

# PHENIX WEEKLY PLANNING



Oct. 10, 2013  
Don Lynch







### VTX/FVTX

Stave production completed  
Begin assembling FVTX/VTX

Strip-pixel ladder production and testing Done



PHENIX FRONT-NOSE



10/8/13

October 2013 DC  
Meeting

## VTX & FVTX Remaining Tasks

|  |           |
|--|-----------|
| Receive remaining strippixel stave components                                    | Done      |
| Assemble & test strippixel staves  | Done      |
| Receive remaining pixel ladders  | Done      |
| Test pixel ladders   | Done      |
| Integrate staves & electronics & test  | by 10/11  |
| Assemble East & West VTX & test  | by 10/20  |
| Transport FVTX to Chemistry building.  | By 10/21  |
| Integrate FVTX Integrated into East & West VTX.                                  | By 10/25  |
| Survey VTX/FVTX assembly   | By 11/8   |
| Transport VTX&FVTX assembly to PHENIX and install on rails.                      | 11/11     |
| Re-install coolant and N <sub>2</sub> lines, LV, signal and HV cables and fibers | by 11/25  |
| Re-survey full detector in IR  | by 11/27  |
| Re-commission VTX & FVTX   | by 1/1/14 |

## DC East & West Repairs Summary of Tasks

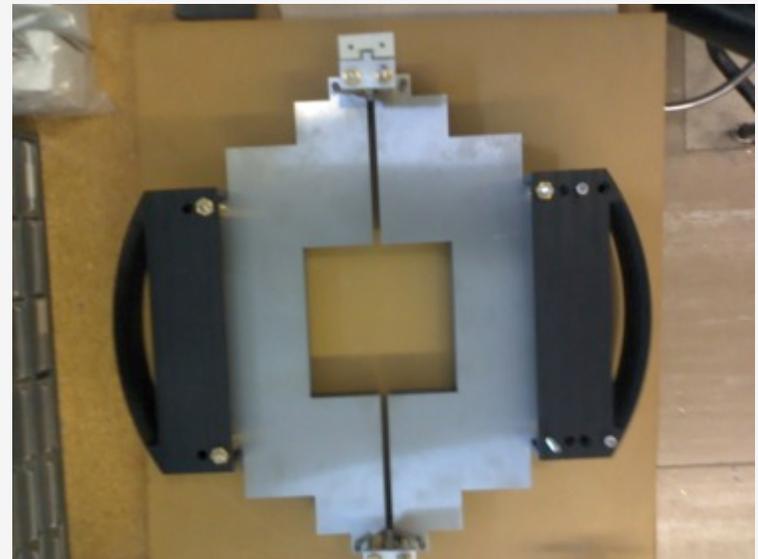
PHENIX  
 PROTECT  
 NORM

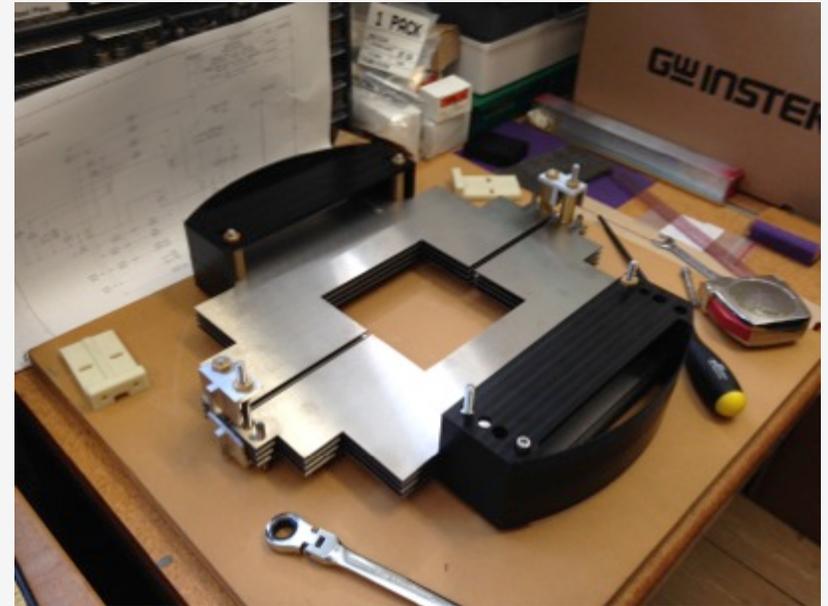
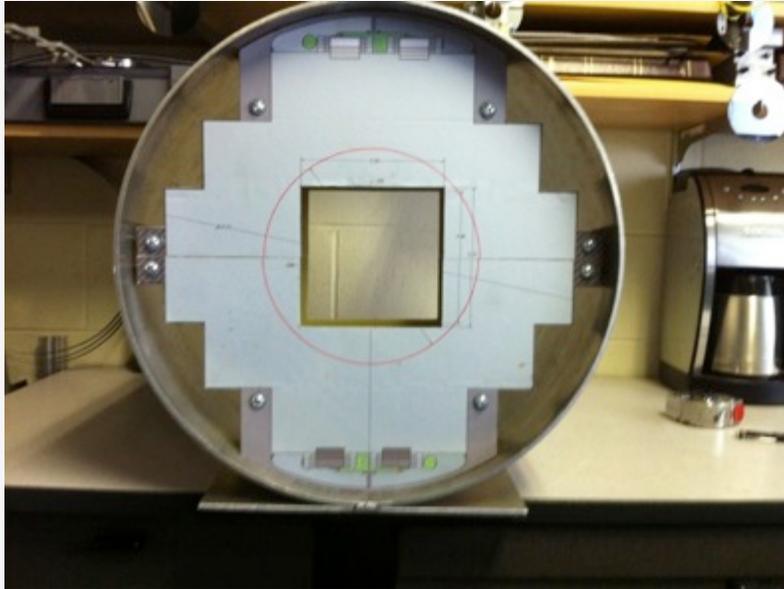
- East Carriage move to AH - Done
- Work Permit - Done
- Design & Construct tent (similar to tent constructed for DC West last year) to prevent foreign material from entering DC East cavity while window is removed. - Done
- CAD to provide 2 vertical manlifts to allow DC experts to remove and replace window - Done
- Get supplies and materials from Stony Brook for window replacement - Done
- Troubleshooting and repairs on DC West - Done
- Supply Gas, DAQ and Electric to EC East - Done
- Isolate and repair leak on DC East - Done
- Remove and replace window - Done
- Isolate and repair leak under electronics card - Done
- Leak test - Done
- Operational tests - Done
- Remove tent and manlift - Done
- DC West broken wire removal - 12/15 - 12/30

## MPC-Ex Initial (Partial) Installation



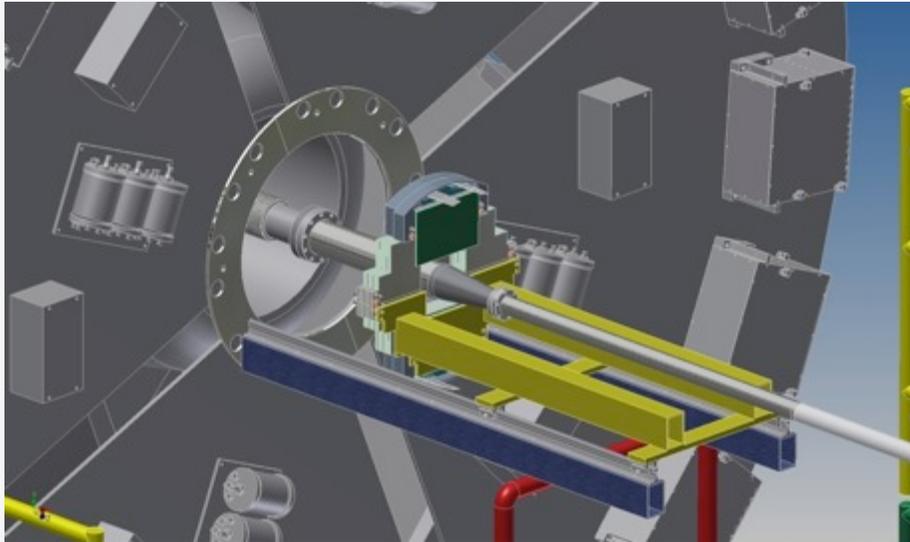
Design vacuum bellows anti-squirm in MPC S Cavity to accommodate MPC-Ex. Part is done needs to be "adjusted". Adjustment fixture in progress





MPC-Ex mockup to be used for cable and utilities routing plans

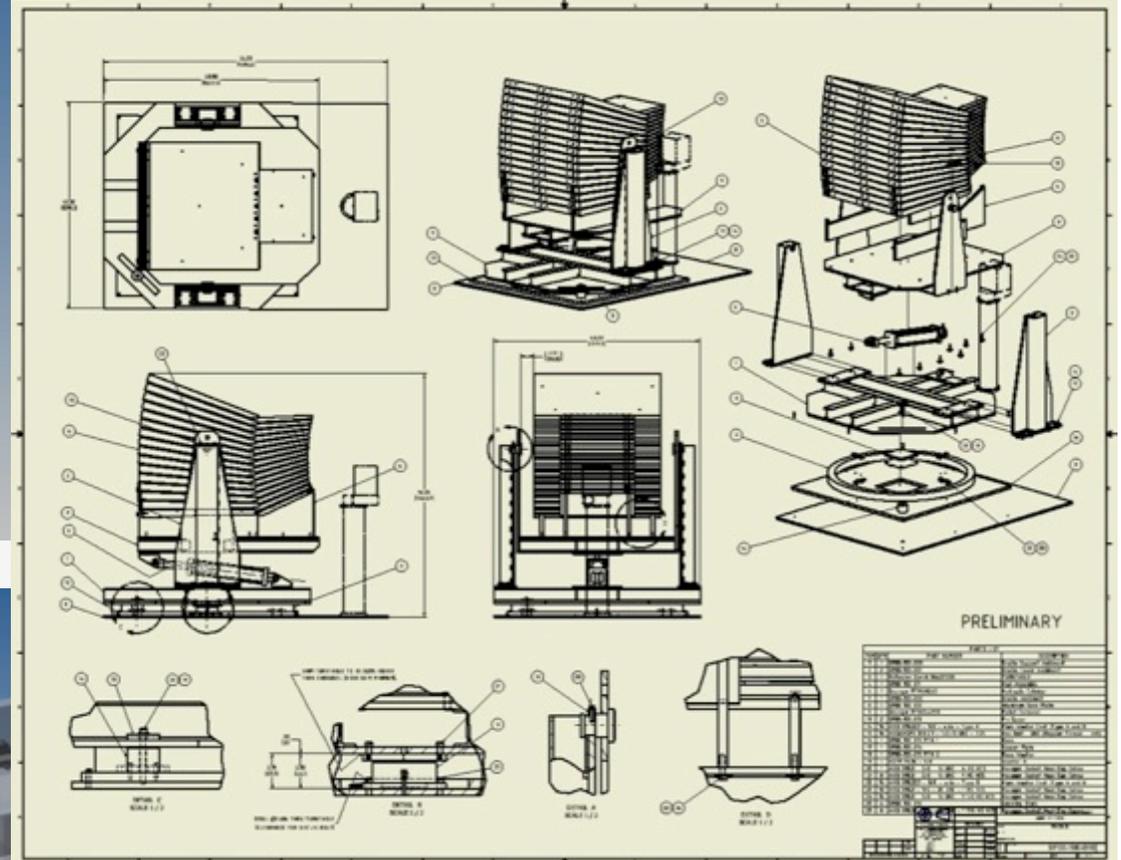
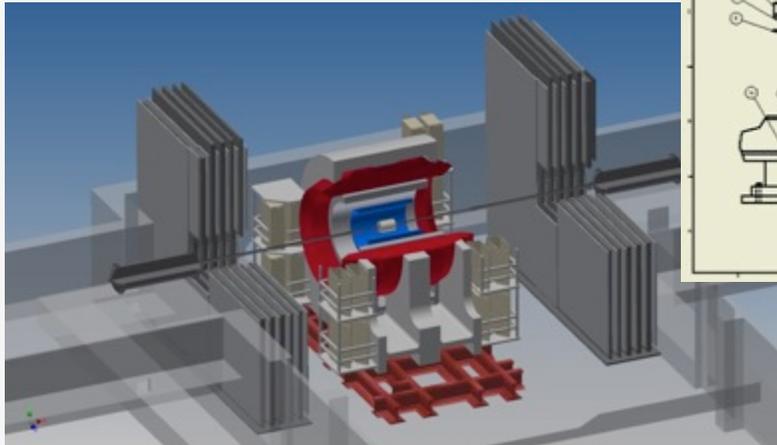
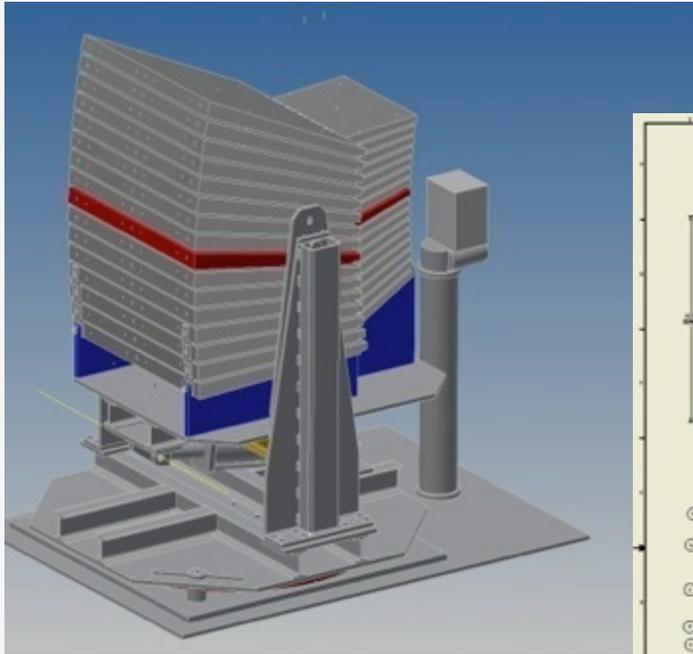




Installation fixture design completed out for fabrication/procurement

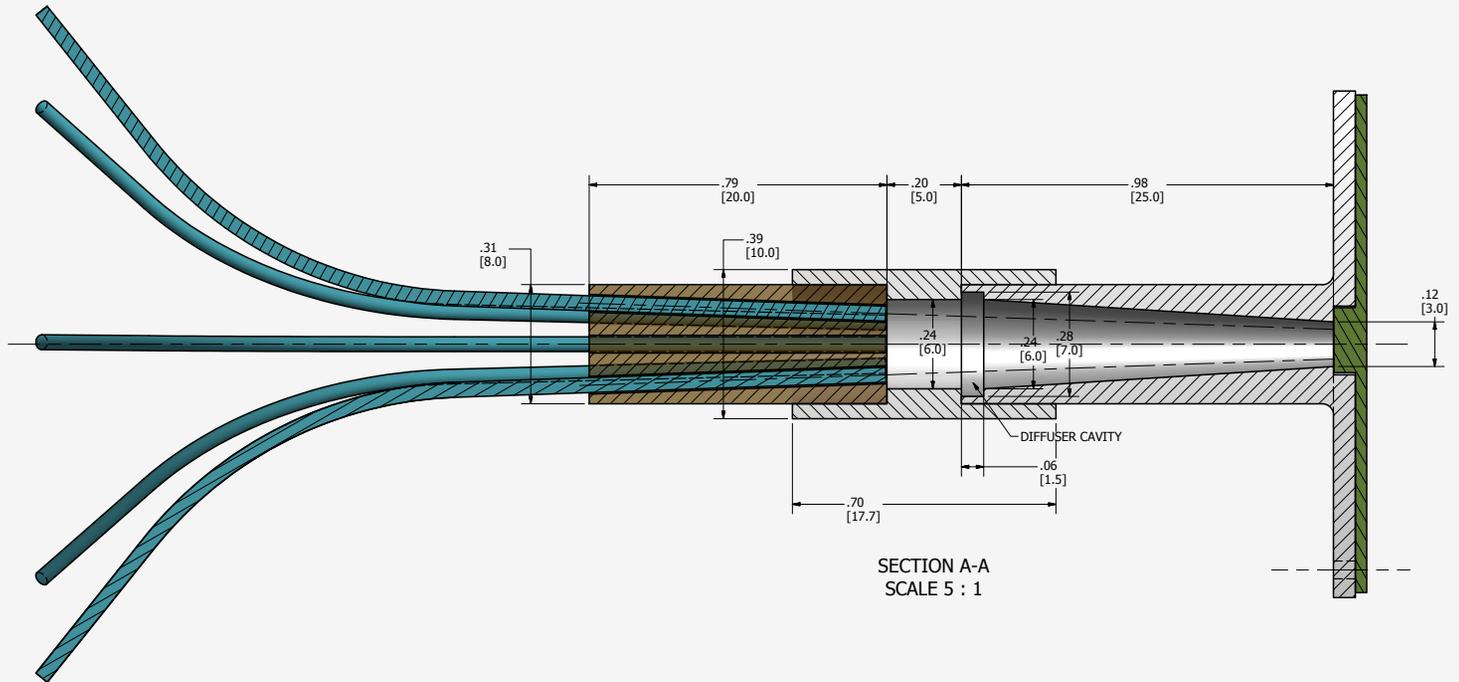


PHENIX 7 SDAOBS 7 NO 7





Hi-Bay Prototype Assembly Area



## Light Collection for HCal

## sPHENIX Prototype Assembly and Test Tasks

PHENIX  
CALORIMETER  
DEVELOPMENT  
PROGRAM

Design Hcal and EMCal Prototypes and support components and shipping crates - *in progress*

Procure materials and detail parts - *in progress*

Receive and inspect parts

Assemble prototypes

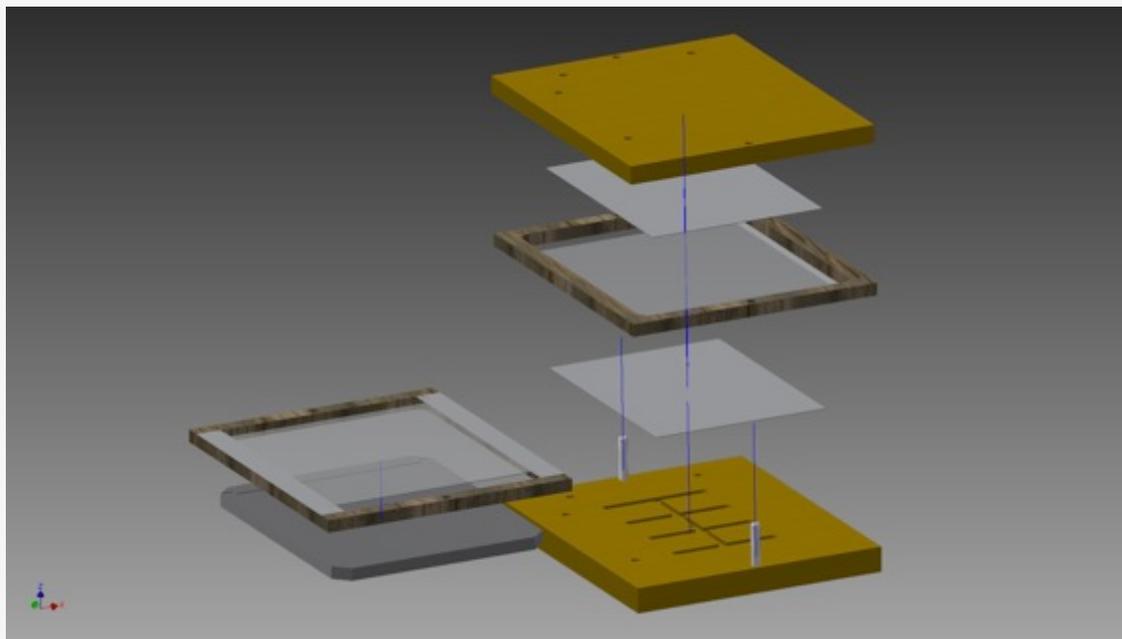
Test assemblies for mechanical fit and function

Package and ship prototypes to FERMI Lab for performance tests

Test and Evaluate at Fermi Lab

# EMCal Prototype

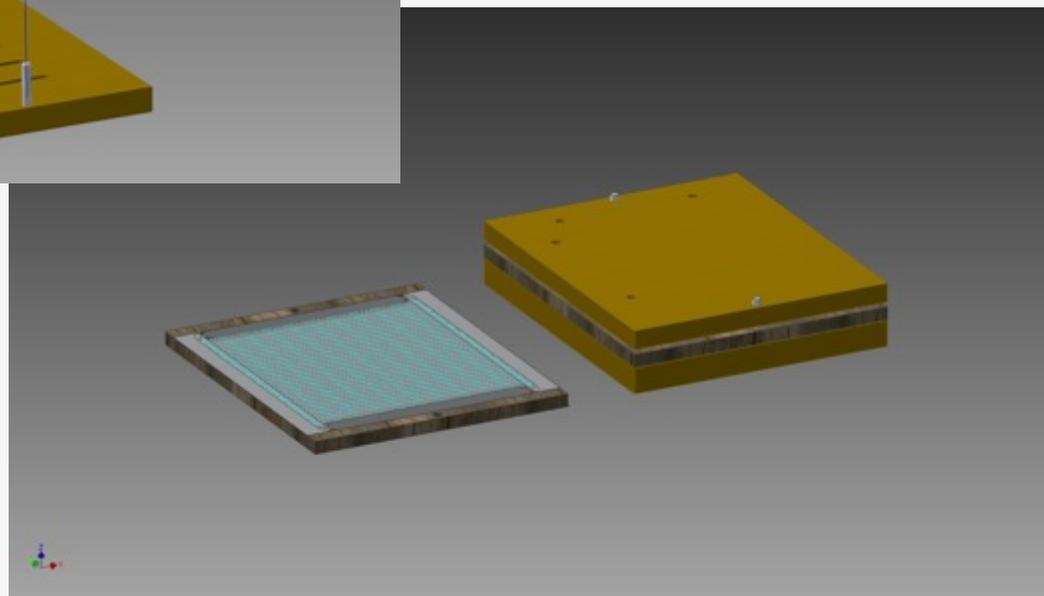
PHENIX PROPOSAL NUMBER



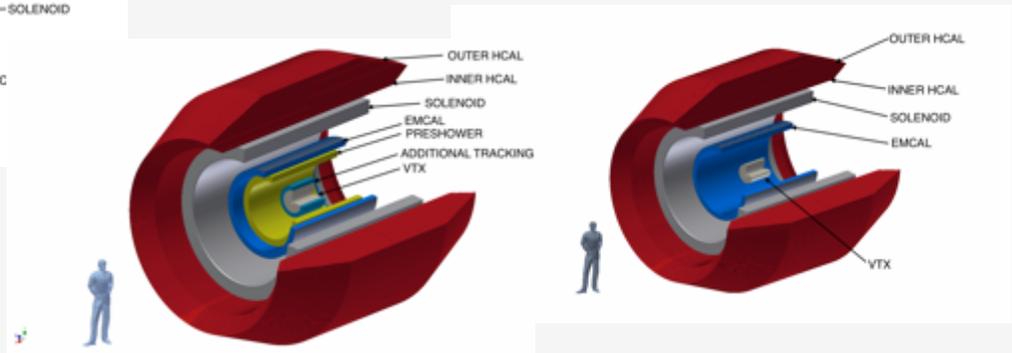
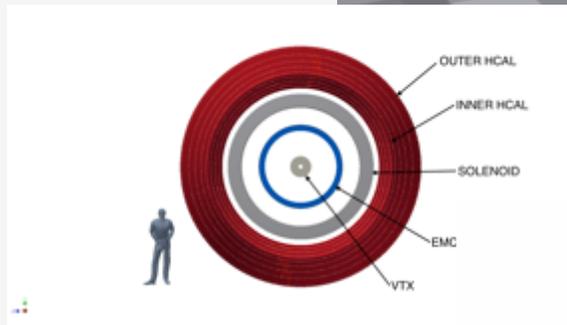
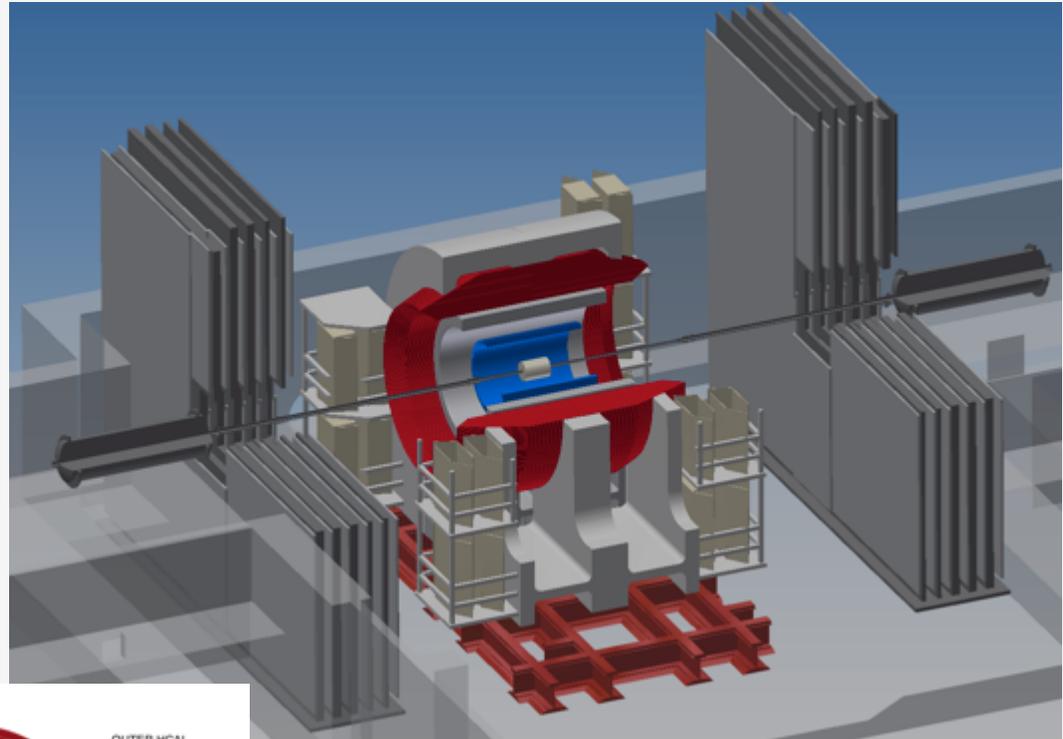
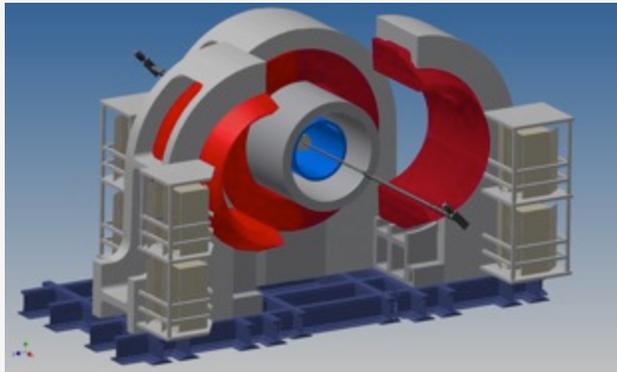
Gluing Fixture for sandwiches,  
Tower Stacking/holding fixture  
is next



Prototype "Egg Carton"  
light collection

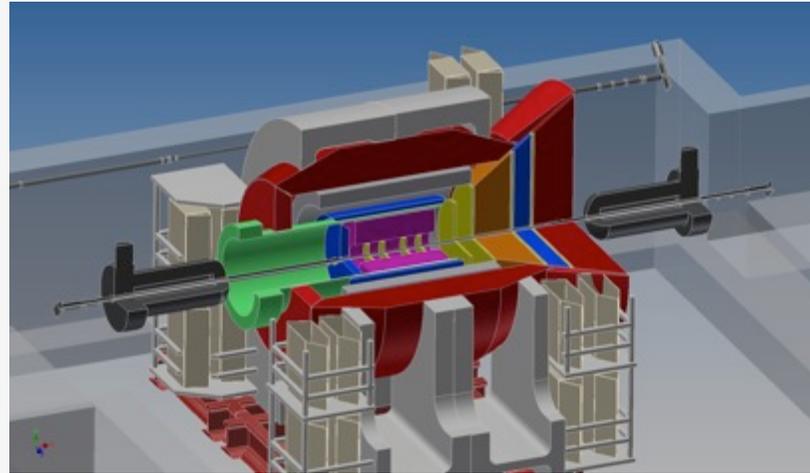


PHENIX PROGRESS REPORT

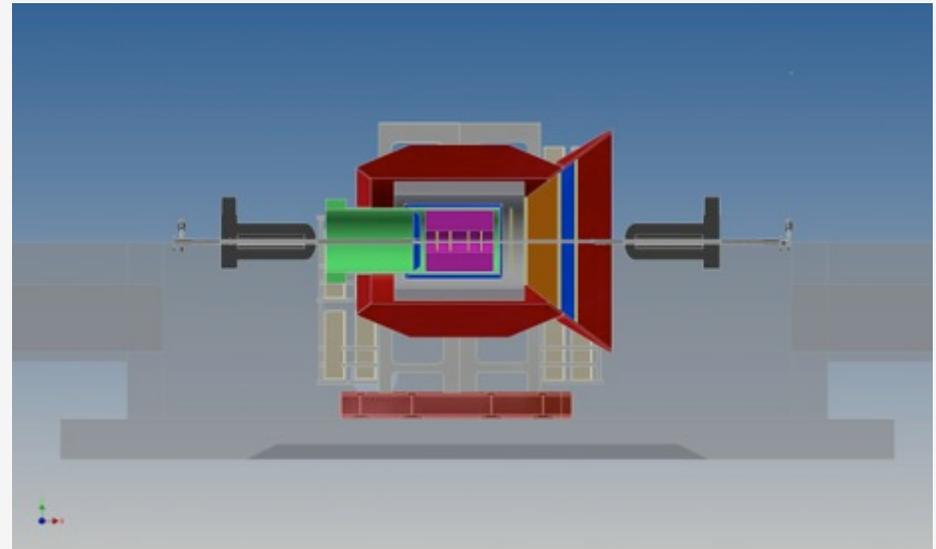
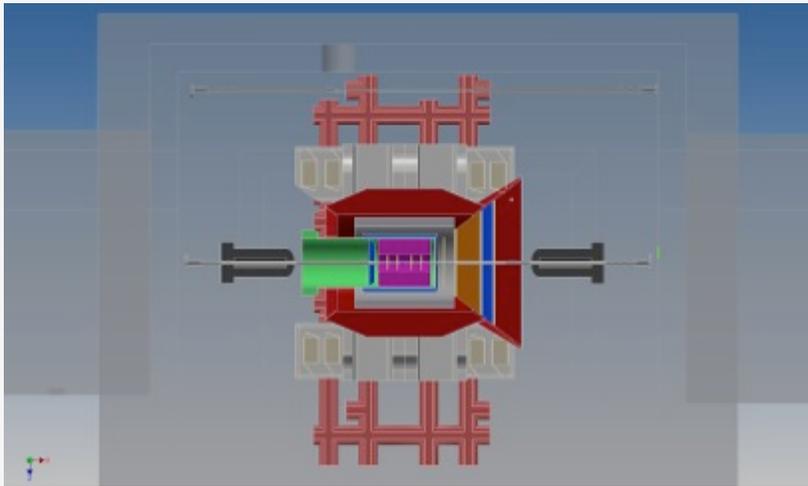


sPHENIX Modeling support for updated MIE

# ePHENIX

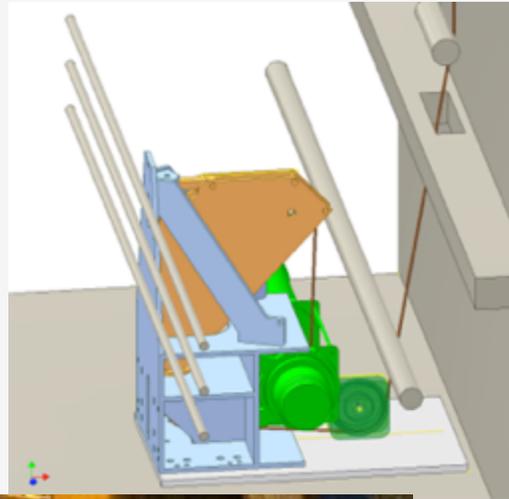


Plan View



Elevation View

# Window Washer Winch Upgrade



New baseplate positioned, anchors installed



## Window Washer Winch Upgrade Summary of Tasks

Receive and Inspect winch and components - Done

Design and Fabricate Winch & Sheave Base - Done

Install and test Winch, integrate with window washer hardware, controls and power

Final Inspection and approval of window washer upgrade

(Note: remote safety pin insertion and retraction was installed and has been in operation since the start of run 13.)

Alcohol Chiller Work For Shutdown 2013



Merlin Chiller

➤Chiller supplied about ½ the flow as in the past.

- Pressure on chiller says ~70-80psi
- Install gauge on supply line and measure actual output pressure.
- Replace chiller with spare if needed.
- Send old chiller out for maintenance or replace.

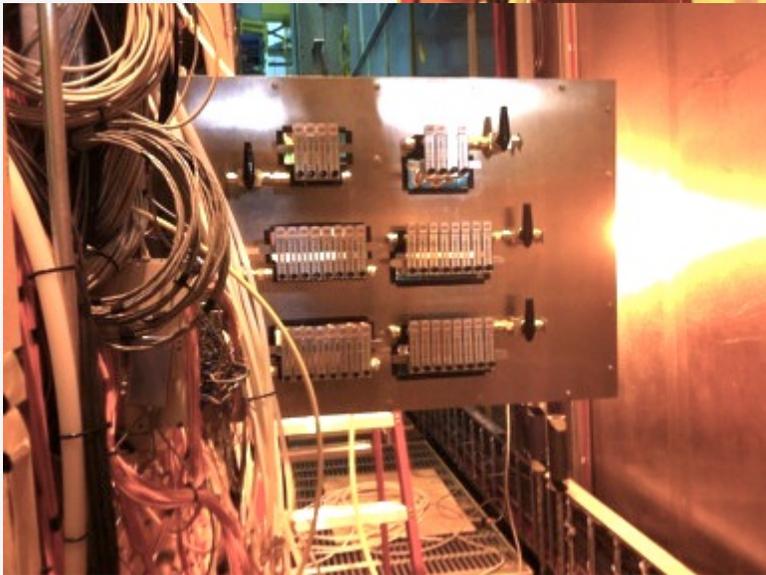
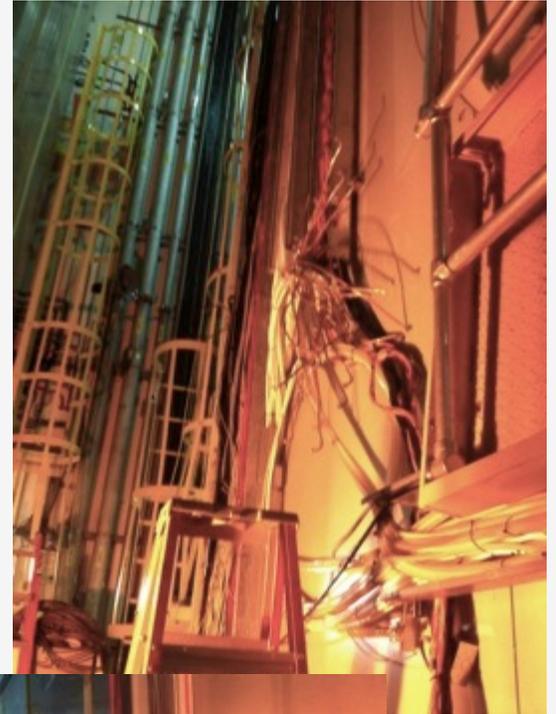
New Chiller Received.

Re-Insulate Glycol lines



❖Remove old polyethylene insulation and wrap and replace with foam rubber insulation.

- Temp of fluid is affected too much by temp change in the gas house.
- Lines are condensing and dripping because of gaps in insulation.



MuTr Gas Distribution Upgrade

10/8/13

October 2013 DC Meeting



## New Gas Analyzer Project (RPC recirculation and more)



Replace VTX supply tubing with stainless steel  
as much as possible - **in progress**

## Additional Shutdown Work

- ZDC Remove, Test, Recalibrate



Access on South side enhanced by shielding removal for DX magnet repositioning effort. Overhead cranes can now be used with existing fixture to remove ZDC modules

PHENIX  
ZDC  
REMOVAL  
WORK

## 2013 Shutdown Schedule

PHENIX  
 1  
 2  
 3  
 4  
 5  
 6  
 7  
 8  
 9  
 10  
 11  
 12  
 13  
 14  
 15  
 16  
 17  
 18  
 19  
 20  
 21  
 22  
 23  
 24  
 25  
 26  
 27  
 28  
 29  
 30  
 31  
 32  
 33  
 34  
 35  
 36  
 37  
 38  
 39  
 40  
 41  
 42  
 43  
 44  
 45  
 46  
 47  
 48  
 49  
 50  
 51  
 52  
 53  
 54  
 55  
 56  
 57  
 58  
 59  
 60  
 61  
 62  
 63  
 64  
 65  
 66  
 67  
 68  
 69  
 70  
 71  
 72  
 73  
 74  
 75  
 76  
 77  
 78  
 79  
 80  
 81  
 82  
 83  
 84  
 85  
 86  
 87  
 88  
 89  
 90  
 91  
 92  
 93  
 94  
 95  
 96  
 97  
 98  
 99  
 100

|  |                 |
|--|-----------------|
| Prep for 2013 shutdown   | Done            |
| Design, Fabricate MPC-Ex   |                 |
| 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                        |                 |
| Review and approval of parts, tools, fixtures and procedures           |                 |
| Assembly and QA tests  |                 |
| VTX Strippixel redesign  | Done            |
| VTX Strippixel 1 <sup>st</sup> article stave assembly                  | Done            |
| VTX Strippixel 1 <sup>st</sup> article qualification/performance tests | Done            |
| VTX Strippixel sensor reclamation                                      | Done            |
| Run 12 Ends  | Done            |
| Shutdown Standard Tasks  | Done            |
| • <del>Open wall, disassemble wall, Remove MuID Collars</del>          |                 |
| • Move EC to AH, etc.  |                 |
| VTX/FVTX Post run tests  | Done            |
| Disassemble VTX/FVTX services  | Done            |
| July 4 <sup>th</sup> Holiday   | Done            |
| Remove VTX/FVTX and transport to Chemistry Lab                         | Done            |
| Remove Lampshade MMS, East Vertical                                    | Done            |
| VTX strippixel stave production  | Done            |
| Pixel Ladder repairs   | Done            |
| VTX Strippixel ladder assembly & Test                                  | 7/15-10/11/2013 |
| Assemble, Test and Install MPC-Ex (Partial, location TBD)              | 7/22-11/15/2013 |

PHENIX  
 PROTOTYPING  
 SUPPORT  
 TEAM

|  |                  |
|--|------------------|
| MuTR Troubleshooting, maintenance and repairs              | Done             |
| Summer Sunday (8/4) Prep and teardown                      | Done             |
| Summer Sunday (RHIC)                                       | Done             |
| DC West troubleshooting & Repairs                          | Done             |
| DC East Window Upgrade and Related Repairs                 | Done             |
| sPHENIX HCal Prototype Assembly/test                       | 8/19-12/31/2013  |
| Re-assemble VTX/FVTX halves                                | by 10/31/2013    |
| Test, survey (at Chemistry and IR) and re-install VTX/FVTX | 10/31-11/11/2013 |
| Install & Survey VTX/FVTX in 1008 IR                       | 11/11-11/25/2013 |
| VTX Commissioning  | 11/25-12/31/2013 |
| Other detector maintenance as required                     | As required      |
| Infrastructure maintenance as required                     | As required      |
| Pre-run commissioning and prep for run 14                  | 11/25-12/31/2012 |
| Veterans Day, Lab Holiday                                  | 11/11/2013       |
| Prep for EC roll in  | 11/1-11/22/2013  |
| Roll in EC   | 11/25-11/27/2013 |
| Prep IR for run  | 11/1-11/30/2013  |
| Thanksgiving Holidays                                      | 11/28-29/2013    |
| Pink/Blue/White sheets                                     | 12/14-12/31/2013 |
| DC West wire repairs                                       | 12/15-12/30/2013 |
| Christmas Holiday  | 12/24-25/2013    |
| New Year's Day Holiday                                     | 1/1/2014         |
| Start run 14   | 1/2/2014         |

From Ray Karol:



1. Review your emergency assembly areas at:

[http://www.c-ad.bnl.gov/ESSHQ/SND/emergency\\_assembly\\_areas.htm](http://www.c-ad.bnl.gov/ESSHQ/SND/emergency_assembly_areas.htm)

2. Recent LOTO training session slides for the new LOTO program at BNL may be viewed at:

<http://www.c-ad.bnl.gov/ESSHQ/SND/Training/LOTO%20Classroom%20Training%20for%20C-AD%20Authorized%20Workers%20%207-16-2013.pdf>

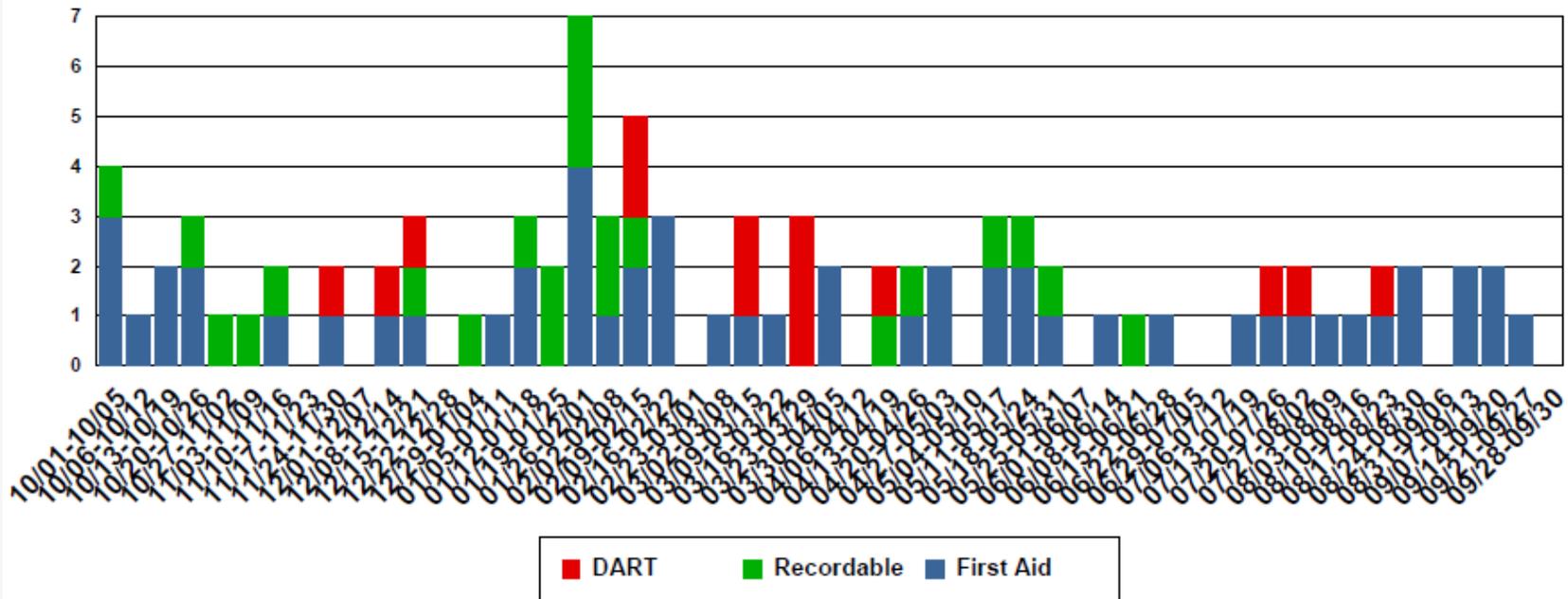
3. **Recalled Products(s):**

10/03/2013 Schneider Electric Recalls APC Surge Protectors Due to Fire Hazard [View Recalled Product](#)

4. **EEBA Crane Bolt Failure:**

This past Monday a bolt broke on the AGS crane (912) and a piece of the bolt (1" the nut and a washer fell from about 35 feet up. All had hard hats and no one impacted or injured. An inspection (Hynan) found 2 more damaged/defective bolts. The crane is locked out pending further investigation and review.

Injuries Per Week (FY)  
As of 10/7/2013



**Injury Status:**

FY14 YTD: DART – 0, TRC – 0, First Aid – 0

FY13: DART – 14, TRC – 36, First Aid – 53

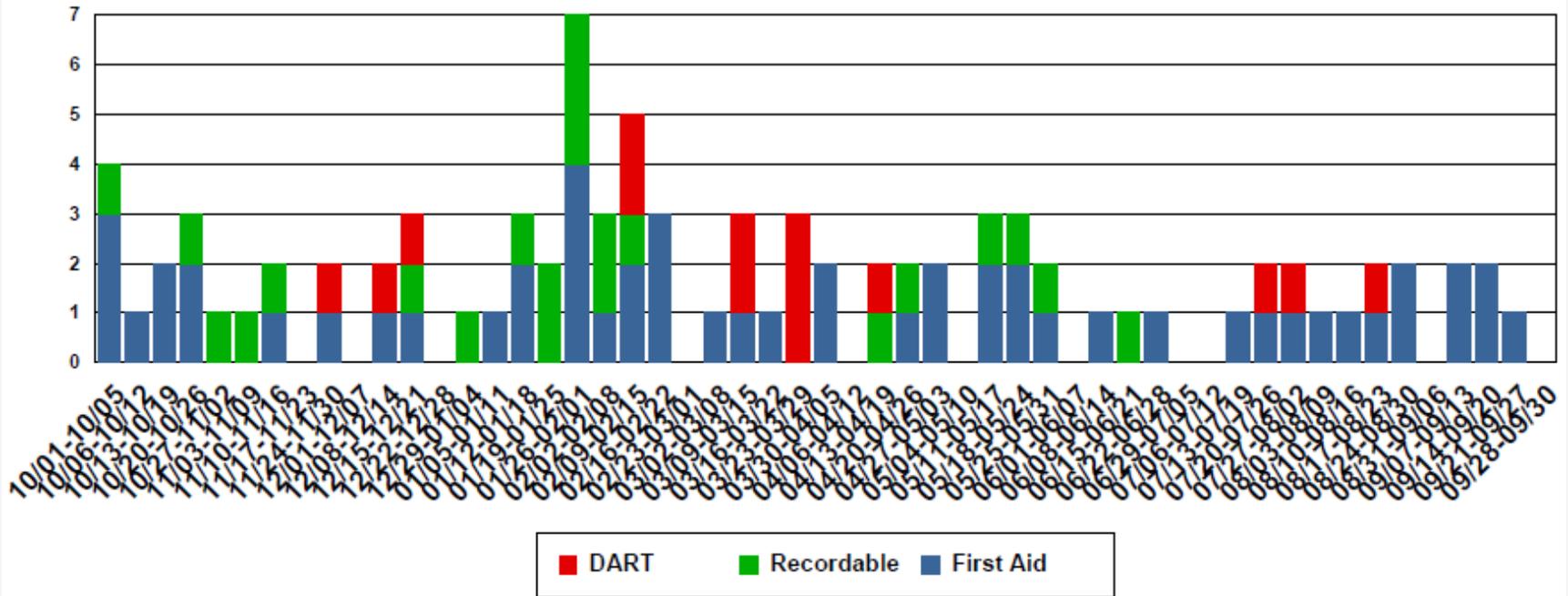
FY12: DART – 19, TRC – 38, First Aid – 69

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

**Recent Injuries**

|         |           |  |
|---------|-----------|--|
| 9/26/13 | First Aid | Employee was doing exterior building maintenance when stung by a bee. At the OMC, first aid was given. |
|---------|-----------|--|

### Injuries Per Week (FY) As of 10/7/2013



**Injury Status:**

FY14 YTD: DART – 0, TRC – 0, First Aid – 0

FY13: DART – 14, TRC – 36, First Aid – 53

FY12: DART – 19, TRC – 38, First Aid – 69

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

**Recent Injuries**

|         |           |  |
|---------|-----------|--|
| 9/26/13 | First Aid | Employee was doing exterior building maintenance when stung by a bee. At the OMC, first aid was given. |
|---------|-----------|--|

# Where To Find PHENIX Engineering Info



We're coming down to the final months of the shutdown. Stay safe and lets get ready for run 14.