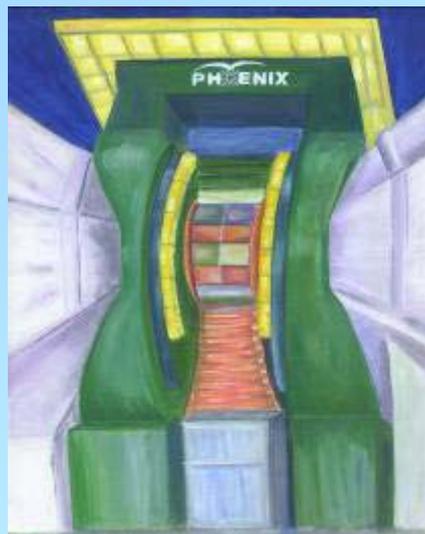


PHENIX WEEKLY PLANNING



2/18/2010
Don Lynch

TECHNICAL SUPPORT NO-0

Ongoing Tasks for Run 10

Task

Start Date

End Date

Install rack components in RPC3 N racks

in progress

2/28/2010

Attach cables to RPC3 N racks and to Detector $\frac{1}{2}$ octants

in progress

2/28/2010

Install blower for RPC3N thermal control

in progress

2/28/2010

Send mass flowmeters out for recalibration (DC/PC, MuID, TOF.W)

In Progress

?

AH Crane 110 switch for lockout

In Progress

6/30/09

PHENIX Startup Checklist Status

Item

Responsibility

Status

Item 1: ESRC relevant items completed

Wood Stairs

Phillips

Post Start

Update Work procedures

Cirnigliaro, Lynch

Post Start

Item 4: HBD Mock Up

Lynch

After Run 10

Item 11: Fire Pull Box

Phillips

Post Start

Item 12: Dumb Waiter

Lynch

Revising
Calculations

TECHNICAL SUPPORT NO-O

Next Week:

Next holiday not until May 31

Next Scheduled Maintenance Thurs. 2/25 (Note: Change)

- Subsystem routine maintenance, etc.
- No specific maintenance requests yet
- Check RPC3S above MUID support clearances
- Dumb Waiter inspection?

Run 10 tech support as necessary

2010 summer shutdown prep continues

Future upgrade support as necessary

Prep for beampipe installation review

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2010 Tasks

TECHNICAL SUPPORT 2010

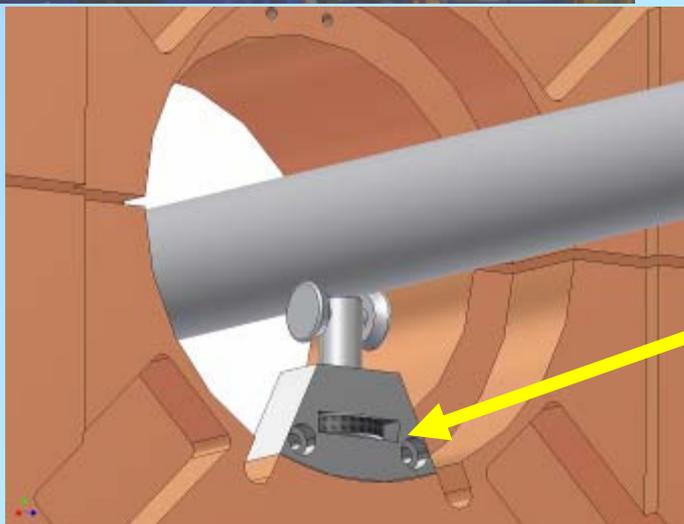
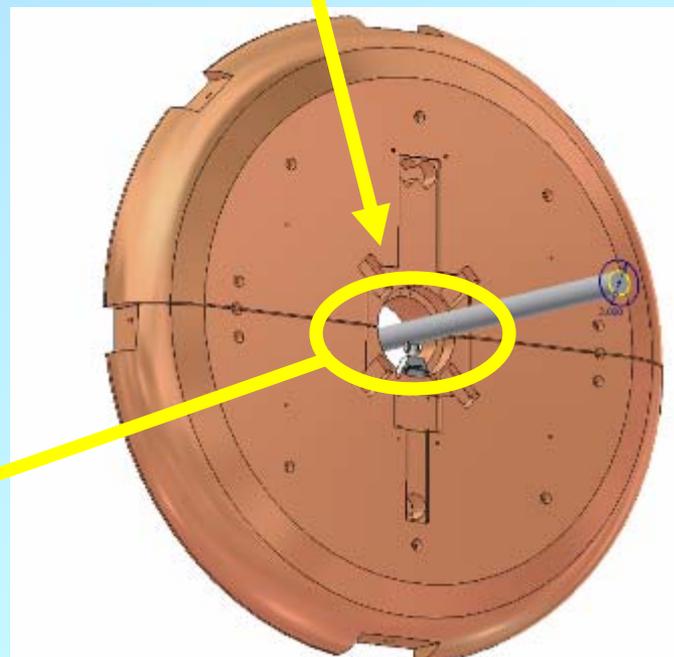
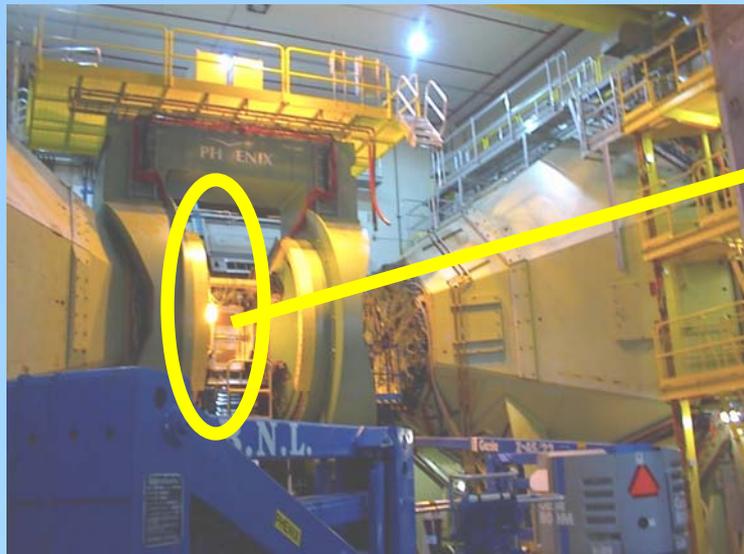
	Start Date	End Date
Run 10	In progress	6/1
VTX Fabrication and Installation Plan (1st Draft)	Done	Done
RPC3 South Fabrication and Installation Plan (1 st Draft)	Done	Done
Receive New Beampipe	On Order	2/26
Design Beam pipe supports	In progress	2/26
Update RPC3 N design for RPC3 S	In progress	2/26
Design support structure, alignment scheme for VTX	In progress	2/26
Fabricate beam pipe supports	2/19	5/1
Beampipe NEG coating (CERN)	2/1	5/1
Fabricate/procure parts for RPC3 S installation	3/1	5/1
Fabricate/procure parts for VTX installation	3/1	6/1
End of run 10	6/1	6/1
Prep IR for shutdown	6/1	7/1
Complete unfinished business for MuTrgr FEE & RPC3 North	6/1	8/1
Install Beam pipe	7/1	10/1
Install VTX	8/1	10/1
Install RPC3 South	6/1	10/1
2010 Shutdown Other Tasks	6/1	11/1

New Beampipe Pre-Shutdown Prep

TECHNICAL SUPPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Design central beam pipe and new transition sections	Done	
Order beampipe	Done	Brush Wellman
Order new design transitions	Done	CAD
Order replacements for existing transitions and spools	Done	CS
Conceptual and mechanical design beampipe supports	Done	Done
Beampipe fabrication	2/26/2010	Delayed to 3/3?
Receive bp and all beampipe sections	2/26/2010	CAD
Beampipe Installation Review (Preliminary)	2/26/2010	To Be Scheduled
Bp and sections acceptance tests and inspection	3/14/2010	
Send beampipe to CERN for NEG Coating	3/15/2010	
Fabricate beampipe supports	5/31/2010	
Receive bp back at BNL	5/31/2010	
Choreograph removal of old beampipe and installation of new (final)	6/1/2010	
Final acceptance and inspection bp and sections	6/15/2010	
Test and inspect beampipe supports	6/15/2010	
Beampipe Installation Review (Final)	6/15/2010	

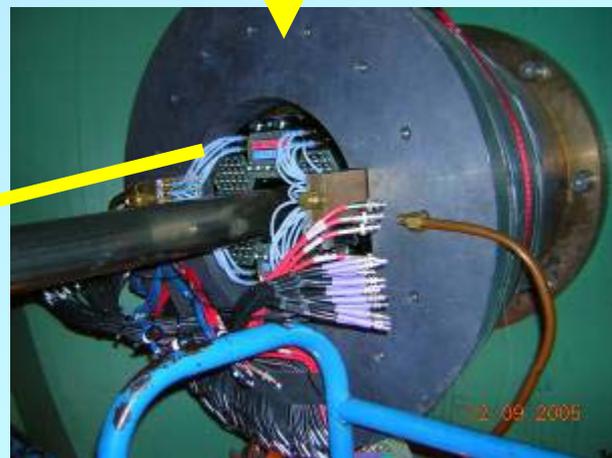
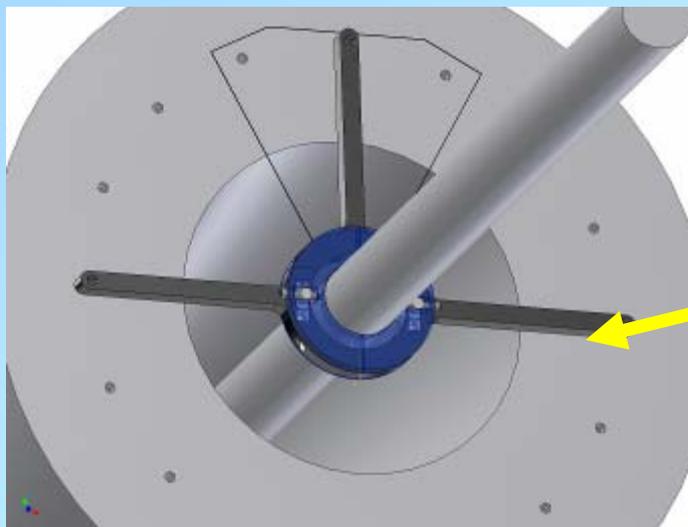
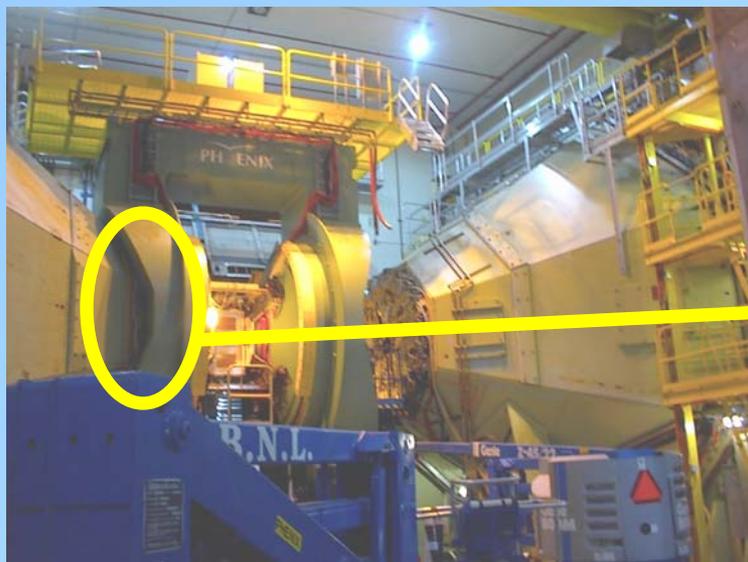
CM central BP supports (2 req'd)

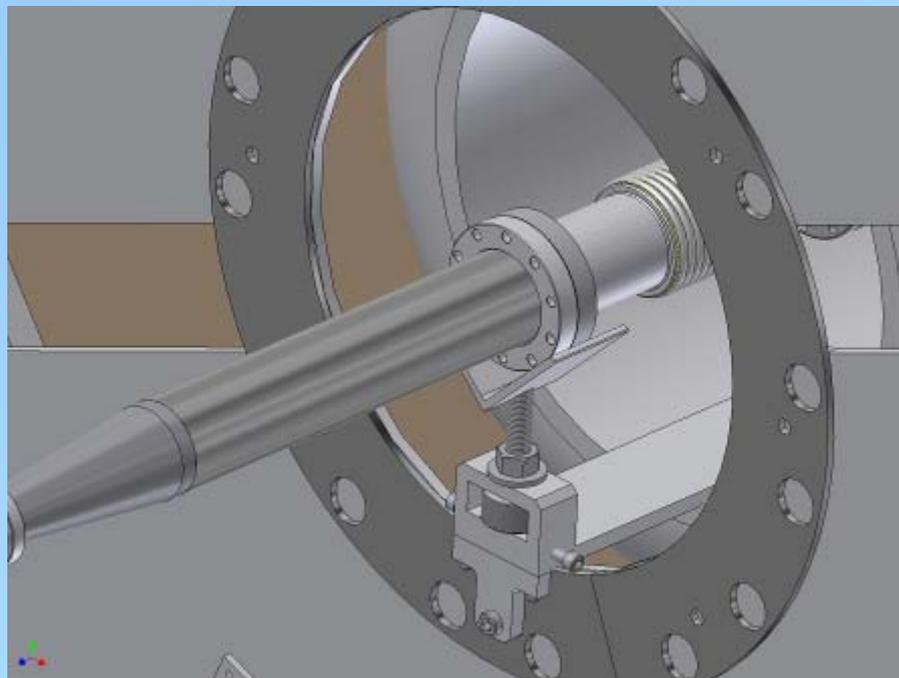


TECHNICAL SUPPORT NO-0

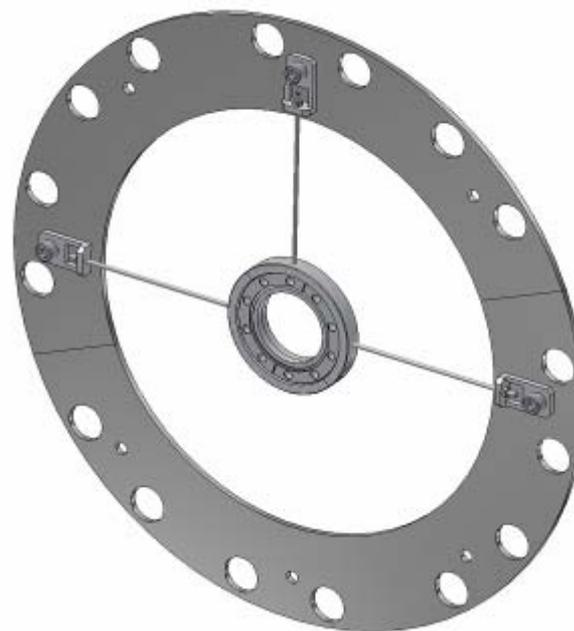
South Flowerpot BP support

TECHNICAL SUPPORT NO-0





North MPC Cavity BP support



ЛУЧШИЙ НАПОЛН

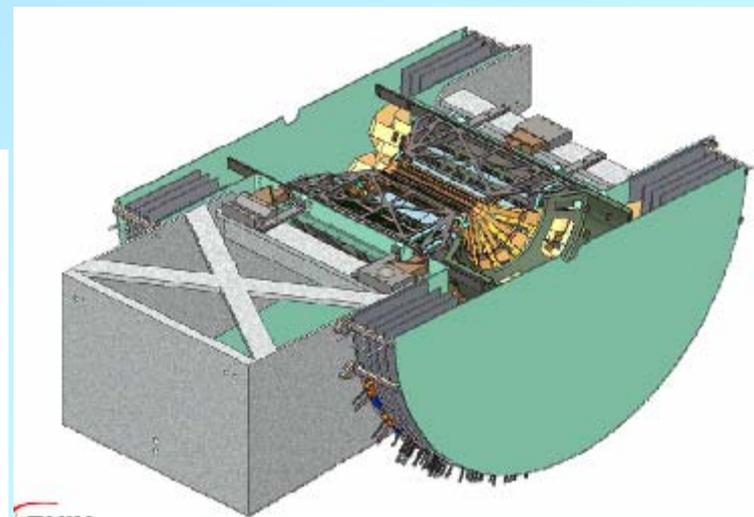
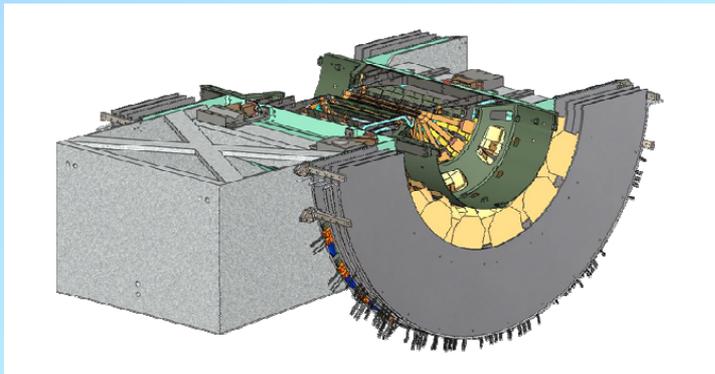
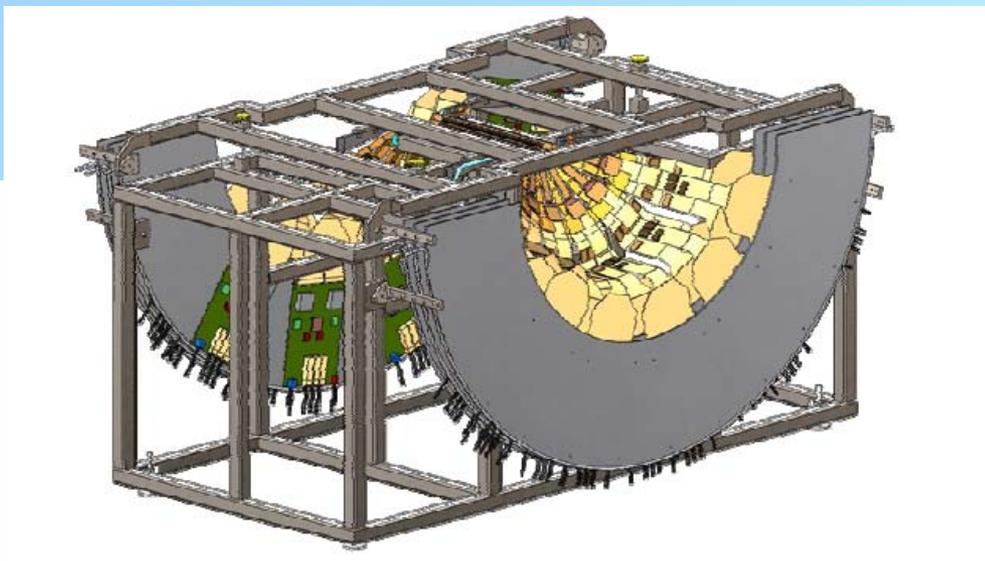
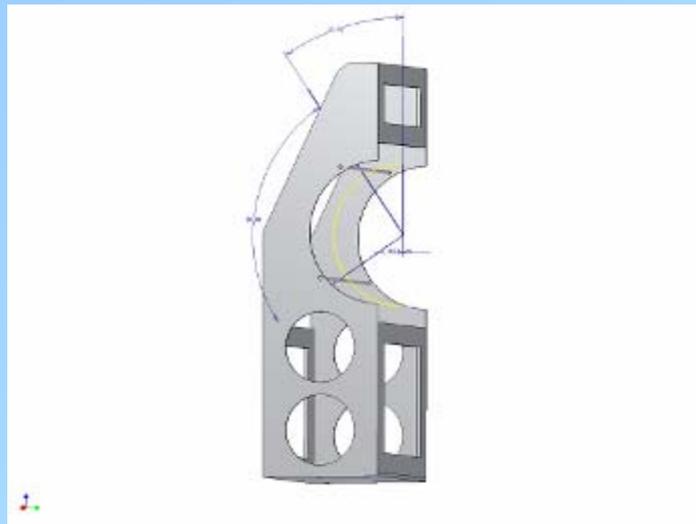
VTX Subassembly, Top Assembly, Installation and Integration Prep

TECHNICAL SUPPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Design assembly workspace, tools and fixtures	Done	Fixtures designed by PHENIX →
Fabricate/prepare assembly workspace, tools and fixtures		Fixtures designed by PHENIX Done →
Receive, inspect, test, rework and qualify assembly tools and fixtures		Fixtures designed by PHENIX Done →
Subassemblies complete ready for integration into hemispheres		→
Design assembly workspace, tools and fixtures	Done	VTX Group →
Fabricate assembly workspace, tools and fixtures	3/31/2010	VTX Group/PHENIX? →
Conceptual and mechanical design of installation, structural support and detector alignment, including station 1 work platforms	2/26/2010	→
Installation Review (ESRC)	~3/15/2010	→
Beampipe & VTX Installation Work Permits	5/31/2010	→
Receive, inspect, test, rework and qualify assembly tools and fixtures	6/30/2010	VTX Group →
Fabricate/procure detail components for installation, support and alignment, including station 1 work platforms	6/30/2010	→
Design & fabricate fixtures, techniques and mockups for installation and alignment	6/30/2010	→
Receive & inspect components (installation, support & alignment)	7/15/2010	→
Assemble Hemispheres	7/15/2010	→
Mock installations/alignments on bench and in IR	7/31/2010	↓

VTX Support Structure Base Assembly Design In Progress

TECHNICAL SUPPORT NO-0



RPC3 Pre Shutdown Prep

TECHNICAL SUPPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Review RPC3 North for Lessons Learned		
Make a list of all purchased and fabricated parts	1/29/2010	
Place order for CS fabricated parts	2/5/2010	
Order raw materials for PHENIX fabricated parts	2/12/2010	
Order purchased parts for RPC3 South	2/19/2010	
Implement design improvements for RPC3 South	2/26/2010	
Receive and inspect 1/2-octant shells	2/26/2010	
Prepare Installation Plan	3/15/2010	
pre-survey 1/2 octant shells	3/19/2010	
Fabricate PHENIX parts	5/14/2010	
Receive and inspect CS fabricated parts	5/28/2010	
Prepare work permit for installation	6/1/2010	
Receive purchased parts	6/4/2010	
Assemble, test and burn-in 1/2 octants	6/18/2010	
Pre-Assemble base components at PHENIX	6/25/2010	

Start of Shutdown

TECHNICAL REPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
End of Run 10	5/31/2010	
Purge Gas From Detectors	6/4/2010	→
DAQ Tests	6/4/2010	→
Close North and South BP gate valves and lock closed for until new BP is installed	6/4/2010	→
Open and disassemble wall	6/11/2010	→
Remove EC ladder and fold platforms	6/11/2010	→
Remove BP Collar	6/11/2010	→
Move MMS south	6/14/2010	→
Prep EC for move to EC	6/18/2010	→
Move EC to AH	6/25/2010	→
Install cart	6/28/2010	→
Move Collars to AH	6/28/2010	→
Install decking	6/29/2010	→
Install Manlift	6/29/2010	→
Remove RPC2 Prototype, support brackets, cabling & Piping	6/29/2010	→
Remove MMS east vertical lampshade	6/30/2010	→

Beampipe De-installation

TECHNICAL REPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Remove MPC's (Use Manlift)	7/9/2010	
Install South station 1 work platforms	7/12/2010	
Remove BBC's	7/16/2010	
Position MMS for Vacuum break	7/21/2010	
Install Temporary supports for old BP	7/21/2010	
Break vacuum on either side of MMS	7/22/2010	
Remove south bellows	7/22/2010	
Prep MMS for move to AH	7/22/2010	
Move MMS to shutdown park position	7/22/2010	
Remove south 3 to 5 transition and south spool	7/23/2010	
Remove north bellows	7/23/2010	
Remove north 3 to 5 transition	7/23/2010	
Remove HBD's and HBD cables	7/23/2010	
Remove RXNP's and cables	7/30/2010	
Extract Old Be Beampipe from CM	7/27/2010	

New Beampipe installation



TUESDAY 15:44:00T NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Rework north bellows to include anti-squirm guide rods	7/28/2010	→
Prepare north 3 to 5 transition for installation with roller guides, bakeout wrap and thermocouples	7/28/2010	→
Install north 3 to 5 transition in MMN	7/29/2010	→
Install new Be pipe in CM on temp supports	7/30/2010	→
Install north and south 1-5/8 to 3 transitions and position in CM	7/30/2010	→
Prealign Be/Alum pipe with transitions attached on new BP supports At MPC north, BBC south and north nosecone	8/2/2010	→
Prepare south 3 to 5 transition for installation with roller guides, bakeout wrap and thermocouples	8/3/2010	→
Install south 3 to 5 transition and 5 spool with temporary supports in MMS	8/4/2010	→
Move MMS back into IR	8/5/2010	→
Connect all beampipe sections and perform leak check.	8/6/2010	→
Install temporary bakeout supports	8/6/2010	→
Install bakeout blankets and monitoring	8/6/2010	→
Bakeout New BP and activate NEG coating	9/3/2010	→
Leak check BP	9/10/2010	→
Re-install MPC's including Cables and services	9/10/2010	→
Re-install BBC's including Cables and services	9/17/2010	→
Move CM to run position	9/20/2010	→
Final alignment of new BP	10/1/2010	→

2/18/2010

VTX Installation, VTX Services and Electronics

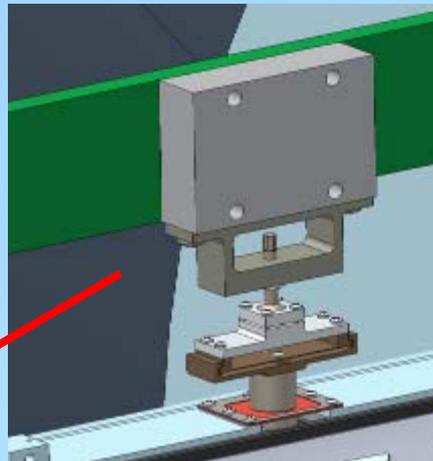
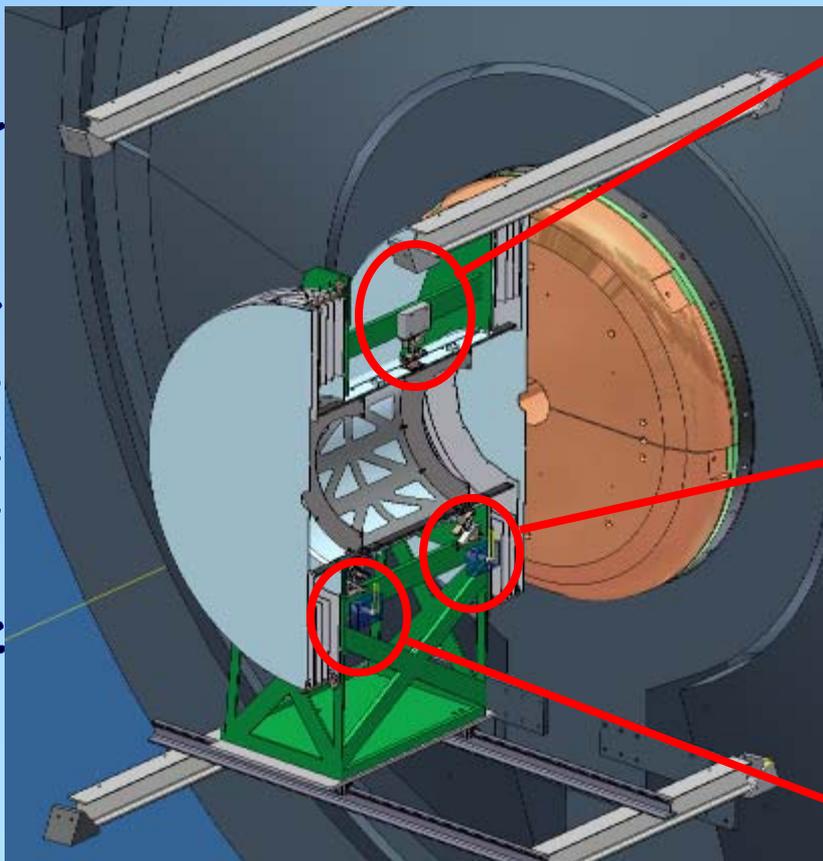


TECHNICAL SUPPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Install and align VTX rail attachment hardware to CM	8/27/2010	
Install and align VTX rails parallel to beam line	9/3/2010	→
Install and align VTX rails perpendicular to beam line	9/10/2010	→
Install and align west half detector module	9/17/2010	→
Install and align east half detector module	9/24/2010	→
Install mechanical support structures for VTX services and electronics	10/1/2010	→
Install Cable trays	10/1/2010	→
Install racks	10/1/2010	→
Install chiller	10/1/2010	→
Install cables, plumbing	10/1/2010	→
Connect cables and plumbing	10/1/2010	→
Test and commission	11/1/2010	↓

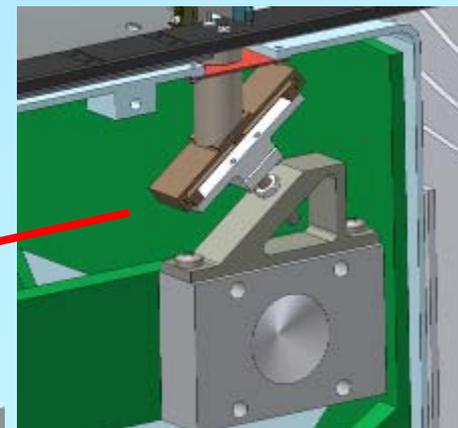
VTX Installation Plan

TECHNICAL SUPPORT NO-0
Kinematic mounts for mating east and west detector halves

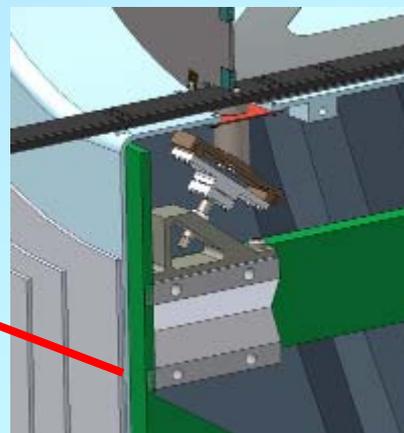


2 DOF (Y & Z)

0 DOF



6 interface points w/ HYTEC



1 DOF (Z)

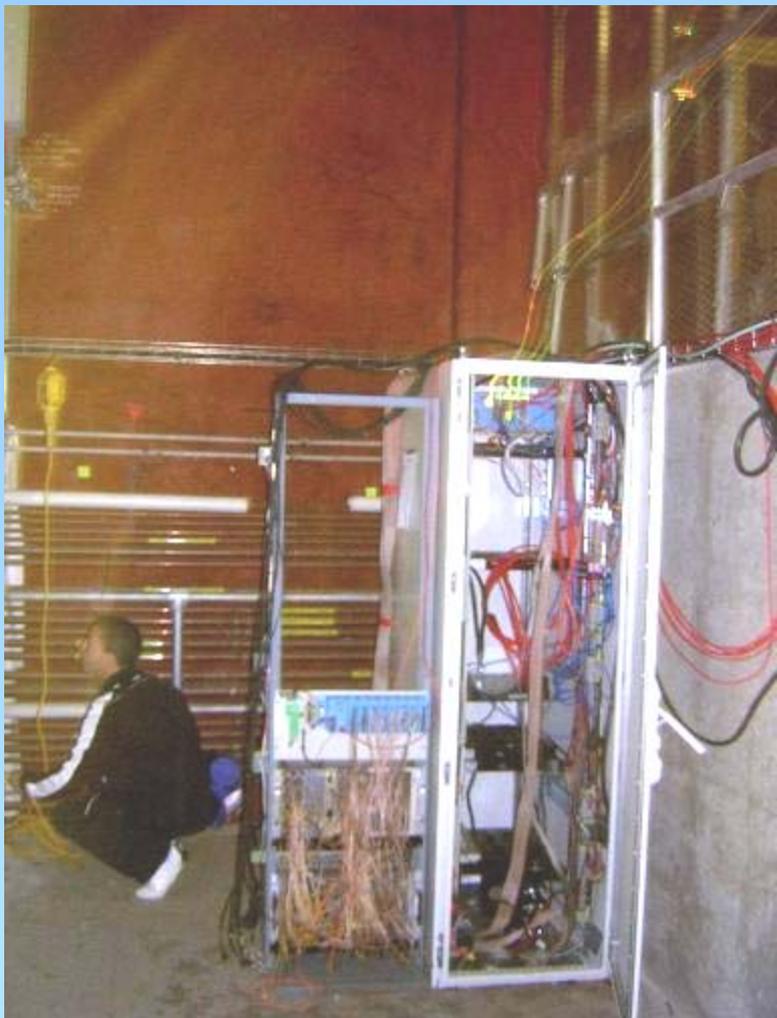
RPC3 South Prep, Early Shutdown



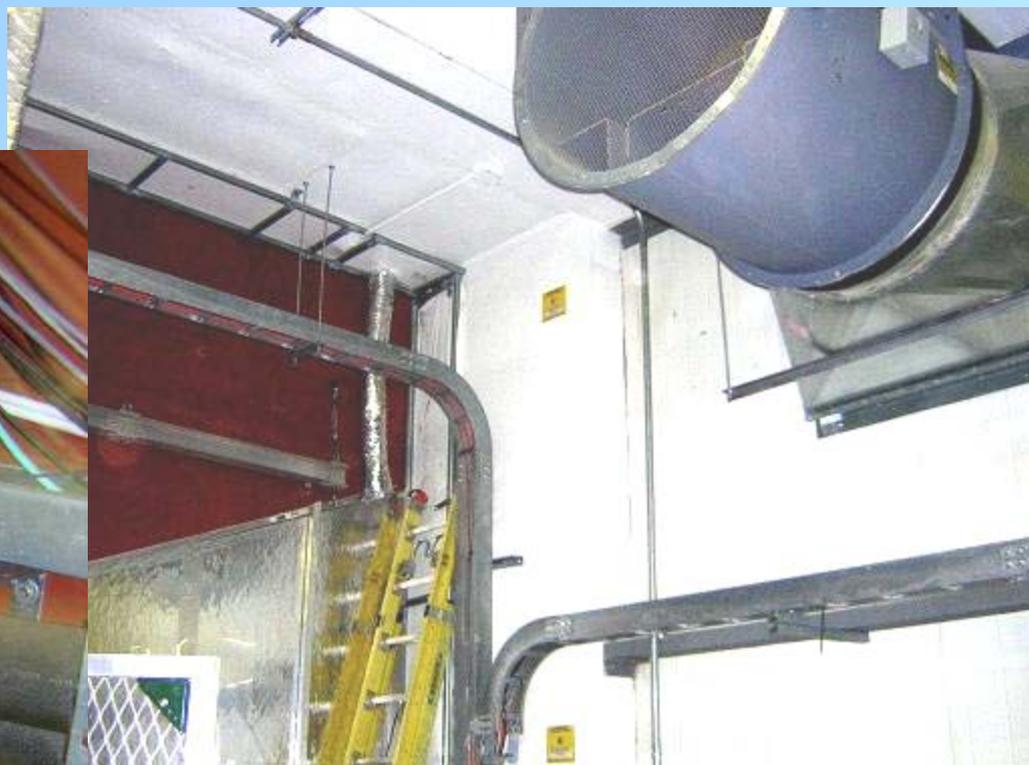
TECHNICAL SUPPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Remove wiring, walkovers, FCAL and scintillator hardware that would otherwise interfere with installation	6/4/2010	→
Remove/relocate shielding	6/11/2010	→
Remove crystal palace & vapor barrier	6/18/2010	→
Inspect Gap 5 south for legacy items/problems	6/25/2010	→
Address legacy items/problems as convenient prior to shutdown start	7/2/2010	→
4th of July Holiday	7/6/2010	→
Install lighting & relocate sensors as necessary	7/20/2010	→
Temporarily relocate, re-position or otherwise address interfering piping, cable trays	7/21/2010	→
Remove RPC prototype	7/21/2010	→
Build/install access and work platforms for walk on top of MuID steel	7/23/2010	→
Pre-survey $\frac{1}{2}$ octant reference points	7/28/2010	→
Drill and tap $\frac{1}{2}$ octant and rotating piston mounting points	7/30/2010	→
Final cleaning and prep of gap 5 for grouting	8/6/2010	→
Pre-installation orientation meeting with masons and riggers	8/5/2010	→
Position lifting equipment in tunnel	8/6/2010	→
Move east and west base structures into south tunnel and assemble on east and west sides of pedestal respectively. Include translation control fixtures	8/6/2010	↓

TECHNICAL SUPPORT NO-0



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RPC3 South Installation

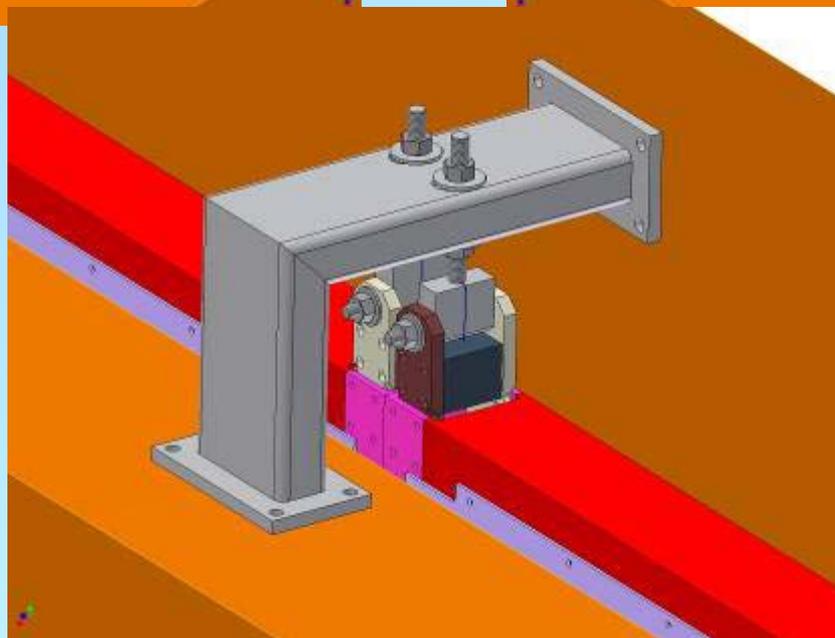
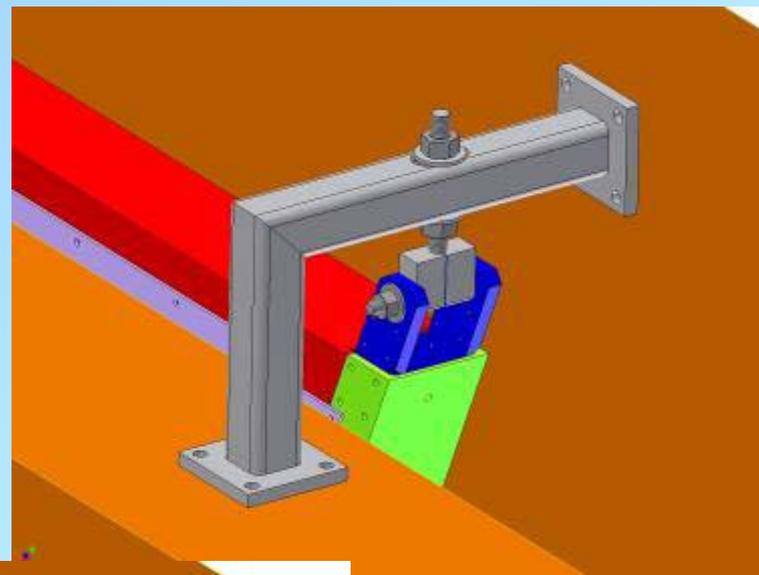
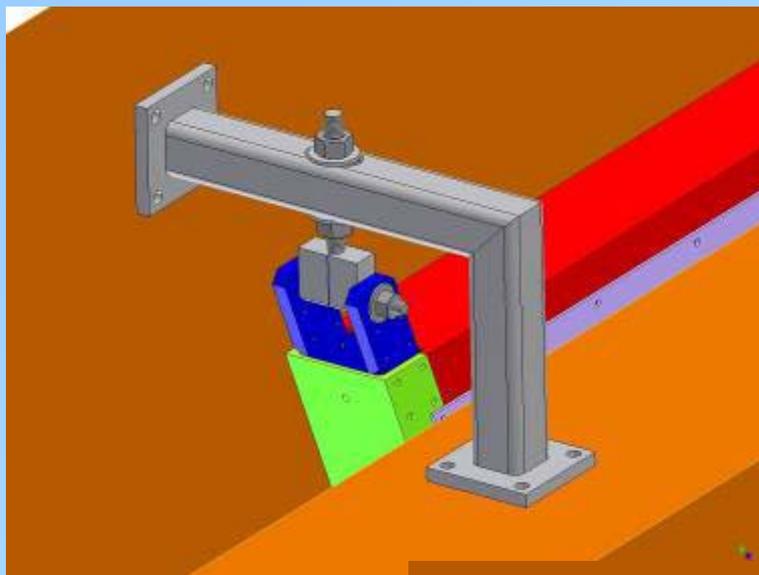


TECHNICAL SUPPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Install and align base structures on east and west sides of gap 5	8/11/2010	
Prepare for grouting	8/12/2010	
Install grout	8/13/2010	
Install pitch control rails on pedestal and gap 5 east & west inner walls	8/27/2010	
Install upper suspension support hardware	8/31/2010	
Install $\frac{1}{2}$ octants, 2 at a time in accordance with work plan/work permit		
<i>Transport $\frac{1}{2}$ octants 2 at a time from RPC factory to south tunnel on angled transport carts</i>		
<i>Transfer $\frac{1}{2}$ octants from angled transport carts one at a time to temporary free standing and re-orienting roller fixture (fore and aft wheels and axel)</i>		
<i>Lift (and re-orient if appropriate) $\frac{1}{2}$ octant and install into base structure, previously installed $\frac{1}{2}$ octant or upper suspension hardware as appropriate per work plan</i>		
<i>Pre-align each $\frac{1}{2}$ octant as installed</i>		
<i>Perform electrical integrity tests before proceeding to next pair of $\frac{1}{2}$ octants</i>		
<i>After all $\frac{1}{2}$ octants are in place and tested, join east and west halves of full south station 3 detector and align to survey markers</i>	9/10/2010	

RPC3 South Installation Plan

TECHNICAL SUPPORT NO-0



RPC3 South Integration

TECHNICAL SUPPORT 2-0-0

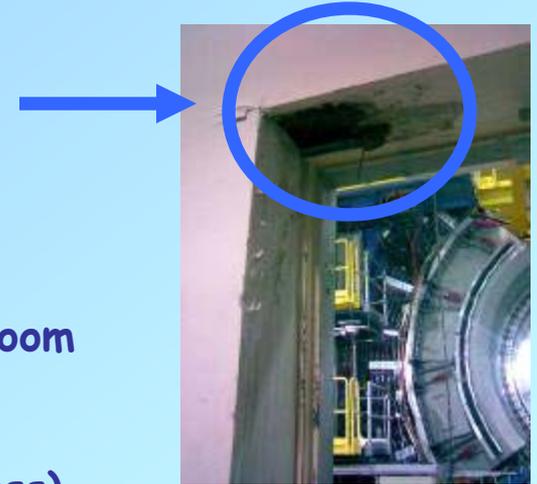
<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
Final survey	9/17/2010	
Install new cable trays and piping supports	9/30/2010	→
Re-install MuID wiring and pipes	9/30/2010	→
Re-install MuID gas rack	9/30/2010	→
Install RPC3 HV, LV and signal wiring and gas lines	10/31/2010	→
Install RPC3 South gas distribution rack	10/31/2010	→
Install RPC3 South environmental controls (heaters and thermostats)	10/31/2010	→
Install south thermal/vapor barrier	10/15/2010	→
Re-install shielding	10/29/2010	→
Commissioning and final acceptance tests	10/29/2010	↓

Shutdown 2010 Other Work

TECHNICAL SUPPORT NO-0

<u>Task</u>	<u>Due By</u>	<u>NOTES</u>
RPC3 North unfinished business	7/15/2010	
MuTrigger FEE unfinished business	7/15/2010	
RHIC Summer Sunday Tour	8/15/2010	→
Other subsystem maintenance and repair	10/1/2010	→
Gas System maintenance, repair, upgrade	10/1/2010	→
Bridge Electrical support upgrade	10/1/2010	→
PHENIX Infrastructure maintenance, repair, upgrade	10/1/2010	→
Rack Room upgrade	10/1/2010	→
Future upgrade support	10/1/2010	→
DC/PC maintenance/repair	10/15/2010	→
Prepare for Run 11	10/31/2010	↓

- Roof leaks in utility bathroom at northwest corner behind tech offices, over door between rack room and assembly hall and over door between control room and elect. ass'y room.
- General maintenance for Trailer Offices (in progress)
- Trailer Office Modifications planning in progress



PHENIX Procedure Review Current Status:

147 Procedures Identified

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

12 CAD procedures relevant to PHENIX, all are current and up-to- date.
All currently under review,
3 to be de-activated.

40 PHENIX approved procedures.

1 is currently under review
39 are current and up-to-date

15 Proposed/Draft Procedures (never previously formalized)

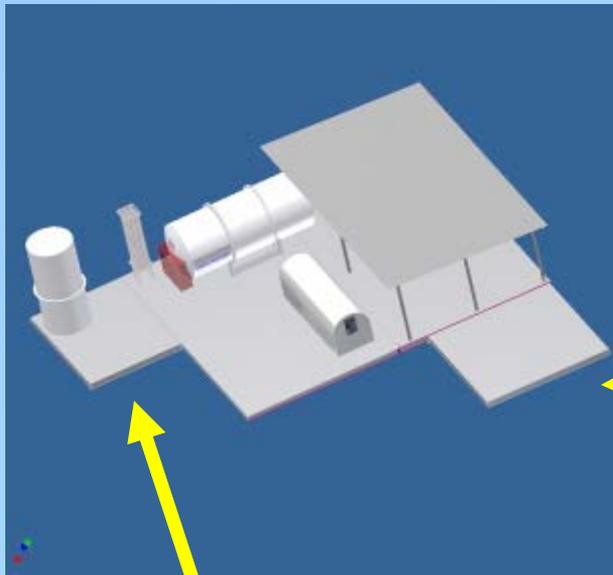
New Spreadsheet Tracking Application to keep track of Procedure revisions and updates - Done and Working

Web retrieval of latest procedures now available from PHENIX Internal:

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

TECHNICAL SUPPORT 2010

New Argon Dewar and Empty Gas Bottle Storage Area



Pad for Empty Gas Bottles



Pad for argon Dewar



Safety, Security, etc.

1. CAD will be having its annual internal management system assessment of the BNL ISO14001 (Environmental Management System) and the OHSAS 18001 (Worker Occupational Safety and Health) Programs next week by Bet Zimmerman and Dave Skipper.
2. In parallel with that assessment they are having Compliance assessments by BNL and BHSO (Brookhaven DOE Office) of:
 - Flammable Cabinets by Bob Selvey
 - Non-ionizing radiation (NIR) and Static and Magnetic Fields (SMF) by Chris Wielandics
 - Walking and Working Surfaces by Steve Kane
 - Electrical Safety by Steve Kane
 - Confined Space Permitting by Bob Selvey Lasers by Chris Wielandics
 - Water and Power Consumption by Bob Lee
 - Pollution Prevention (P2) and Environmental Purchasing by Bob Lee
 - Pest management by Bob Lee
 - RCD ALARA, Entry and Exit Controls, Posting and Labeling by BHSO and Peter Heotis

These may include PHENIX: Know the essence of the BNL ESSH Policy if asked:

We protect the environment, we maintain a safe work environment, we protect our health and that of the surrounding community, we comply with ESSH requirements, we maintain an open constructive relationship with our colleagues and neighbors inside and outside the lab and we strive to continually improve our ESSH performance.

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm

PHENIX Technical Staff Current Training

All are up to date on JTA's (~Paul)

A couple of you have one or two required training due. Check the report.

TECHNICAL SUPPORT NO-0

Where To Find PHENIX Engineering Info

The summer 2010 shutdown schedule is full. All of the techs will be fully loaded with work, and will be working on multiple projects. The work outlined requires temporary relocation of the EC, MMS and CM which will necessitate severing most services to these structures and their subsystems. Subsystems should not assume the availability of any specific techs to work on projects not already committed. Please let me know of any additional work so I can assure that it doesn't conflict with the major efforts and I can assure that it gets appropriately scheduled where it can best be supported.



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

