

LHRS ANALYSIS FOR d_2^n

SCALERS, PION REJECTOR E/p AND SAMC

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2/18/11

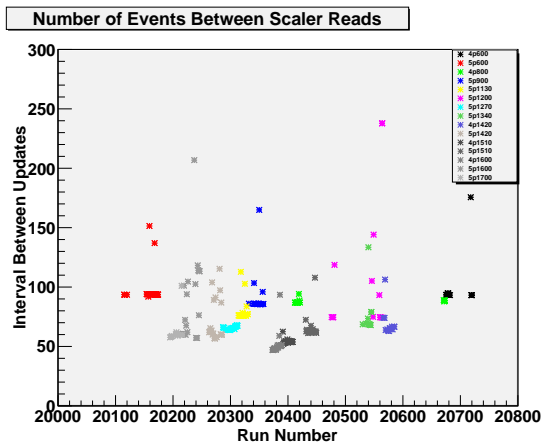
OUTLINE

- 1 SCALERS
 - BCM Readouts
- 2 PION REJECTOR E/p
 - Tracking Variables
- 3 SAMC
 - Comparison of Simulation to Data
- 4 SUMMARY

BCM READOUTS (1)

HOW OFTEN ARE THE SCALERS UPDATED IN THE T TREE?

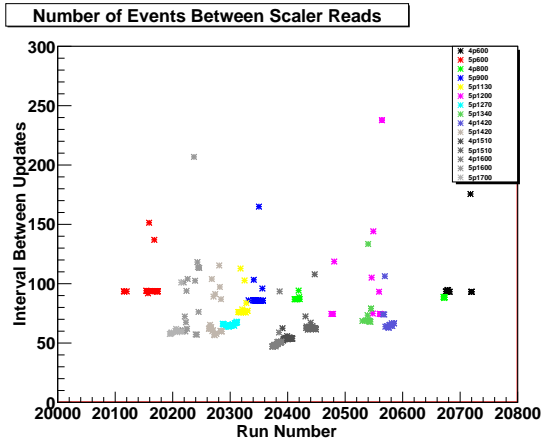
- Results from last time:



BCM READOUTS (1)

HOW OFTEN ARE THE SCALERS UPDATED IN THE T TREE?

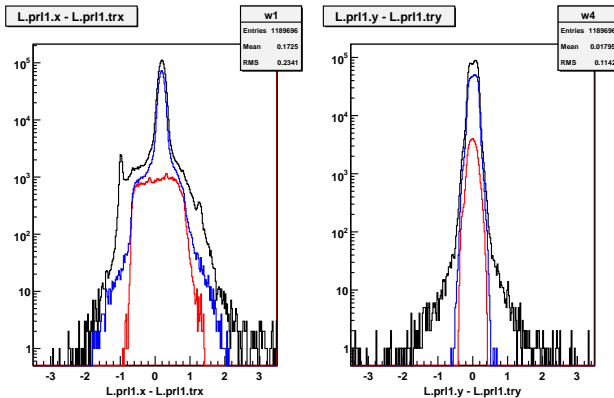
- Structure is identical when looking at the fast clock:



PION REJECTOR E/p (1)

COMPARISON: TRACKING AND PROJECTED TRACKING VARIABLES

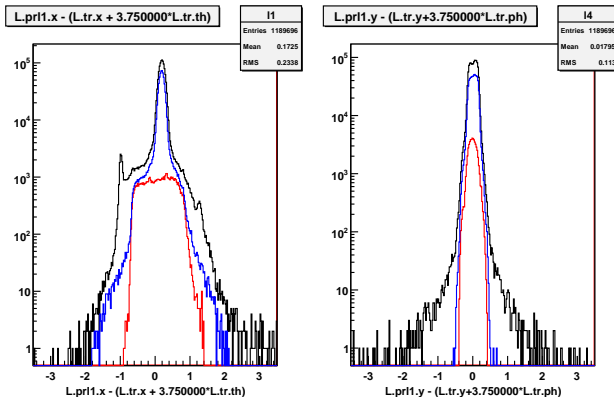
- Plots from last time:



PION REJECTOR E/p (2)

COMPARISON: TRACKING AND PROJECTED TRACKING VARIABLES

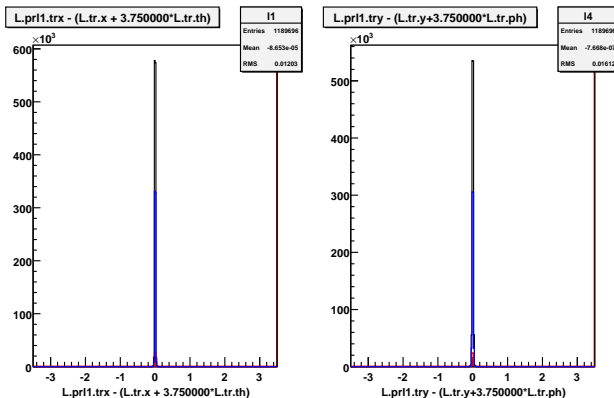
- Projected tracking variables:



PION REJECTOR E/p (3)

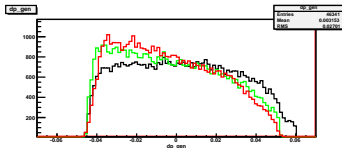
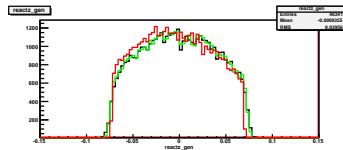
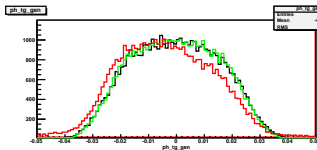
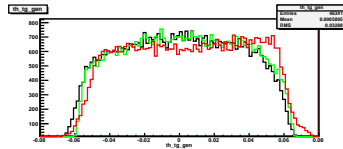
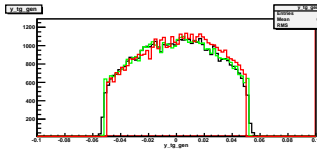
DIFFERENCE OF TRACKING AND PROJECTED TRACKING VARIABLES

- How close are the two variables?



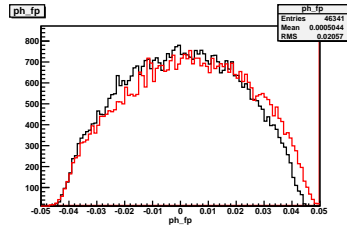
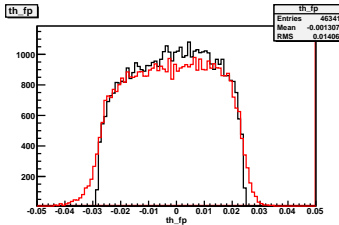
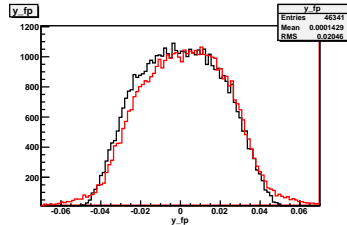
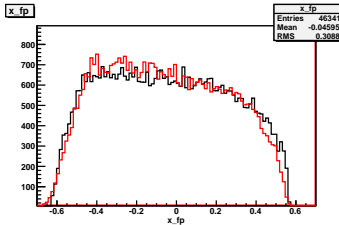
SAMC (1)

TARGET VARIABLES: $E = 4.73$ GEV, $p = 0.60$ GEV



SAMC (2)

FOCAL PLANE VARIABLES: $E = 4.73$ GeV, $p = 0.60$ GeV



SUMMARY

- Scalers:
 - Looking at the fast clock to see how often the scalers update yields no new information
- Pion Rejector E/p :
 - Projection of tracking variables onto PRL1 plane is identical to using the `L.prl1.*` tracking variables
- SAMC:
 - Slight 'leaning' of θ_{tg} towards $\theta_{tg} > 0$
 - Shift in ϕ_{tg} is interesting
- Farm replay (32-bit):
 - Analyzer is up and running
 - Updated LHRS replay scripts (now utilizes Diana's `FarmReplayCore.C`)
 - Tested out job submission to farm – working properly
 - Submitted jobs for all 4- and 5-pass negative and positive polarity data (299 runs)

WHAT'S NEXT?

- SAMC:
 - Look further into θ_{tg}, ϕ_{tg}
- Farm replay (32-bit):
 - Get skim procedure running
- Data Quality:
 - Checks on scintillators/ β
 - To be checked after the fresh replay on the farm
 - VDC chamber trips vs. time (for each run)
 - To be checked after skimming of all data
 - One-pass data