

PHENIX Technical Support 2006

PHENIX PLANNING

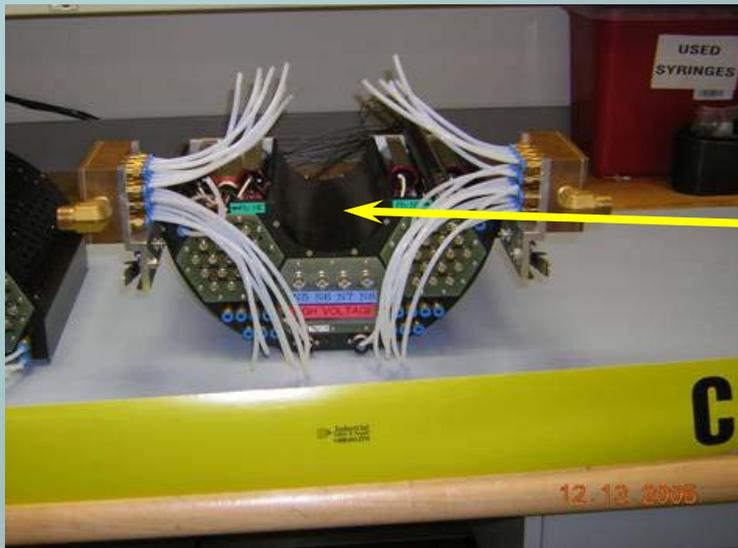
Technical Support Plan for 2006
Don Lynch

- Recover from water in dry air system/ MuTr repairs -December '05
- MPC South - January '06
- Prepare for Run 6 - January-February '06
- Run 6 - February-June '06
- HBD Test Installation - May '06
- TOF West - July '06
- RXNP - August '06
- HBD - August '06
- MPC North - September '06
- Prepare for run 7 - September-October '06
- Run 7 - November '06 - June '07

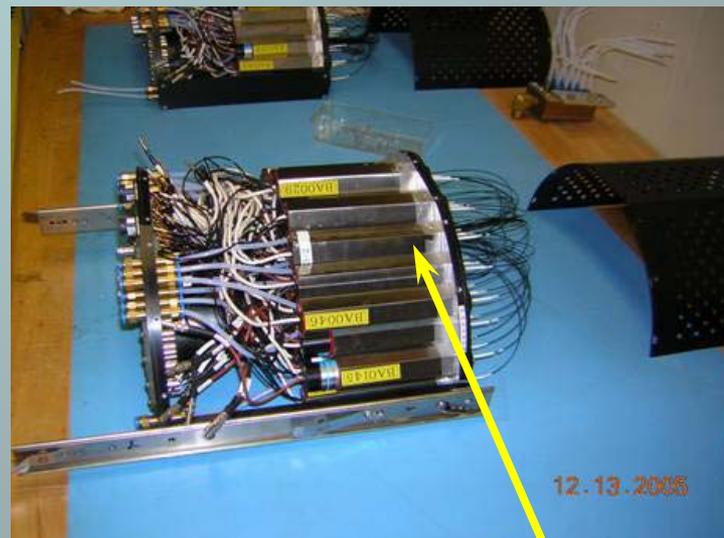
PHENIX Technical Support 2006

Water in Dry Air System

BBC North and South have been reinstalled and are currently being tested. No further problems are anticipated.



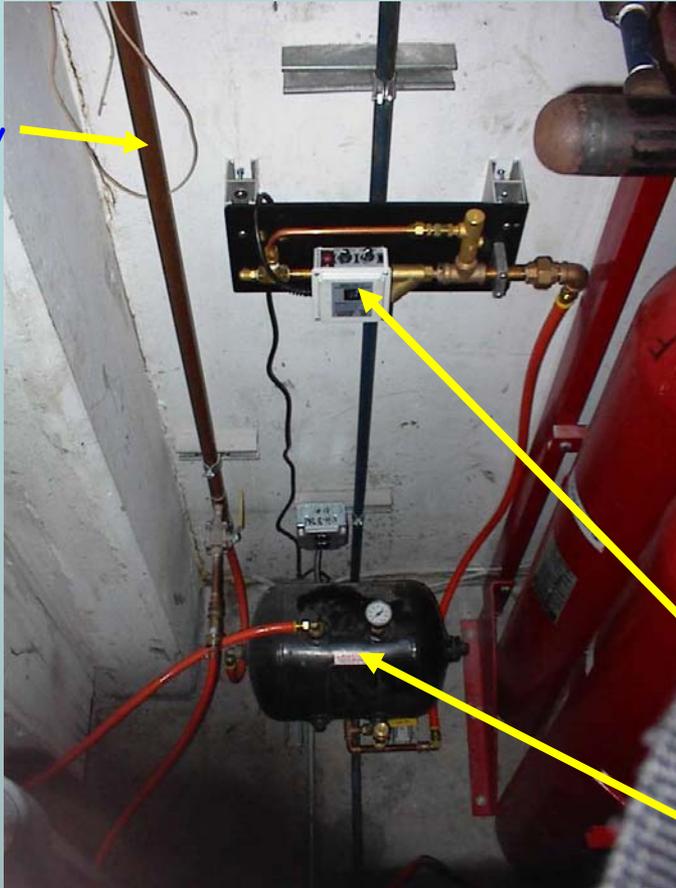
BBC North



BBC South

Water in Dry Air System

Air supply



New timed blowoff system to trap water and remove it from ring air. (System shown is for gas leak detection system in AH. Similar system is installed in RHIC ring before air supply is routed to mixing house.) C-A has informed us that all repairs and improvements to "dry" air system have been implemented on their side and system is now operational. Carter will implement additional controls and checks on PHENIX side.

Timed purge valve

Holding tank

PHENIX Technical Support 2006

Water in Dry Air System



All lines have been vacuumed to North and South anode purges and North FEE. HV and LV have been tested and all other nagging MuTr problems have been addressed. Lampshades re-installed 1/6/06.

PHENIX Technical Support 2006

TOF W Installation



TOF W
Installation
Fixture and
access platform

*Ready to install
detectors when
they arrive.
Installation to be
delayed until
shutdown 2006 if
run starts in Feb.
2006 as now
planned.*

PHENIX Technical Support 2006

TOF W Fabrication



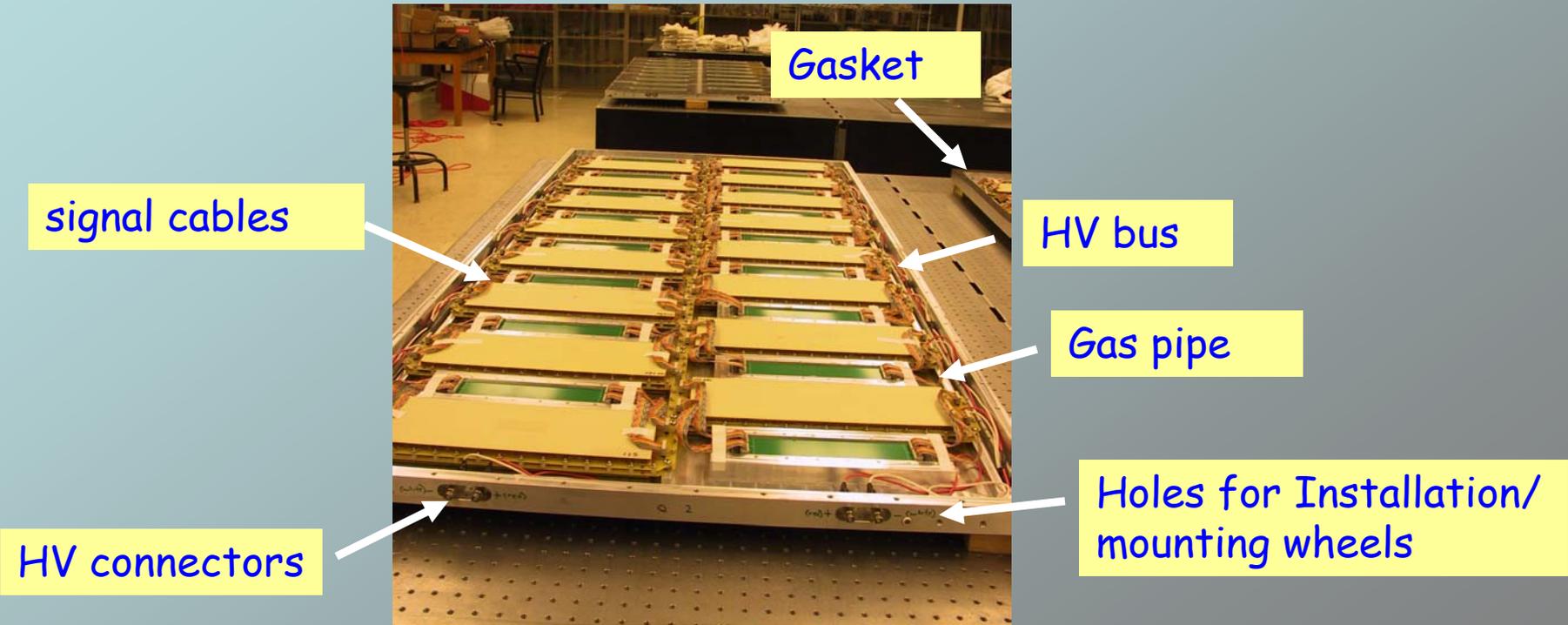
M
R
P
C
S

Feedthru boards

PHENIX

MRPC's

$\frac{1}{2}$ box with detectors



PHENIX Technical Support 2006

TOF W Assembly



PHENIX Technical Support 2006 HBD Gas Monitoring



HBD transparency monitor hutch ready to install instrumentation when it arrives

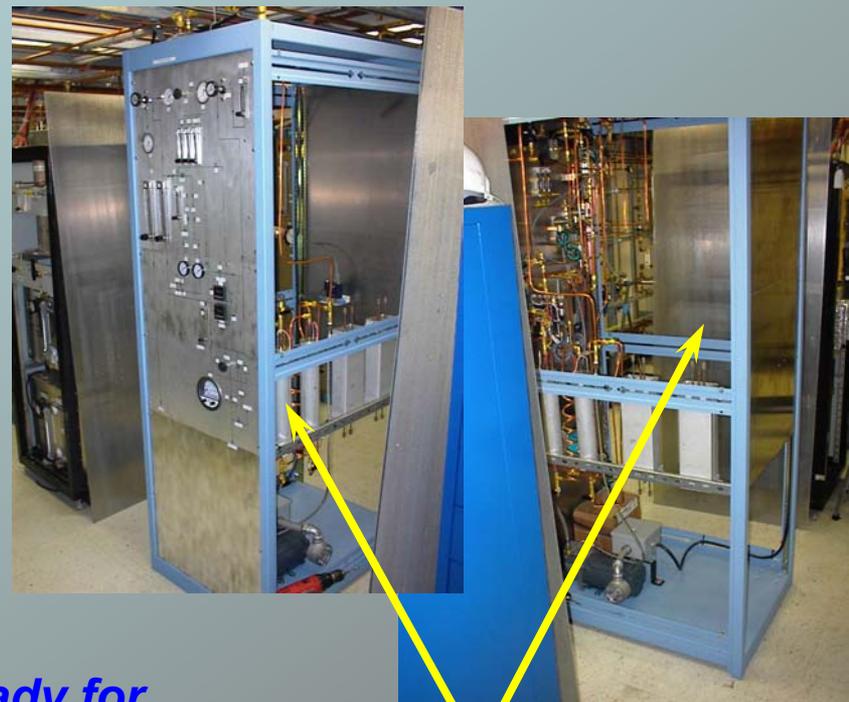
PHENIX Technical Support 2006

HBD & TOF Gas Systems



Electronics rack
In Gas Mixing
House

*TOF W nearly ready for
operation; HBD waiting for
components*



TOF/HBD
Gas Flow
Control
Rack

PHENIX Technical Support 2006

HBD & TOF W Gas Systems



Gas Pad
Location for
CF4 bottles

Scales to monitor
bottle contents



R134A Gas
Bottle Location

HBD Electronics



HBD low voltage
and signal
electronics rack
(to be located
on east-central
pedestal)

HBD High
Voltage Rack
(to be located
on Bridge)

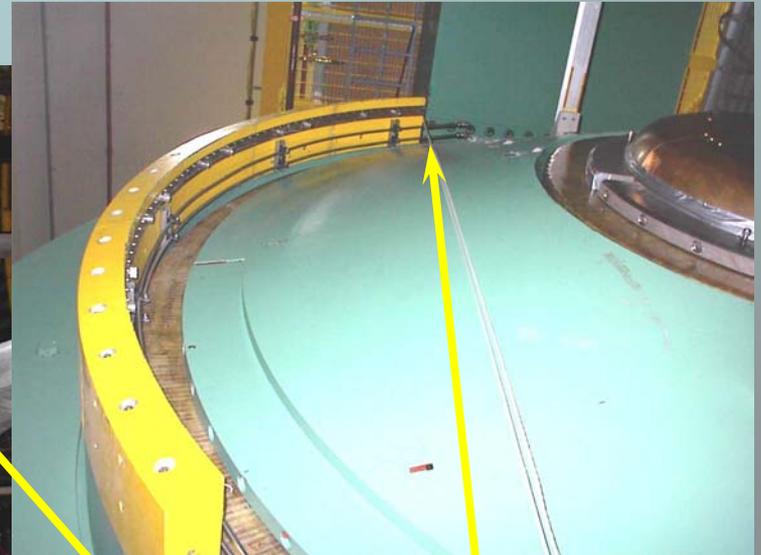




SS Gas lines from pad to mixing house

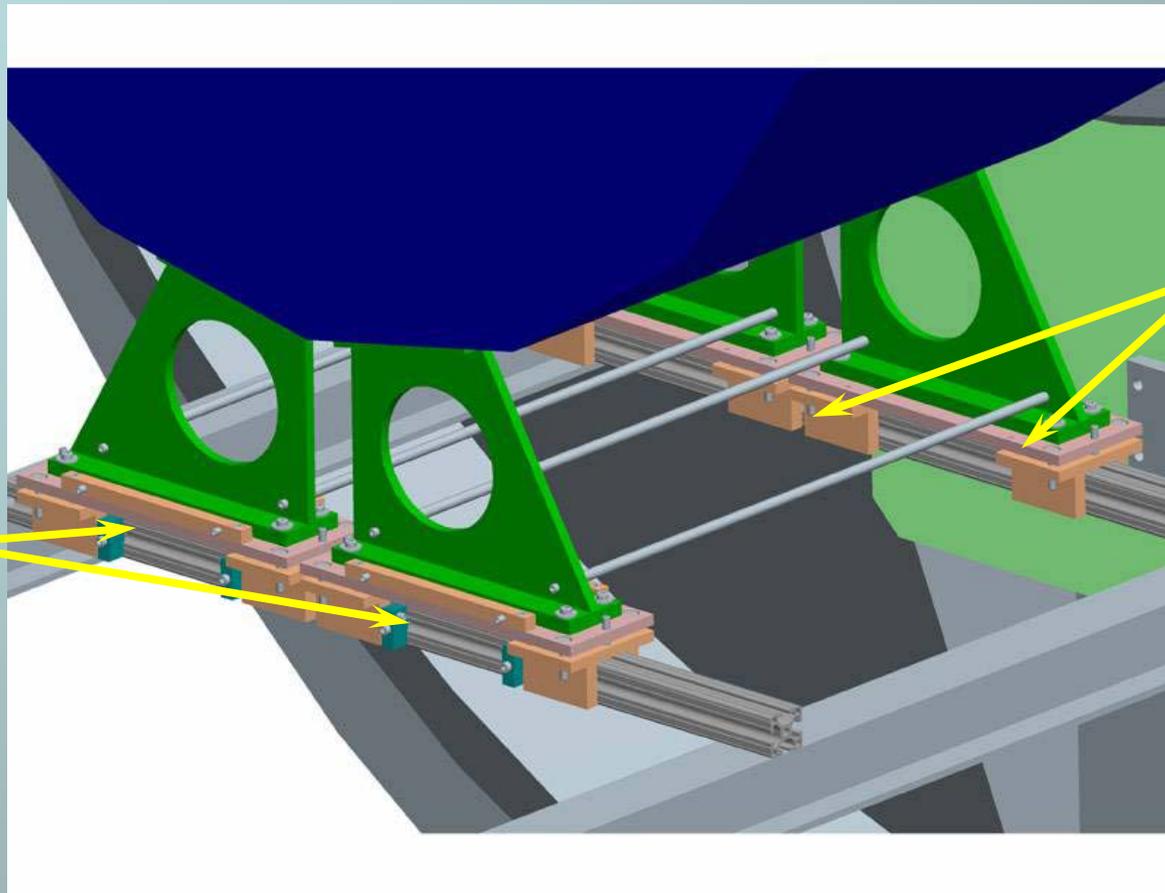


Piping nearly complete. Flexible lines will connect to detector



Stainless Gas Lines to top of CM

HBD Mechanical Support



HBD
Support

X, Y, Z
adjustments
on this side

HBD Support
X, Y

adjustments
on this side

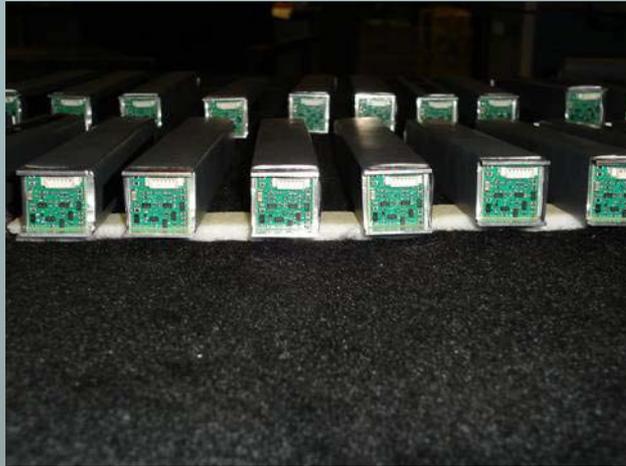
*Design of
details is
currently in
progress*

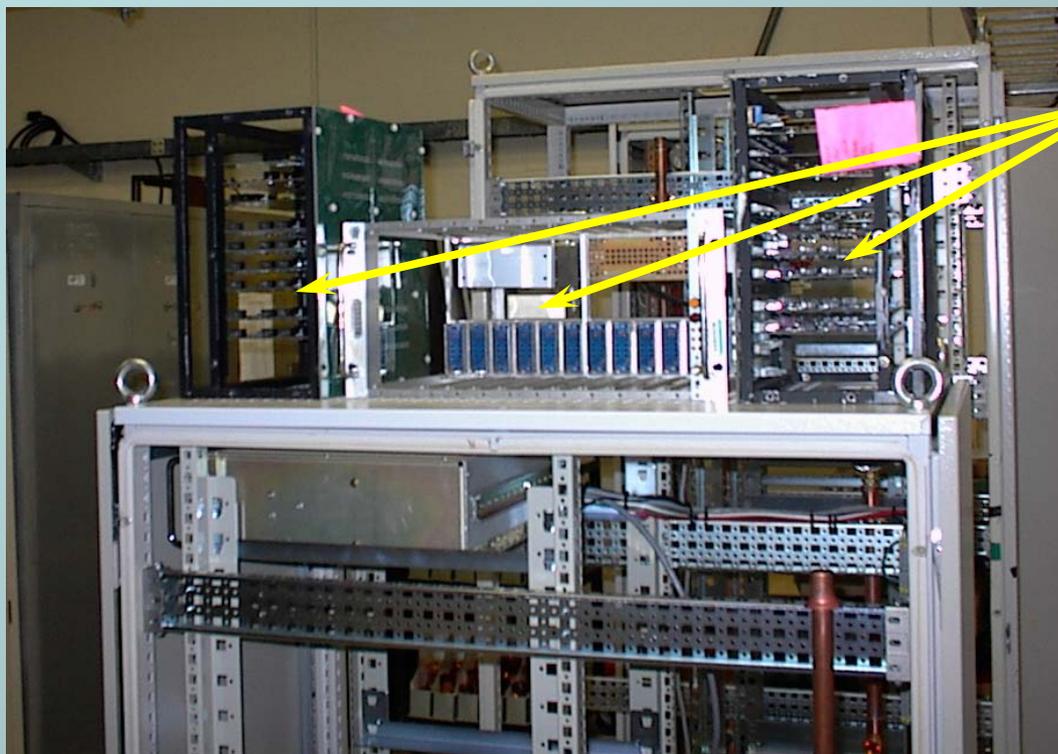
PHENIX Technical Support 2006

MPC Production



Expect MPC South to be at PHENIX by 1/7/06.

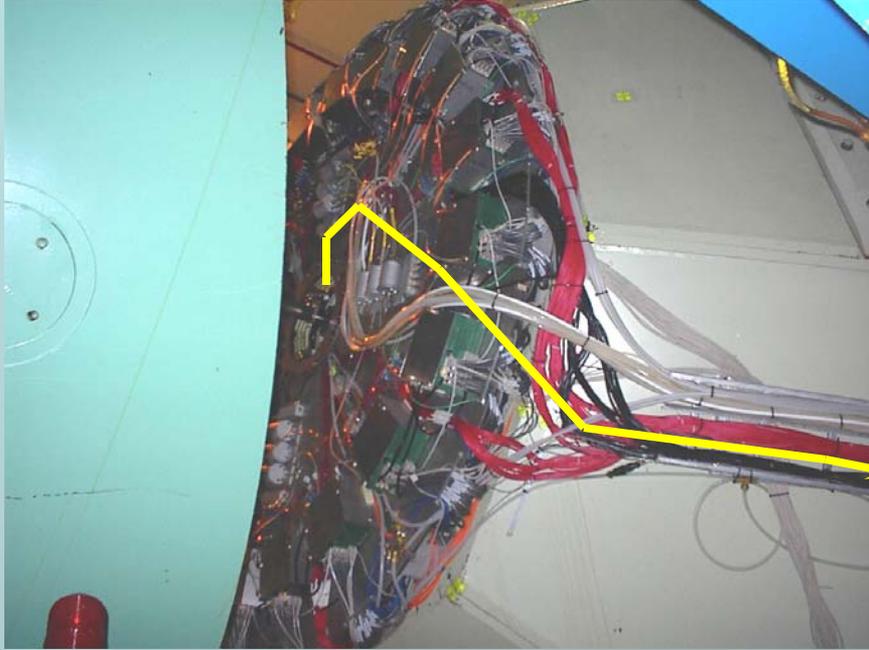




MPC electronics to be on top of MuTr rack on eyebrow

PHENIX Technical Support 2006

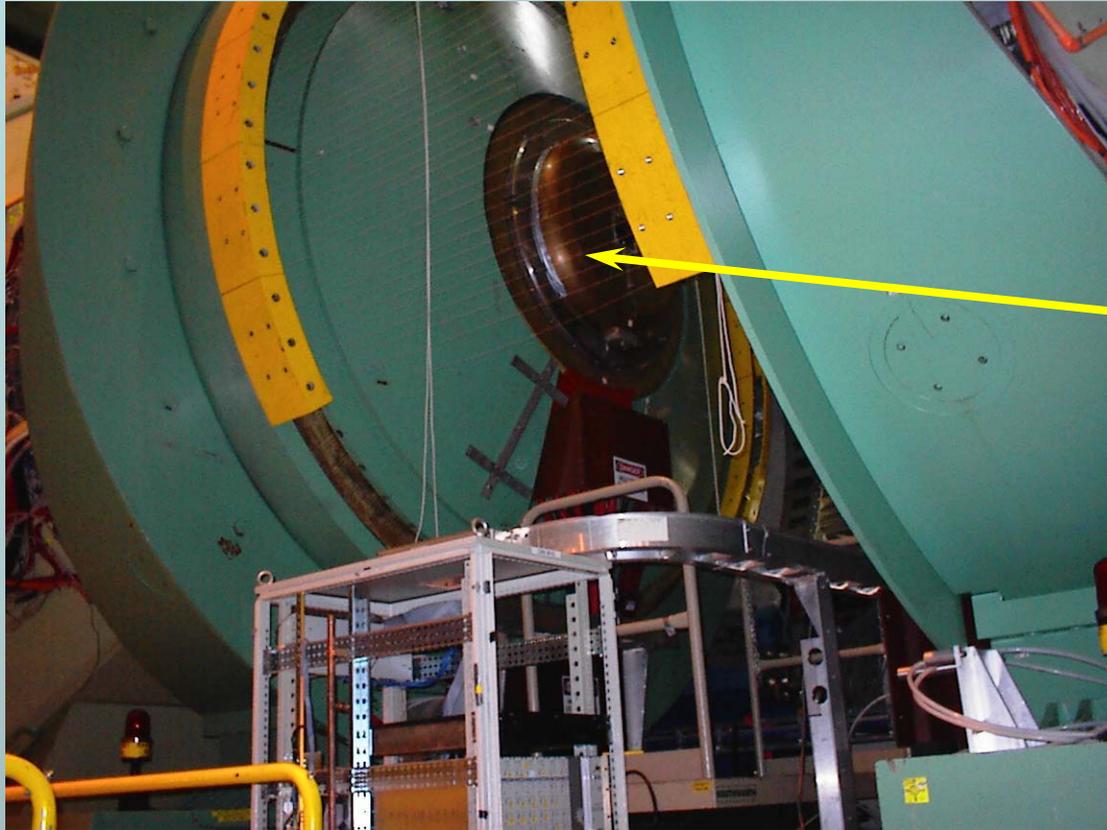
MPC Installation



Cable Routing Plan



Beam Loss Monitor

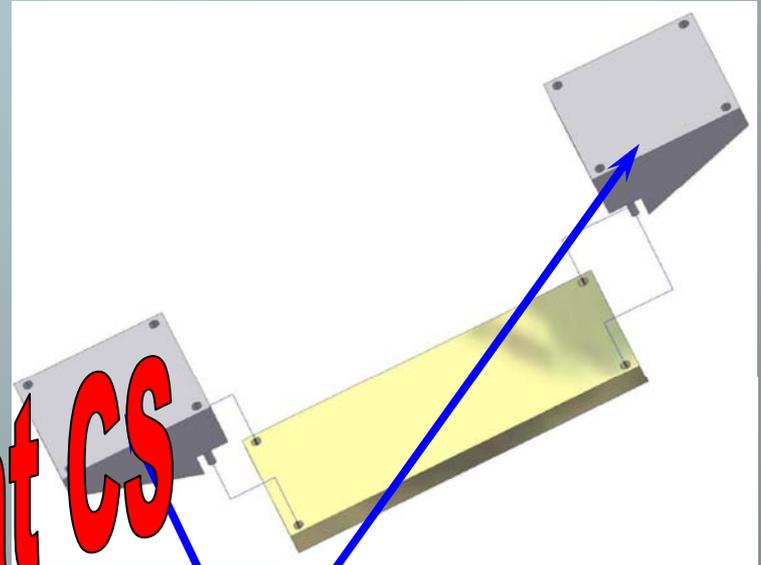
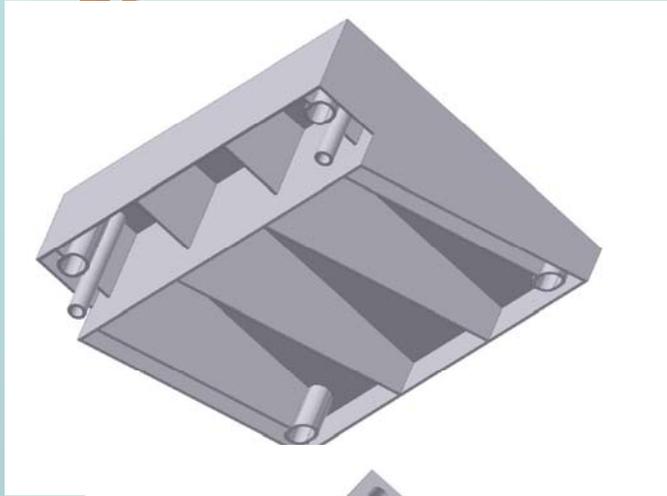


To Be Installed on
Brass Nosecone

Other Required Work

- CM lift table modification
- New Helium Bags
- Dry air system upgrade
- Conceptual design efforts in support of future detector upgrades
- Sub System Maintenance (TBD)
- Bridge Utilities

HBD Installation/ Access



In Fabrication at CS

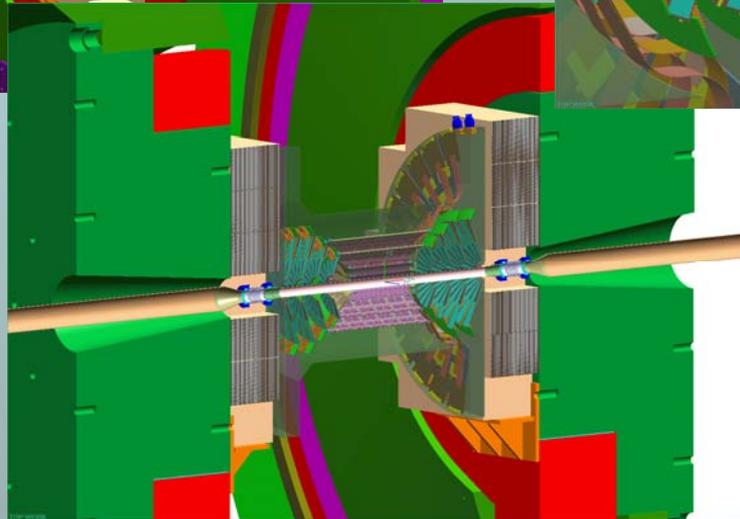
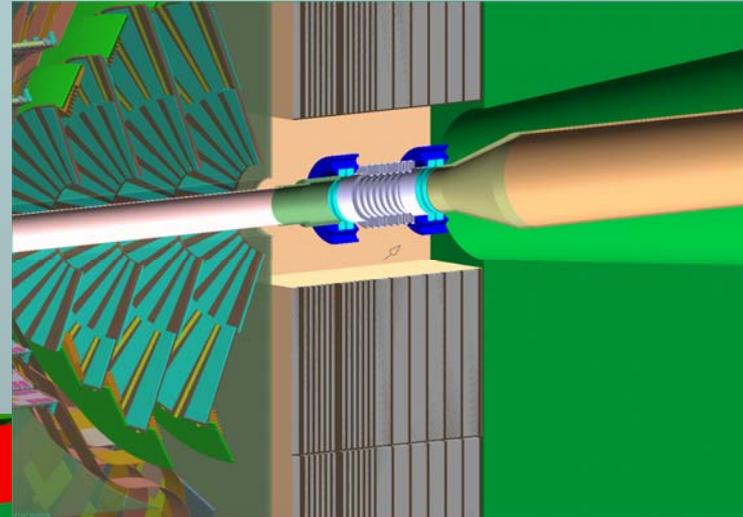
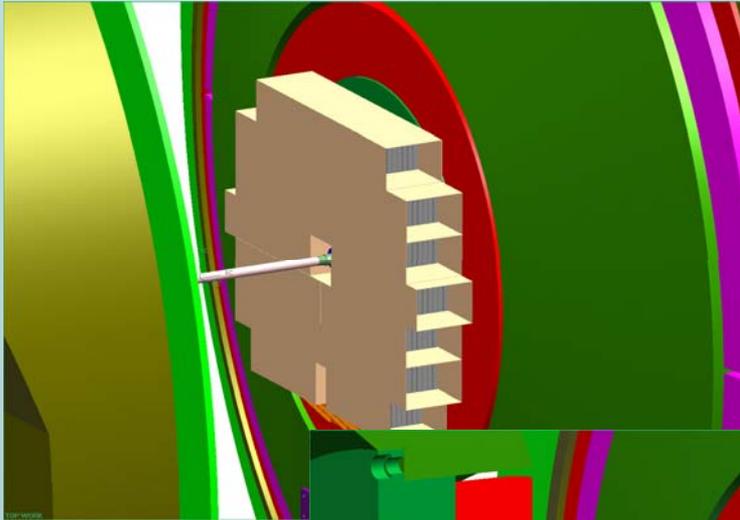
CM scissor lift table
Extensions
(extends table 22" east & west;
Steps up 8")

Shutdown 2006 Tasks

- CM Crane design
- Integration support work for Future Detectors (NCC, SVTX, FVTX, RPC) (New beampipe)
- CM region access stairs
- Discretionary improvements to existing equipment
 - EC: Fix/replace fibers, Noisy FEM's in DC, PC, DC water flow interlocks, TEC replace p/s and FEM's, ARCNET on fiber to all racks?
 - WC: Replace bucketless buckets in AGEL racks, noisy FEM's in DC, PC
 - MuTr & MuID: HV repair, troublesome FEM's, blue logic repairs, MUTR cosmic ray trigger with LL1?
 - E F & I: Verify installation of transient suppression in all racks, Bucket maintenance, Fan replacement, Communication testing to UVC HV mainframes, tighten connections on distribution panels, fiber repairs

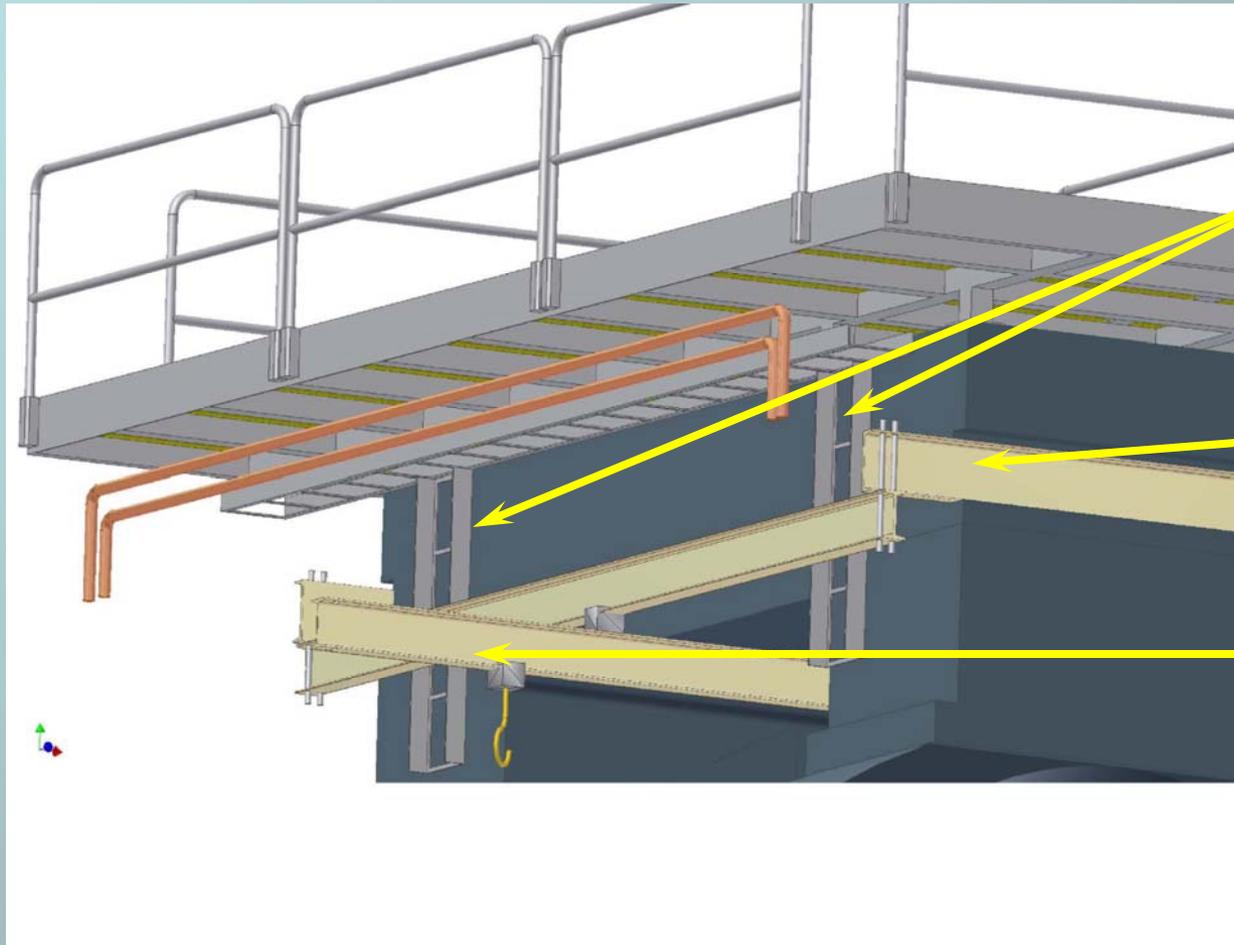
PHENIX Technical Support 2006

New Beampipe for Upgrades



A concept discussed between Jan Boissevain of LANL and D. Lynch of BNL. Requires support built in to NCC and temporary isolating support to move CM.

CM Region Crane & Cable Routing Concept

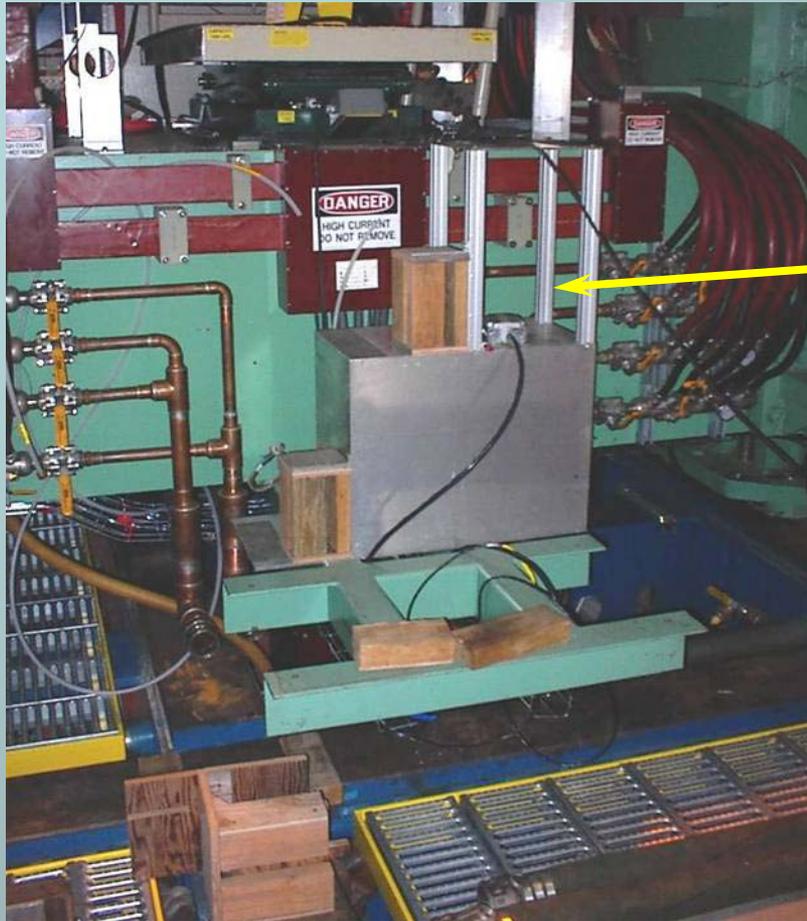


Cable Trays to route cables NCC Detector from Bridge

Crane Supports use existing flux return notches

CM Crane north-south & east-west motions; extended travel east to existing crane coverage

CM Region Stairs



Something a little more substantial would be nice

Additional Beneficial Work for S/D 2006

- DAQ Electronics: Replace/test GL12GTM, STTP's, blue logic trigger racks?
- Computing: Backups: test reliability, weed out unreliable hardware and servers, upgrade network
- Gas System
 - Reinstall all recalibrated mass flow controllers in gas racks
 - Rearrange regulator and flow meters for N2 on TEC and TOFW PID controllers
 - Purchase Calibration gas for TEC ethane analyzer
 - R & R TEC gas manifolds to accommodate work on pre-amp/shaper boards

Prior to Run 6

- Prepare EC scaffolding for move to IR
- Install access platforms from EC top north and MMS
- Magnet tests (Blue sheets)
- Build Shielding wall
- Remaining blue sheets

Postponed to Shutdown 2006

- Replace emergency fan louvres
- Rewire/add IR ceiling lights on emergency power
- Replace WC sliding platform hoisting cables
- Analyze/balance rack water distribution
- Mixing house exhaust fan maintenance

Conservation & Housekeeping

- Energy Conservation
- Clean/organize under the tracks
- Move extra I-beams & pipe to storage
- Electronics lab (new shelves?)
- Clean & organize storage areas:
 - Assembly hall
 - Shelves near transformers
 - Trailers
 - Wire

PHENIX Technical Support 2006

SD 06 Schedule

To Be Determined

