

Status of MIPP Commissioning

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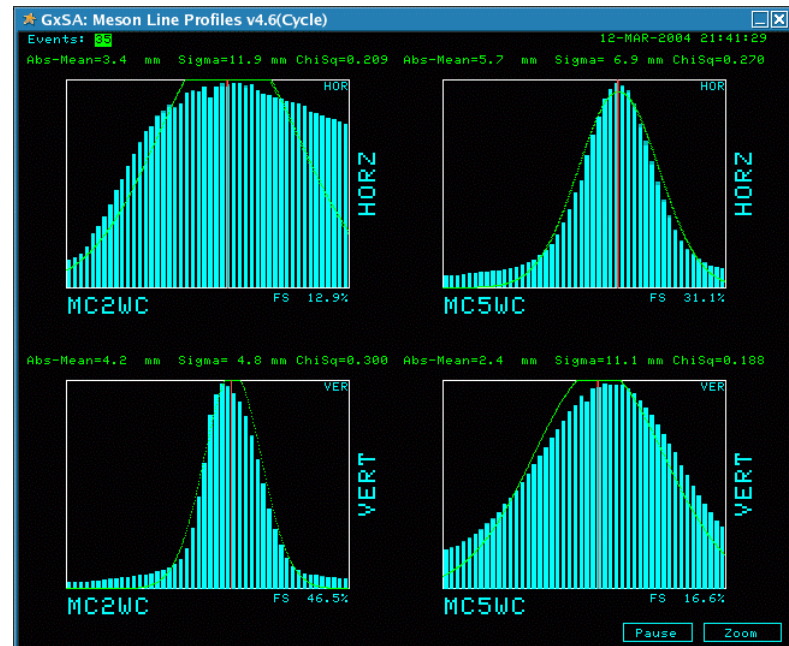
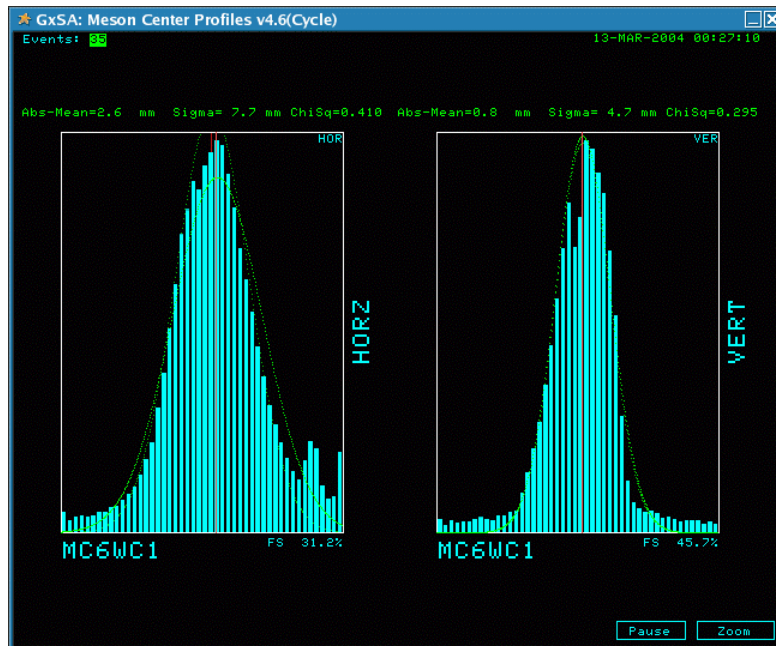
- Beam
- Time of flight counters
- Beam Cerenkovs
- TPC
- Beam Chambers + other chambers
- Multi-Cell Cerenkov
- Calorimeters
- Time of Flight system
- RICH
- DAQ + Monitoring software
- Sunday's Smoking incident

Beam Status

- Beam being delivered at 1 shot per minute or sometimes at 1 shot per 30 secs.

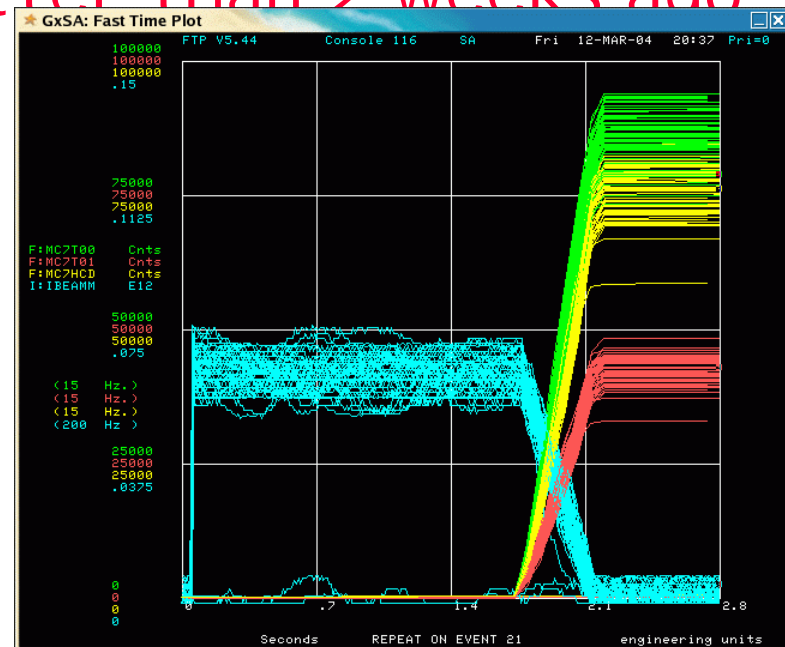
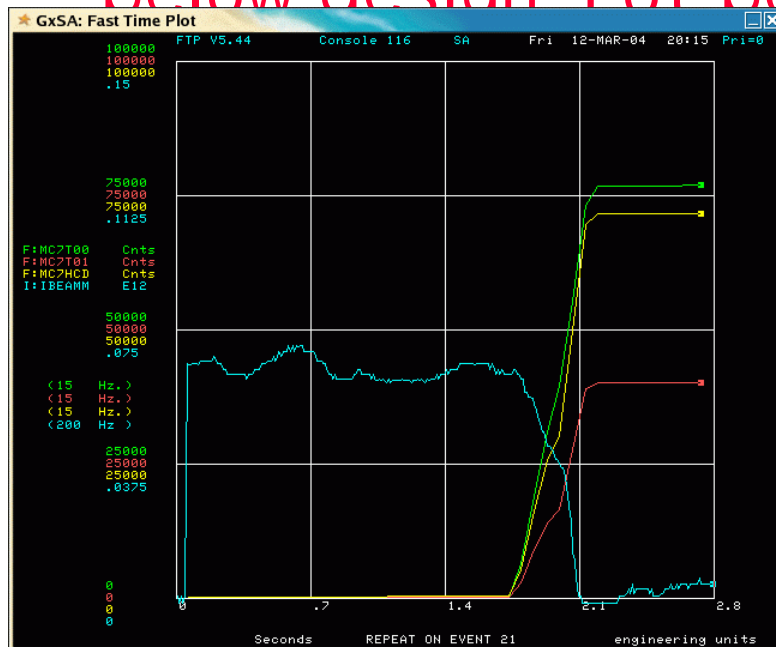
Beam upstream of primary target

Beam in MC2



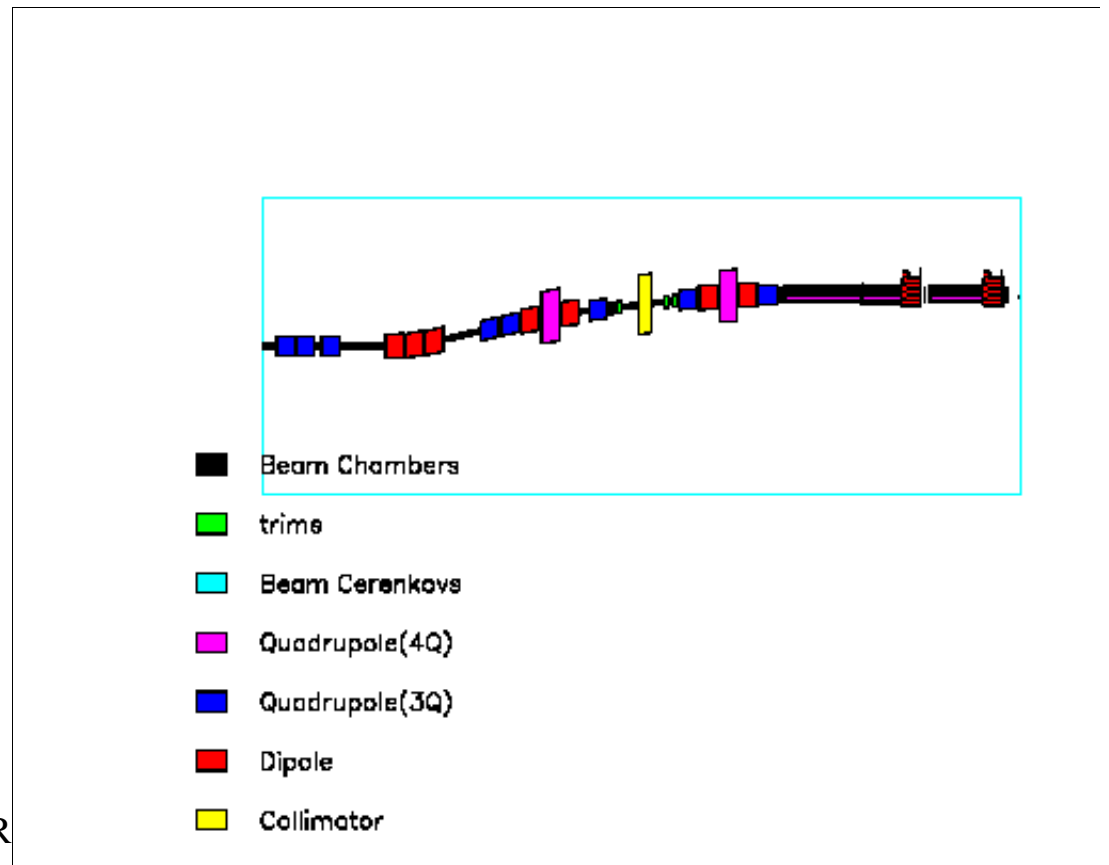
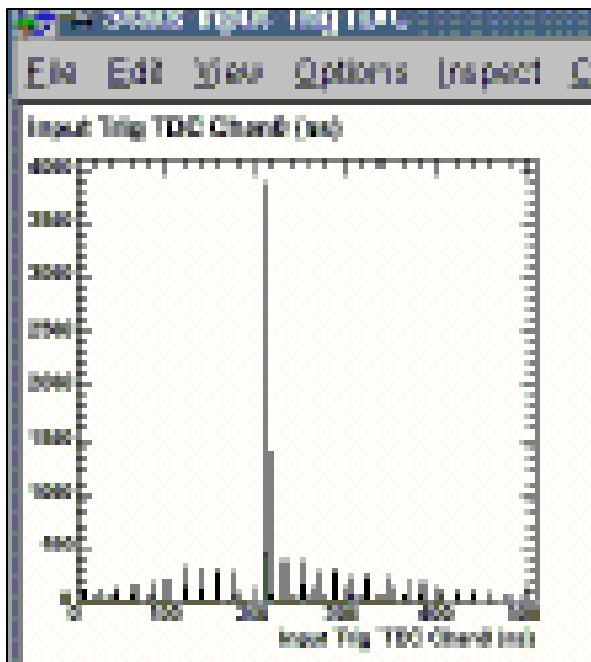
Beam

- Beam emittance on primary target too high. Perhaps RPOS control in MI to blame? 40 GeV/c positive tune. The number of secondaries/proton is a factor of 150 below design. Lot better than 2 weeks ago.



Time of flight trigger counters

- T-00(in beamline downstream of momentum selection collimator), T-01(next to TPC).

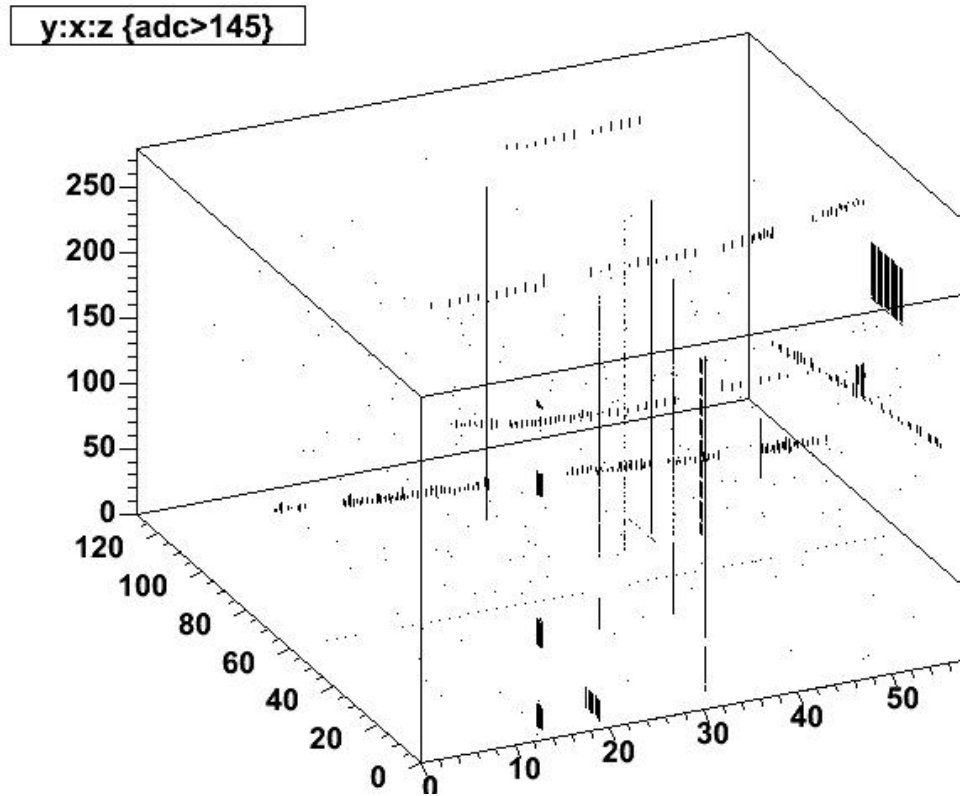


Beam Cerenkovs

- Both filled with nitrogen at pressure such that pions will give signal in both counters. Each Cerenkov has 2 phototubes. Three/four tubes give signals. The 4th tube is being looked at today. Mirrors aligned.

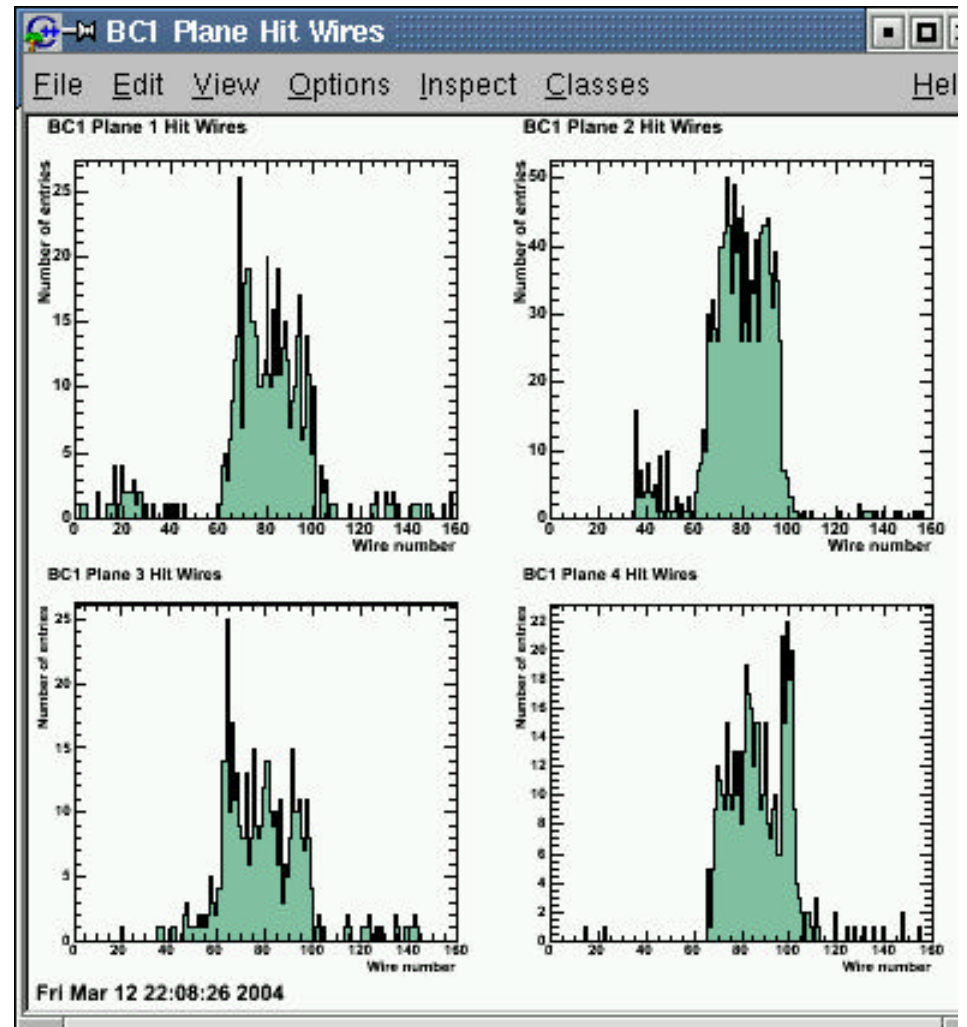
TPC

- In non-zero suppressed read out mode. Is able to see tracks. Trigger on beam particles. TPC only reaches 5KV with P10. Sparks. Reaches 10KV in N2. Being looked at now. ~ 10 sticks need repair.



Beam chambers + Other chambers

- Gas system delayed due to lack of tech power. Just being able to mix in Methylal quencher with appropriate proportions. Had too much in. Can see beam profile out of chamber 1. Chamber 2 had a low voltage problem.
- ACNET MWPC's MC7WC1 and MC7WC2 not functional
- Drift Chambers 1-4 need threshold adjustment.
- Chamber 5+6 had RMH electronic readout problem. Being repaired.



Multi Cell Cerenkov, Calorimeters, ToF system Status

- Multi-Cell Cerenkov. Not filled with C4F10 (expensive gas). Readout almost functional.
- EM-Calorimeter– HV on, detector read out through DAQ, data unpacking for online monitoring is done. Need to look at histograms
- H-Cal Same as EM-Cal
- Time of Flight– HV problems and cabling problems ironed out. Intermittent Camac branch problems. Online monitoring package almost done.

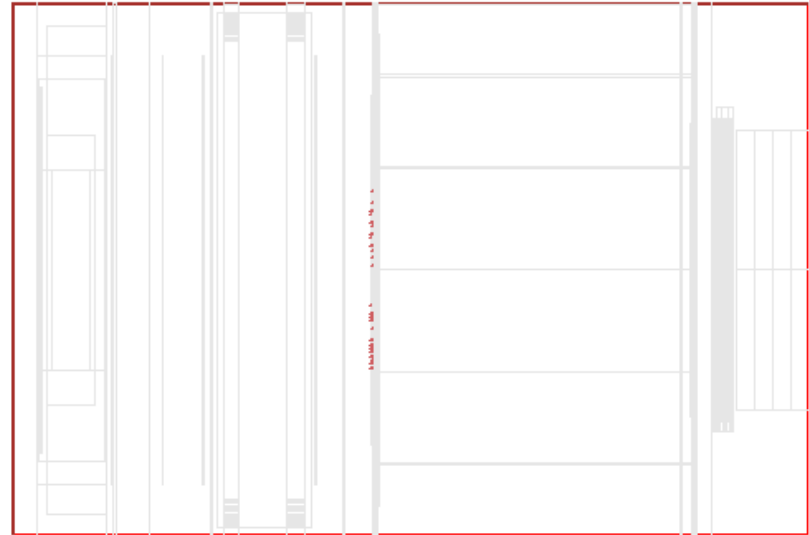
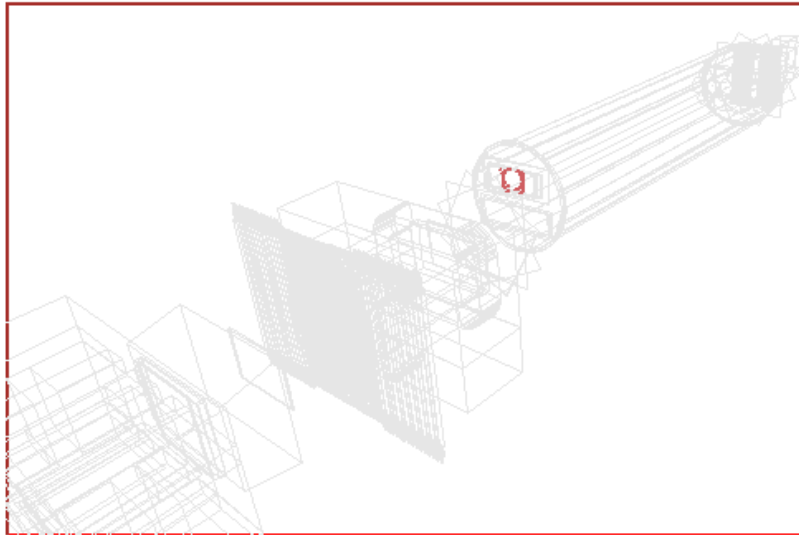
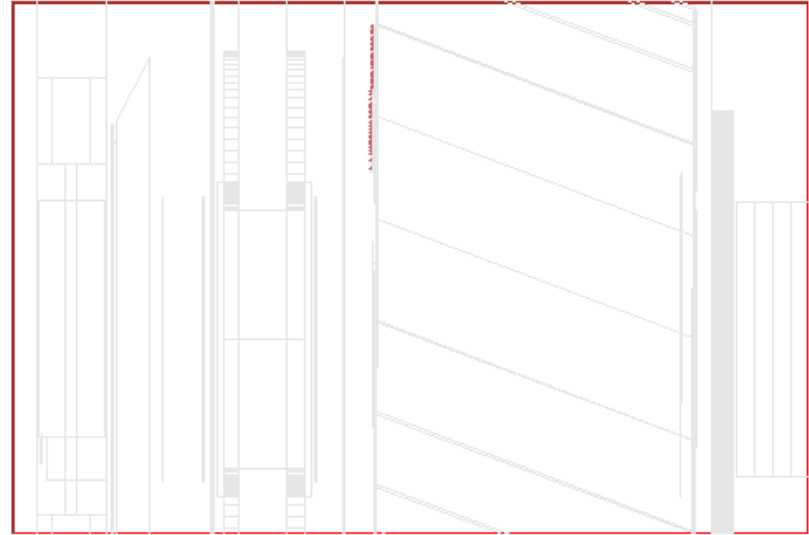
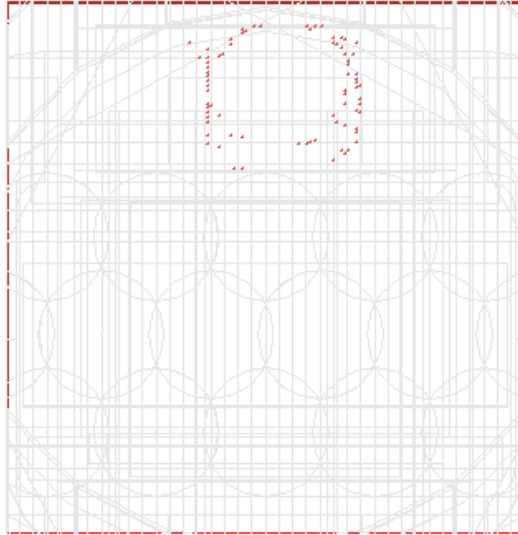
RICH was being read out successfully. We see rings.

MIPP (FNAL E907)

Run: 4337
SubRun: 0
Event: 33

Fri Mar 12 2004
07:07:47.991455

Version: 0
Trigger: d



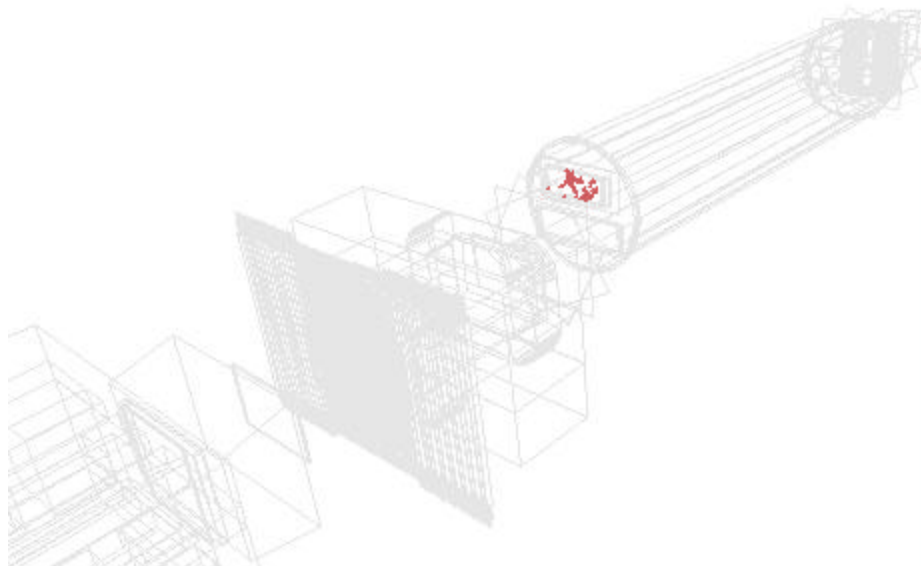
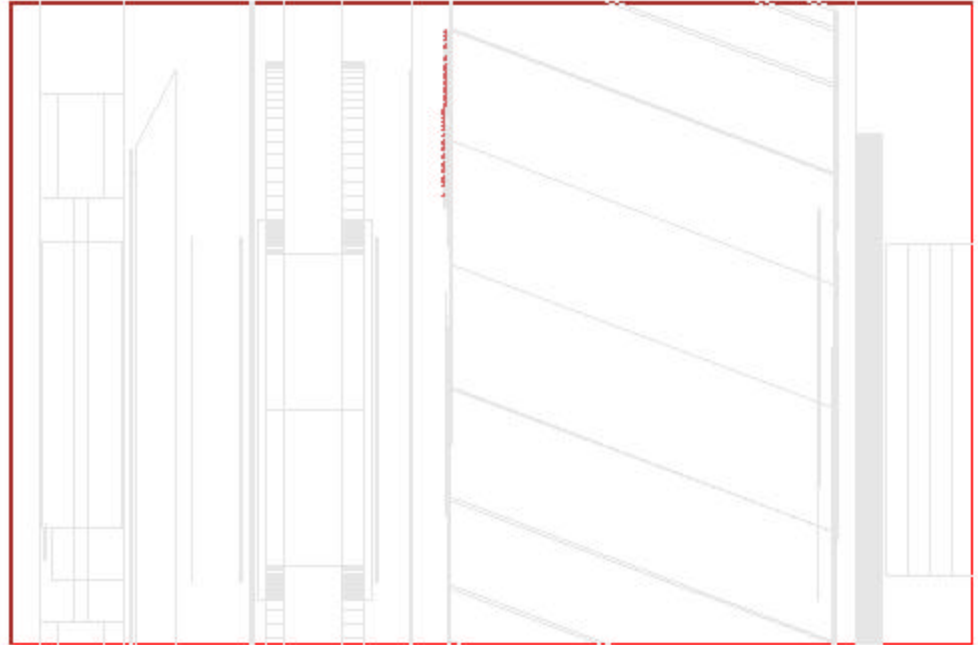
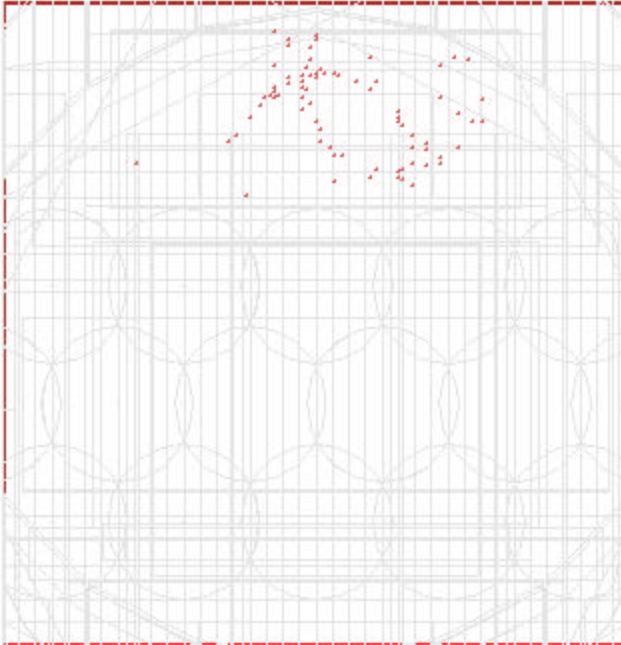
RICH rings

IPP (FNAL E907)

Job: 4337
JobRun: 0
Event: 45

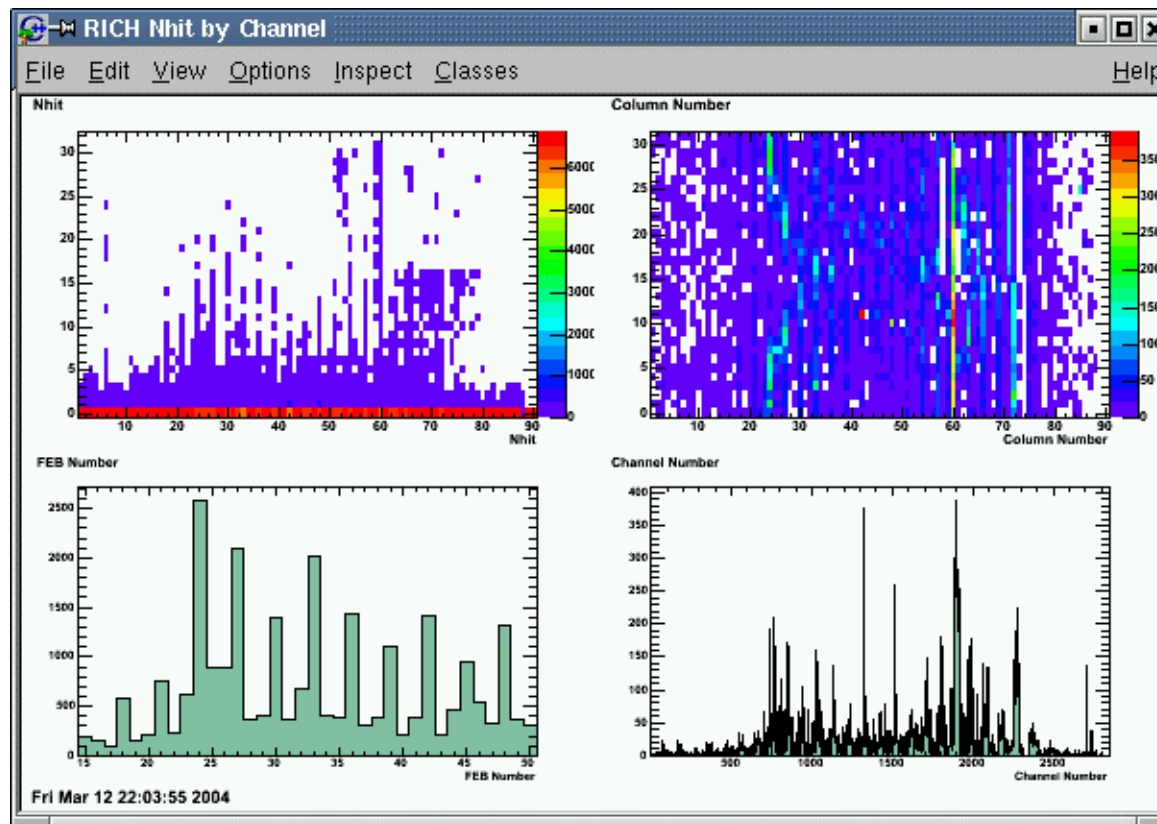
Time: Mar 12 2004
Time: 07:48.095883

Version: 0
Trigger: d



RICH

- Russian tubes vs Hamamatsu tubes. 300 phototube RICH. MIPP front end electronics.



DAQ + Monitoring software

- E907DAQ has a problem with the TPC readout. When event rate exceeds 1 HZ with double buffering on, the DAQ crashes. This needs debugging with a debugger that can handle multiple threads.
- Data monitoring software is being worked on by a team of postdocs and grad students. It is the key to a successful turn on.
- Postgres database describing data taking parameters need to be populated. We have the machinery, which needs turn on.
- We need to turn on ENSTORE. Data currently sitting on disk at MIPP. Needs to be sent to Feynman.

Shift rules + Controlled Access Rules

- Working with Accelerator Division (E. Ramberg SY120 rep), we have arrived at a workable set of controlled access (CA) rules. CA has to be approved by the run co-ordinators. CA maximum length is 4 hours. If beam is off for more than this or if access is needed for more time than this, the run co-ordinators will request an open access.
- Beam is re-established by a search and secure after an open access.
- We have had problems re-establishing beam after a CA during the owl shift. Operators not fully trained yet to send beam to us.

Smoke Event on Sunday

- On Sunday 14-March at approximately noon time, a critical device in our beamline went down. Beam was off, so people made a controlled access. Upon entering MC7, they detected odor of smoke. Looking at our APACS system, it was discovered that three smoke detectors had detected smoke and turned off power to RR18, RR20 and the RI CH. The person on shift had not noticed this since there was no audible alarm (We need this) and the I F I X page containing the alarm was not being displayed.

Smoke Event on Sunday

- The run co-ordinator notified the fire department who came in.
- There are smoke detectors in RI CH was being read out successfully. There are smoke detectors in MI PP that would have given FIRUS alarms had they gone off. The rack detectors shut off power before these were triggered. I.e. system worked.
- PPD were going to install a VESDA system which would have triggered a FIRUS alarm, but this work has not been done due to lack of techs.
- Conclusion- MI PP has conformed with safety rules and were given ORC. The safety system performed as designed. Improvements- Audible alarm, VESDA (not needed by rules).
- We are investigating the source of the smoke.