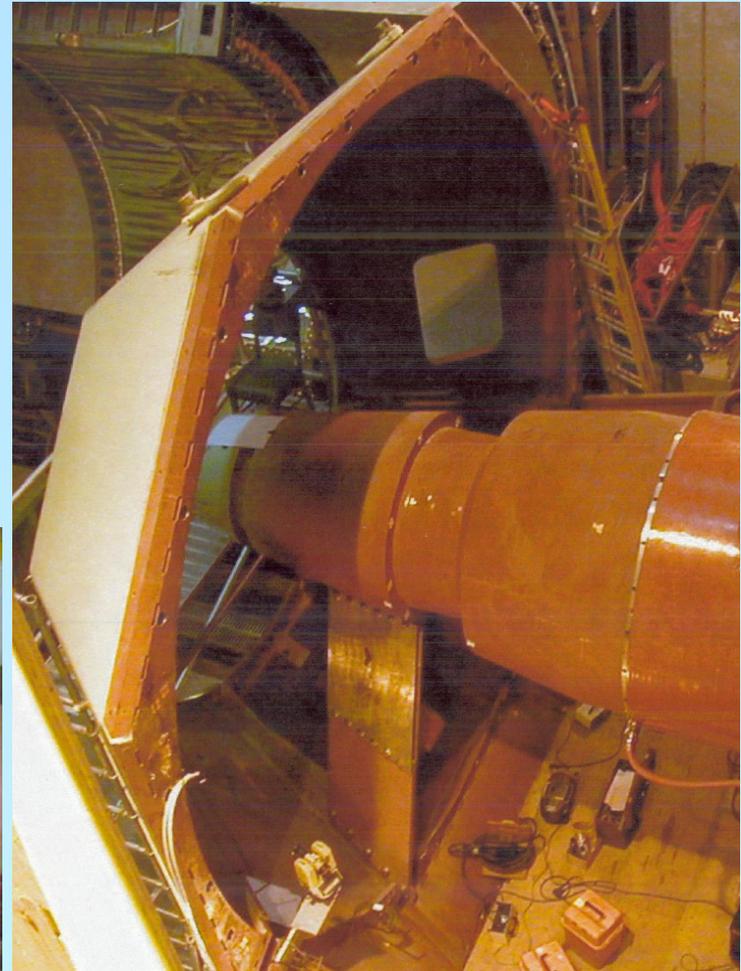
- Start of Shutdown
- VTX Removal/FVTX/VTX Installation
- MuTr Maintenance and Upgrade
- RPC Absorber Upgrade/RPC1 Installation
- MuTrigger Maintenance and Upgrade
- End of Shutdown

MuTr & RPC1 Work platform/scaffold

TECHNICAL SUPPORT







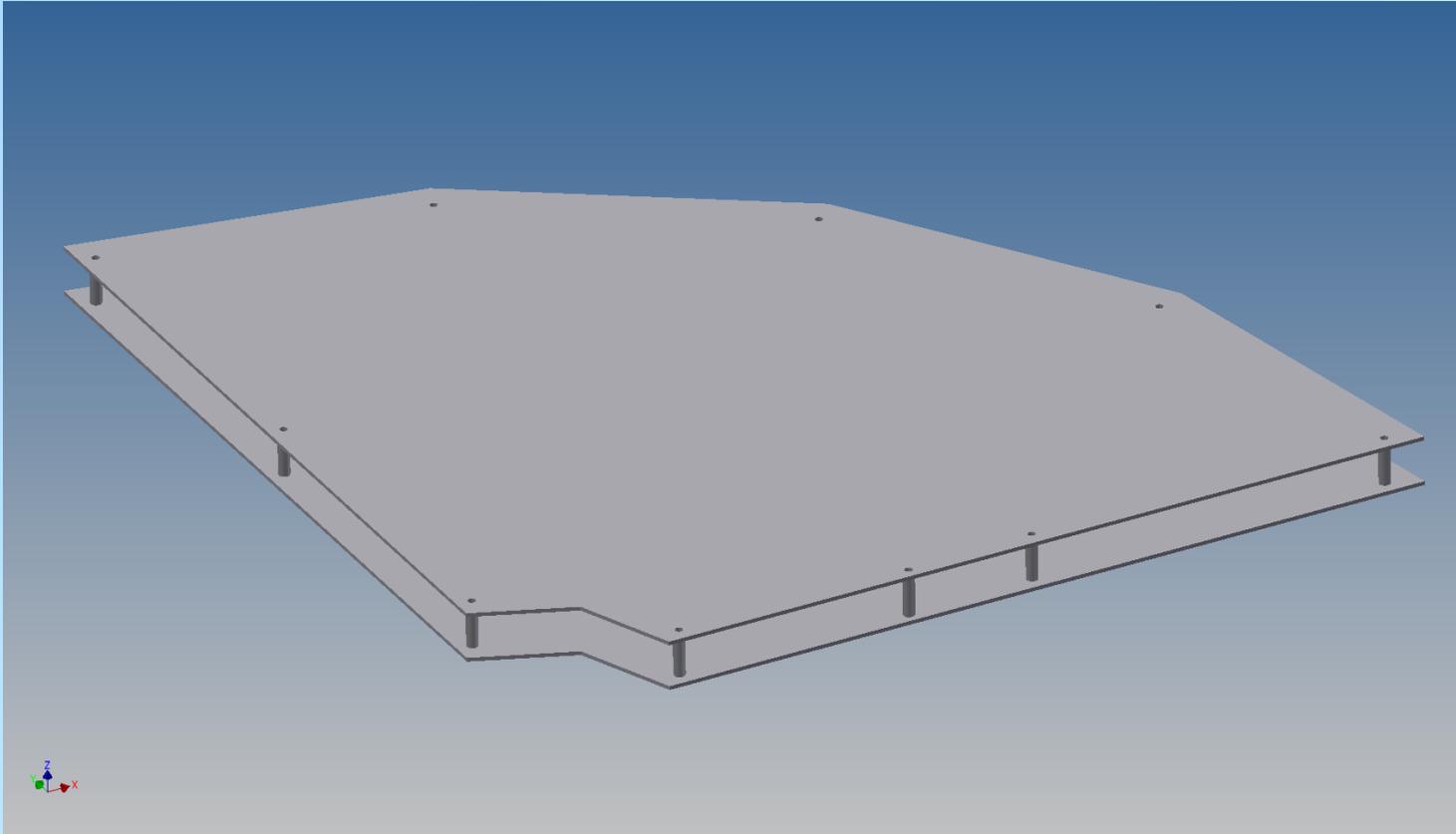
Station 2 access (MMS shown
MMN is similar)

4/28/2011



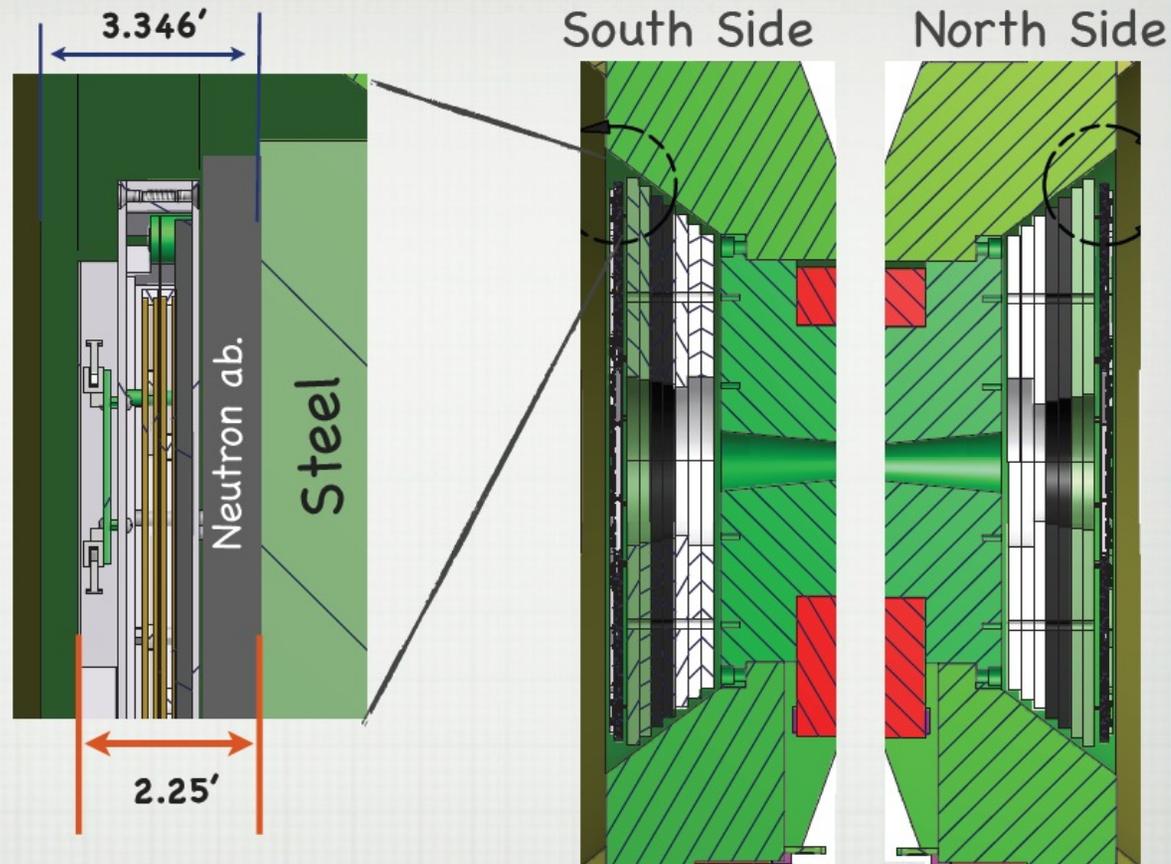
MuTr station 1 lifting fixture





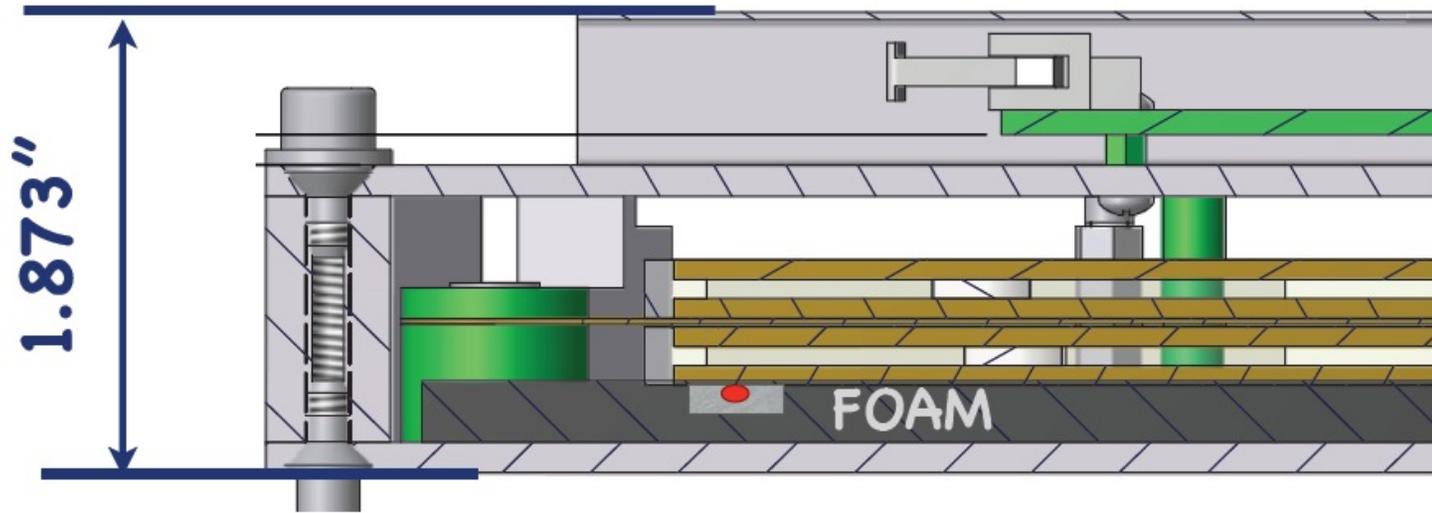
Dummy MuTr Station 1 Octant. Will be used to re-qualify vacuum lifting fixture and to practice using vacuum lifting fixture prior to removing station 1 north octants.

RPC1 Design including Thermal Neutron Absorber
 (Slides from this month's DC meeting by Francesca Giordano)



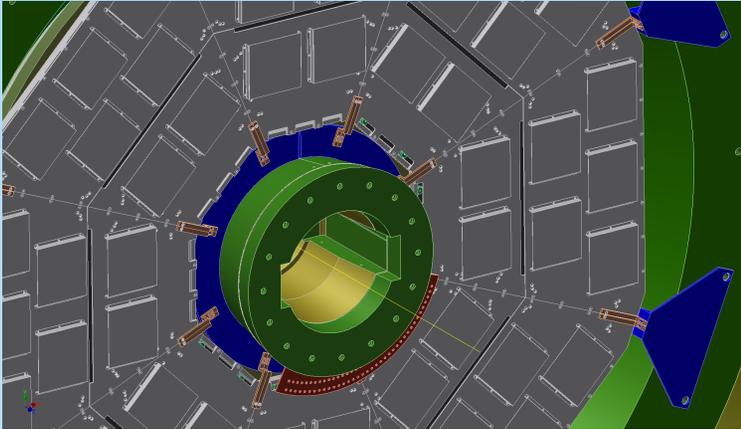
SPACE AVAILABLE FOR RPC1 & NEUTRON ABSORBER

Minimum thickness needed for
RPC1: 1.873"



Left thickness for Neutron absorber: 0.38"

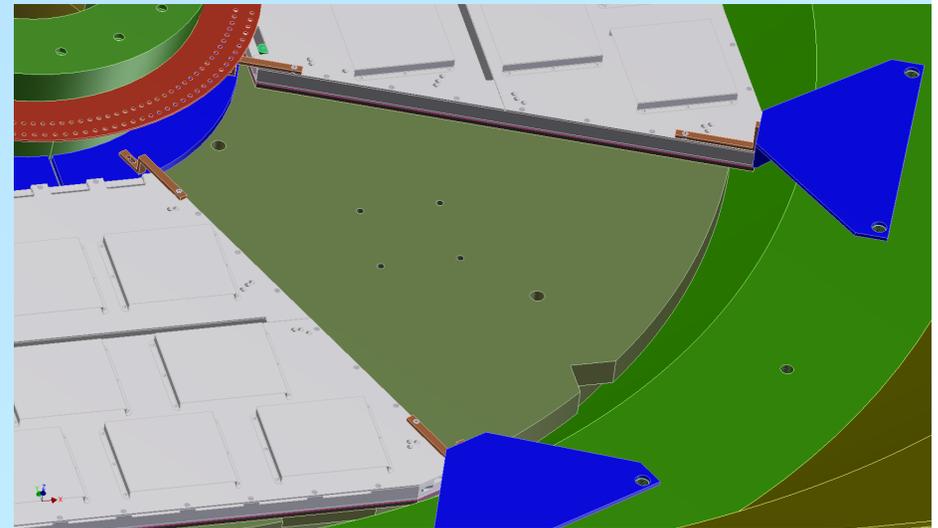
2.25": SPACE AVAILABLE FOR RPC1 & NEUTRON ABSORBER



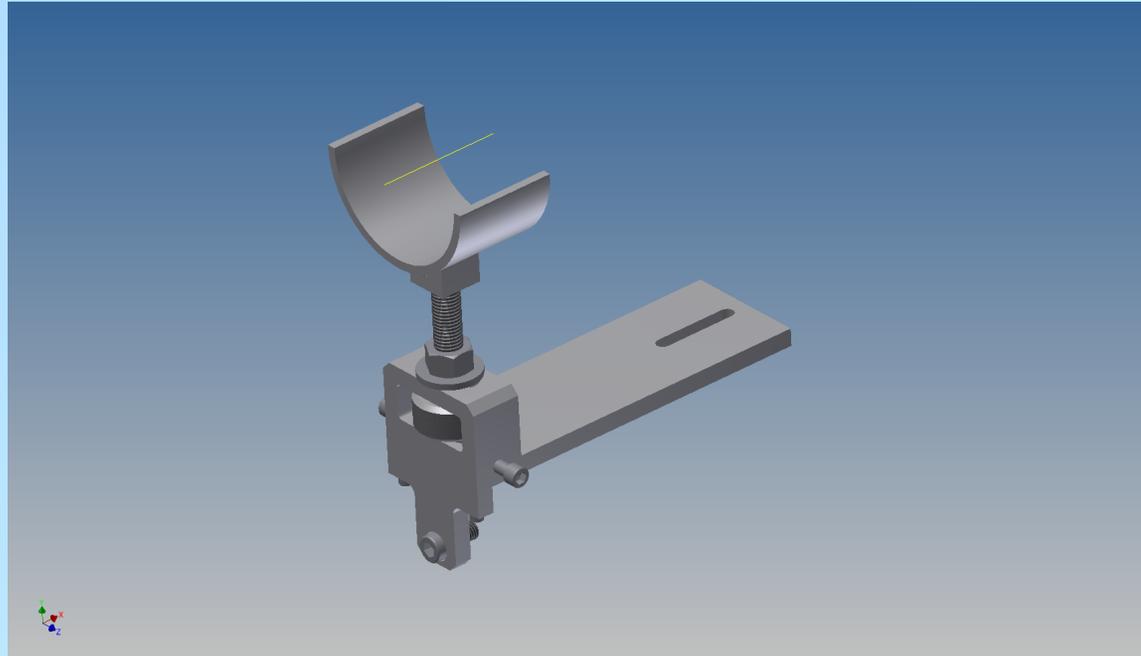
RPC1's installed (above showing 8 octants, below showing 1 octant removed to accommodate the BBC cables)



RPC1 Mounting Concept (Preliminary)



Octants are individually mounted then tied together and supported at the outer octant boundaries by brackets mounted on existing tapped holes, and on inner edges by rings which wedge against the flower pot lead liner. The absorber section is assumed to be pre-attached to the octants. Tapped thru holes in 6 places on each octant are used both to mount the absorber section and to attach the mounting brackets.



Improved Beampipe support for north station 1 support.

New wider rings have also been designed for south station 1 support. Both supports are intended to improve support when moving *CM* and *MMS* magnets during shutdown maintenance, based on experience last year and lessons learned as recorded during our 2010 shutdown closeout meeting.

2010 Building Maintenance Issues

TECHNICAL SUPPORT NORTH

- 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
- Repair repair floor with

Nothing New This Week



PHENIX Procedure Review Current Status:

147 Procedures Identified

87 Made Inactive (not currently used) and when necessary re-activate if

9 are not used and available on the

43 are not used

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

Nothing New This Week

Web retrieval of latest procedures now available from PHENIX Internal:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_procedures.htm

1. RPC Factory annual safety review

- a) All procedures reviewed and found to be up to date requiring no revisions

Done

Annual RPC Factory safety system blue sheet testing, Done

Safety walkthru needed, schedule TBD, after blue sheets Done

action items:

- 1- Inventory and place gas cylinders into Chemical Management System. Clearly post the static inventory form near the bottle racks. -DONE
- 2- Update and review RPC work Plan for 2011. - DONE To be posted at factory
- 3- Send Documentation of certification of gas safety system to C-AD ESSHQ. - Paul
- 4- Send Documentation to ESSHQ of environmental discharge of RPC for year 2011. Done
- 5- Repair exit sign in RPC tent. - Paul

2. FoCal Prototype safety review

- a) Documents prepared and submitted for review - Done
- b) Installation procedure and work permit in progress - Waiting for prototype, now expect prototype to be ready by end of May
- c) Assembly of prototype and design of installation/support structure in progress - wire bonding in progress? (Fabrication Done)
- d) Expect to install during a maintenance access period sometime in May?

4/28/2011

TECHNICAL SUPPORT 2011

3.

Where To Find PHENIX Engineering Info

Happy World Day for Safety and Health at Work



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

