

PHENIX WEEKLY PLANNING



August 7, 2014
Don Lynch

This Week

PHENIX
SOUTH
REPORT
NORTH

- Take down summer Sunday stuff
- Finish MPC-Ex prototype removal
- Take down South station 1 scaffold
- Move MMS South
- Move CM South
- Install Station 1 North scaffold
- Begin prep for MPC-Ex North installation
- VTX/FVTX Repairs repairs continue
- Continue assembly of MPC-Ex North
- Continue sPHENIX support

Next Week

- Finish Install of Station 1 North scaffold
- Continue prep for MPC-Ex North installation
- MPC North removal of failed modules repair/reinstall
- VTX/FVTX Repairs repairs continue
- Continue assembly of MPC-Ex North
- Continue sPHENIX support

2014 planned Technical Support & 2014 Shutdown

TECHNICAL SUPPORT NORTH

Remove MPC-Ex prototype

MuTr Sta 1 South troubleshooting and repairs

Maint. & Repairs for MPC South, BBC South, RPC1 South1

Repair and reinstall FVTX/VTX East & West
 VTX/FVTX Upgrade cooling lines, chiller preventive maintenance
 Troubleshoot intermittent water leak in MMS
 Other Maint. In MMS
 Summer Sunday prep AH, tours and restore AH
 Assemble & test MPC-Ex North, ready for installation
 Remove scaffolding from sta 1 south, Move CM South
 Install scaffolding in Sta 1 North

Electronic Cooling Water High Temp Alarm

8/11-8/29/2014

Prep MPC-Ex North installation area
 MuTr Sta 1 & Sta. North troubleshooting and repairs
 MPC North-remove damaged crystals, repair as necessary, re-install
 Install new MPC-Ex North, thoroughly test before moving CM north
 Reinstall MMS east vertical lampshade
 Assemble & test MPC-Ex South, ready for installation

Done

Done ?

Done?

in progress -10/15/2014
 in progress-10/6/2014
 7/30- 8/8/2014
 7/30-8/29/2014
 in progress-8/6/2014
 in progress-9/5/2014
 8/4-8/5/2014
 8/6-8/8/2014

8/8-8/15/2014
 8/11-9/5/2014
 8/11-9/5/2014
 9/8-9/26/2014
 9/2-9/5/2014
 9/2-10/3/2014

2014 planned Technical Support & 2014 Shutdown (cont'd)

Remove Sta 1 N scaffolds, Move CM North, Install scaffolding in Sta 1 S	9/29-10/3/2014
Install MPC-Ex South	10/6-10/24/2014
Reinstall, reconnect, re-survey and re-commission VTX/FVTX	10/16-11/26/2014
Other detector support	TBD
Infrastructure Maintenance and Improvement	TBD
Decommissioning of obsolete PHENIX detector equipment	TBD
sPHENIX Support	on-going
End of Shutdown Tasks (Move MS north, roll in EC , install collars, remove 10 ton cart, plates and manlifts, build shield wall, etc.)	10/27-11/26/2014
DC East & West maintenance & repairs	11/17-12/5/2014
Pink/White/Blue Sheets	12/1-12/19/2014
End of Shutdown Party	????
Start Flammable gas flow	????
Close shield wall, install radiation interlocks and prepare for run 14	12/31/2014
Start run 15	1/2/2015

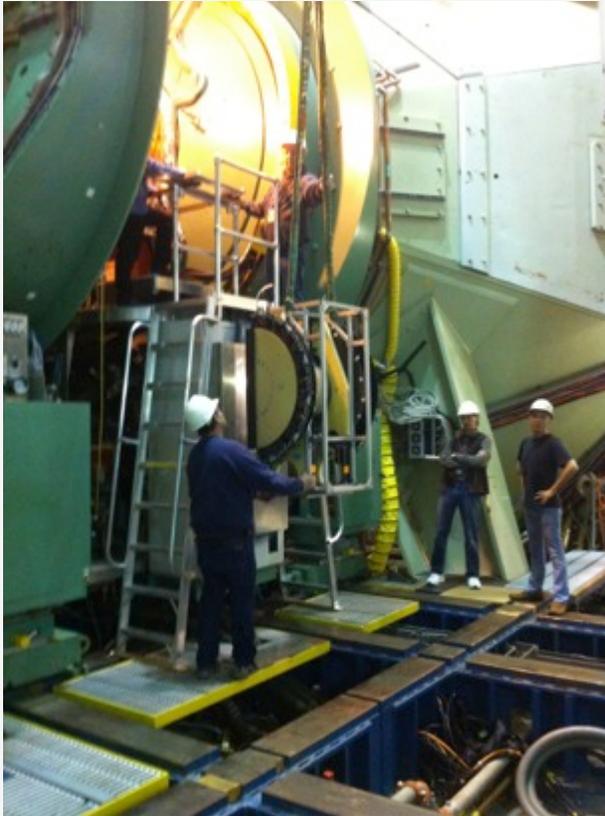
Muon Tracker Shutdown Work List – summer 2014

- testing as MPC-EX installed, particularly before closing Sta-1's
- **fix North Arcnet – N.2.7.1, North Sta-2 Oct-7 Chassis-1 (bad cable?) - Done**
- fix packets that were disabled for Run14
 - 11035,36 – South Sta-1 Quad-4 Chassis-3
 - **11267,68 – North Sta-2 Oct-7 Chassis-2 - Done**
- replace boards for most frequent FEM problems from run
 - 11195 - North Sta-1 Quad-3 Chassis-3?
 - might have already done this; check history (changed RX 3/14/12)
 - 11064 – South Sta-2 Oct-3 Chassis-3 - unreachable
- N341 HV trip problem?
- auto-reboots of ArcNet and iocondev's for calibration?

- Access needed:
 - South & North Sta-1
 - **Inside North Sta-2 on bottom Done**
- Main Issue – Manpower

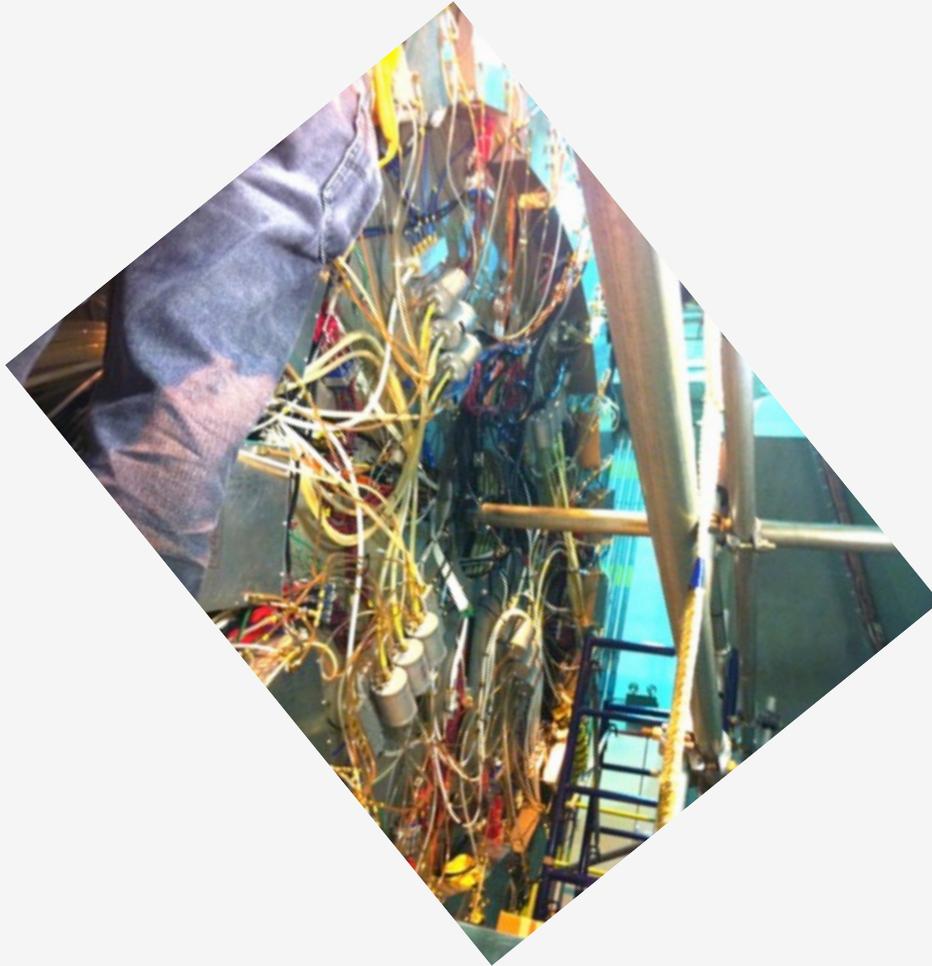
Work Permits for 2014 Shutdown

- **Start of Shutdown - Done**
- **VTX/FVTX East - Done**
- **MPC-Ex - Done**
- **MuTr Sta 1 N & S - Done (scaffold agreement done)**
- **MuTr North station 2/3 - Done**
- **MuTr South station 2/3 & MMS South Water leak - Done**
- **MPC North - Done**
- DC East/West – need in November
- End of Shutdown – need in November



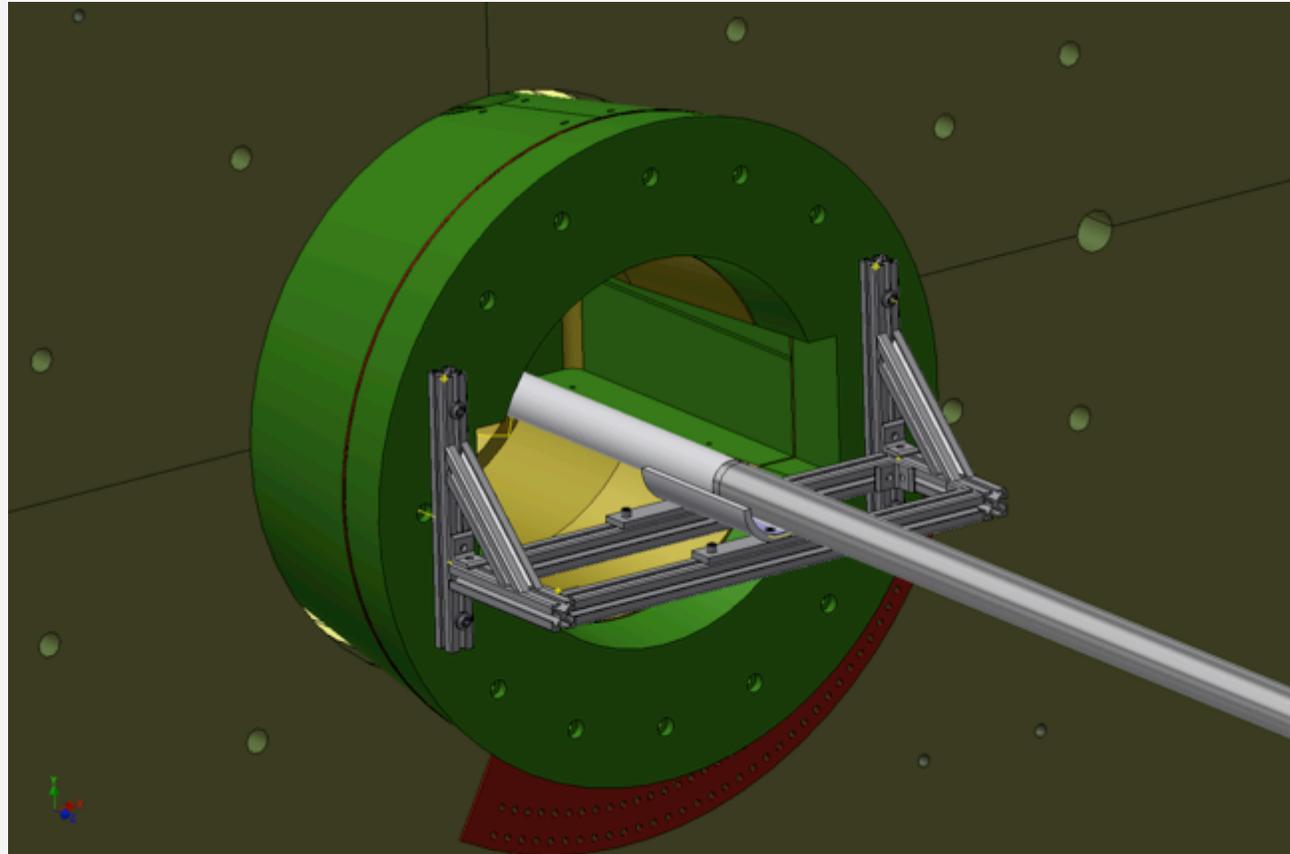
VTX/FVTX east & west repairs/
upgrades under way

MPC-Ex Prototype removed and relocated to 510

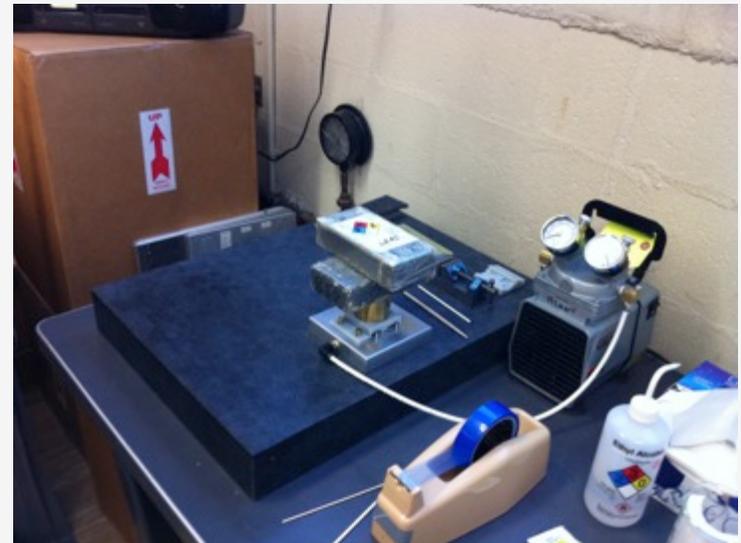
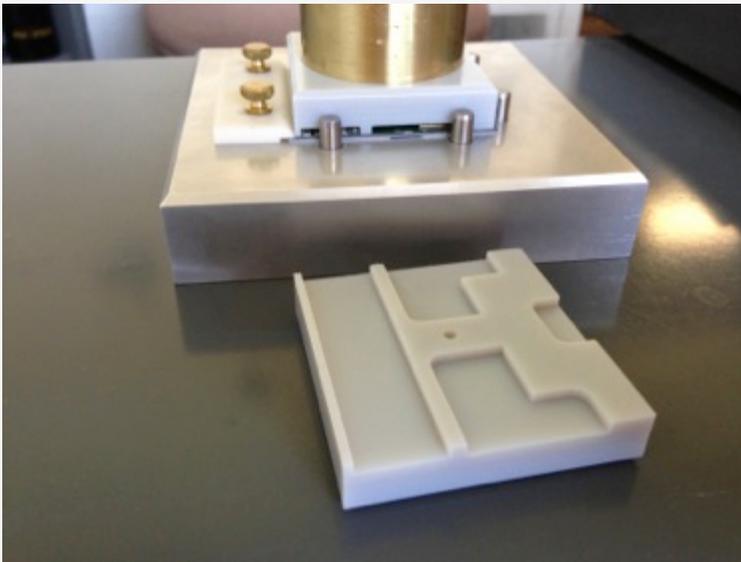
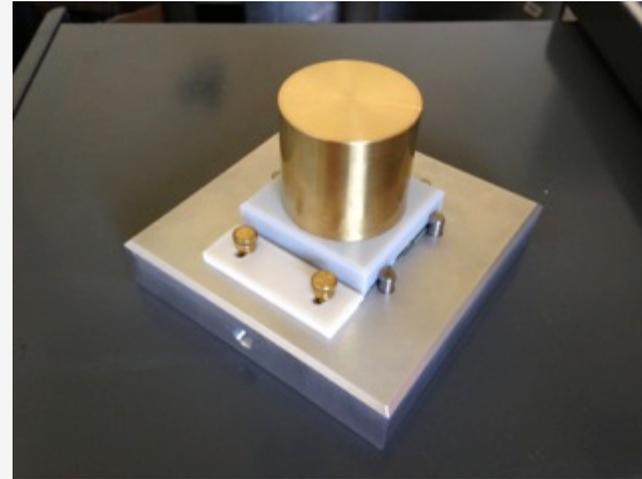
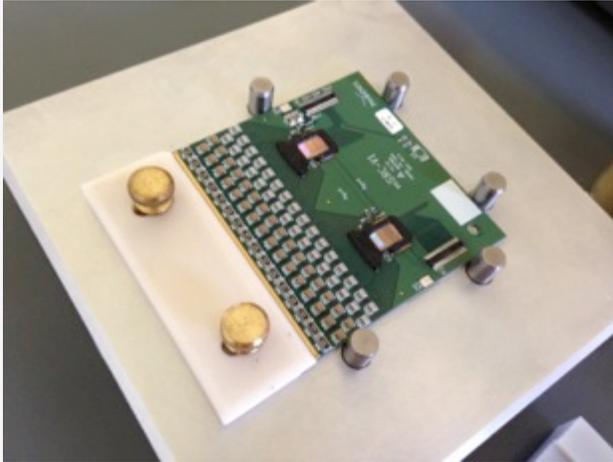


8/7/2014

MPC-Ex North & South



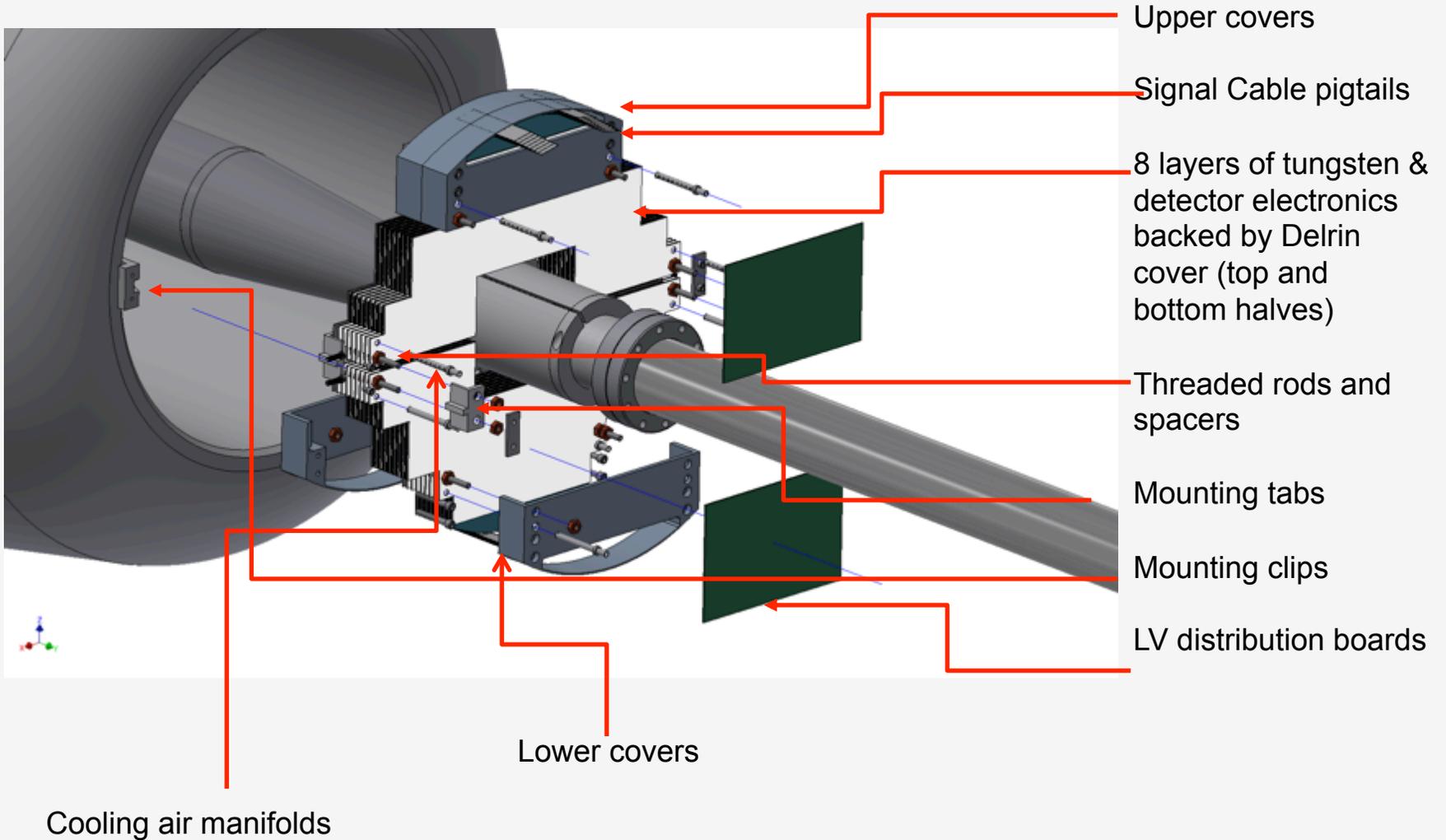
MPC-Ex North Beam pipe temporary support



Micromodule Gluing tool micromodule parts and glued assembly currently in production

MPC-Ex Exploded view

PHENIX
EXPERIMENT
MPC-EX



MPC-EX Fabrication Status

- Micromodule Fabrication and Testing (BNL/SB)
 - 192 modules required per MPC-EX arm (384 total)
 - As of 8/6 a total of 216 micromodules have been assembled:
 - 146 micromodules wire bonded and tested
 - Of these 129 are “good” – good leakage current and no dead areas
 - Of remaining 17 - 6 “dead”, 2 have confirmed dead areas, 11 require additional testing
 - 70 micromodules in wire bonding 8/6-8/7
 - Sufficient micromodules on hand for MPC-EX N very soon
- Sensor Testing and Delivery
 - Sensor testing limiting factor this week
 - Youngil will deliver 50 tested sensors next week 8/9, giving ISU time to catch up
 - Total delivery will be 440 sensors + >40 additional “2nd class” sensors (slightly higher leakage current)
 - Additional 100 ROCs have been ordered, sufficient parts on hand to “overproduce” to account for losses at various production stages.
- Carrier Boards
 - Nikki and Sarah pulling together boards and tungsten for lamination (Mike L.?)

MPC-EX Electronics

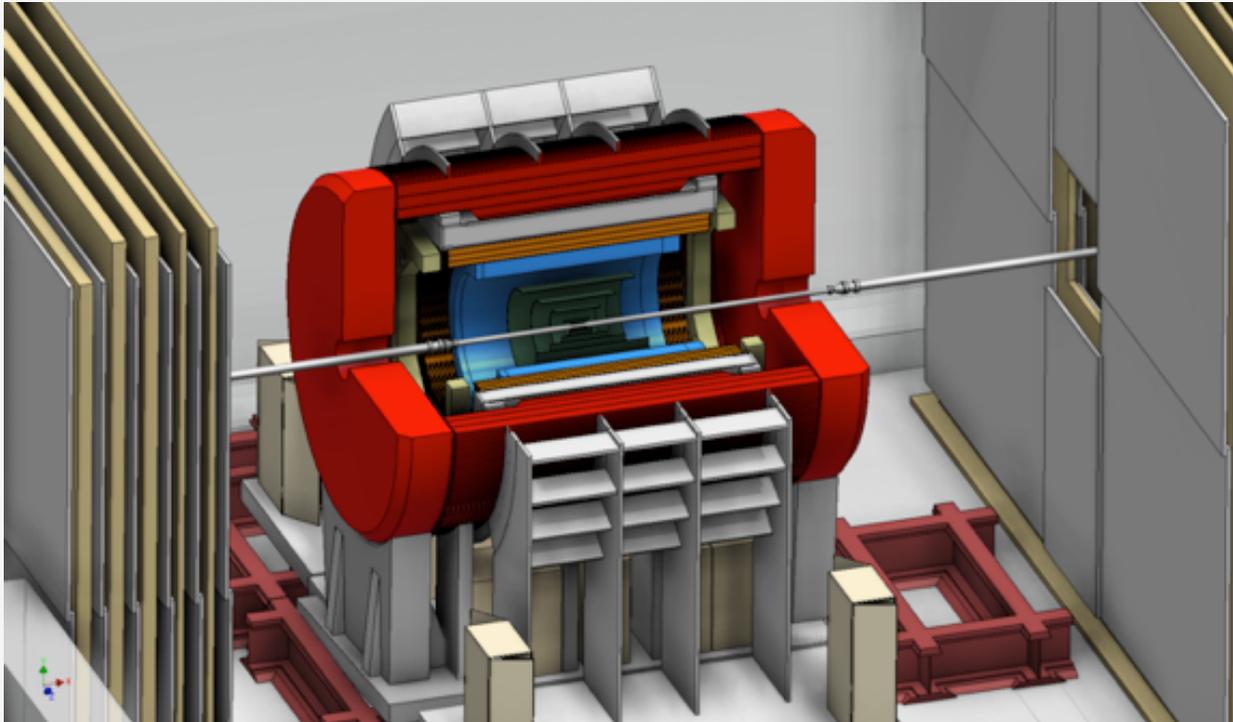
- Added Chuck Pancake and Maki to FEM design/firmware
- Rev0 FEM is being used for FPGA development but not acceptable for final detector:
 - Choice of FPGA pins for LVDS not consistent with mfg. specification
 - Some wire-mod error correction
 - Change in design of readout cable routing and slow controls connection
 - Underway at ISU, re-route by 8/8, finalize and send out for production week of 8/11 (10-day turn-around)
- FEM P/S Board in Production
- Electronics Box Mock-Up Underway (Sarah Campbell)
- Remaining Elements:
 - RPi to LVDS for FEM connection (need designer, Andrey?)
 - Cable interconnect (L/R styles – Sal? Just settled last week...)
- Electronics for the North Arm are going to come in at the last minute...

Electronics Cooling Water High Temperature Alarm

Display showing temperature of cooling water

Add Alarm to Panel



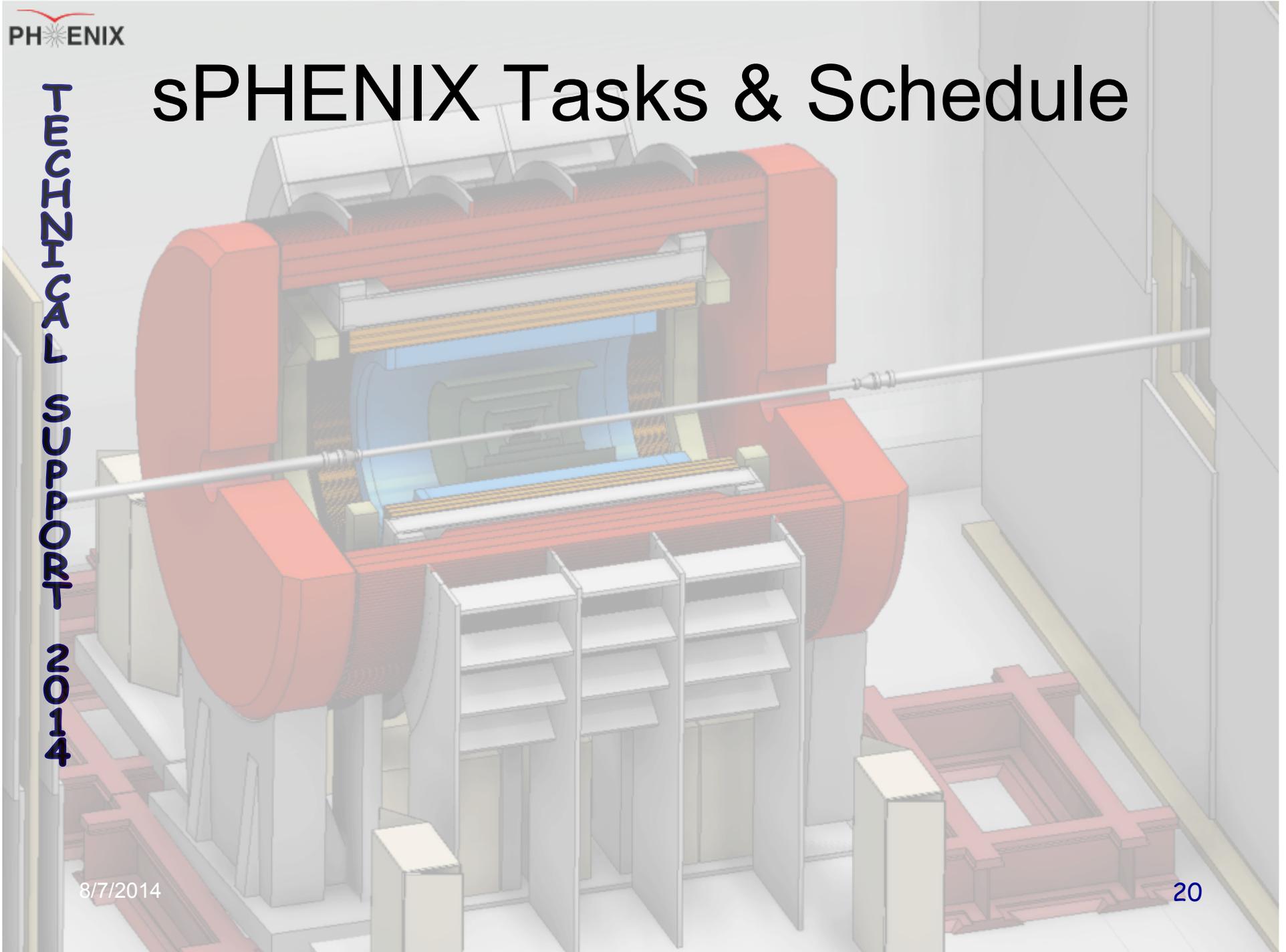


BABAR Magnet Update

- Meeting yesterday at magnet division to discuss shipping
 - Shipping fixtures for magnet OK
 - Need shipping fixtures for valve box, Paul Kovach has potential design
- Need a transportation and handling review at CAD
- 4 week window to ship by Sep. 10

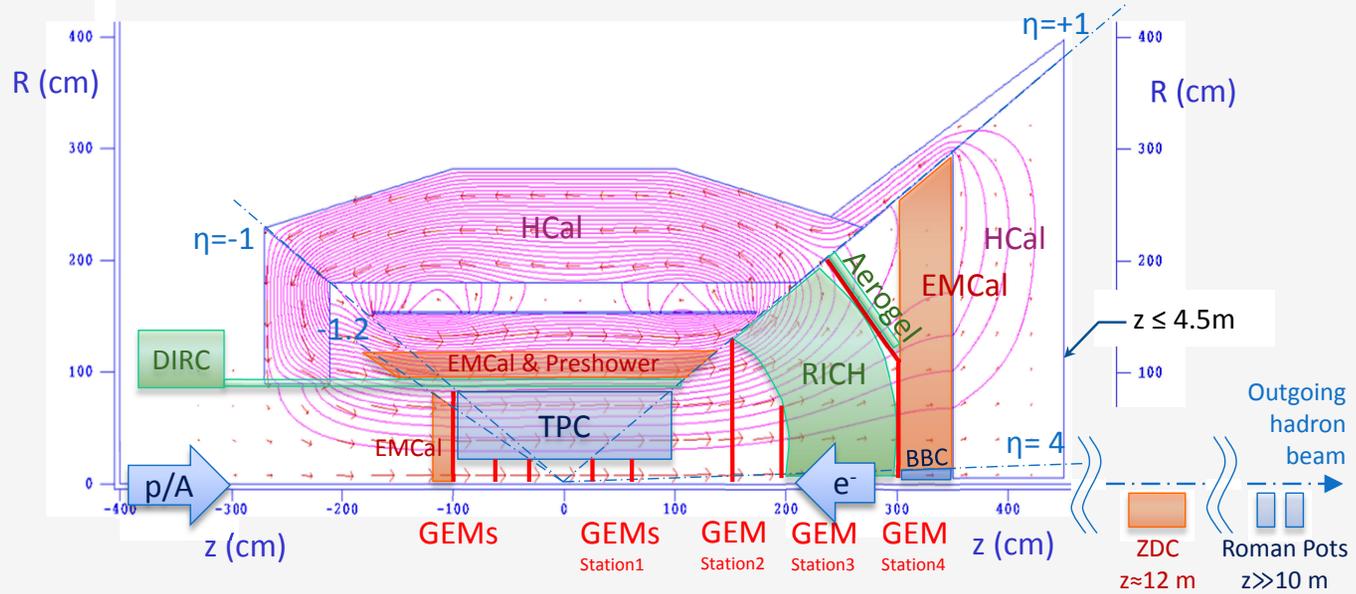
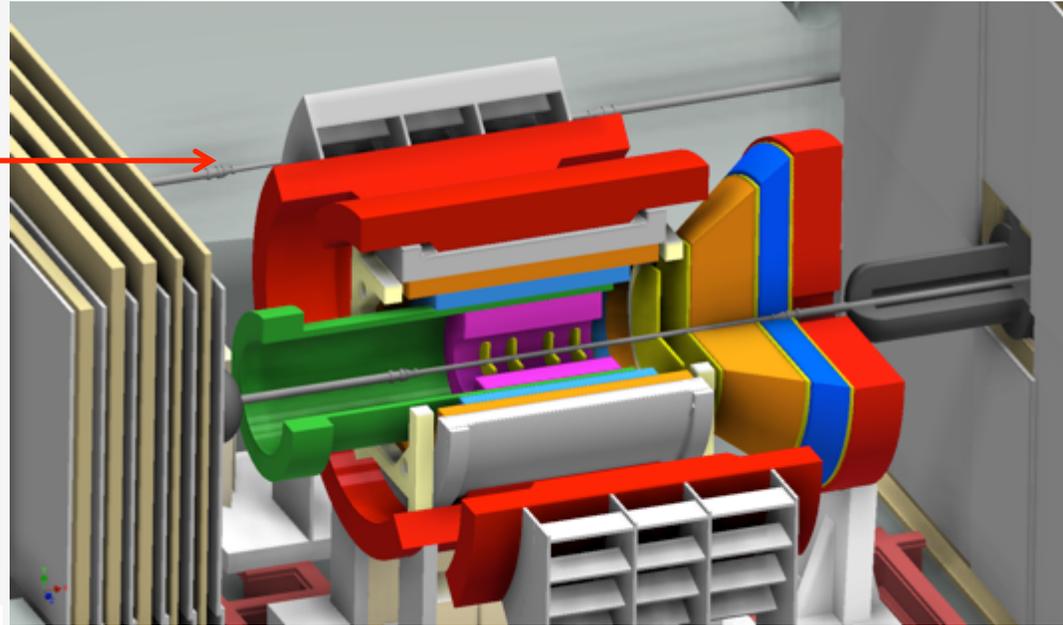
sPHENIX Tasks & Schedule

PHENIX TASK SCHEDULE NORTH

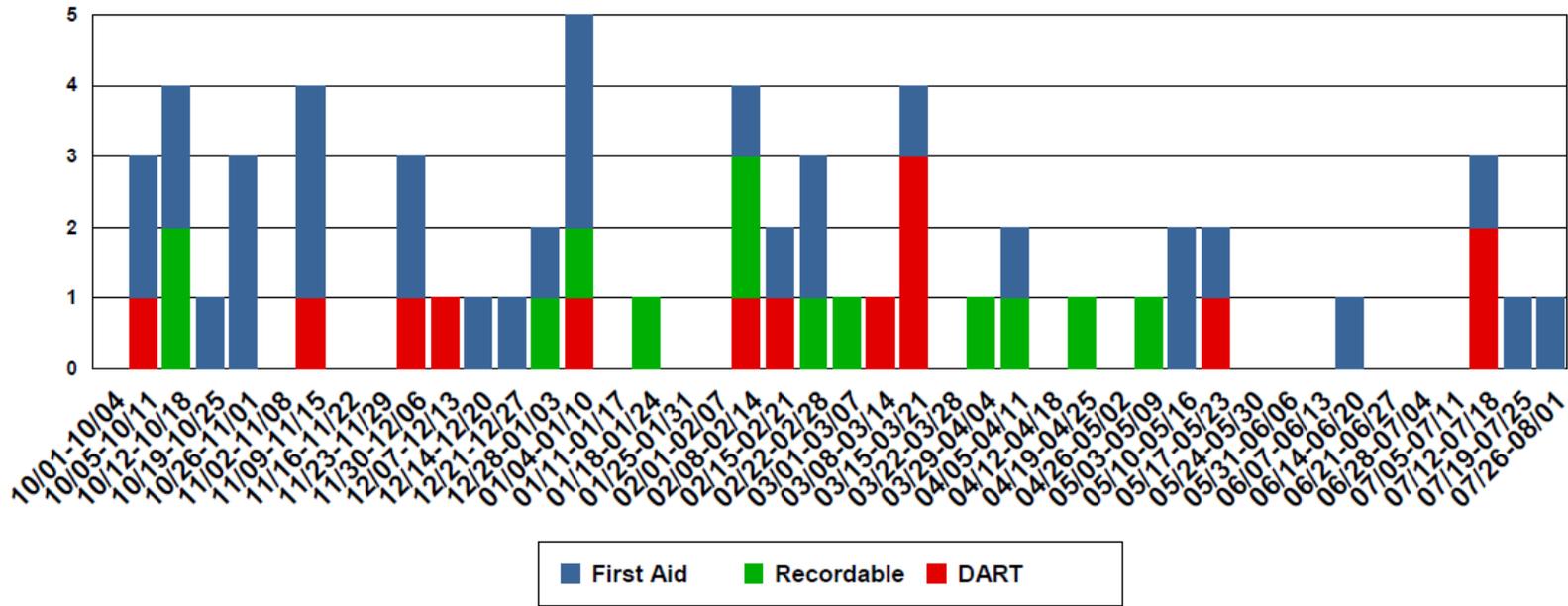


2ft high x 1 ft wide
clearance needed
for e-ring
components

ePHENIX



Injuries Per Week (FY)
As of 8/1/2014



Injury Status:

FY14 YTD: DART – 14, TRC – 27, First Aid – 32

FY13: DART – 16, TRC – 38, First Aid – 53

FY12: DART – 19, TRC – 36, First Aid – 69

FY13 Injury Listing: <https://intranet.bnl.gov/esh/shsd/seg/Occlnj/BNLInjuries.aspx>

Recent Injuries

7/29/14	First Aid	An employee struck an arm against a bolt and received first aid at the OMC.
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From Ray Karol:

1. Employee crossed red tape barrier.
2. Similar situations reported with barricades during drills, new SBMS coming soon.

From John Maraviglia:

Updated CAD Radiological Work Permit. Available to read and sign in Bldg. 911 lobby.

Recent Events		
8/1/14	Non-Reportable	<p>Circuit Breaker Panel SM in Bldg. 479 tripped. On Friday morning the house electrician reset the breaker only to have it trip again. The panel was de-energized and LOTO was applied. The panel was disassembled and revealed that an incorrect breaker was installed as the main 200 amp main breaker. To further aggravate the situation, the electrical path from the breaker to the buss is provided by three ferrules secured by three bolts (one per ferrule). The ferrules were missing and the bolts were the conductive paths. The top bolt must have loosened and created a high resistance point for the electrical current. The bolt, breaker tab, and the buss were scorched due to heat buildup. Replacement parts are on order. No personnel injury occurred, and no sparks were observed. The breaker functioned properly. (Event Link)</p>
7/31/14	Non-Reportable	<p>An experimenter was pushing a detector on a wheeled cart out of an experimental enclosure. The AC cord feeding the control box was pinched against the chassis and shorted to ground. This caused the circuit breaker to trip. There was no injury or equipment damage. The cord was unplugged immediately. Upon inspection, the cord was found to be worn in several spots, and was subsequently cut to prevent further operation. (Event Link)</p>
7/31/14	SC-4	<p>It was discovered that a Biodex Radioactive Sample Transport Box was received at Building 801 with radioactivity greater than the permissible limit. Specifically, 5mR of radioactivity was measured when it should not have exceeded 0.5mr. (Event Link)</p>
7/30/14	SC-3	<p>An electrical contractor, who was performing work directly for the DOE Brookhaven Site Office under the UESC contract, inadvertently cut into an energized 277 AC volt emergency lighting circuit in Building 1005S. The lighting circuit that the contractor was scheduled to work on was de-energized. However, the contractor inadvertently commenced work on an adjacent unlit emergency lighting fixture, which was energized. The worker experienced a flash when he cut into the power conductor to the emergency lighting fixture. The worker did not sustain a shock or injury. At the time of the event, the worker was wearing a hard hat, safety glasses, safety shoes, and cloth gloves. The worker was evaluated at the BNL Occupational Medicine Clinic (OMC) and was released for work without restriction. BHSO will work directly with BSA to conduct an investigation per BNL's Event/Issues Management Subject Area. (Event Link)</p>



Where To Find PHENIX Engineering Info

2014 Shutdown Continues !



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