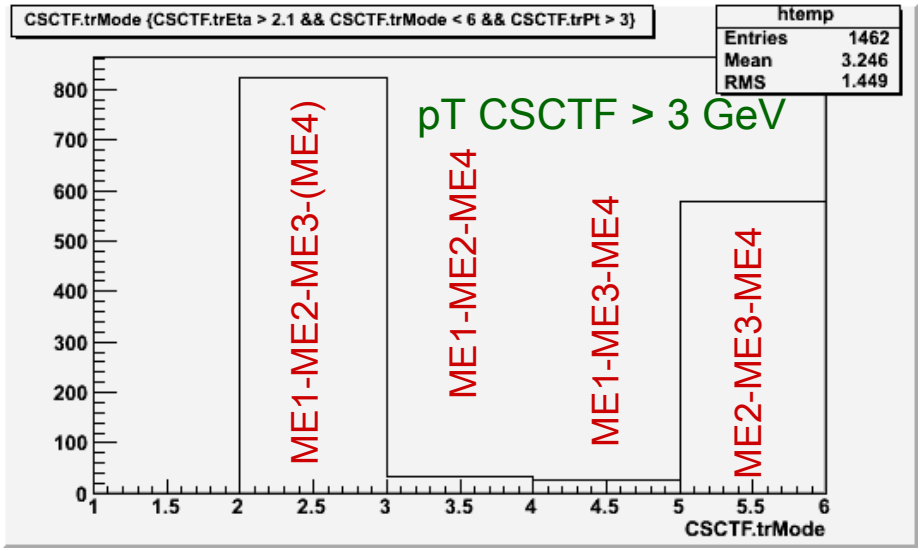
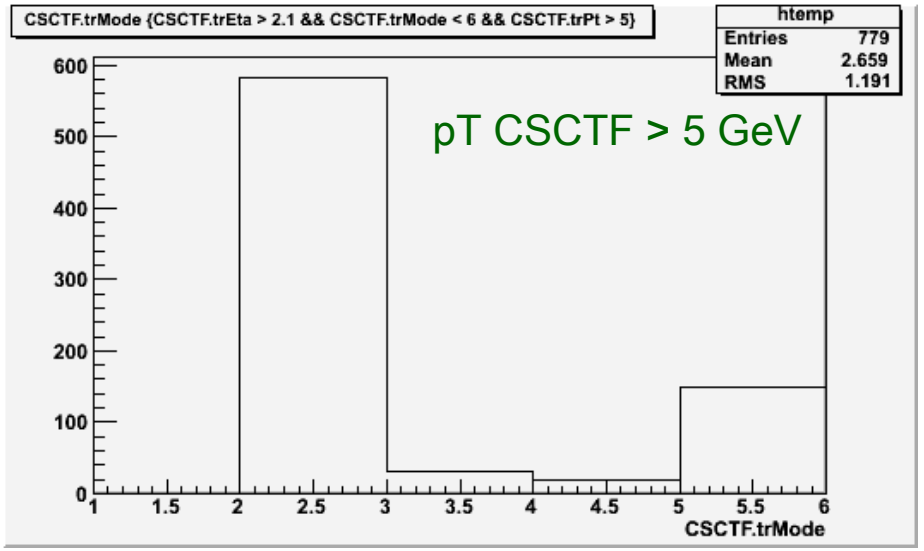
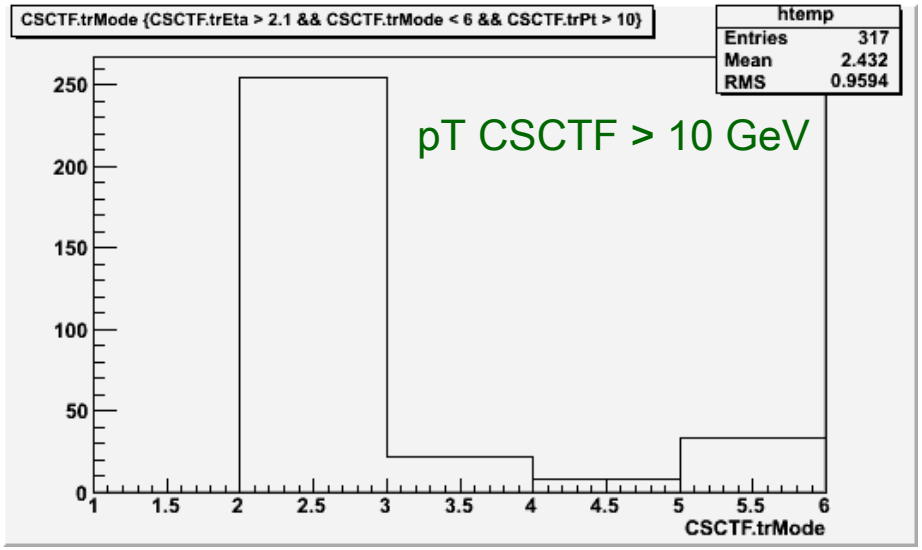
3 or 4 station tracks at |η|>2.1



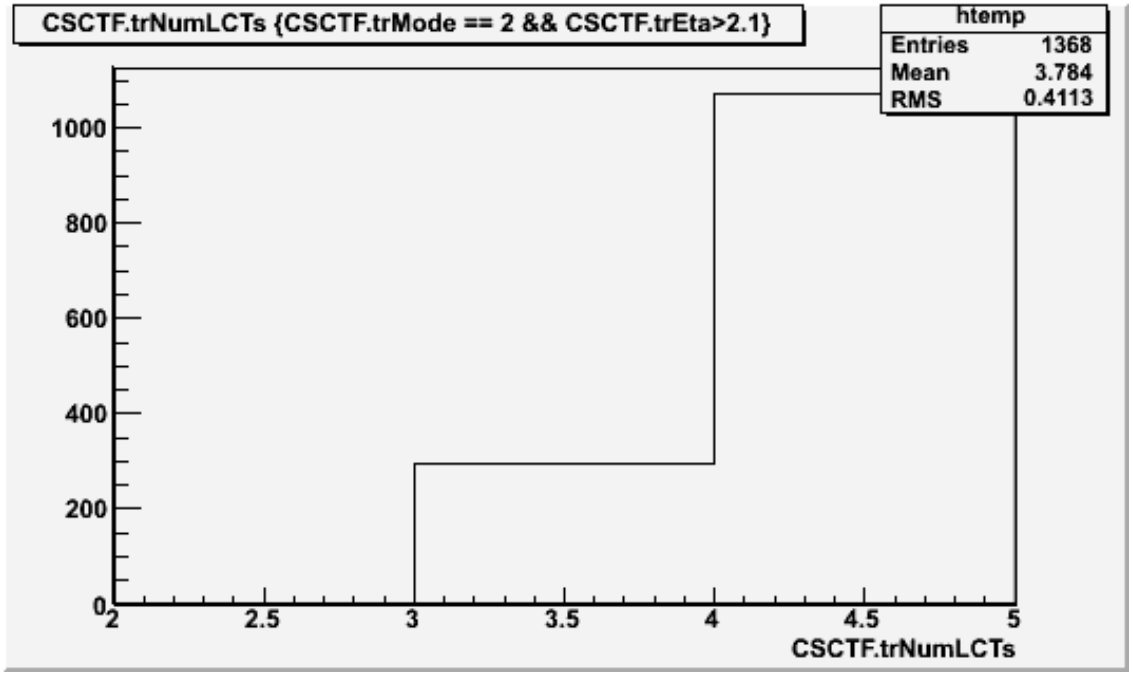




At pT CSCTF > 10 mode 2 (ME1-ME2-ME3-(ME4)) becomes dominated in the contribution to the rate of 3-4 station tracks

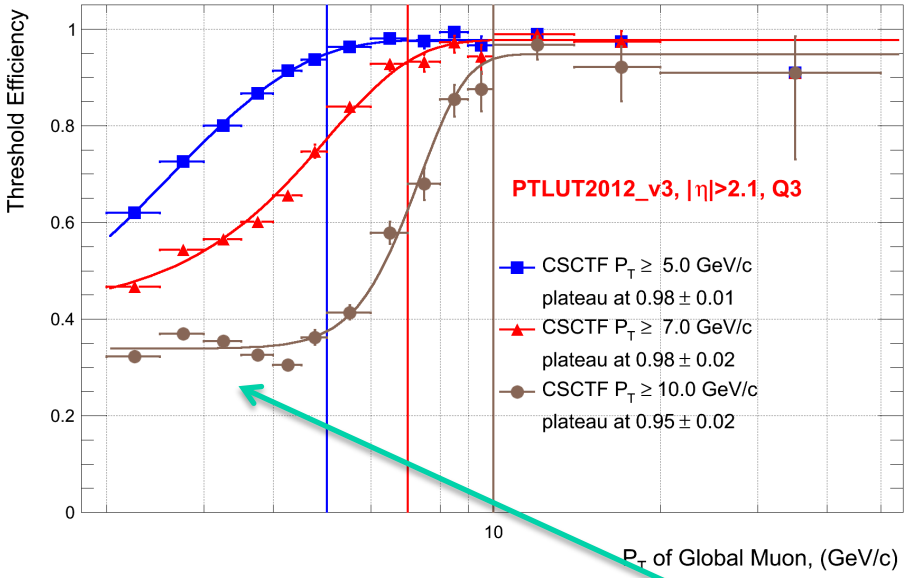
ME1-ME2-ME3 vs ME2-ME3-ME4 at |η|>2.1

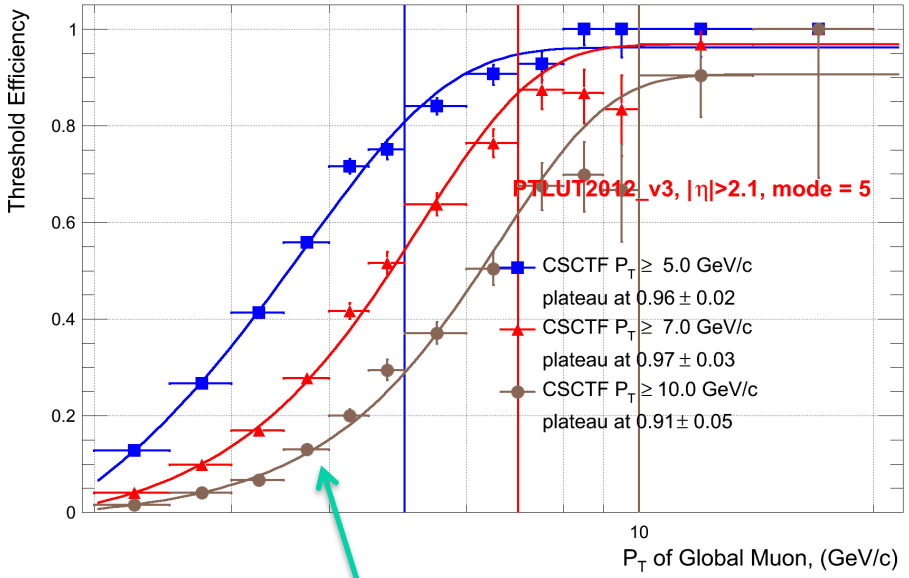
3 station tracks at |η|> 2.1:
Number of stubs in tracks which were reconstructed like ME1-ME2-ME3 at |η| > 2.1:



~ 80% of ME1-ME2-ME3 have 4 stubs -> have ME4 stub
So we have extra information for pT assignment in ~80% cases

ME1-ME2-ME3 vs ME2-ME3-ME4 at |η|>2.1

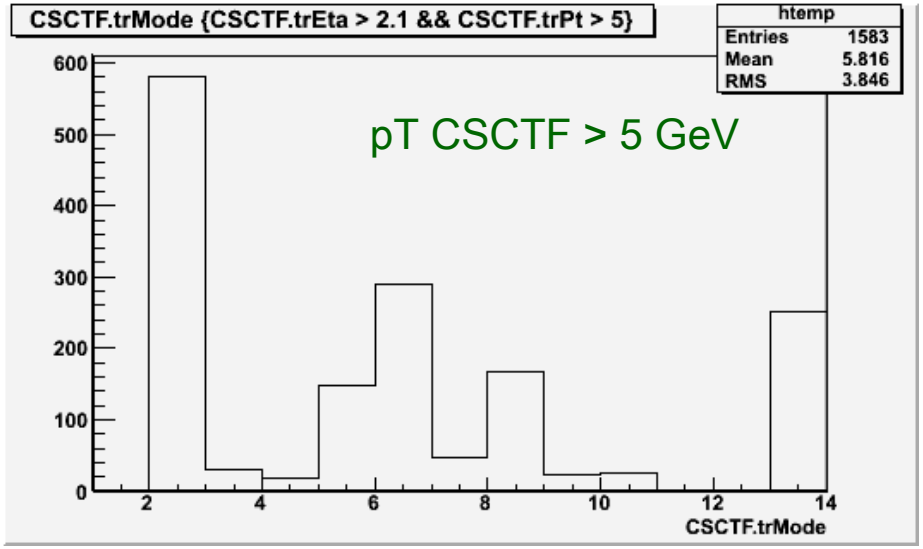


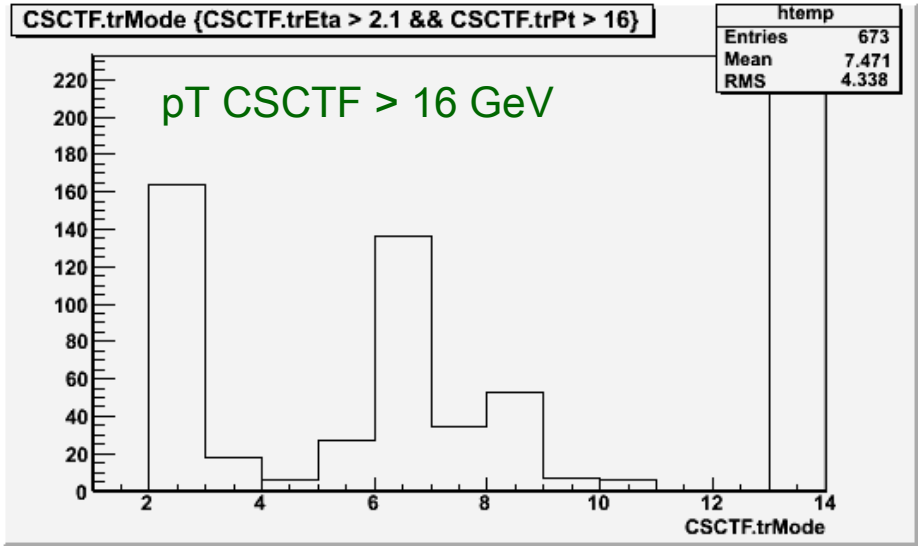


Now for 4 stations tracks we use ME1-ME2-ME3 pT assignment: huge contribution of low pT
If we start use ME2-ME3-ME4 pT assignment for 4 station tracks: significant suppression of low pT
~80% 3-4 at pt > 5-10 GeV are mode 2 (ME1-ME2-ME3-(ME4))
80% ME1-ME2-ME3-(ME4) tacks are 4 station track
-> rage of 3-4 station takes could be supress by ~2-3 if we start use ME2-ME3-ME4 for 4 station track
-> may be not still enough to start again triggering at in in L1SingleMuon
-> could it help for L1DoubleMuon trigger?
Alex told that it easy to implement in firmware

Some thinking |η|>2.1

Double Mu triggering with all modes
Single Mu was triggering only with 3 or 4 station track





✓ At pT CSCTF > 16 GeV ME1-ME4 (mode 14) gives for most contribution to rate
Could be that we still have ghost there? Or we just have gaps in ME2 and ME3 stations
✓ After mode 14 the most contribution comes from:
- mode 2 (ME1-ME2-ME3(ME4) which could be suppressed using ME2-ME3-ME4 pT assignment
- mode 6 (ME1-ME2) -> could do nothing
✓ At pT CSCTF > 5 GeV mode 2 is dominated