

PHENIX WEEKLY PLANNING

TECHNICAL SUPPORT ZONE



7/12/2012
Don Lynch

This Week

- Complete VTX/FVTX Post Run Tests
- Open Shield Wall
- Stow shield wall
- Drop power to EC and dumb waiter
- Remove MUID Collars
- Move MMS South
- sPHENIX design and analysis continues
- MPC Work Permit
- VTX/FVTX Work Permit
- MuTr all stations work permits (3)
- RPC Work Permit
- Move EC to AH
- Remove MPC North
- Begin de-cabling VTX/FVTX



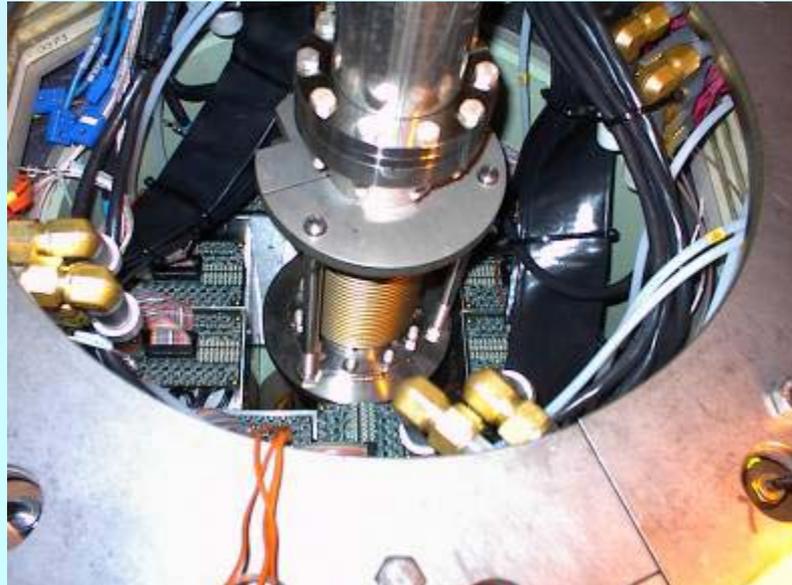
Next Week

- Complete MPC North removal
- MPC-Ex measurements
- Begin VTX/FVTX removal
- Prep for MuTr Station 1 South & Stations 2&3 N&S

MPC repairs

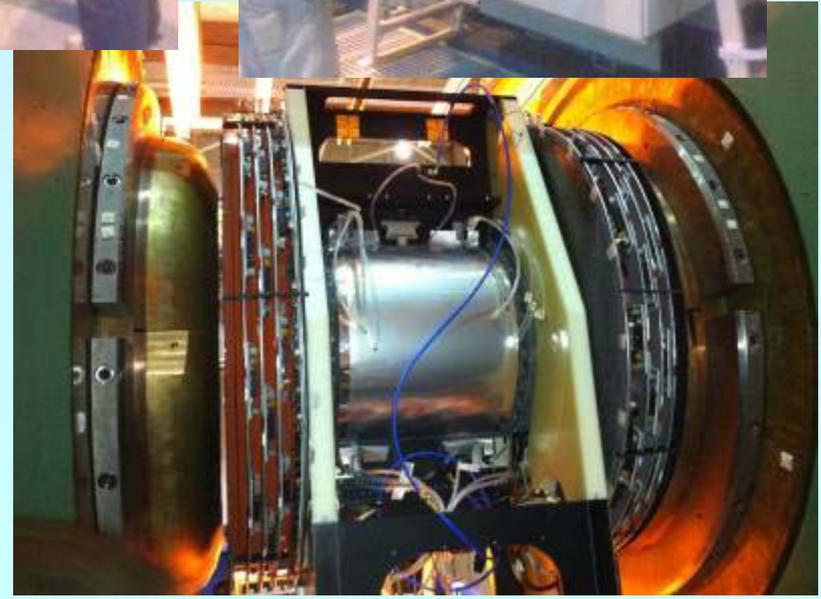
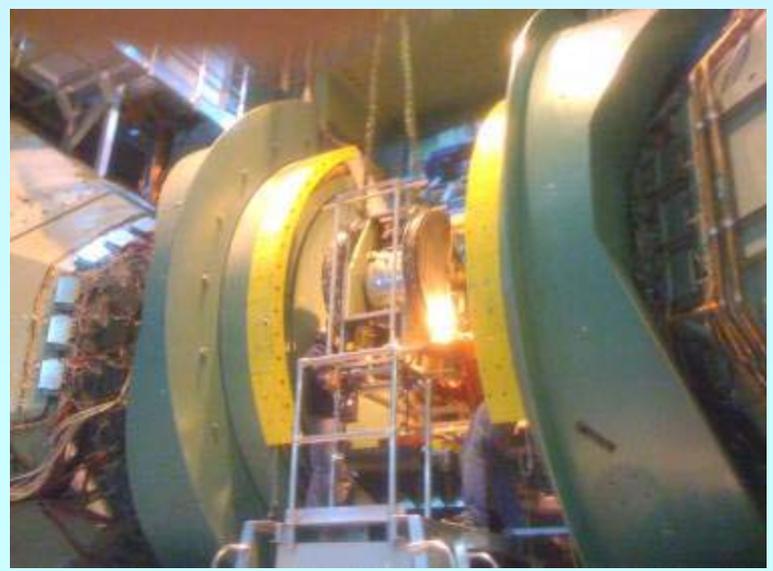
Need CAD manlift week of 7/9 - Asked for at CAD coord meeting

WP Approved



VTX Installation 2010 & 2011. 2012 Removal and re-installation will be same.

TECHNICAL SUPPORT NON



RPC Station 1 North and South Cooling Upgrade

TECHNICAL SUPPORT



North

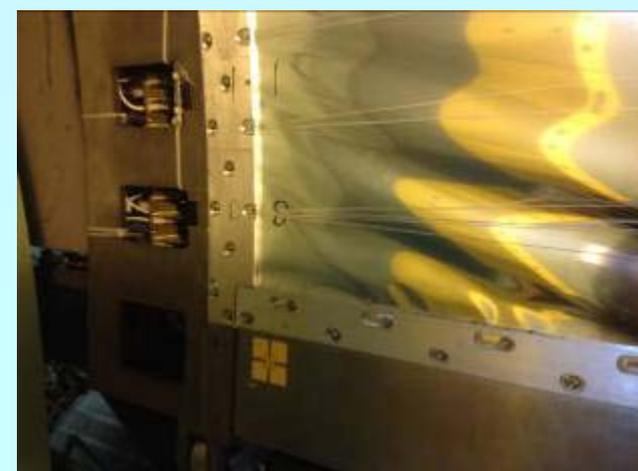
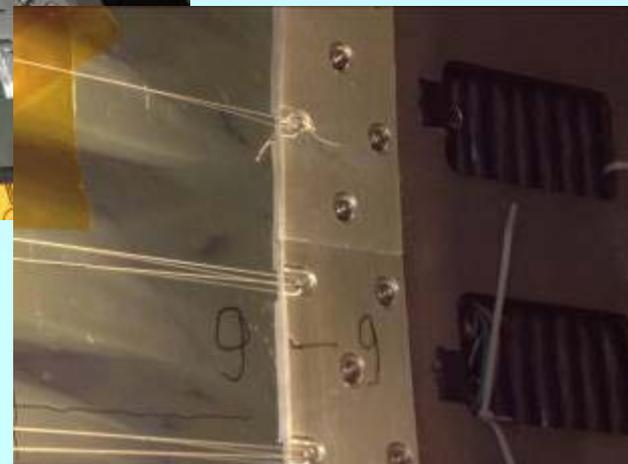
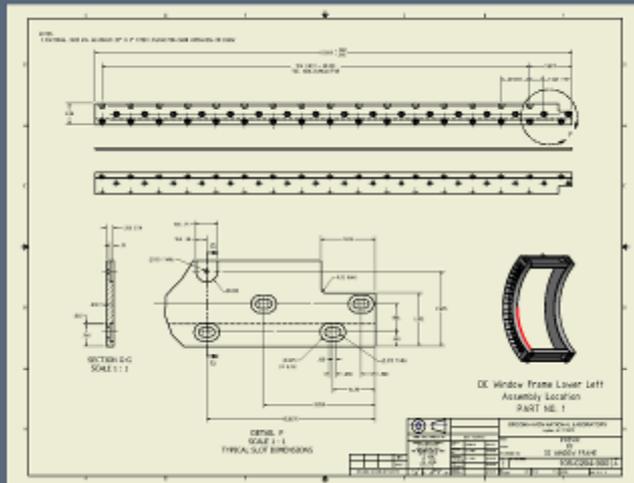


South

Work Permit Done

DC West Upgrade Design and measurements

TECHNICAL SUPPORT NON



TECHNICAL SUPPORT NON

- Station-1 South re-capacitation and termination



WP Submitted



vacuum lifting fixture



view when sta-1 removed (south)

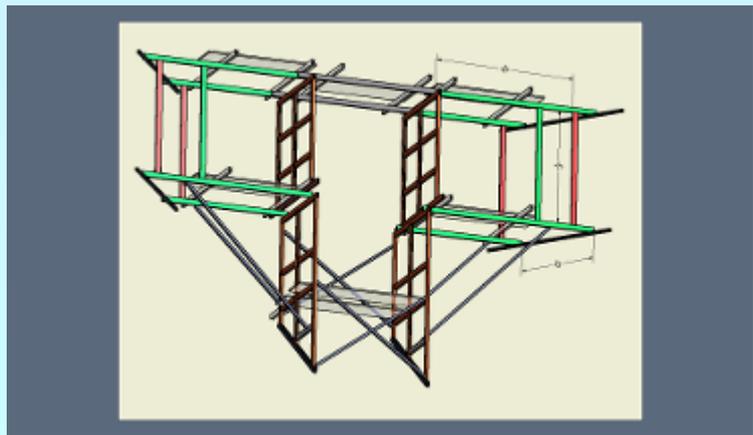
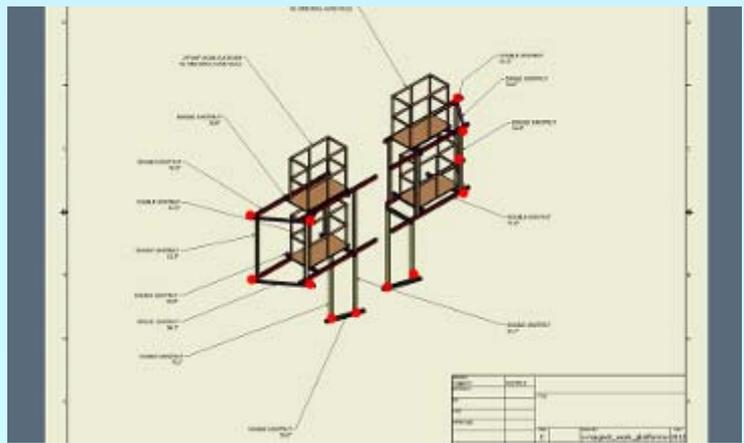
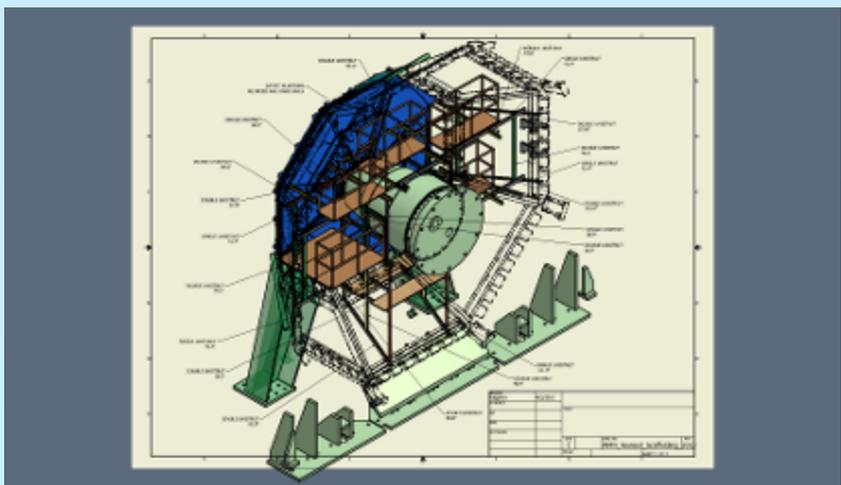
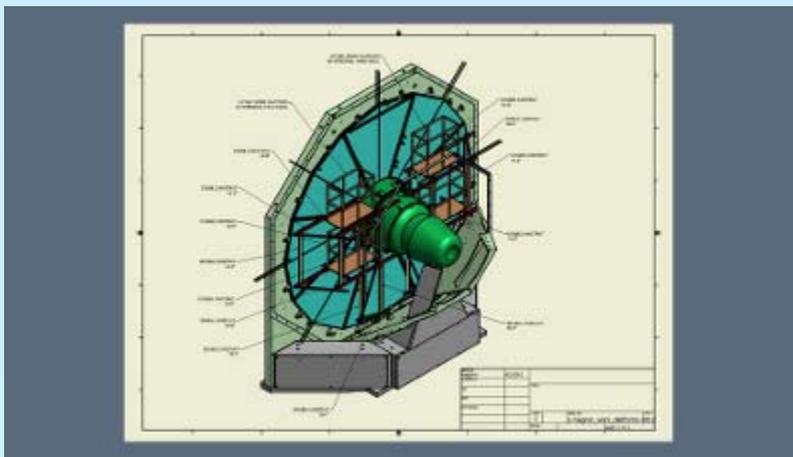


Clamp-on Terminator Installation on North & South Station-3

- Lower clamp-on terminators already installed for both north and south sta-3 (bottom 4 octants)
- With new work platforms that reaches all of sta-3; install remaining (upper) clamp-on terminators.
- WP Submitted

2 WP's Submitted (N & S)



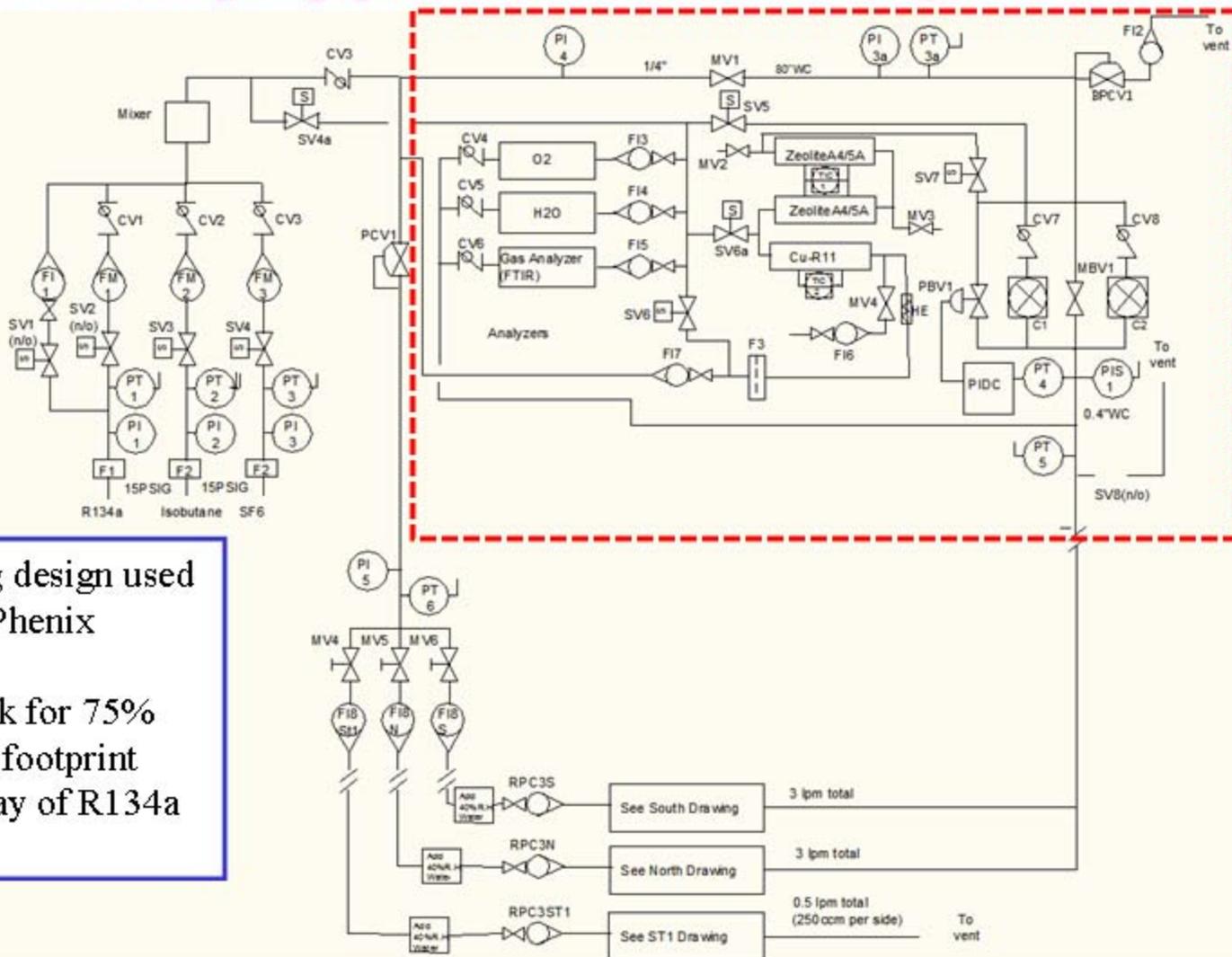


MMS Work Platforms

MMN Work Platforms

Design Approval Done, Bargaining Unit Agreement (Almost)

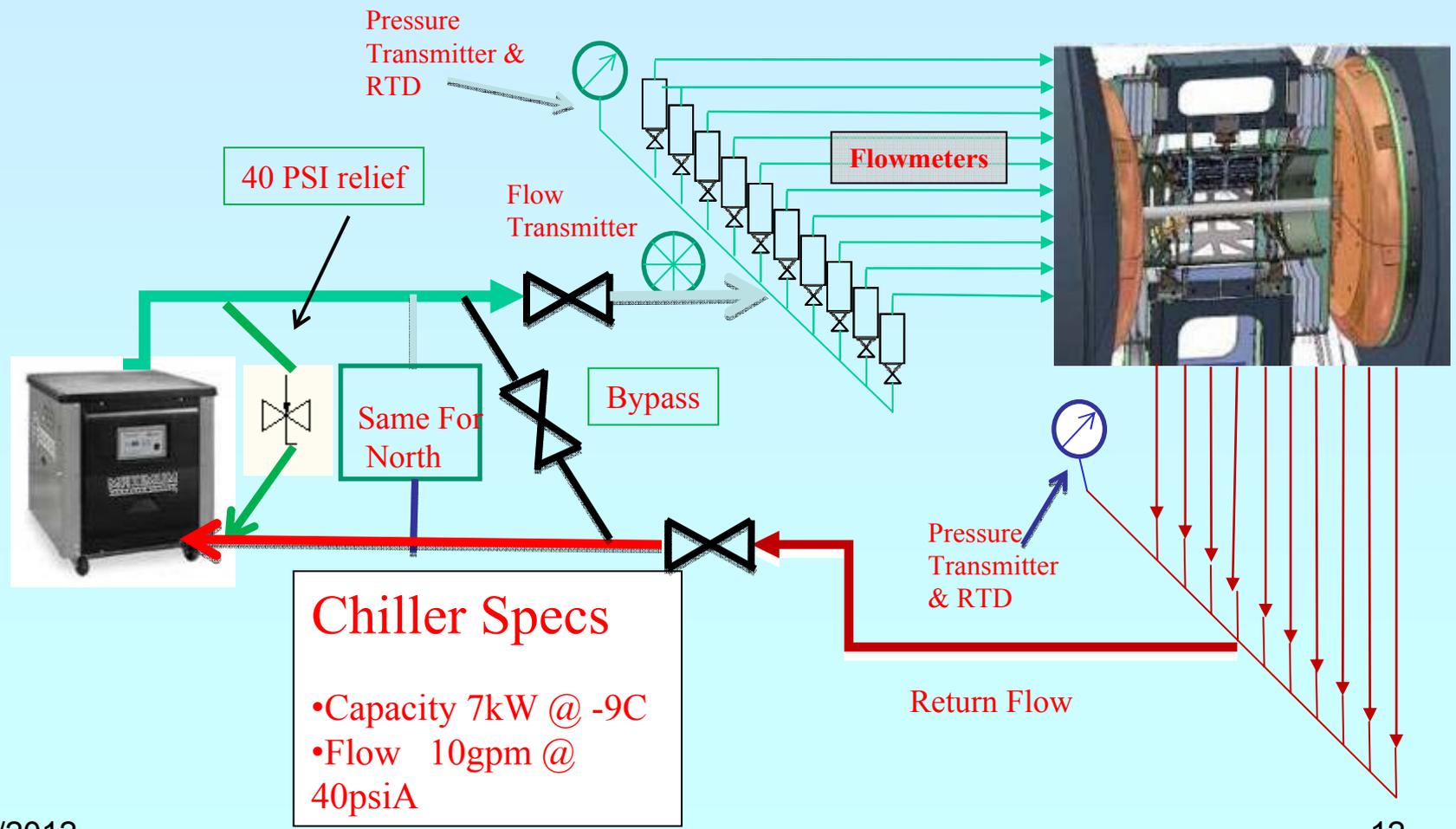
Recirculating Upgrade to RPC Gas System



- 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

Nover 7200 Chiller

- Big Wheel/ Low temp chiller
 - Rebuild to increase size of manifold
 - make pixel lines permanent
- Low Temp
 - Split North FVTX feeds
 - Upgrade to 3/4" pipe from 1/2" where possible
 - Increase size of manifold to reduce restrictions
- Nitrogen
 - Add more lines for FVTX feeds

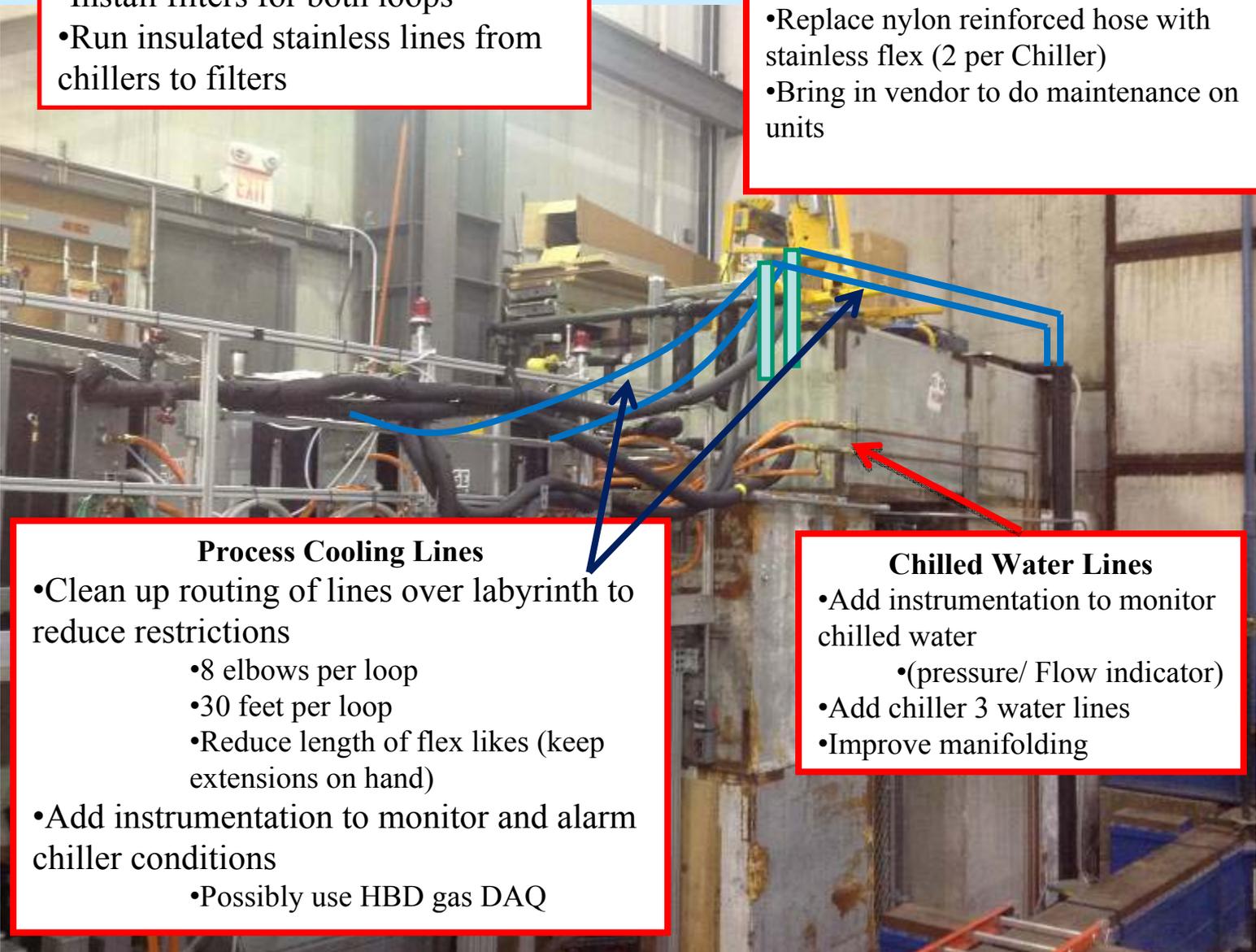


Upgrade Novec Cleaning System

- Install filters for both loops
- Run insulated stainless lines from chillers to filters

Chiller Work

- Replace nylon reinforced hose with stainless flex (2 per Chiller)
- Bring in vendor to do maintenance on units



Process Cooling Lines

- Clean up routing of lines over labyrinth to reduce restrictions
 - 8 elbows per loop
 - 30 feet per loop
 - Reduce length of flex likes (keep extensions on hand)
- Add instrumentation to monitor and alarm chiller conditions
 - Possibly use HBD gas DAQ

Chilled Water Lines

- Add instrumentation to monitor chilled water
 - (pressure/ Flow indicator)
- Add chiller 3 water lines
- Improve manifolding

TECHNICAL SUPPORT
NON

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

1. Support CAD replacement of Assembly Hall 480V Fused Switch Panels #8H-1, 8H-2, and 8 EMH1. Coordinate temporary power patch while work is being performed and minimize impact on shutdown work.
2. Add the Assembly Hall Crane lockout/contactors/ indicator light key switch circuit - similar to IR Crane.
3. Add Transient Surge Suppressor to 3 phase power panel on the Central Magnet Bridge.
4. The Gas Mixing House Breaker Panel for the Gas Mixing side is almost out of spare breaker slots and needs to be reviewed for increased capacity panel to replace it.
5. New computer rack replacements/additions for upcoming Run 13 & Rack Room computer infrastructure changes involving power distribution circuit (UPS and normal AC power) re-work

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

1. Replaced aging magnet hoses (CM only)
2. identify obsolete services passing through sill and remove them.
3. Cover for services coming from IR through sill.
4. Plan for stripping out TEC electronics and services to free up TEC racks.
5. Add limit switch and improved spooling control for window washer cable.

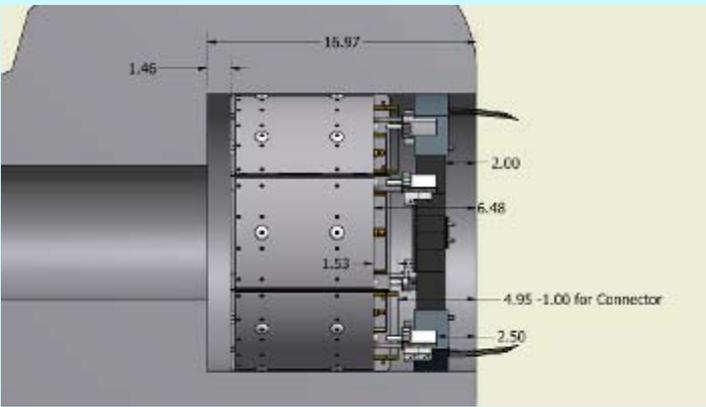
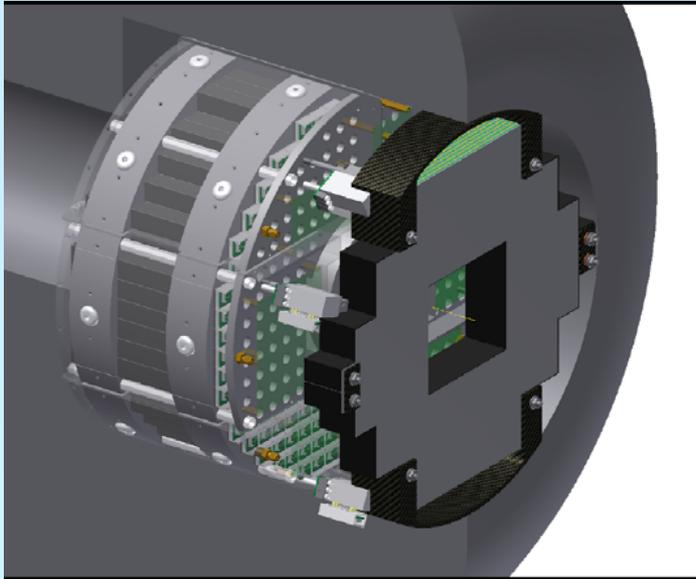
PHENIX Shutdown 2012 Electronics Upgrade /Repair

TECHNICAL SUPPORT ZONE

- Replace remaining RS-485 type ADAMs on West carriage with MODBUS/TCP type.
- Install Ethernet switches and MODBUS/TCP ADAMs on Central Magnet arm.
- Install second MODBUS server in counting house.
- Install MTP patch bay and jumpers for FVTX in counting house.
- Add several backup MTP fibers from CH to IR

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

- Replace aging magnet hoses (CM only)
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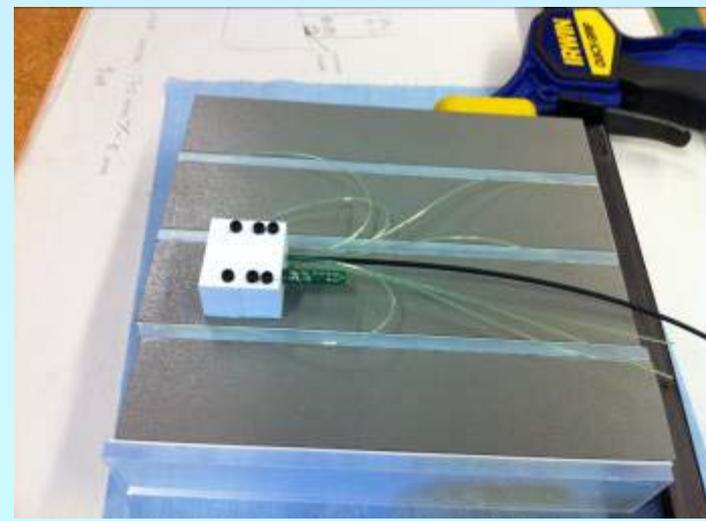
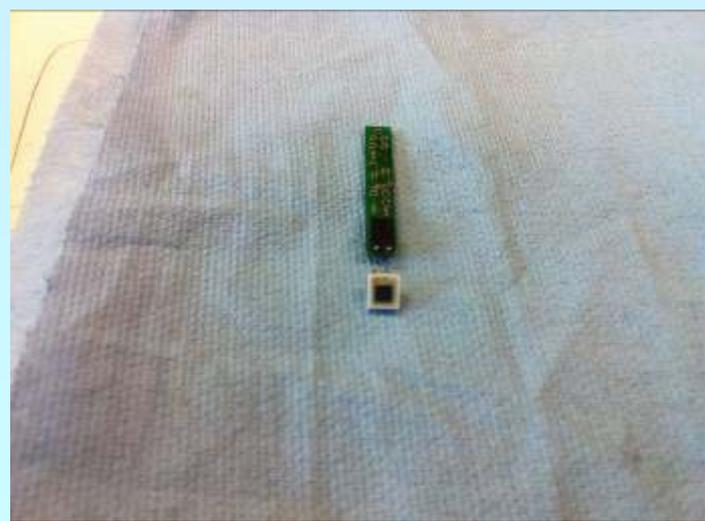


MPC-Ex Upgrade

We will be making measurements and test fitting mockups this summer in preparation for design and fabrication next fall, if proposed upgrade is approved

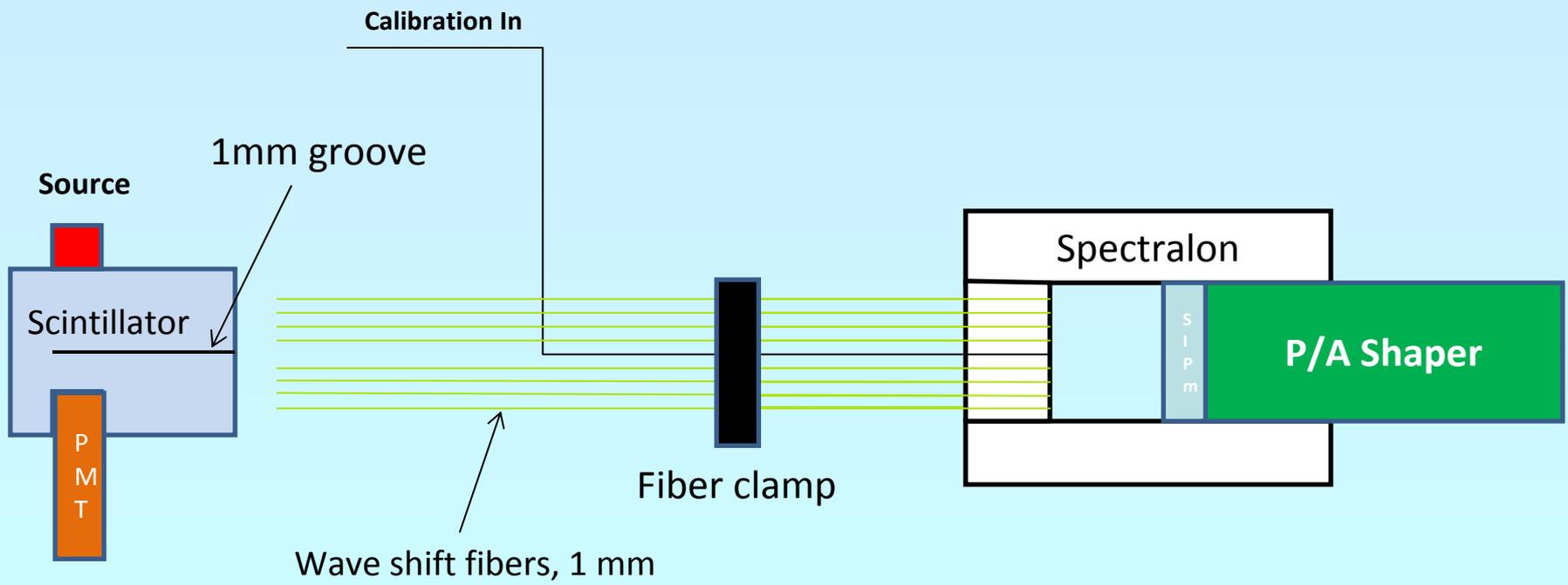


sPHENIX HCAL Prototype work



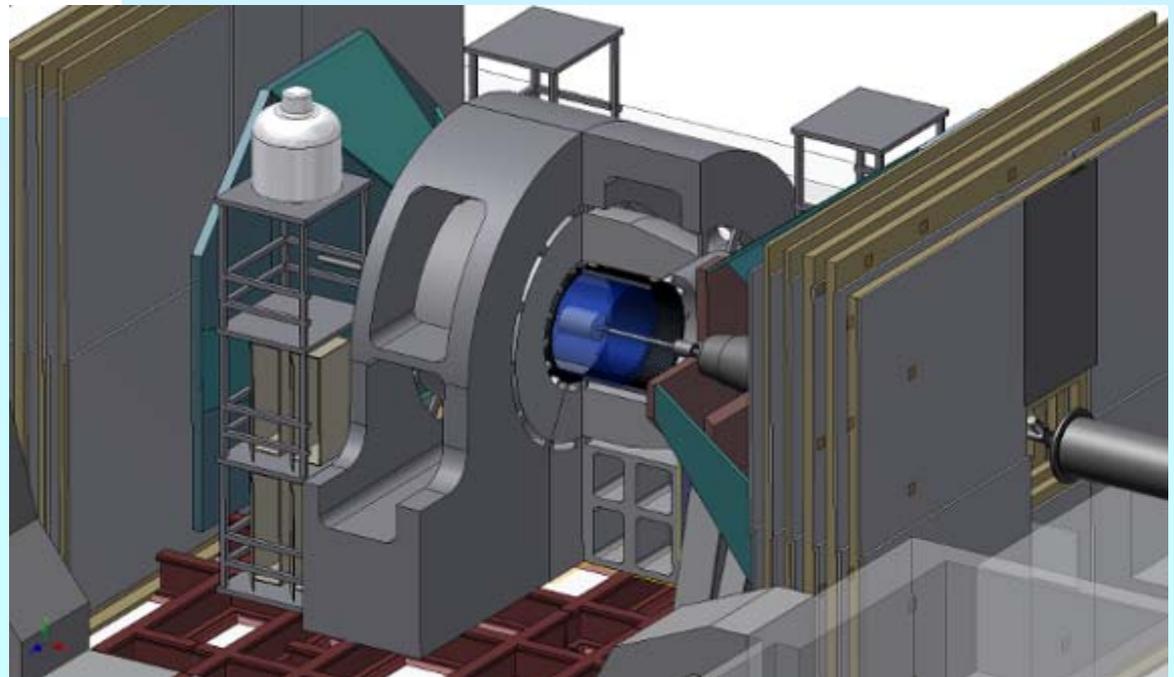
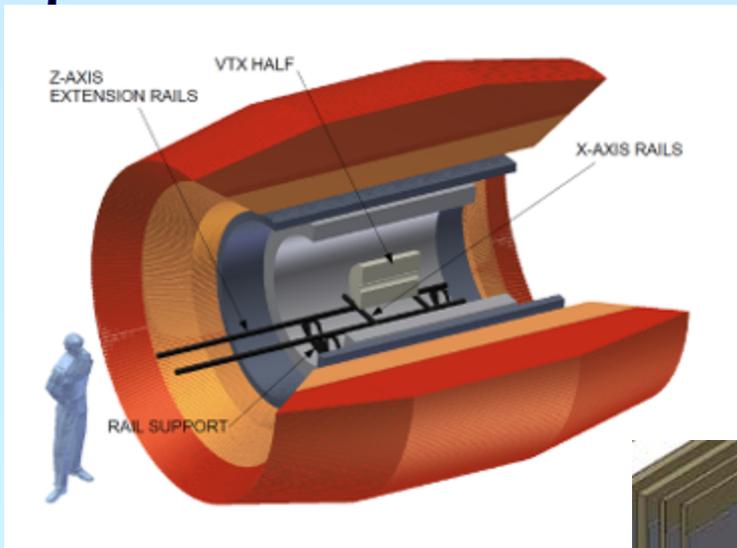
sPhenix H-Cal reverse integration cavity test

TECHNICAL SUPPORT NON



sPHENIX Proposed Upgrade

We will be making measurements and observations to develop information concerning decommissioning and removal of some existing PHENIX subsystems, and integration of sPHENIX into retained PHENIX subsystems.



NON-TOUCH

Requested CAD Support for 2012 Shutdown

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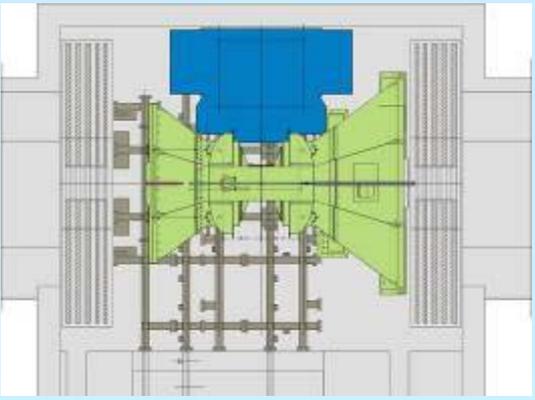
- Riggers - Disassemble and stow moveable shield wall and plug door - week of June 25
- Riggers and Carpenters - remove dumbwaiter and ladder from EC - week of July 2
- Carpenter - Assist with Station 1, MMS, MMN and DC West scaffolding and work platforms
- -7/23-Oct. 26 (2 weeks at beginning, 1 week at end, 1/2 days at various intervals between)
- Articulated manlift - For removal and re-installation of MPC N - weeks of 7/9 and 10/16
- CAD Mech techs - remove and restore MMS and MMN lampshades - week of 7/23
- Survey - VTX/FVTX at Chemistry and PHENIX IR - 10/8-11/9
- Riggers - transport VTX/FVTX to IR from Chemistry - week of 10/29
- Carpenters and Riggers - erect and disassemble Summer Sunday dance floor - 8/1-8/7
- Riggers and Carpenters - restore dumbwaiter and ladder to EC - week of 11/26
- Riggers - Assemble shield wall and Install plug door - 12/26-12/28
- Blue Sheets and White Sheets - 12/3-12/21
- A/C evaluation and repairs, IR and rack room A/C's - complete by start of run 13

Procedures for Shutdown 2012

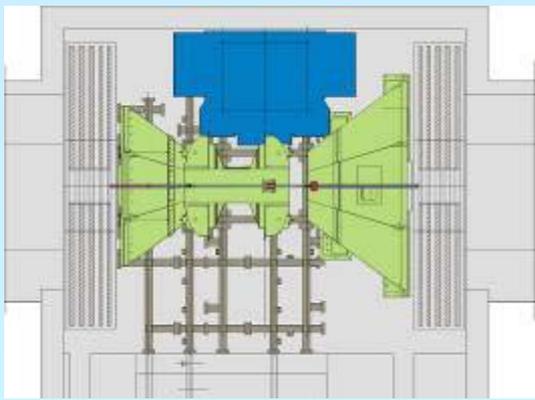
- Existing PHENIX General Purpose Recurring Task procedures - on line
 - VTX Removal - Done
 - FVTX/VTX installation - Done
 - VTX Survey - Done
 - FVTX Survey - Done
 - FVTX Cooling System Upgrades - Done
 - MuTr Maintenance & Upgrade (stations 1 2 & 3) - Done
 - MuTrigger Maintenance and Upgrade - Done
 - DC Repair - Incl. in WP
 - MPC removal and re-installation - incl in WP - Done
- Procedures will be part of 1 WP for VTX and FVTX
- Incl. in separate WP's for MMN and MMS entry

Work Permits for Shutdown 2012

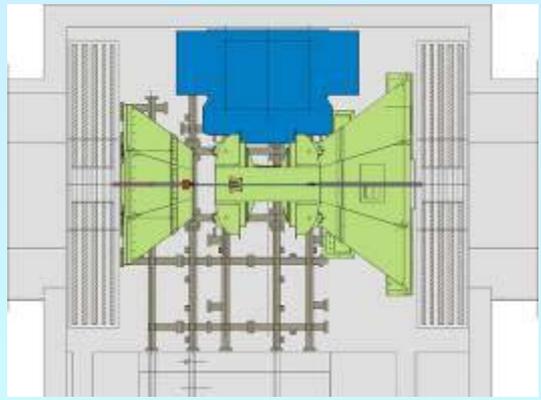
- Start of Shutdown (PHENIX) - Done
- VTX Removal/FVTX/VTX Installation - Approved
- MuTr/MuTrigger Maintenance and Upgrade 3 WP's: Station 1, MMN and MMS work - at CAD for Approval
- RPC1 Cooling Upgrade (PHENIX) - Done
- DC West Repairs - in Design
- MPC repairs - Approved
- End of Shutdown (PHENIX)



IR is currently in this (Run) configuration. (MuID collars not shown)



After MuID collars are removed and EC is moved to AH, MMS is moved south. CM is then moved south to gain access to Station 1 North. MPC North to be removed, RPC1 North to be addressed. (1 week)



CM is then moved north to gain access to station 1 south. Work on RPC1 South, DC West, MPC South and MuTr Station 1 South. After all work finished move CM south, reinstall MPC complete RPC1 North work, survey step 1 for beampipe, then move CM north complete beampipe and CM survey. Move MMS North to run position. VTX/FVTX work may be done in any configuration.

TECHNICAL SUPPORT ZONE

Shutdown Standard Tasks

- Open wall, disassemble wall, Remove MuID Collars,
- Move EC to AH, etc.

In Progress

VTX Strip-pixel post run tests

Done

FVTX post run tests

Done

Disassemble VTX/FVTX services

In Progress

July 4th Holiday

7/4/2012

Open Station 1 North, remove MPC North for repairs

7/9-13/2012

RPC1 North Cooling Upgrade

7/9-13/2012

Remove VTX/FVTX and transport to Chemistry Lab

7/30/2012

Remove MMS & MMN vertical East lampshades

7/23-7/27/2012

Summer Sunday (8/5) Prep and teardown

8/1-8/7/2012

Summer Sunday (RHIC)

8/5/2012

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MuTr South Station 1 work	
Install access (Sta. 1work platforms)	7/30-8/3/2012
Disconnect Cables, hoses etc, ID/label all	8/6-8/10/2012
Remove FEE plates and chambers	8/13-8/17/2012
Station 2 Terminators and manifold upgrade through access opened by station 1 removal	8/20/-8/31/2012
MPC South repairs	8/20-9/15/2012
RPC 1 South cooling upgrade	8/20-9/15/2012
Labor Day Holiday	9/3/2012
MuTr South Station 1 work (Cont'd)	
Clean/install new MuTr Sta. 1 chamber parts and upgrades (concurrent At RPC Factory)	8/20/-9/7/2012
Re-install chambers and FEE plates	9/10-9/14/2012
Re-cable, re-hose and test	9/10-9/28/2012
re-capacitation and air manifold upgrades	
Station 3 North and South (upper half)	7/23-9/30/2012
Repair upgrade, reassemble VTX/FVTX	7/23-10/5/2012
Test, survey (at Chemistry and IR) and re-install VTX/FVTX	10/8-11/9/2012
Substation breaker upgrade/test (CAD)	8/20-9/30
AH utility power distribution upgrade	8/20-9/30
DC West maintenance (replace window)	9/15-10/15
RPC stations 1 and 3, north and south maintenance	As required
Other detector maintenance as required	As required
Infrastructure maintenance as required	As required
TBD prototype tasks	As required
Open Station 1 North, re-install MPC North	10/16-10/26/2012
RPC1 North Cooling upgrade (if not completed earlier)	10/16-10/26/2012

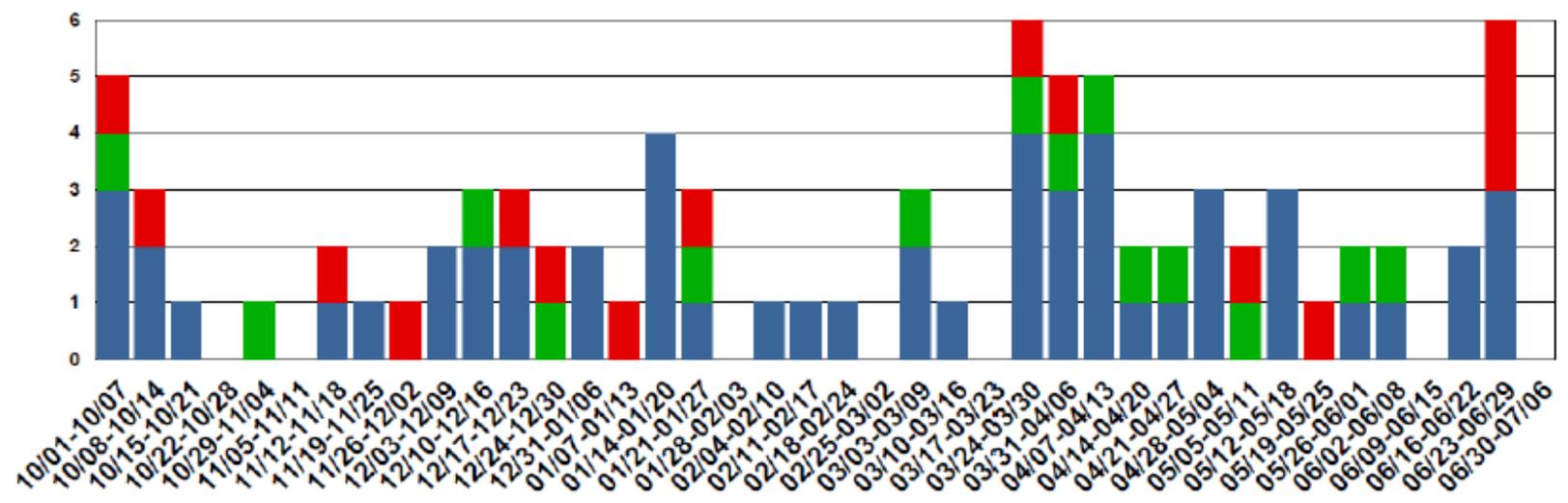
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Veterans Day Holiday	11/12/2012
Pre-run commissioning and prep for run 13	11/1-12/31/2012
Prep for EC roll in	11/12-11/16/2012
Roll in EC	11/19-11/23/2012
Thanksgiving Holidays	11/22-23/2012
Prep IR for run	11/26-12/3/2010
Pink/Blue/White sheets	12/3-12/21/201
Christmas Holidays	12/24-25/2012
Start run 13	1/1/2013

Safety and Security

1. Ladder incident: Serious injury at lab: ladder Stand down
2. Training: latest training report for PHENIX tech staff sent - we're in pretty good shape.
3. From Ray Karol:
 - Laptop batteries - replace batteries over 3 years old to prevent battery fires from overheating
4. From Mike Zarcone: Effective Immediately Safety shoes (steel toe or equivalent) must be worn in the (PHYSICS) machine shop. This apparently applies to our machine shop as well.

Injuries Per Week (FY) As of 7/6/2012



■ DART
 ■ Recordable
 ■ First Aid

Injury Status:

FY12 YTD: DART – 15, TRC – 29, First Aid – 53
 FY11: DART – 27, TRC – 42, First Aid – 45
 FY10: DART – 19, TRC – 33, First Aid – 52

FY12 Injury Listing: <https://intranet.bnl.gov/esh/shsd/seg/Occlnj/BNLInjuries.aspx>

Recent Injuries		
6/29/12	DART	While climbing a fixed ladder to walk down a future job a worker lost his grip and fell approximately 15 feet to the pavement. The employee was conscious and talking when Fire/Rescue arrived and transported him to Brookhaven Memorial Hospital.
6/27/12	DART	An employee reported injuring his back while digging in a trench. He has been out of work since.

Recent Events		
7/5/12	SC-BNL	A student in lab 118 in Bldg 526 was doing a procedure to passivate a crystal with about 25 ml of 30% Hydrogen peroxide. The student was wearing appropriate personal protective equipment, including lab coat, gloves, safety glasses and face shield. After the process was complete, the student placed the hydrogen peroxide in a waste container that contained hydrogen peroxide and bromide thinking that the hydrogen peroxide would be compatible. Within a few minutes, the waste container was giving off a reddish gas that the student smelled. The student called the advisor and moved the bottle into the hood to complete the reaction. The students stopped work, evacuated the area, and called fire/rescue. Fire/Rescue and Industrial Hygiene responded and found no airborne exposure. (Event Link)
7/4/12	Non-Reportable	A condensing unit in bldg 555 flooded a small area of room 202. There was no equipment damage. (Event Link)
7/4/12	Non-Reportable	Fire/Rescue responded to a false fire alarm in bldg 1005S. There were no signs of smoke or fire. (Event Link)
7/3/12	Non-Reportable	F/R responded to building 459 for a smoke and fire alarm activation. The alarms were reset. (Event Link)
7/3/12	Non-Reportable	At approx. 12:25 pm, Bldg 1002 Fire alarm actuated. Work had been on-going on the fire alarm system since the previous night. At approx. 2:30 pm, a water flow alarm was received for the same bldg. The plumbers were called to reset the alarm. The alarms were false alarms, and the system has been temporarily by-passed. (Event Link)
7/3/12	Non-Reportable	F/R responded to Bldg 740 pendant 3 for an activated water flow switch. It was determined that a plumber working on the system accidentally set the fire alarm system off. The system was reset and the zone was disabled so the plumber can conduct his work. No further action was taken by F/R. (Event Link)
7/2/12	Non-Reportable	Fire/rescue responded to a fire alarm in 1002. They searched the area inside the building and found no fire or smoke. (Event Link)

Where To Find PHENIX Engineering Info

TECHNICAL SUPPORT ZONE



I will be out tomorrow to celebrate my Mom's 90th birthday

Happy Birthday Mom !

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

