

MIPP Update

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Fermilab All Experimenters' Meeting
2/7/05

- MIPP statistics
- MIPP beam issues
- Detector
- Cryo-target

MIPP Update

- Monday:
 - Data on $-50\text{GeV}/c$
 - No beam 5:00 to 11:00 (vacuum)
 - No beam 13:40 to 16:00 (shot)
- Tuesday:
 - Data on $-50\text{GeV}/c$
 - No beam 2:00 to 2:50
 - No beam from noon to midnight (kicker)
- Wednesday:
 - Establish $+30\text{GeV}/c$ tune at midnight
 - No beam 3:30am to 6am (shot)
 - MIPP CA to MC7 for RICH electronics problems (20 min.) at 7:50am
 - No beam after the CA (MI power supply) until 12:40
 - TPC Gating grid problems caused CA until 15:00
 - Beam intensity too high by factor 10, MIPP chambers trip

MIPP Update

- Wednesday (cont.):
 - Tuning secondary beam in evening. SWIC profiles look good when integrating 200ms into the spill. Profiles look flat when integrating all of the spill.
Thanks to Carol for getting us good profiles over the entire spill!
- Thursday:
 - Rad. trip in ME6 (not MIPP) at 5:30am , no beam for 15 minutes
 - High intensity first spill when beam returns, chamber trips
 - Another rad. trip in ME results in MIPP getting reduced intensity, 6 spills per minute
 - No beam 8:20 to 10:00, no beam 11:15 to 14:45 (TeV shot)
 - MIPP CA for Trigger problems (25 min.) at 23:10
- Friday:
 - No beam 4:40 to 8:40 (TeV shot)
 - MIPP CAs for Trigger problems (3 hours, 15 min.) at 9:00
 - No beam 13:20 to 15:10 (shot)
 - Thanks to external beams people for tuning in afternoon and evening

MIPP Update

- Saturday:
 - No beam 9:00 to 11:10 (shot)
 - Tune to -30GeV/c, again Carol is tuning
 - No beam 17:30 to 20:00 (linac problems)
 - No beam 22:00 to 1:30 (shot)
- Sunday:
 - Bad beam quality 1:30 to 4:30 (septum)
 - No beam 5:15 to 6:30 (shot)
 - No beam 9:10 to 9:20 (Booster)
 - No beam 20:40 to 23:50 (shot)

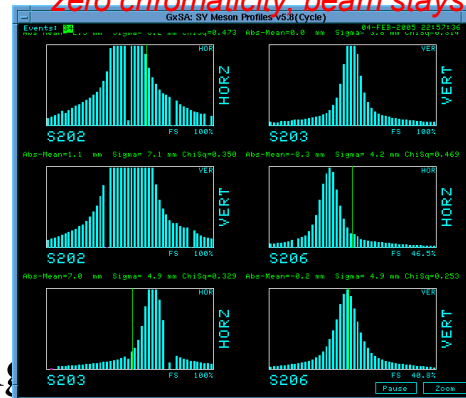
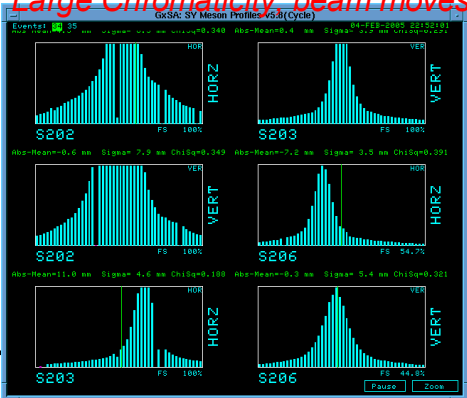
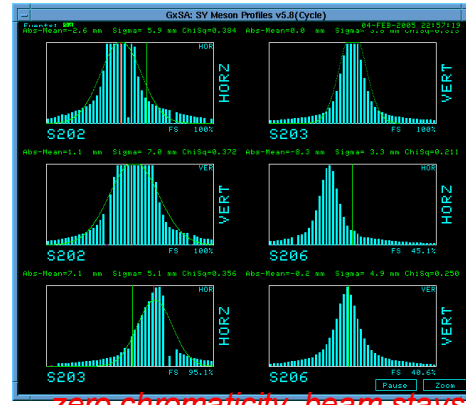
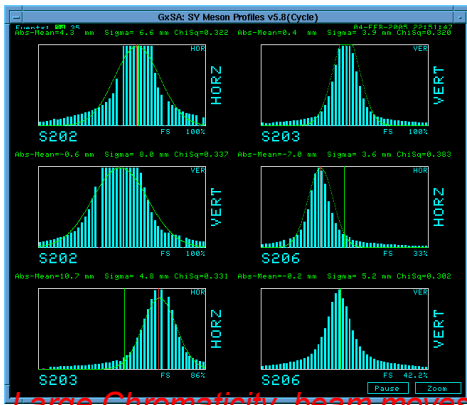
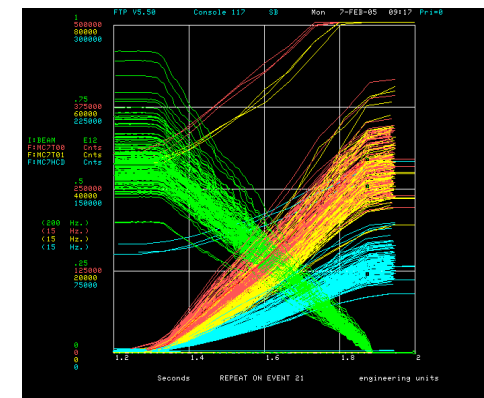
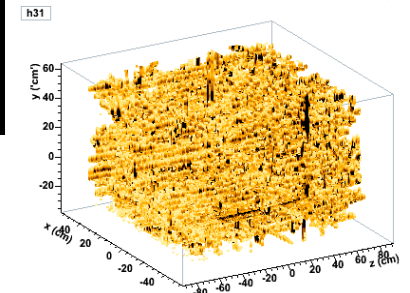
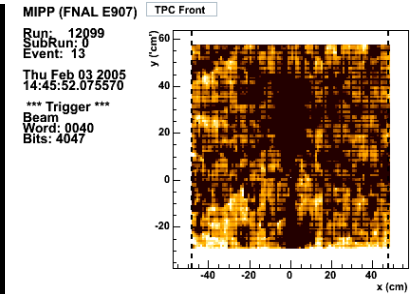
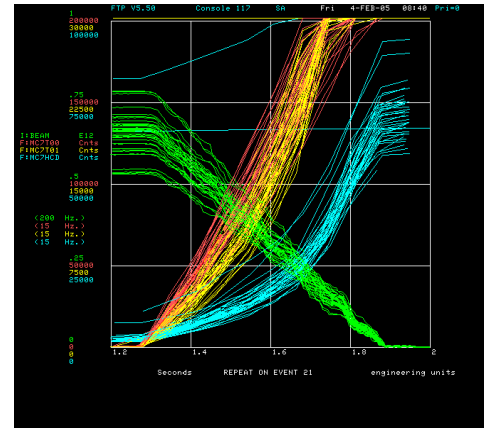
MIPP statistics

- MIPP took data for approx. 100 hours (59%) during the last week
- Accumulated data (no. of events includes calibration triggers) :

- target	momentum	total_events
- - - - -	+ - - - -	+ - - - -
- Berillium	50	201587
- Bismuth	50	200870
- Empty	50	134433
- Berillium	-50	162281
- Bismuth	-50	301729
- Empty	-50	91253
- Berillium	30	2337
- Bismuth	30	275743
- Empty	30	54401
- Aluminum	-30	20039
- Bismuth	-30	132251
- Empty	-30	29105

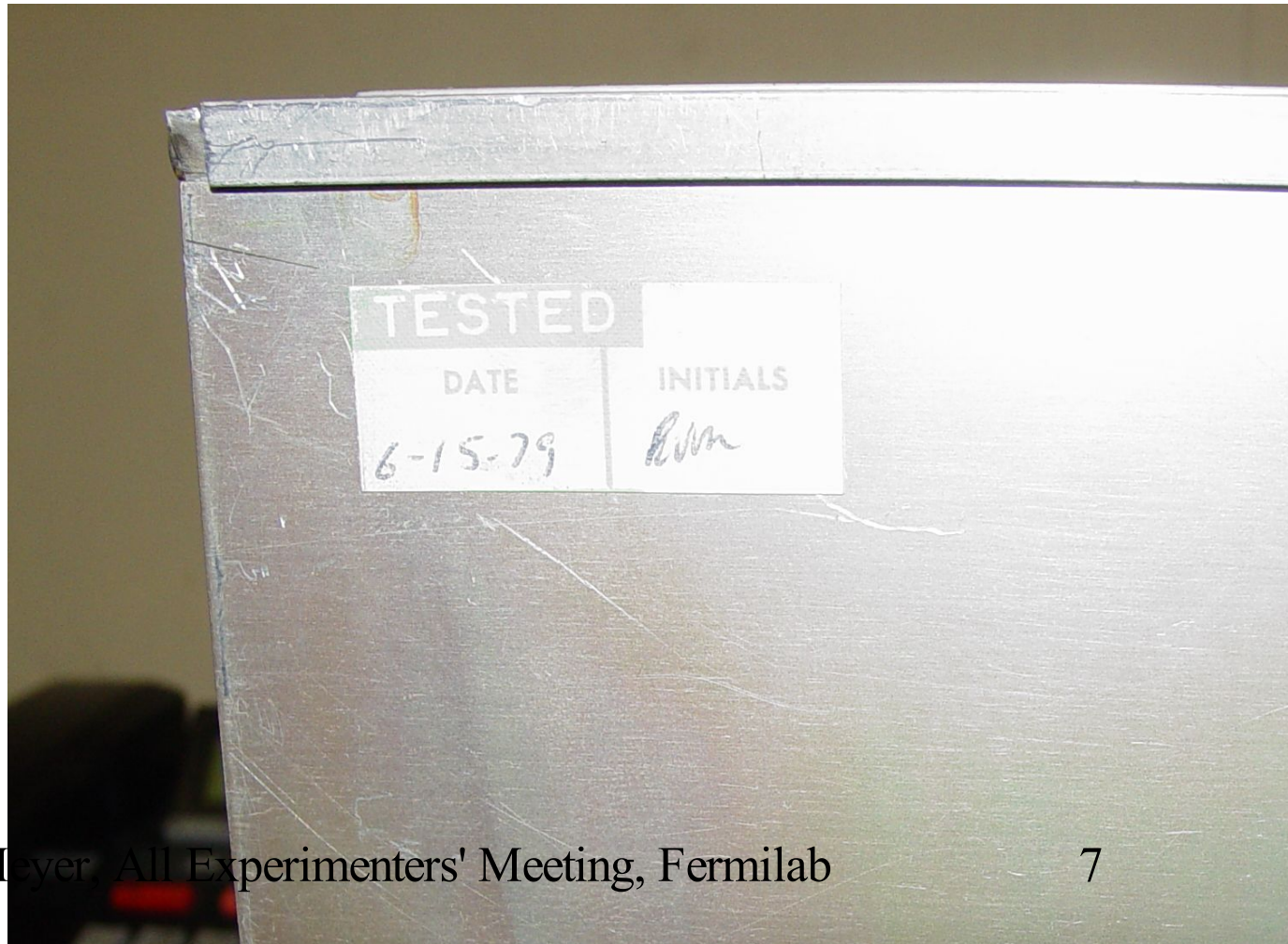
Beam to MIPP

- MIPP intensity profile uniformity has improved early last week with ramps in the Switchyard line. Actually intensity in the second half of the spill increased. However, beam was dirty later in the spill due to momentum dependence. Large readout times result in little net gain for MIPP.
- On friday/saturday Carol Johnstone studied Chromaticity in the MI. She managed to get much better extraction.



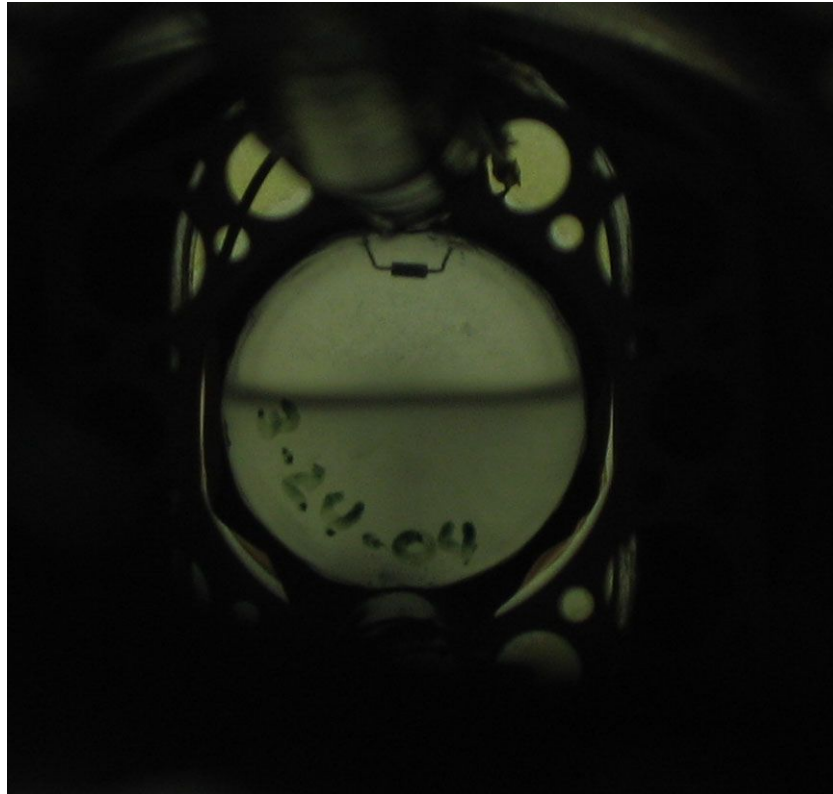
MIPP detector status

- Some problems in the detector. All got fixed:
 - 3 of 89 RICH electronics boards did not read out: switch cable, reset
 - Trigger distribution to detectors failed on thursday and friday
LSR370 strobed coincidence unit failed. Spare failed, too. Replaced with different module.
 - These problems cost MIPP
4 hours of
beam time



Cryo-target

- Target was run in MDB over the weekend with MIPP shifters monitoring the target.
 - THANKS to Terry Tope, Jim Kilmer, et. al.
- We are ready to move the target into MC7 and are working on a final schedule for the installation that will minimize beam down-time.



MIPP summary

- Beam is slowly improving.
- We accumulate data...
- ...slower than we would like to.