

Status on 1L3B final states for $t \rightarrow cH(bb)$ in $t\bar{t}$ decay

Kevin Deroover

Cuts

- Topology cuts:
 - $= 1$ lepton (e or μ)
 - ≥ 4 Jets
 - ≥ 3 CSVM b-tagged jets
 - ≥ 30 GeV
- Object cuts (to be discussed/optimized):
 - μ : > 10 GeV, $|\eta| < 2.4$
 - e: > 15 GeV, $|\eta| < 2.5$
 - Jet: > 20 GeV $|\eta| < 2.4$

Samples

- Signal: $TT_Kappa_Hct_Htobb$ (5 pb)
- Background:
 - $W + 1, 2 \text{ \& } 3 \text{ jets}$
 - $t\bar{t}$
 - $t\bar{t}V$
 - VV
 - $VH (H \rightarrow b\bar{b})$
 - $H (-\rightarrow b\bar{b})$
 - SingleTop

TO ADD: $t\bar{t}H$, DY, $W + 4 \text{ jets}$





