

# PHENIX Preparations for Run 12

John Haggerty  
*Brookhaven National Laboratory*

October 18, 2011



## Run Coordinator

The Run 12 PHENIX Run  
Coordinator is Xiaochun He,  
from Georgia State  
University



## PAC recommendations June 8, 2011\*

For Run 12 the PAC recommends the following (in order of priority):

1. 5 weeks of running with polarized proton collisions at 200 GeV.
2. 7 weeks of running with polarized proton collisions at 500 GeV.
3. 5 weeks of running with Cu+Au collisions at 200 GeV.
4. 3 weeks of running with U+U collisions at 193 GeV.

\*Assumes 26 cryo weeks; present guidance is 22 cryo weeks

## PHENIX physics goals

- 500 GeV longitudinally polarized pp to advance the W program (requires high polarization, high luminosity, low background)
- 200 GeV transverse polarized pp for Au+Au comparison with vertex detector and a look at transverse single spin asymmetries
- Cu+Au and U+U for studying effects of collision geometry

## Run 12 schedule

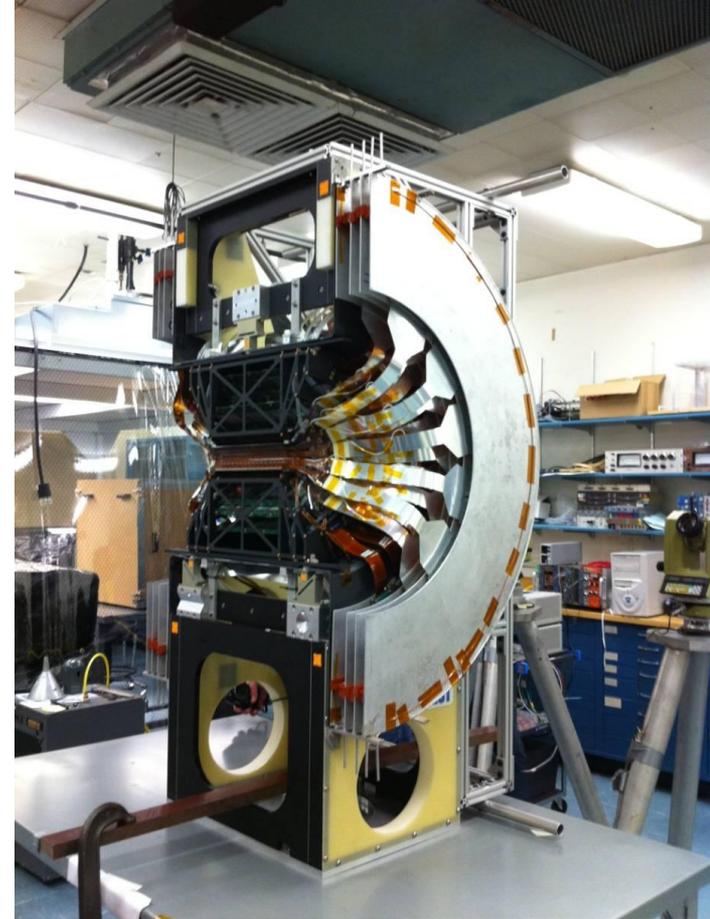
- Run schedule is not finalized, run expected to start in “early January” (January 1 is what our schedule is driving towards) and go for 22 weeks (nominal end June 3)
- East Carriage roll-in sets time frame for operation; scheduled for December 5
- Several weeks of reconnection, pink/blue/white sheets, should be ready for operation with flammable gas ~Christmas
- Shield wall late December/early January
- After gas starts, we would start cosmic ray shifts

## Completely new for run 12

- Forward Vertex Detector (FVTX)
  - Large effort under way to complete the detector
  - Substantial installation effort in the IR is under way
  - FVTX and VTX are to be mated into a single unit
- RPC1
  - RPC1.N installed and tested with portable electronics
  - Cabling to racks on bridge followed by system testing
  - Completion will allow full operation of upgraded muon trigger

## FVTX

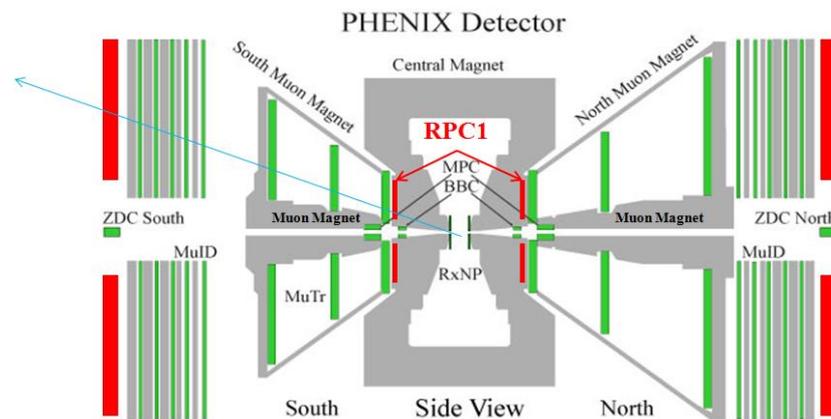
- Racks under construction
- Lots of new wiring (fiber, LV, bias) starting soon
- Mated with VTX and moved to 1008 November 7



October 18, 2011

# RPC1

- RPC1.N installed
- Testing with temporary electronics looks good
- Begin RPC1S installation  
October 28



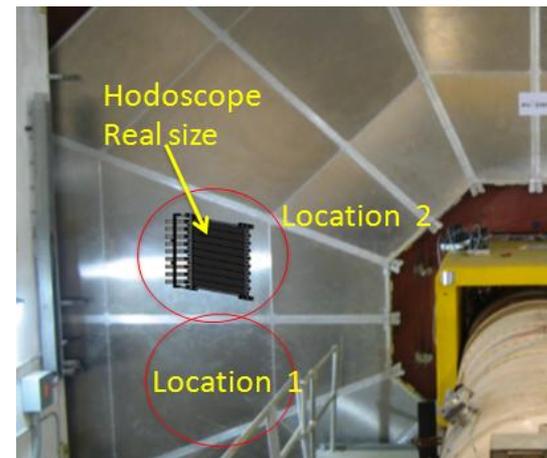
October 18, 2011

## Major changes for run 12

- Muon Tracker North station 1
  - The chambers and electronics were completely removed and serviced; they are back now and being checked
- Barrel Silicon detectors (VFXP+VFXS)
  - Removed and disassembled for service
  - Opening up the pixel layers has uncovered some problems whose resolution is being studied; we don't plan to allow it to affect the installation schedule
- Muon Piston Calorimeter (MPC)
  - New electronics being installed

## In the tunnel

- Plan and procurement for modified shielding in the tunnel under way
- Dave Phillips is planning for December installation
- Small scintillator hodoscope to be installed behind RPC3 for absolute efficiency measurement (may be used for background as well)



## Summary

- A lot of critical systems have been/will be worked on:
  - BB
  - DC/PC
  - MUTR and RPC
  - VTX/FVTX
  - DAQ/Trigger
  - Shielding
- Run 12 shifts to begin ~January 1, 2012