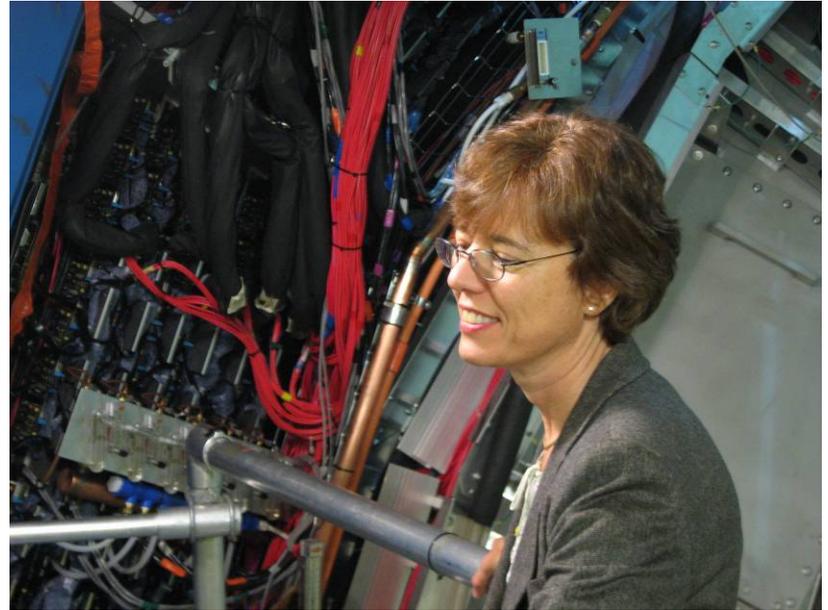


PHENIX Ready for Run7

- New Spokesperson
- Barbara Jacak (SUNYSB)



- Deputies - Yasuyuki Akiba (Riken/BNL), Matthias Gross-Perdekamp (UIUC), Rich Seto (UCR)
- Run Coordinator - Mike Leitch (LANL)

Taking data with cosmic ray triggers (muon, emCal, RXPN, MPC readout)

Have also run with all other subsystems in at times

DAQ Ready!

Run Control for Cosmics Owned by mm

File Options Mode

Download

Stop

Pause

Close

Defaults

-- Run Type --
Calibration

LVL2 Rej Off

Configured

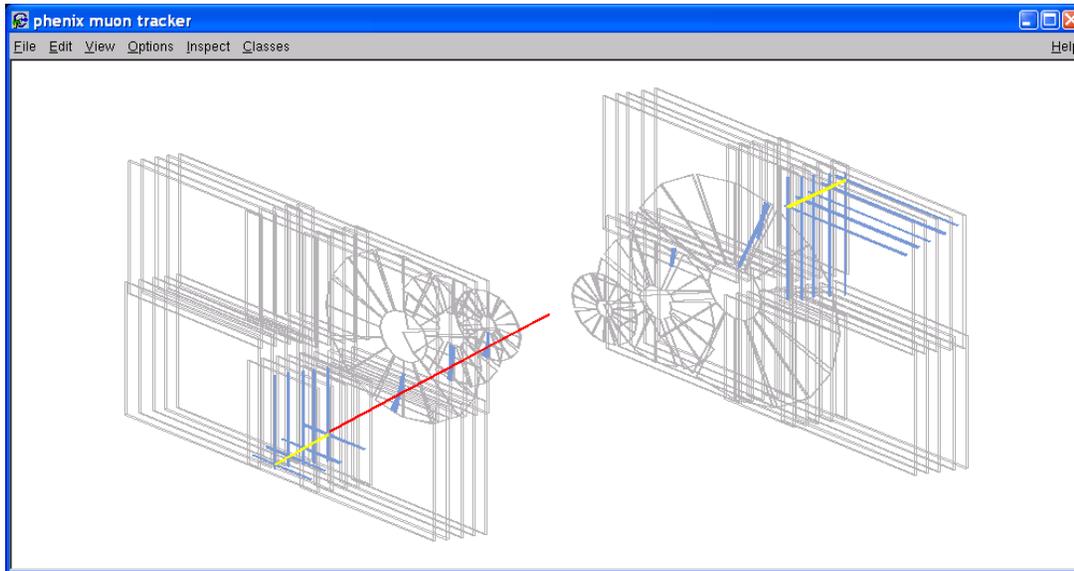
BB LL1 Status
North Glink

Run Number: 219916
Data Taking Mode: production
Run Control State: Run Started
Run Start Time: 10:55:06
Time In Run: 0:10:16
Run Time Remaining (sec): 2946
Outstanding Granule Count: 0
Magnet Polarity: OFF
Data Path: none
Data File Directory: /c/calibdata
Data File Name: CALIBDATA\xxx_P00-0000219916-SEQ#.PRDFF
Buffer Box: phnxbox2.phenix.bnl.gov
Run Length (min):
Granule State: idle

Granule Names	GTM Status				DCM Status				Name	#Events	Event Size	Data Rate	Buff Usage	Read Error	SEB Status		Name	#E
	L1	Run	Busy	OK	L1	Busy	Glink	OK							Busy	OK		
GL1	89613	4	0	0	0	0	0	0	SEB.GL1	86360	0.484 KB	0.288 MB/s	0.001	0	0	0	ATP.0	
									SEB.LL1	86360	0.449 KB	0.329 MB/s	0.004	0	0	0	ATP.1	
EMC.W.B	86412	4	0	0	0	0	0	0	SEB.EMC.W.B	86360	6.494 KB	4.761 MB/s	0.007	0	0	0	ATP.2	
EMC.W.T	86412	4	0	0	0	0	0	0	SEB.EMC.W.T	86360	7.486 KB	5.344 MB/s	0.007	0	0	0	ATP.4	
EMC.ET	86412	4	0	0	0	0	0	0	SEB.EMC.ET	86360	6.943 KB	5.088 MB/s	0.007	0	0	0	ATP.5	
EMC.EB	86412	4	0	0	0	0	0	0	SEB.EMC.EB.0	86360	7.992 KB	5.707 MB/s	0.001	0	0	0	ATP.6	
									SEB.EMC.EB.1	86360	7.580 KB	5.535 MB/s	0.007	0	0	0	ATP.7	
MUTRS	86412	4	0	0	0	0	0	0	SEB.MUTRS.ST1.0	86360	2.065 KB	1.246 MB/s	0.007	0	0	0	ATP.8	IATPs
									SEB.MUTRS.ST2.0	86360	5.861 KB	3.550 MB/s	0.007	0	0	0	ATP.9	
									SEB.MUTRS.ST3.0	86360	1.024 KB	0.609 MB/s	0.007	0	0	0	ATP.B	
									SEB.MUTRS.ST3.1	86360	2.749 KB	1.631 MB/s	0.001	0	0	0	ATP.C	
MUTR.N	86412	4	0	0	0	0	0	0	SEB.MUTR.N.ST1.0	86360	0.286 KB	0.170 MB/s	0.007	0	0	0	ATP.D	
									SEB.MUTR.N.ST2.0	86360	1.159 KB	0.689 MB/s	0.007	0	0	0	ATP.E	
									SEB.MUTR.N.ST3.0	86360	0.473 KB	0.287 MB/s	0.007	0	0	0	ATP.F	
									SEB.MUTR.N.ST3.1	86360	0.495 KB	0.300 MB/s	0.007	0	0	0	ATP.10	
MUID.N	86412	4	0	0	0	0	0	0	SEB.MUID.N	86360	0.256 KB	0.152 MB/s	0.001	0	0	0	ATP.11	
ERT.E	86412	4	0	0	0	0	0	0	SEB.ERT.E	86360	0.427 KB	0.313 MB/s	0.007	0	0	0		
ERT.W	86412	4	0	0	0	0	0	0	SEB.ERT.W	86360	0.413 KB	0.303 MB/s	0.001	0	0	0		
FCAL	86412	4	0	0	0	0	0	0	SEB.FCAL	86360	2.548 KB	1.868 MB/s	0.001	0	0	0		
MUIDS	86412	4	0	0	0	0	0	0	SEB.MUIDS	86360	0.233 KB	0.141 MB/s	0.007	0	0	0		
Sum										86360	55.418 KB	38.309 MB/s						

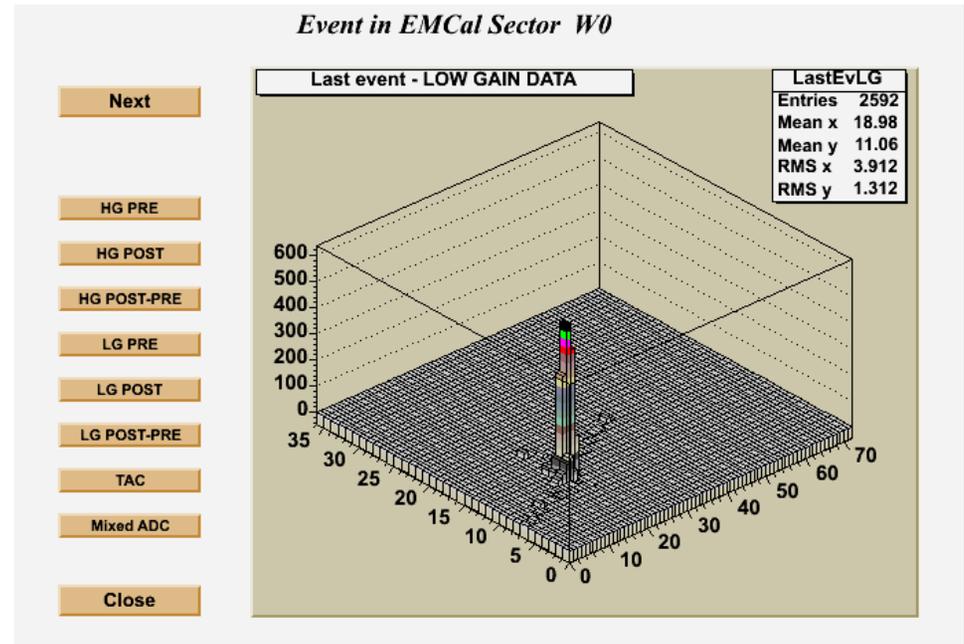
Log period (seconds): 20 Prescale configuration: Default v 0

Log	Trig	Status	Prescale	Raw	Live	Scaled	Raw Rate	Live Rate
<input type="checkbox"/>	Noise	Disabled	0	0	0	0	0.000 Hz	0.000 Hz
<input type="checkbox"/>	MUIDLL1_N1D	Enabled	0	152990	44027	44027	229.041 Hz	71.169 Hz
<input type="checkbox"/>	MUIDLL1_S1D	Enabled	0	68004	25728	25728	119.849 Hz	40.412 Hz
<input type="checkbox"/>	MUIDLL1_N1D&MUIDLL1_S1D	Enabled	0	4468	1983	1983	6.072 Hz	2.887 Hz
<input type="checkbox"/>	ERTLL1_2x2	Disabled	0	2183197953	0	0	3.525 MHz	0.000 Hz
<input type="checkbox"/>	ERTLL1_4x4a	Enabled	50	448075	406401	7968	727.004 Hz	656.221 Hz
<input type="checkbox"/>	ERTLL1_4x4b	Enabled	50	191440	185145	3630	297.311 Hz	289.250 Hz
<input type="checkbox"/>	ERTLL1_4x4c	Disabled	0	1518658676	0	0	9.383 MHz	0.000 Hz



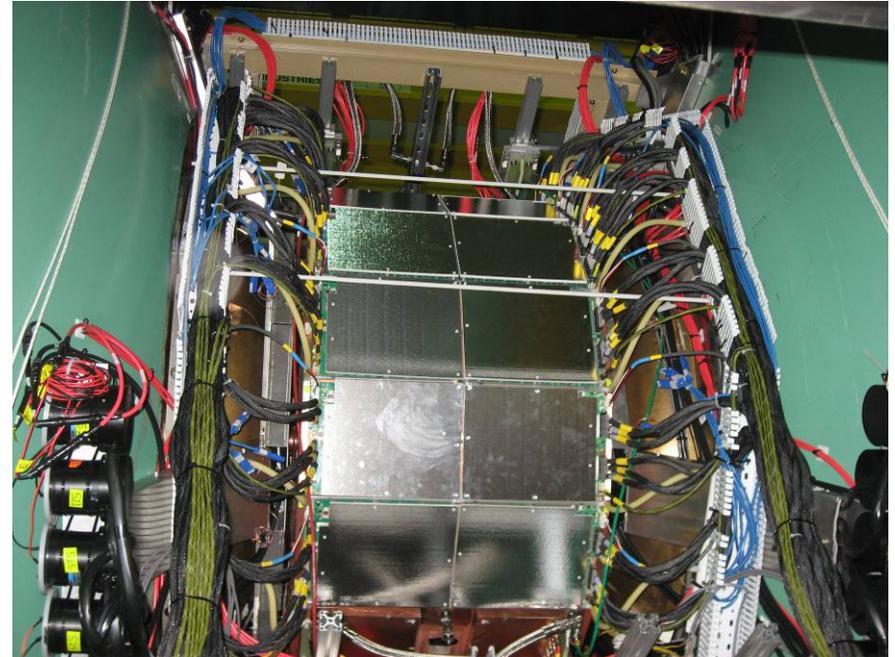
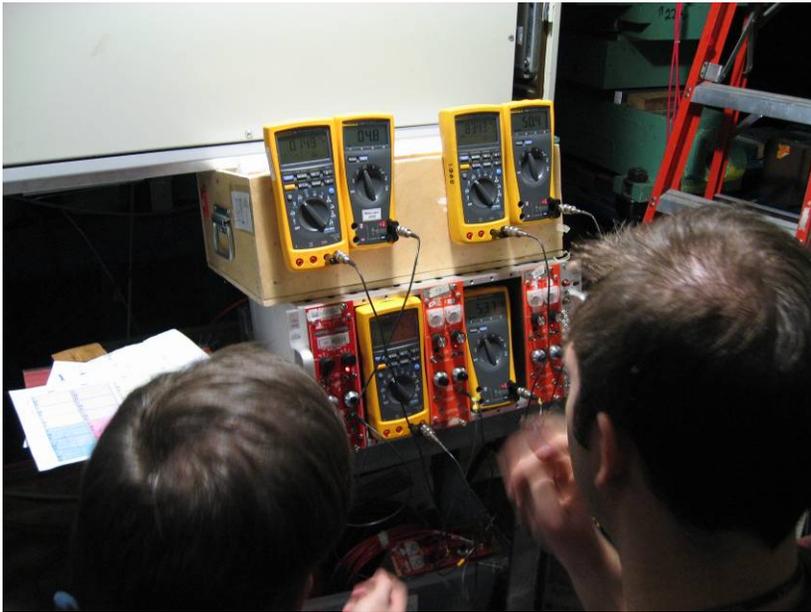
Cosmic/W muon ratio estimated to be 1/1 for $p > 10$ GeV, but estimate is unreliable - need measurement!

Cosmic ray in EMCal looks much like high- p_T photon
 • source of high- p_T photon background?



Hadron Blind Detector (HBD)

HV conditioning with CF_4 nearly complete

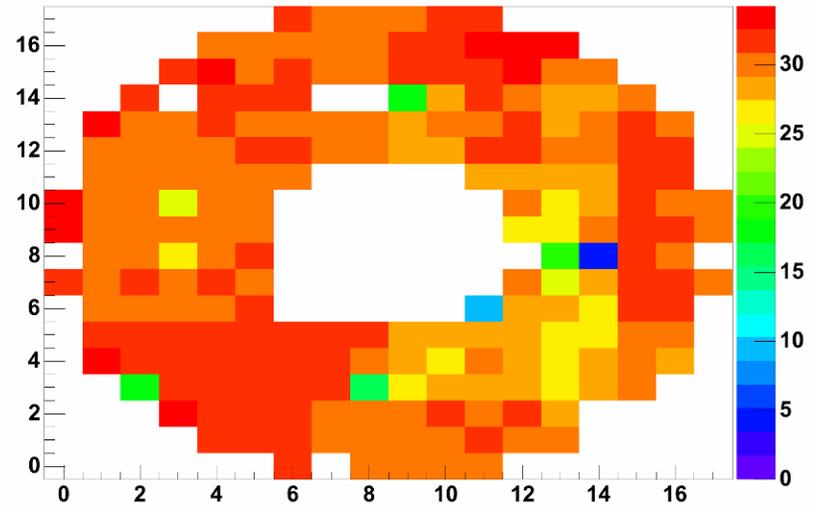


State-of-the-art
detector - challenging to
commission with AuAu!



Reaction Plane Detector

North LED



MPC-North (& South)
 $3.1 < \eta < 3.7$

TOF-W



PHENIX Jan-Feb Operations Plan

- Tue 1/9 Started PHENIX watch/cosmic-ray shifts
- Mon 2/6 Turn on large cooling pump (for magnet operations)
- Wed 2/7 ATS (auto. transf. switch) test
Magnetic sweep to prepare for magnet tests
- Thu 2/8 RHIC - start of cooldown
PHENIX Magnet tests
 - Verify magnet & P/S operation
 - fringe fields for MMS+MMN alone & with CM ("++")
- Fri 2/9 Install south muon shielding collar
- Mon 2/12 Flammable gas to central-arm detectors (DC/PC)
- Tue 2/13 Muon magnets on 24/7 for cosmic ray measurement
- Thu 2/22 RHIC - beam in blue ring
- Tue 2/27 Start 5-person PHENIX shifts
- Thu 3/1 RHIC - beam in yellow ring, 1st collisions?

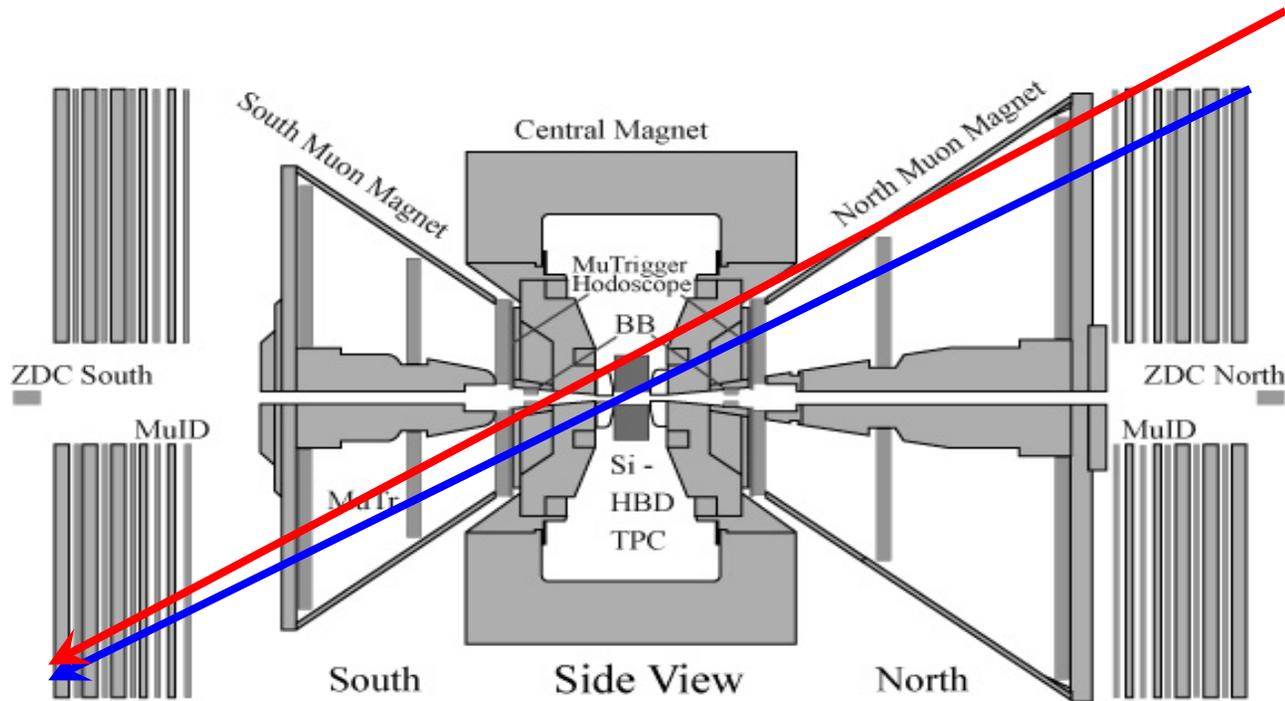
See also: <http://www.rhichome.bnl.gov/SchedPhys/FY2007/schedules/RhicRun7StartUp.pdf> (Feb 1st vers.)

Backup Slides

PHENIX Shakedown/Cosmic Ray Run

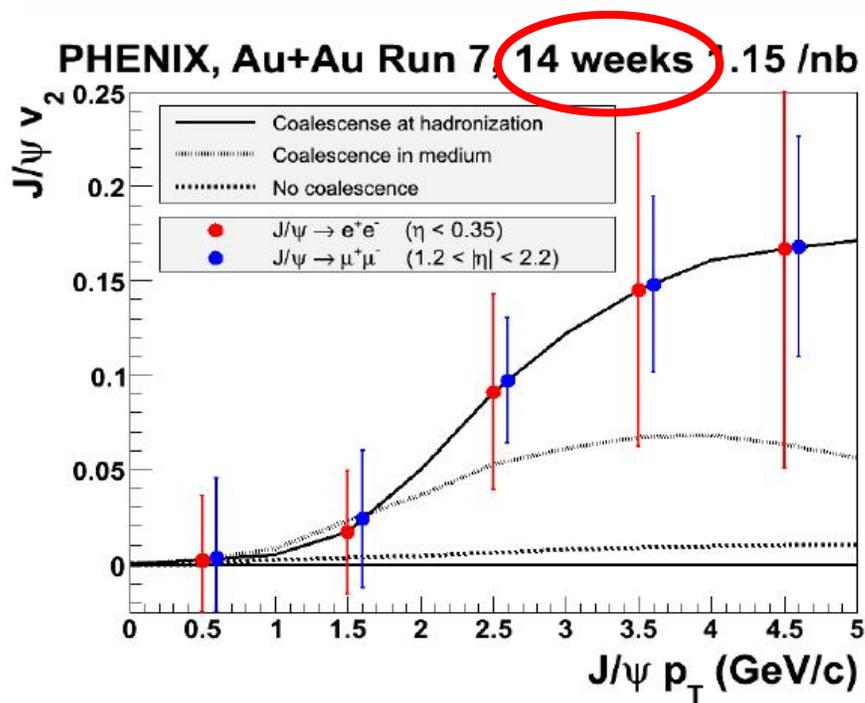
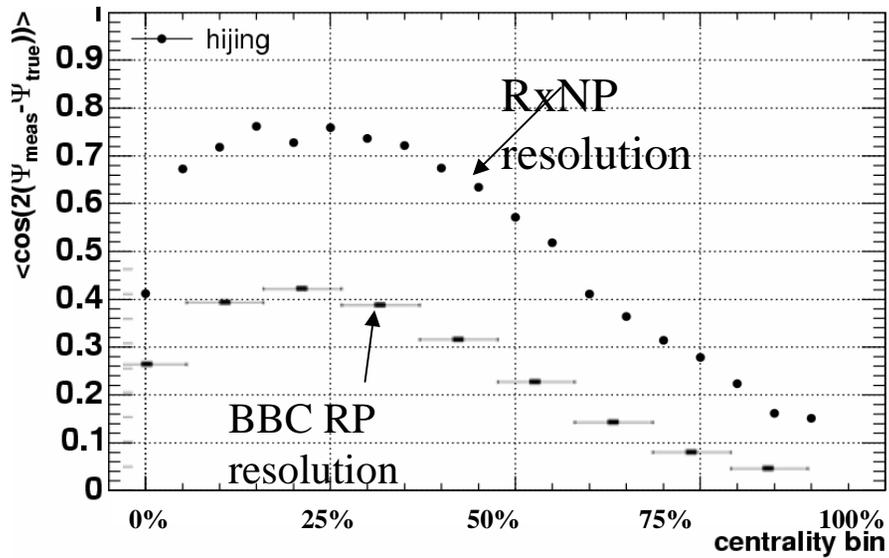
Need Cosmic Ray background measurement for W physics

- cosmic/W estimated to be 1/1 for $p \geq 10$ GeV, but estimate is unreliable - need measurement!
- μ ID-1Deep LL1 in each arm & coincidence of North & South (no BBC)
- readout μ ID, μ Tr, MPC, RXPN



Goals for Run-7

- Large data set of AuAu $s_{NN}^{\frac{1}{2}} = 200 \text{ GeV}$
 - $> 1 \text{ nb}^{-1}$ in recorded data
- First Operation of the Hadron Blind Detector
 - Electron continuum measurement in AuAu
 - Light meson reconstruction using electron channel f,w,h
- First Operation of TOF-W
 - PID out to p_T of $8 \text{ GeV}/c$
 - Identified particle spectra
 - Identified leading particles in jets
- First Operation of RXNP detector
 - Improve v_2 measurement by \sim factor of 2
- First Operation of MPC-N
 - Contribute to reaction plane measurement in Au+Au
- Further accelerator development of machine performance for p+p @ $\sqrt{s} = 500 \text{ GeV}, 200 \text{ GeV}$



From Tony, heavy PWG, Jan 4th

Hadron-Blind Detector (HBD)

- "A hadron-blind detector to detect and track electrons near the vertex."
- Dalitz rejection via opening angle
 - Identify electrons in field free region
 - Veto signal electrons with partner
- HBD: a novel detector concept:
 - windowless CF_4 Cherenkov detector
 - 50 cm radiator length
 - CsI reflective photocathode
 - Triple GEM with pad readout
- Construction/prototype(!)
/installation 2005/2006
- Funding: DOE + \$250K (NSF) + \$100K (Weizmann) + \$57K (SUNY-SB)

