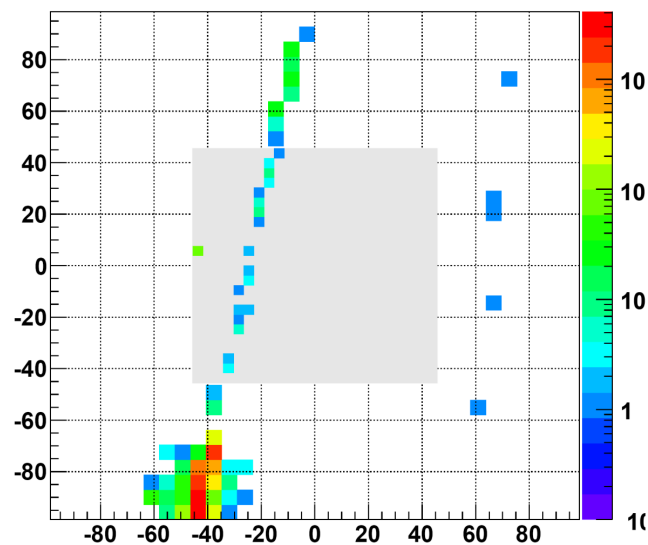


*Bill Christie  
Brookhaven National Lab  
Time meeting  
December 21, 2010.*



## Outline

- Schedule for Remainder of Shutdown (updated from RC mtg)
- List of most tasks accomplished during FY10 Shutdown
- Picture tour of some of the FY10 tasks
- Summary



# STAR will be Ready for Collider Cooldown by December 1, 2010.

*Bill Christie*

*For*

**The STAR Collaboration**

**October 20, 2010.**

## Major Tasks remaining prior to 12/1/10:

- Complete EEMC maintenance (~ 10/27) ✓
- Annual RESC Safety review and Emissions Doc. Update (10/27) ✓
- Install electronics boards for monitoring TPC anode wires (~ 11/1) ✓
- Replace remaining TPC LV supply capacitors (11/12) ✓
- Global Interlocks Certification (Week of 11/8?) 11/13 ✓
- Install East Poletip (11/15 or sooner) **Dec. 6<sup>th</sup>** ✓
- Fill Magnet with water and testing (can start late the week of 11/15) **Dec. 7<sup>th</sup>** ✓
- Install BBCs (Last week of November) **Week of Dec. 27<sup>th</sup>**
- Trigger firmware (revisions into December) **No Change**



# Run11 Physics Programs

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## 1) Spin Physics (2011)

- $W_{\pm} A_L$  at mid-y (Longitudinal Polarization)
- Light meson  $A_N$  at forward-y (Transverse Polarization)
- $\Delta G$  measurements at 500 GeV (Longitudinal Polarization)
  - DPE and hadronic spin-flip amplitude (if pp2pp running)

## 2) Heavy Ion Physics\* (2011)

- Complete BES at 18 and 27 GeV including di-electron program at STAR
- U+U collisions: hydro limit, (further measurements uncertain with reduced beam time allocation)
- High luminosity AuAu collisions
  - Likely physics measurements:
    - J/Psi v2
    - Try to separate Upsilon 1S and 3S states
    - high mass dilepton
    - Possibly try low pT J/Psi
    - Effectively use HLT to select events

\* Request a CA-D test to determine the lowest possible collision energy at RHIC



## Work done on STAR in preparation for Run 11

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Maintenance on TPC Electronics (Diagnose, fix/replace RDOs and FEEs, only a few)

Modified all TPC Low Voltage supplies

“New” Laser installed on West side of TPC, damaged optics replaced on both sides.

Maintenance on BEMC (BTOW & BSMD, Fix tubes, bases, FEEs, Digitizer boards as needed)

Installed more remote Power Supplies for BSMD/BPSD crates

Maintenance on EEMC (Variety of items worked on)

Maintenance on FMS (Various PMTs/bases replaced)

Maintenance on FTPCs (Number of RDOs and FEEs replaced)

Installed Completely New Network system on the South Platforms

Improved Water leak protection for South Platform

New Chiller and Control valves for Hall and IR Air Conditioning

Reconfiguration & refurbishment of Gas Pad area

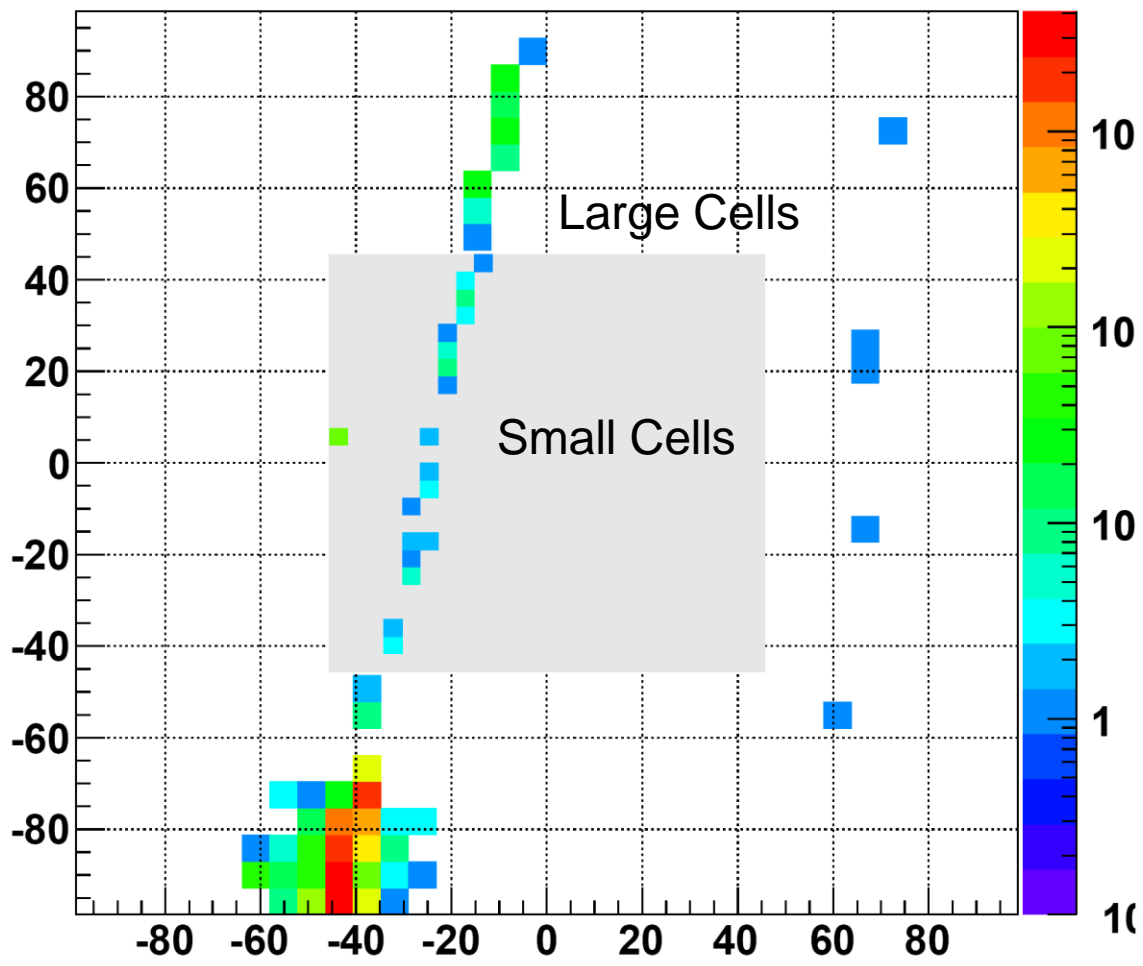
Prep. Work for expected new MTD modules for Run 11

Swapped STAR ZDCs for BRAHMS ZDCs (Cosmic testing performed)

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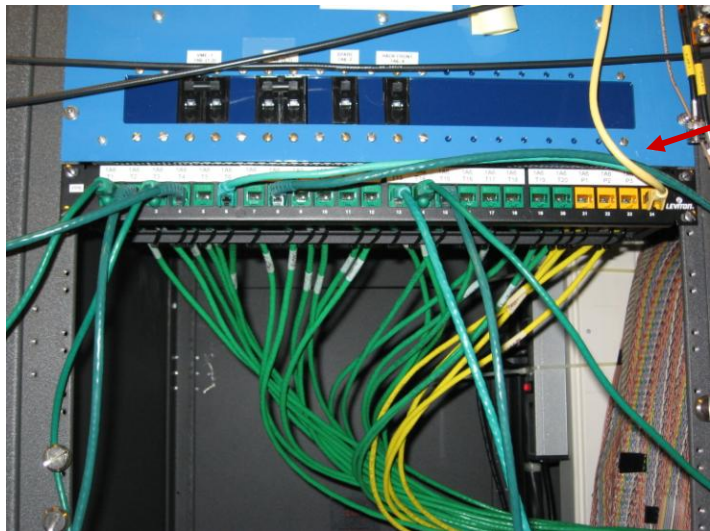
# FMS Cosmic Ray Test

FMS Cluster Trigger: Thr1 = 50





# Completely New Network on the South Platforms (All point to point)



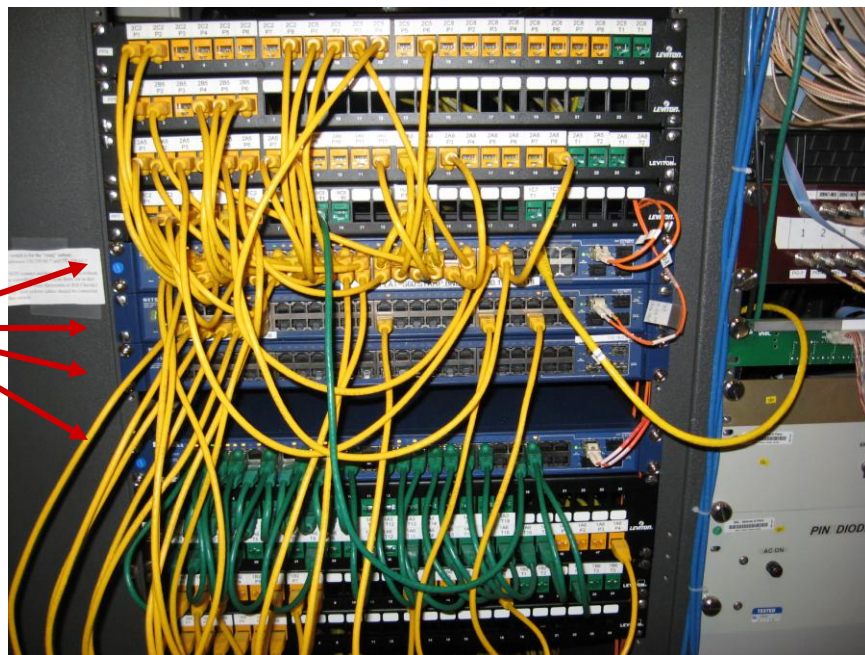
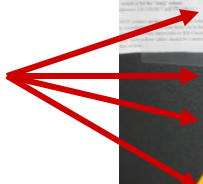
Color coded  
Patch panels  
distributed in  
racks.



**STAR\_TRIG**

**STARP**

Switches



All switches in Rack 1C row  
(away from beam). No  
“hidden” switches in racks.

Should allow for fast diagnosis  
and recovery of any Network  
problems.



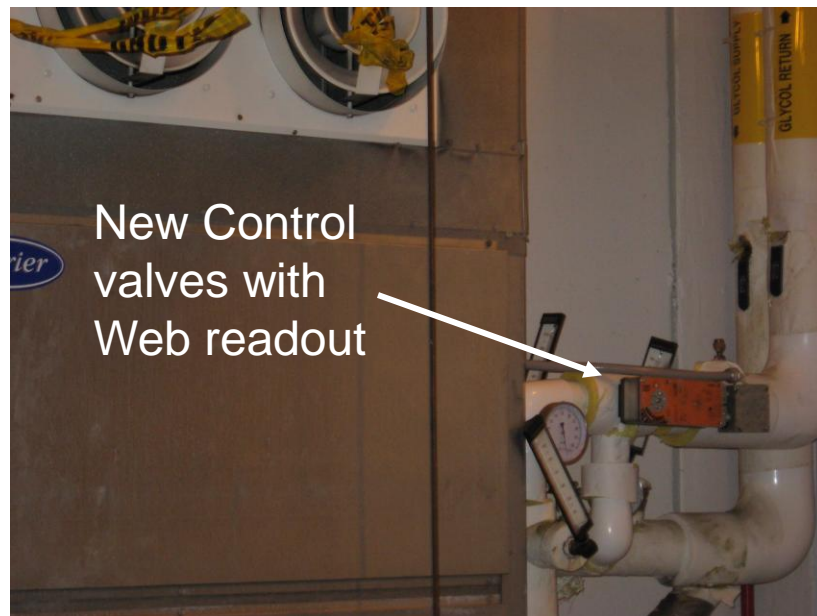


## Some of the Facility Improvements

New roof, and new Chiller for  
AB & IR Air Conditioning



New Control  
valves with  
Web readout



Reorganized and Refurbished  
Gas Pad area





# Summary

- Relative to past few Shutdowns (and next year) no large installation effort this year.
- STAR took advantage of this to upgrade/refurbish some infrastructure (Networking, Leak detection, AC Chiller, Gas Pad, TPC LV supplies, Remote BSMD LV supplies, etc.)
- All usual Sub system maintenance is ~ done.
- Trigger Firmware effort will continue through December.
- Starting a RHIC Run with 500 GeV polarized pp will be difficult, but the STAR Detector will be ready to go.

