

Problem in Top yield vs HLT path

Less Top in Mu12_DiCentralJet20_DiBTagIP3D1stTrack

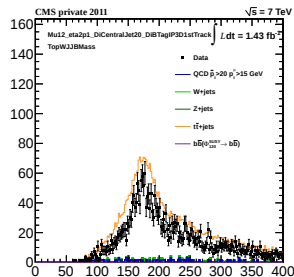
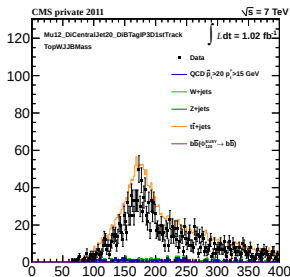
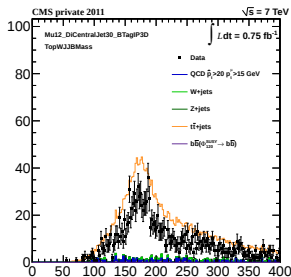
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PD meeting,
PD, 14/10/2011

Top Selection

- Good, isolated muon $p_t > 25$ GeV Combined relative Iso $((\Sigma p_t + \Sigma E_t^{em} + \Sigma E_t^{had})/p_t^\mu < 0.1)$
- exactly 4 jets $E_t > 25$ and $|\eta| < 2.6$ JetID loose
- of which exactly 2 B-jets ($CSV > 0.8$).
- Build hadronic W from the two non-b jets
- build hadronic top with $W + b$ (combinatorics not resolved, $\times 2$ candidates)
- semileptonic top via $b + \mu + met$ (again, combinatorics not resolved)



Problem

$t\bar{t}$ MC (orange) normalized to x-section (152 pb) and integrated luminosity. Off-line HLT applied to MC. All cuts identical.

Why $\sim 50\%$ less top events in

Mu12_DiCentralJet20_DiBTagIP3D1stTrack HLT path??

HLT Mu12_DiCentralJet20_DiBTagIP3D1stTrack

PromptReco_v4

PromptReco_v5

PromptReco_v6

ReReco_5Aug

