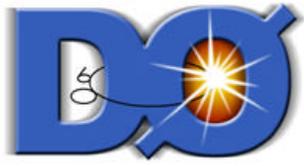


tsim_l1muo Progress and Plans

Rob McCroskey
University of Arizona
for the L1MU group



tsim_l1muo Progress

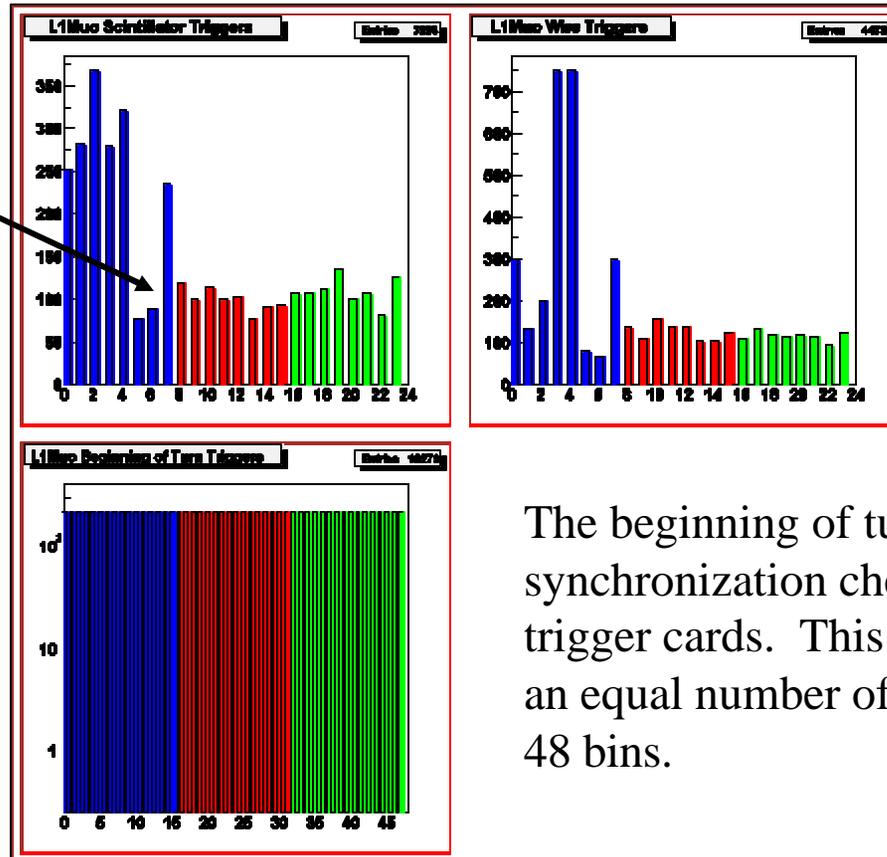
- L1Muo plots added to Global Examine
- tsim_l1muo examine created
 - Online hardware-simulator certification!!!
 - Online node requested from Stu Fuess
- L1Muo TMB contents defined and coded
 - No TMB analysis yet however
- Small bug fixes now running in p12.04.00
 - Correct scintillator roads in central
 - Fixed bug in definition of 'wide' and 'all' triggers



L1muo Examine

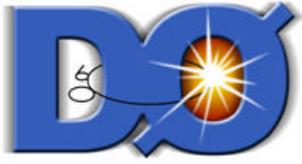
The scintillator and wire triggers are trigger ‘hitmaps’ for the central and forward regions. Each region is broken into eight octants.

Central octants
5&6

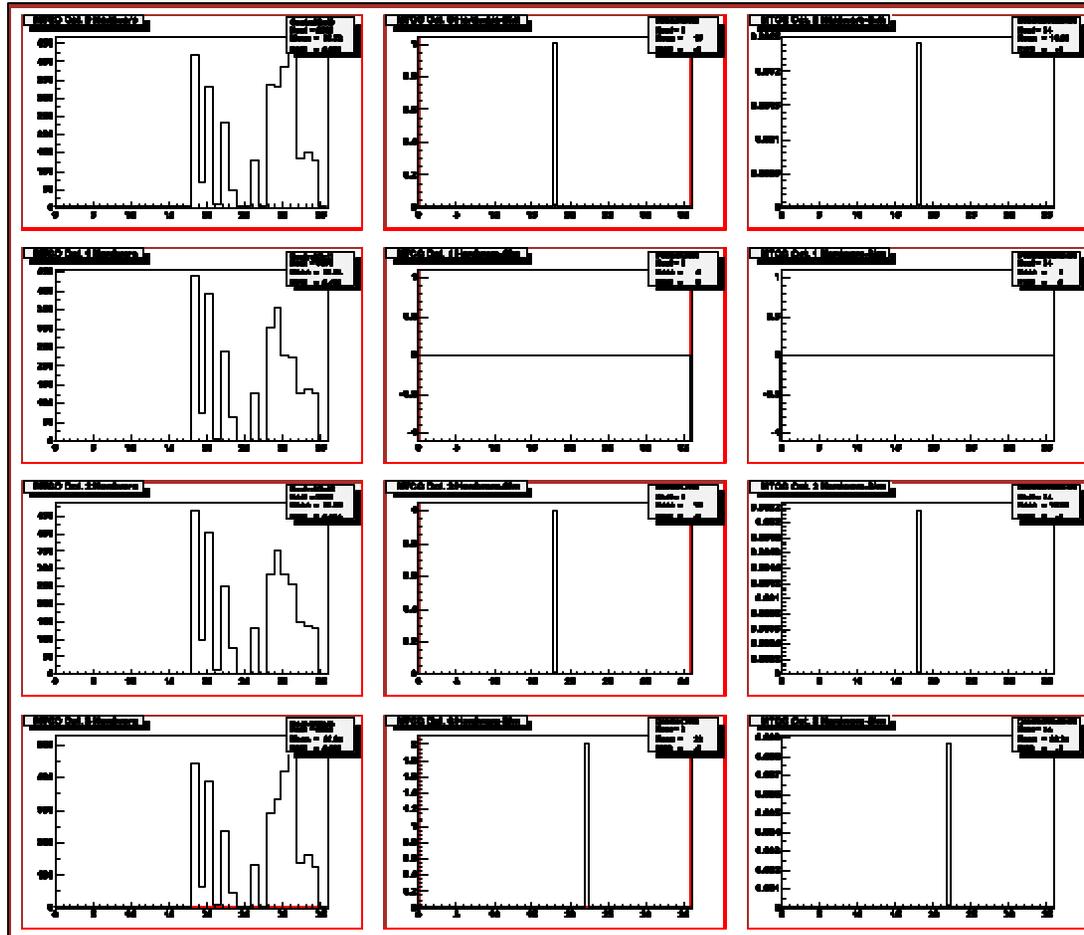


— Central
— North
— South

The beginning of turn trigger is a synchronization check for all 48 trigger cards. This plot should have an equal number of entries for all 48 bins.



tsim_11muo examine (expert)



Octant trigger
'hitmaps'

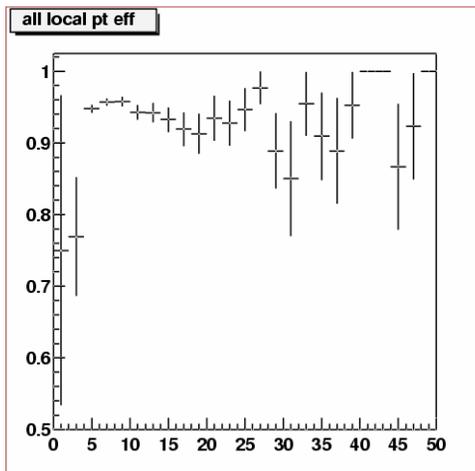
Raw hardware/
sim difference

Fractional hardware/
sim difference

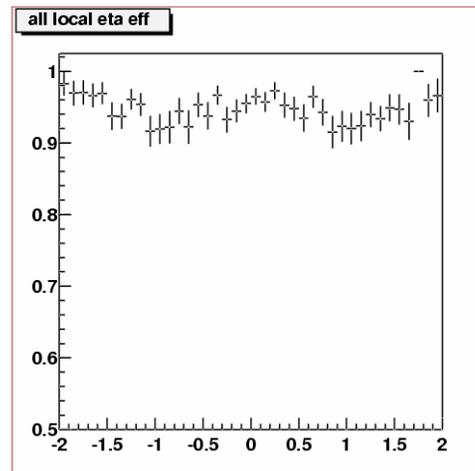


tsim_11muo Progress

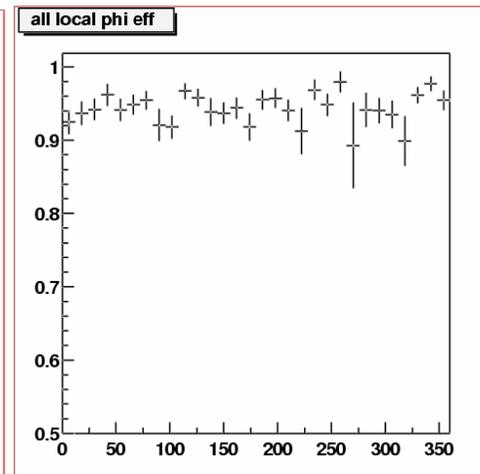
- Method for producing 'standard' 11muo efficiencies from data and Monte Carlo
 - Single muon efficiencies from data (Stefan Anderson)
 - Central (94%), Forward (95%)



P_t

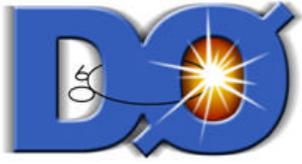


Eta



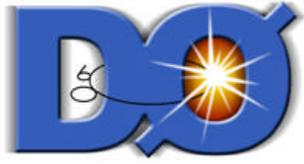
Phi

- Monte Carlo efficiencies (Ken Johns) almost ready



tsim_l1muo Plans

- Hardware certification of PDT, MDT, and L1CFT triggers is our (tsim_l1muo authors) highest priority
- **tsim_l1muo Algorithms**
 - Moving to rcp-based algorithms
 - Use rcp's to generate hardware trigger equations
 - Match algorithms to hardware
 - All algorithms will be updated
 - MTCM, MTM, CF MTC05 (~2 weeks)
 - CF MTC10, L1CFT (~4 weeks)
 - EF MTC10, EF MTC05 (?)
- Standardize certification of L1Muo via online tsim_l1muo hardware-software comparisons



tsim_11muo Plans

- L1Muo TMB content analysis code
 - Move standard methods for extracting L1Muo efficiencies from data and MC from reco-analyze input to TMB input