

PHENIX WEEKLY PLANNING

TECHNICAL SUPPORT ZONE



9/27/2012
Don Lynch

This Week

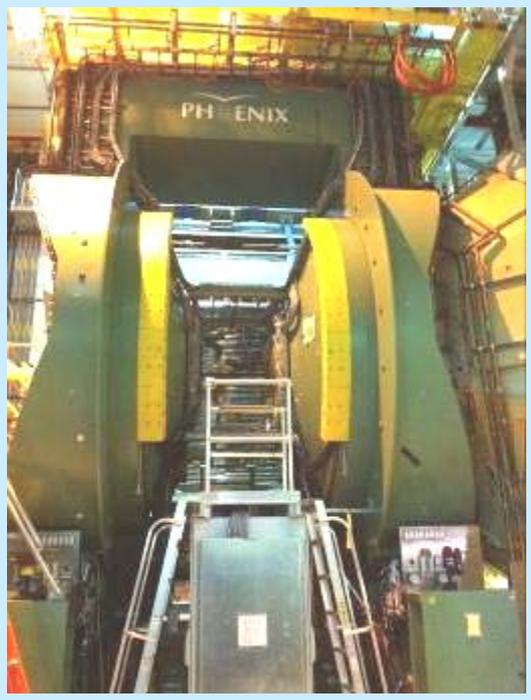
TECHNICAL SUPPORT ZONE

- Continue Repairs & Upgrades for MuTr Stations 2&3 N&S
- DC West Work Platforms and Tent installation
- Continue MPC N&S Repairs
- Continue VTX/FVTX Repairs
- VTX Cooling System Upgrades
- RPC3 Gas Recirculation Upgrade
- RPC1 South Cooling Upgrade & Thermocouples
- sPHENIX design support
- MPC-Ex design support

Next Week

- Continue Repairs & Upgrades for MuTr Stations 2&3 N&S
- DC West Work Platforms and Tent installation, begin repairs
- Continue MPC N&S Repairs
- Continue VTX/FVTX Repairs
- VTX Cooling System Upgrades
- RPC3 Gas Recirculation Upgrade
- RPC1 South Cooling Upgrade & Thermocouples
- sPHENIX design support
- MPC-Ex design support

TECHNICAL SUPPORT NON



Repairs and testing
in Progress at Chemistry (VTX)
and Physics (FVTX) Departments

TECHNICAL SUPPORT NON

- Station-1 South re-capacitation and termination



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.



TECHNICAL SUPPORT NON



MPC Repairs -

North MPC Removed for Evaluation

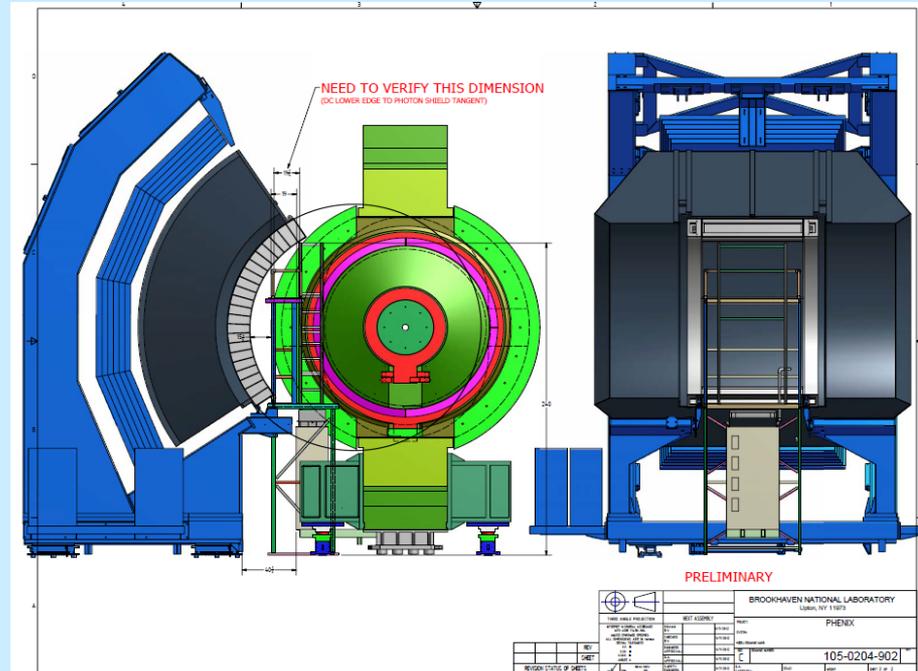
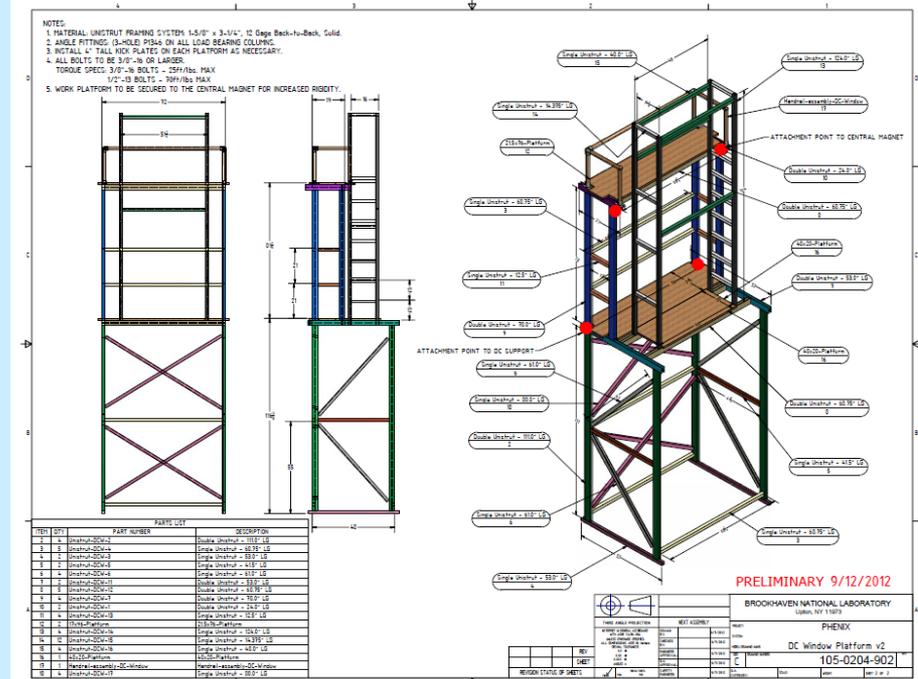


DC West Repairs

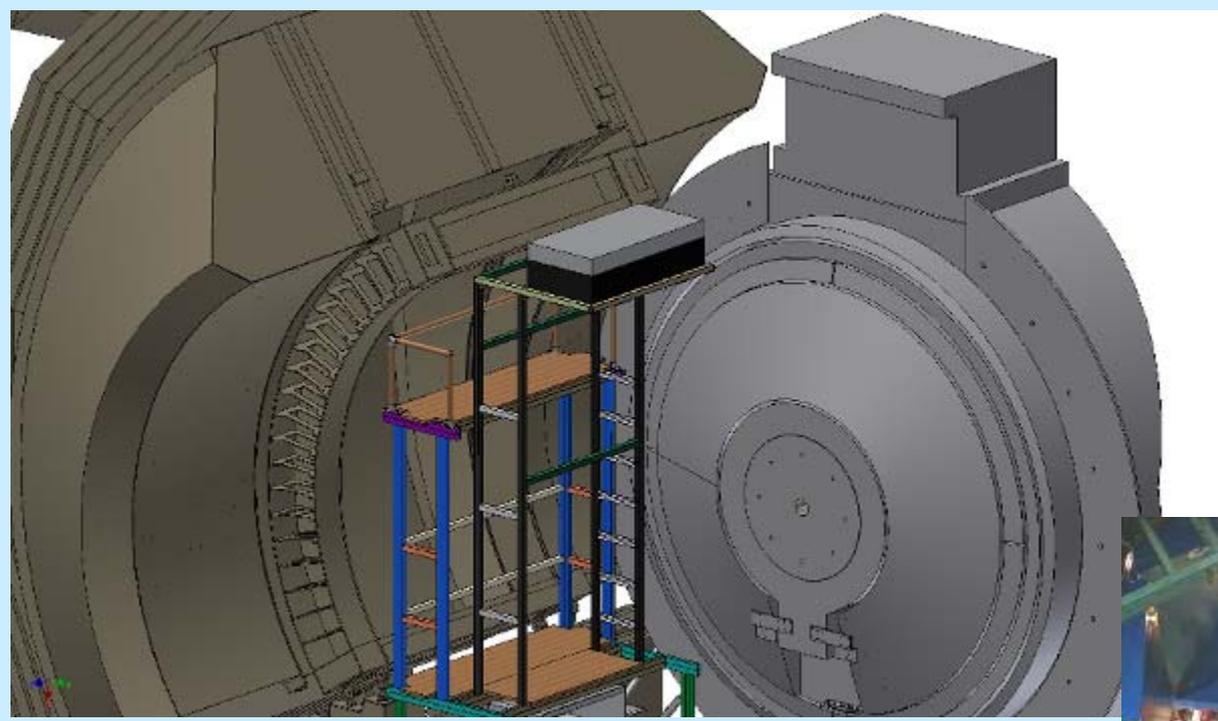
The plan for the DC West Repairs is as follows:

- Gather drawings and materials from DC group - Done
- Make measurements, new drawings and create parts lists as necessary - Done
- Procure/fabricate parts - Done
- Design work platforms and protective covering to access and protect DC west during disassembly/ reassembly. CAD approval received - Done
- Work Permit approved - Done
- Disassemble existing window and sealing components
- Repair/remove broken wires, etc.
- Install new window and seal.
- Leak and functional tests

9/27/2012



TECHNICAL SUPPORT NON

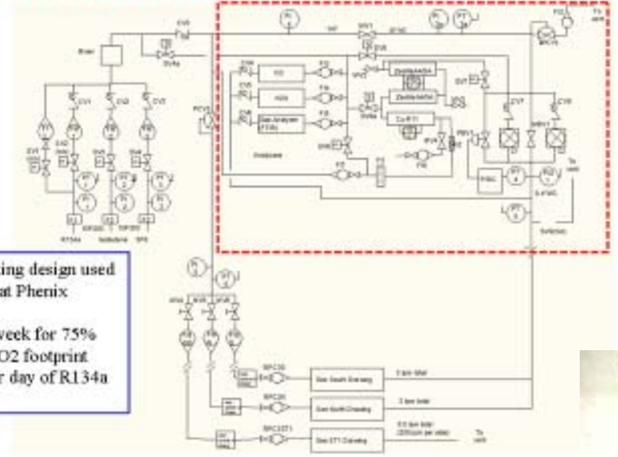


MMS, MMN and DC work Platforms/scaffolds:

Where/How do we store them after they are disassembled this year?:

- Build new crates and store outside?
- Store in shelving at RPC factory?
- Other Ideas?

Run 12 Shutdown Work Overview Gas/Cooling Systems 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

June 20, 2012

RPC Recirculation Upgrade



VTX/FVTX Cooling Upgrade

RPC Station 1 North and South Cooling Upgrade

TECHNICAL SUPPORT ZONE



North



South

TECHNICAL REPORT

RPC1 Cooling

North

South



| | |
|-----------------------------|---|
| Item Number/Brand | 89685804/Allegro |
| Type/Power | Axial Blower/Electric |
| Inlet/Outlet Size (Inch) | 8 |
| Cubic Feet per Minute (CFM) | 625 (Two 90 Bends); 650 (One 90 Bend); 900 (Free Air) |
| Horsepower (HP) | 0.33 |
| Explosion Proof (Yes/No) | Yes |
| Blower Casing Material | Polyethylene |
| Number of Speeds | 1 |
| Maximum Voltage Rating (V) | 115.00 |



TECHNICAL SUPPORT NON

MuID Collar IR Holding Area Support



- Structural support improvements designed
- Parts to be ordered
- Installation this fall prior to EC roll in

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

- 1. Add Transient Surge Suppressor to 3 phase power panel on the Central Magnet Bridge.
- 2. 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.

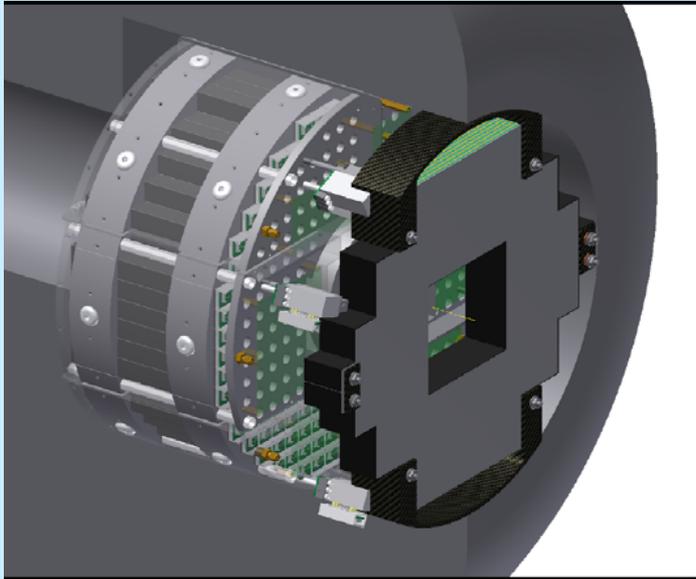
Additional Work for 2012, not yet scheduled, to be fit in as available

- 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.

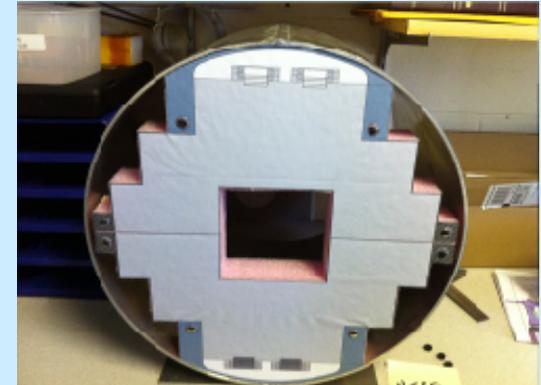
PHENIX Electronics Upgrades

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

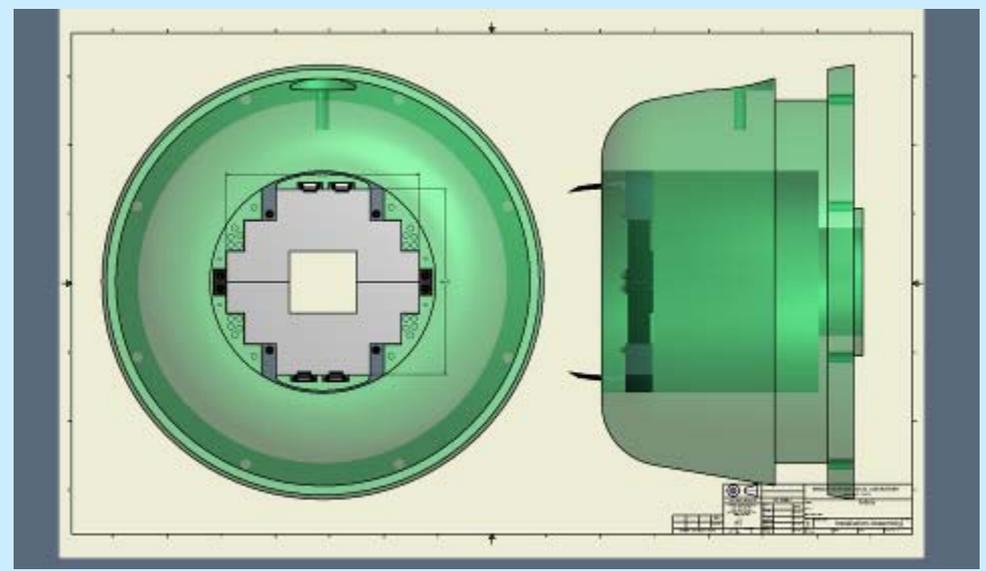
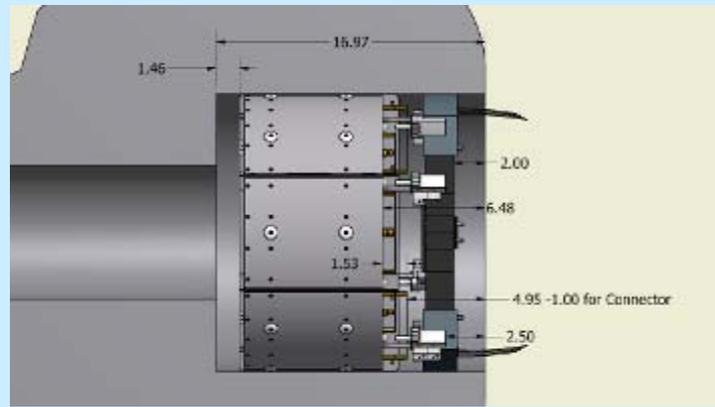
TECHNICAL SUPPORT NON-IRON



MPC-Ex Approved this week

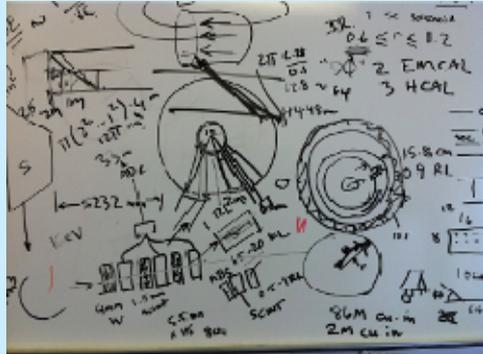
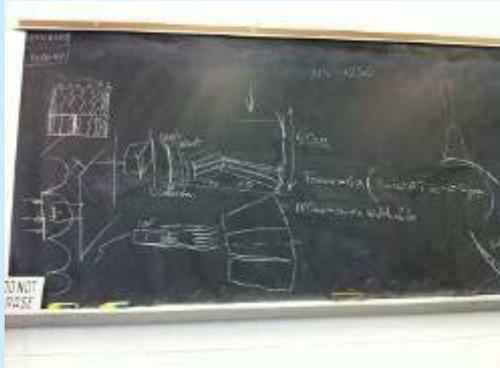


Foam Mockup

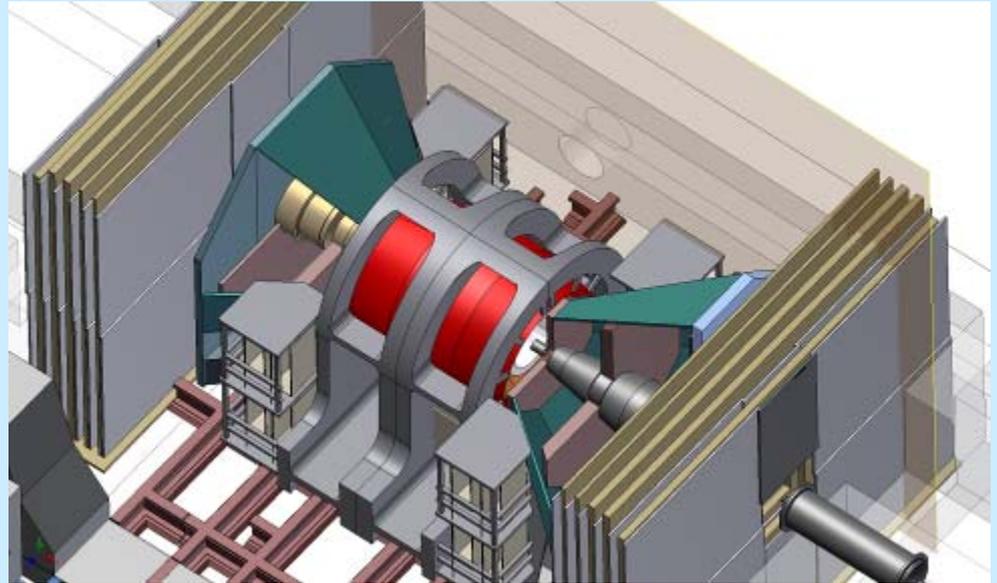


TECHNICAL SUPPORT NOTES

HCal Initial Prototype Spec



sPHENIX Initial Specifications



BNL Review

Draft Practice 9/24/12

Dress Rehearsal 10/1/12

Presentation to reviewers 10/5/12,

Procedures for Shutdown 2012

- Existing PHENIX General Purpose Recurring Task procedures -Done
 - 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 -Done
- MuTr/MuTrigger Maintenance and Upgrade 3 WP's: Station 1, MMN and MMS work -Done
- RPC1 Cooling Upgrade (PHENIX) -Done
- DC West Repairs
- MPC repairs -Done
- VTX/FVTX Cooling Upgrade (PHENIX) -Done
- RPC Recirculation Upgrade (PHENIX) -Done
- RPC Background Attenuation Shielding 2
- End of Shutdown (PHENIX)

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|--|---------------|
| MuTr Station 1 Re-cable, re-hose and test | 10/5/2012 |
| Re-capacitation and air manifold upgrades | |
| Station 3 South (upper half) | 10/19/2012 |
| Remove Station 2/3 South scaffolding | 10/26/2012 |
| Re-install MMS lampshade | 10/31/12 |
| Station 3 North (upper half) Scaffolding | 9/28/2012 |
| Capacitor Clamps and air manifolds | 11/9/2012 |
| Remove station 2/3 scaffolding | 11/16/2012 |
| MPC South repairs | 9/28/2012 |
| MPC South Installed | 10/5/2012 |
| RPC 1 South cooling upgrade | 10/12/2012 |
| RPC1 South Thermocouples | 10/12/2012 |
| Remove Station 1 Scaffolding | 10/15/2012 |
| Move CM South, Open station 1 North | 10/16/2012 |
| VTX Cooling System Upgrades | 10/5/2012 |
| RPC Recirculation Upgrade | 11/2/2012 |
| Repair upgrade, reassemble VTX/FVTX | In Progress |
| Test, survey (at Chemistry and IR) and re-install VTX/FVTX | 10/5-10/31/12 |
| Substation breaker upgrade/test (CAD) | 8/20-9/30 ? |
| DC West maintenance (replace window) | 9/15-10/15 |
| RPC Shielding under DX magnets | 11/21/2012 |
| RPC tunnel Shielding (Dave Phillips) | 12/14/2012 |
| Reinstall MPC North | 10/26/2012 |

TECHNICAL SUPPORT ZONE

| | |
|---|------------------|
| RPC1 North Cooling upgrade | 10/26/2012 |
| RPC1 North Thermocouples | 10/26/2012 |
| Window Washer pin & spool upgrades | 11/21/2012 |
| MuID IR storage support | 11/21/2012 |
| 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 | 11/19-11/21/2012 |
| 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 |



TECHNICAL SUPPORT ZONE

This is the status and priority for the various fixed ladders at PHENIX:

Priority 1 and 2: Ladders to West carriage, North and South: Currently Yellow Tagged: Requires Work permit (Carter has the permit) to use.

Priority 3: Ladder to Eyebrow: Currently Red Tagged: a work around is in place- use new cross over from bridge; ladder repairs in planning stage. Work around is not useable when we move the CM to the south position, so we will need the ladder repaired. Should be upgraded to Yellow tag this week, will require work permit to use (Carter has the permit).

Priority 4: Ladder to Muon ID Steel in Southeast IR: Currently Yellow Tagged: requires work permit to access. We can wait to have the repairs on this ladder. No repairs planned, will probably remain yellow.

Priority 5: Ladder to mezzanine over tech offices to 30 ton AC air handling unit: not yet inspected, effectively red tagged. This ladder is needed to service AC.

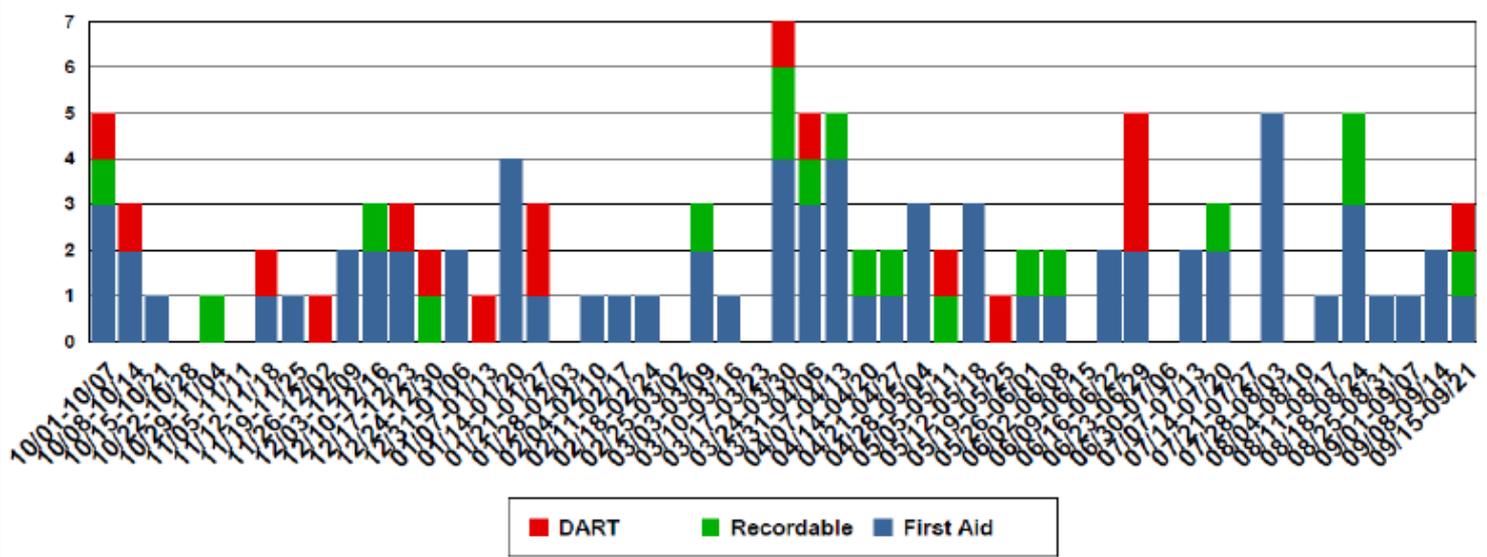
Priority 6: Ladder to PHENIX roof over tech offices. Used by AC techs to service 30 ton AC compressor. Not yet inspected, effectively red tagged. Will impact schedule if AC fails.

TECHNICAL SUPPORT ZONE

- Priority 7: Ladder to Muon ID Steel in Northeast IR: **Yellow Tagged to 2nd platform** : work around use yellow tower ships stairs and access from top level.
- Priority 8: AH ladder to crane: Not yet inspected, effectively **red tagged** : needed for crane servicing. Could impact schedule if crane requires service.
- Priority 9 and 10: Ladders on Southwest and Northwest of MuID steel: Not inspected yet, effectively **red tagged** : do not use, no work around. These are needed to access plumbing for repairs, and MuID detector access. We have no current plans involving these ladders so they are lower priority for inspection/repairs, but could need this access before the run.

TECHNICAL SUPPORT NON

Injuries Per Week (FY) As of 9/21/2012



Injury Status:

FY12 YTD: DART – 17, TRC – 35, First Aid – 70
 FY11: DART – 30, TRC – 44, First Aid – 45
 FY10: DART – 19, TRC – 33, First Aid – 52

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

| Recent Injuries | | |
|-----------------|------------|--|
| 9/18/12 | Recordable | An employee was walking between buildings when the wind blew dust and dirt into his right eye. At the clinic, he received first aid along with a prescription for antibiotic drops, making this recordable. (Event Link) |
| 9/18/12 | First Aid | While exiting the rear door of a step van, an employee struck his neck against the door latch. At the OMC, he received first aid. (Event Link) |
| 9/17/12 | DART | An employee fell and hurt his shoulder. He was subsequently transported to a local ER, where the shoulder was re-aligned. This is recordable and a DART due to lost time. (Event Link) |
| 3/26/12 | Recordable | An employee injured his shoulder while holding onto a door that was suddenly pulled by high force winds. He was sent to an ER for further evaluation. |

TECHNICAL SUPPORT NON

| 9/20/12 | SC-BNL | Fire/Rescue received a phone call for an activated fire alarm at Bld. 370 (Little Red School House). The alarm was never received by the site fire alarm system. A smoke detector was activated when the building heat was turned on for the first time after the summer. A fire alarm electrician was requested to respond to check the system and to see why F/R never received the alarm at the Fire Station. (Event Link) |
|---------|----------------|--|
| 9/15/12 | Non-Reportable | During the site excavation on Saturday, at approximately 11 am, the contractor's excavator damaged a buried telecommunication line (48V DC). The job inspector informed the communication people, they came and fixed the line at around noon. It was permanently repaired on 9/18/12. This line was supposed to be on the north side of Bld. 423 along the Princeton Ave. shoulder as shown on the site utility maps indicate, but it was not. (Event Link) |

Where To Find PHENIX Engineering Info

TECHNICAL SUPPORT ZONE



Summer has ended
Run 13 is coming Fast!

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

