

Starting to work on L1DT efficiency

Veeeeery initial work!

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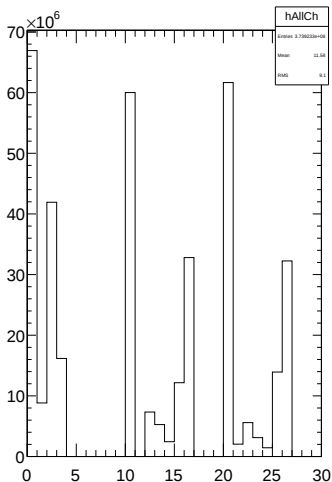
DT Trigger Upgrade Meeting,
CERN, 6 February 2014

Intro

- My work started only last week! Sorry about that
- Just to show you what I'm focussing on
 - ▶ Start playing with your code
 - ▶ Look at efficiency for L1DTTrigger
- How to define eff
 - ▶ I'd like to have it chamber by chamber
 - ▶ and also inside the chamber (eg by local position)
 - ▶ Denominator:
 - ★ Start with DTDigis: in MC I should have one Digi for each SimHit.
 - ★ Try to tell apart simple passing muons (with only 1/2 digis per layer) from showering (multiple digis).
 - ★ I expect the second to be more problematic
 - ▶ Numerator (easier):
 - ★ SubDivided by code()
 - ★ for legacy (old) and new DTL1Trigger



All Chambers



0 Num: chamber has digis

1 Num: $\#digis < 5$

2 Num: $5 \leq \#digis \leq 9$

3 Num: $\#digis < 9$

10 Old: has ϕ Segment

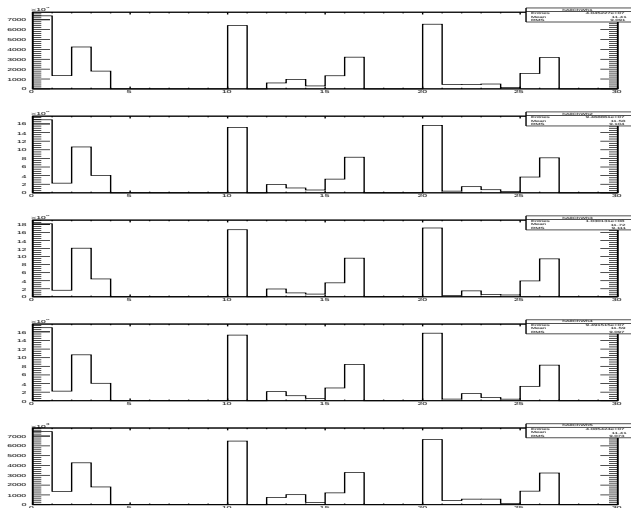
10+n Old: with `code()==n`

20 New: has new ϕ Segment

20+n New: with `code()==n`

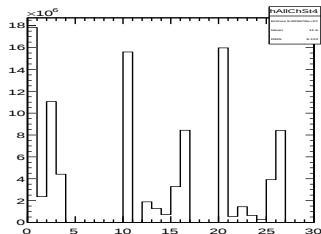
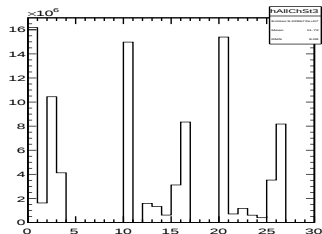
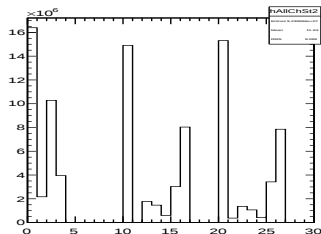
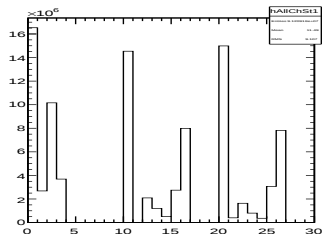


Divided by wheel





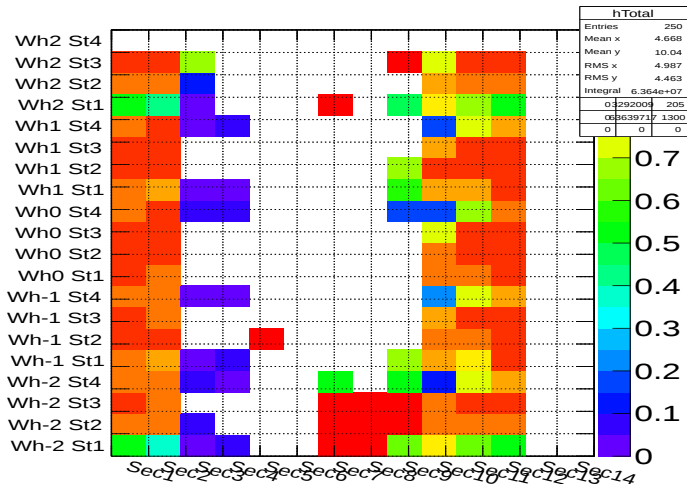
Divided by Station





Legacy efficiency by chamber

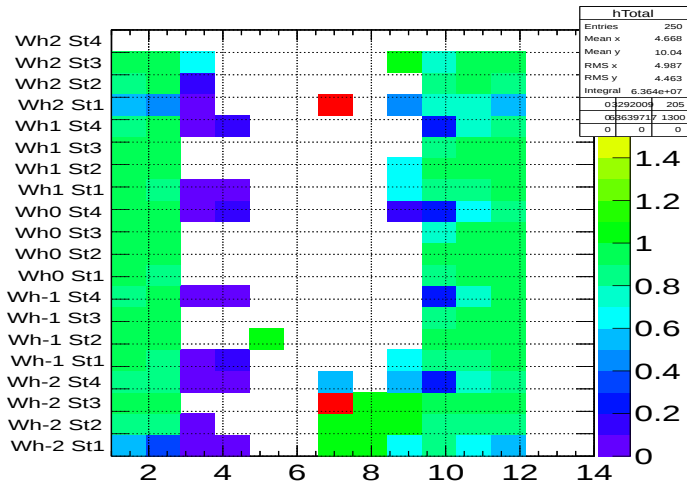
Old (all code)/Num (all #digis)





New efficiency by chamber

New (all code)/Num (all #digis)





New vs Legacy efficiency by chamber

New (all code)/Old (all code)

