

CMS Naples Group Meeting

Dip. di Fisica Università Federico II, Napoli October 22, 2018

Search for a singly produced vector-like quark T in single lepton final states

Relatori:

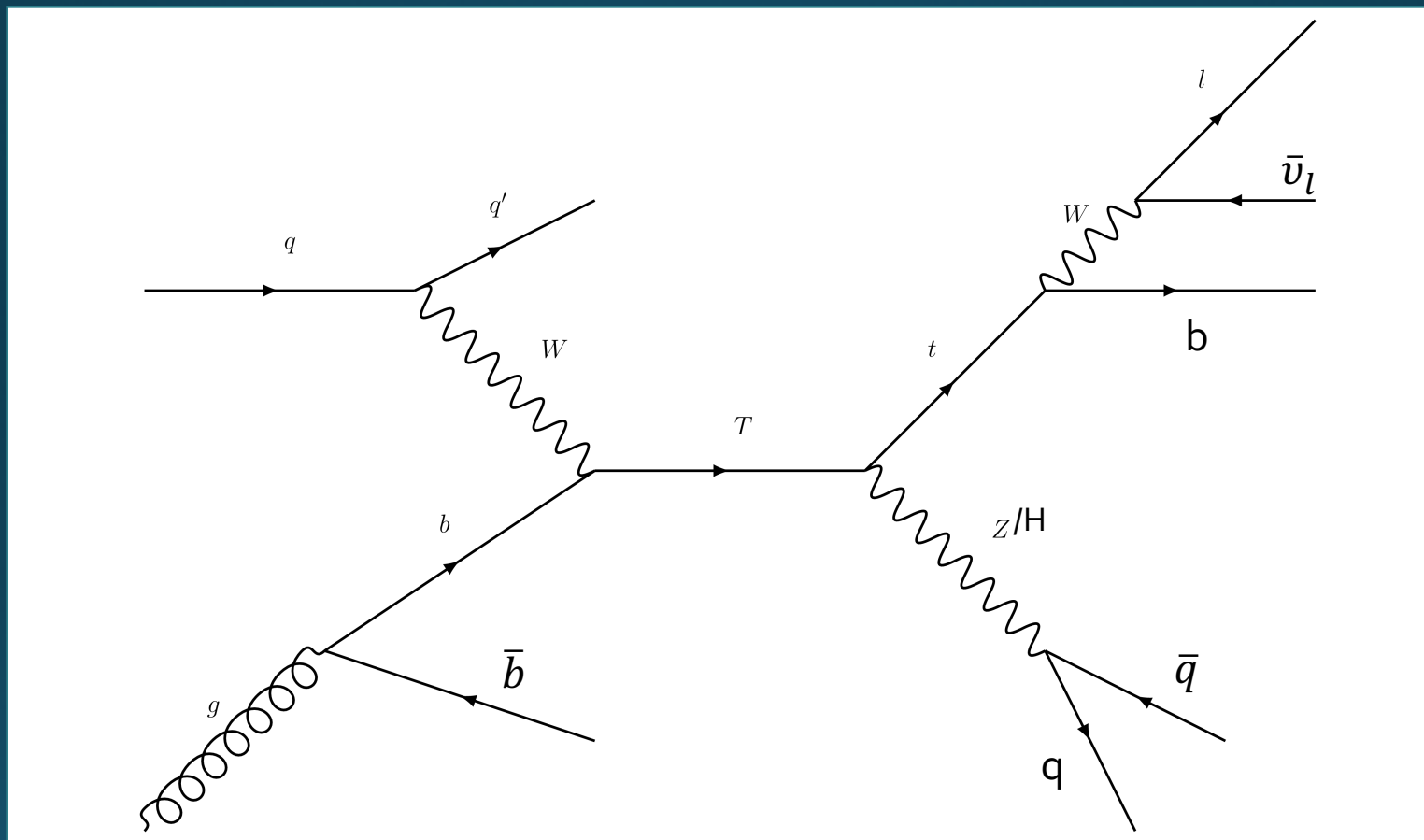
Dott. Alberto Orso Maria Iorio

Dott. Luca Lista

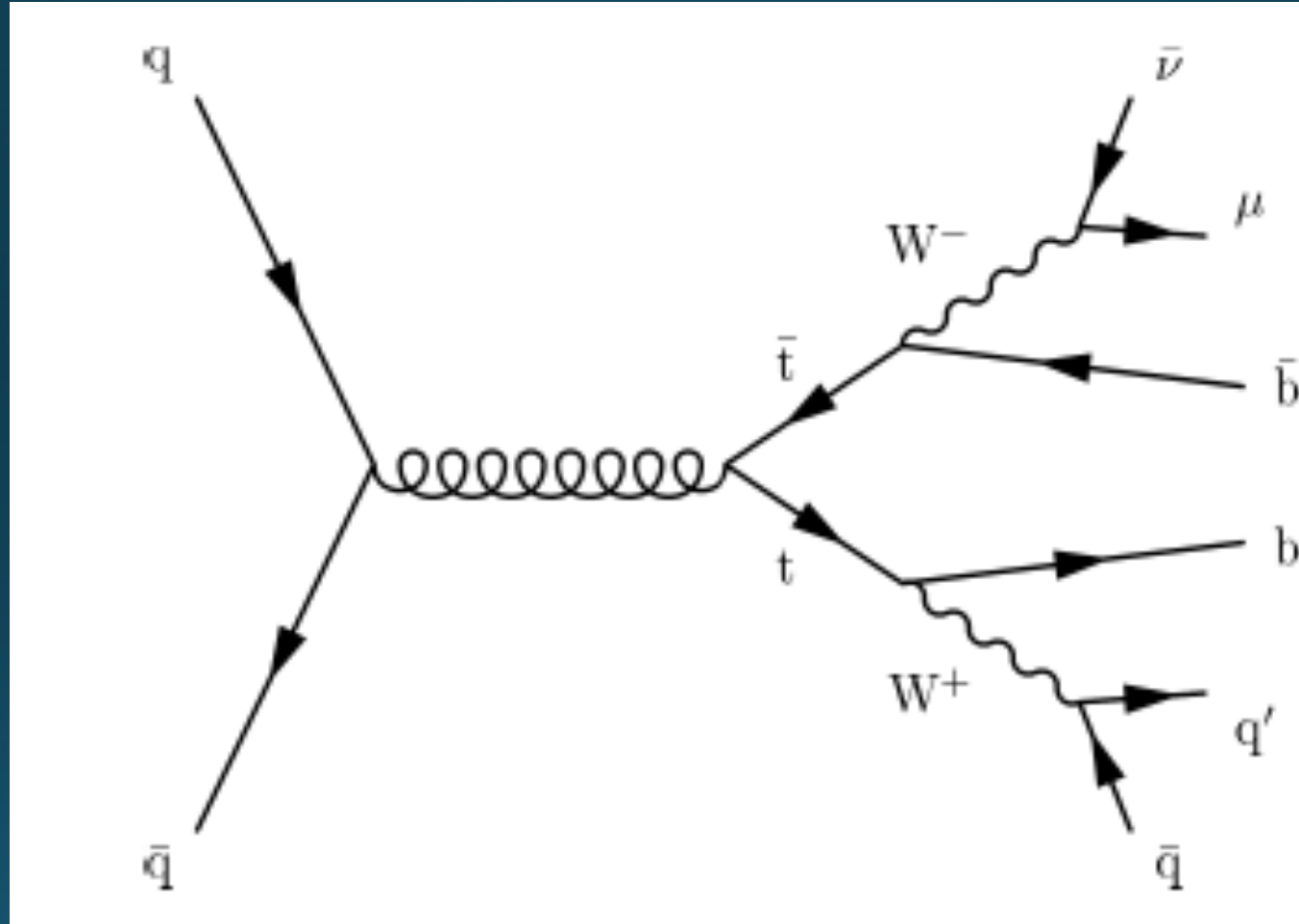
Candidato:

Lorenzo Vigilante

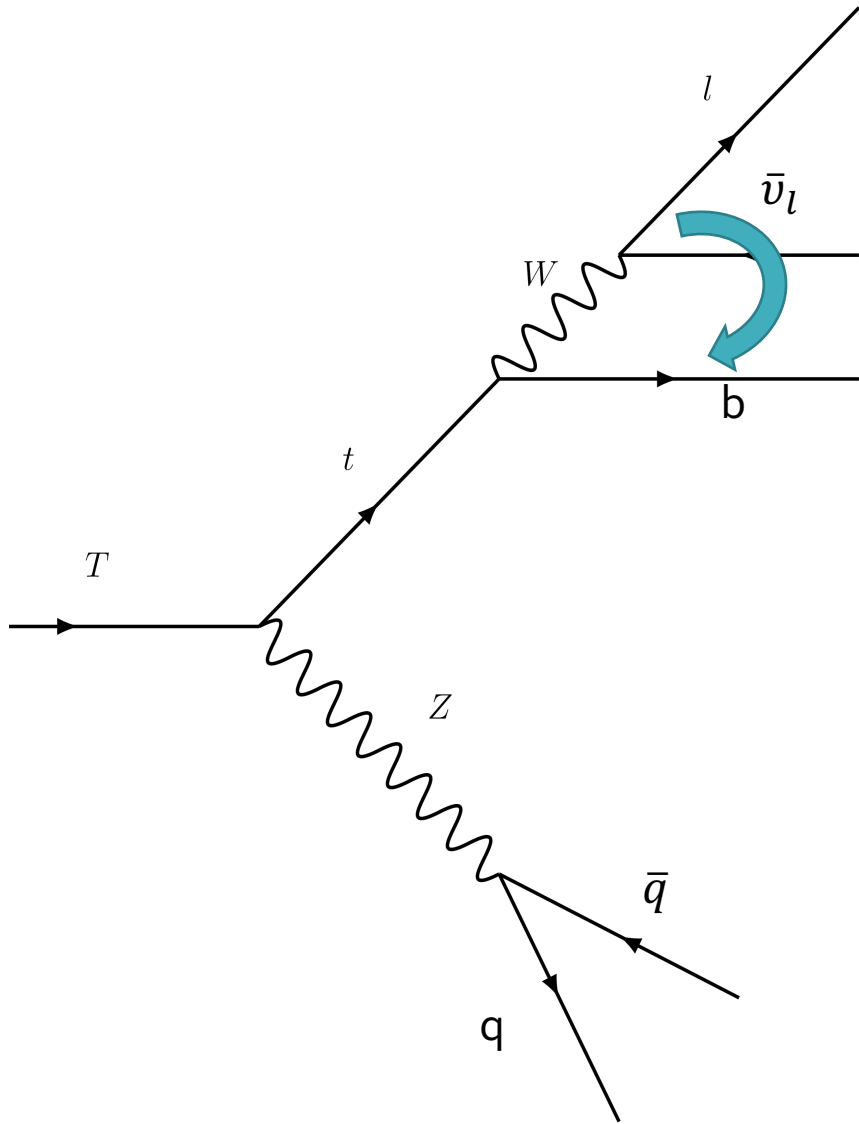
Decay Channel



$TT\bar{b}$ Background

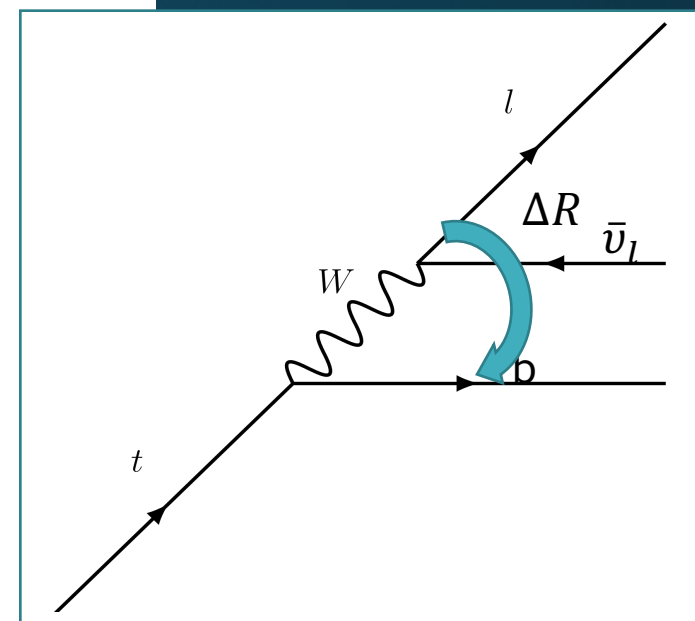
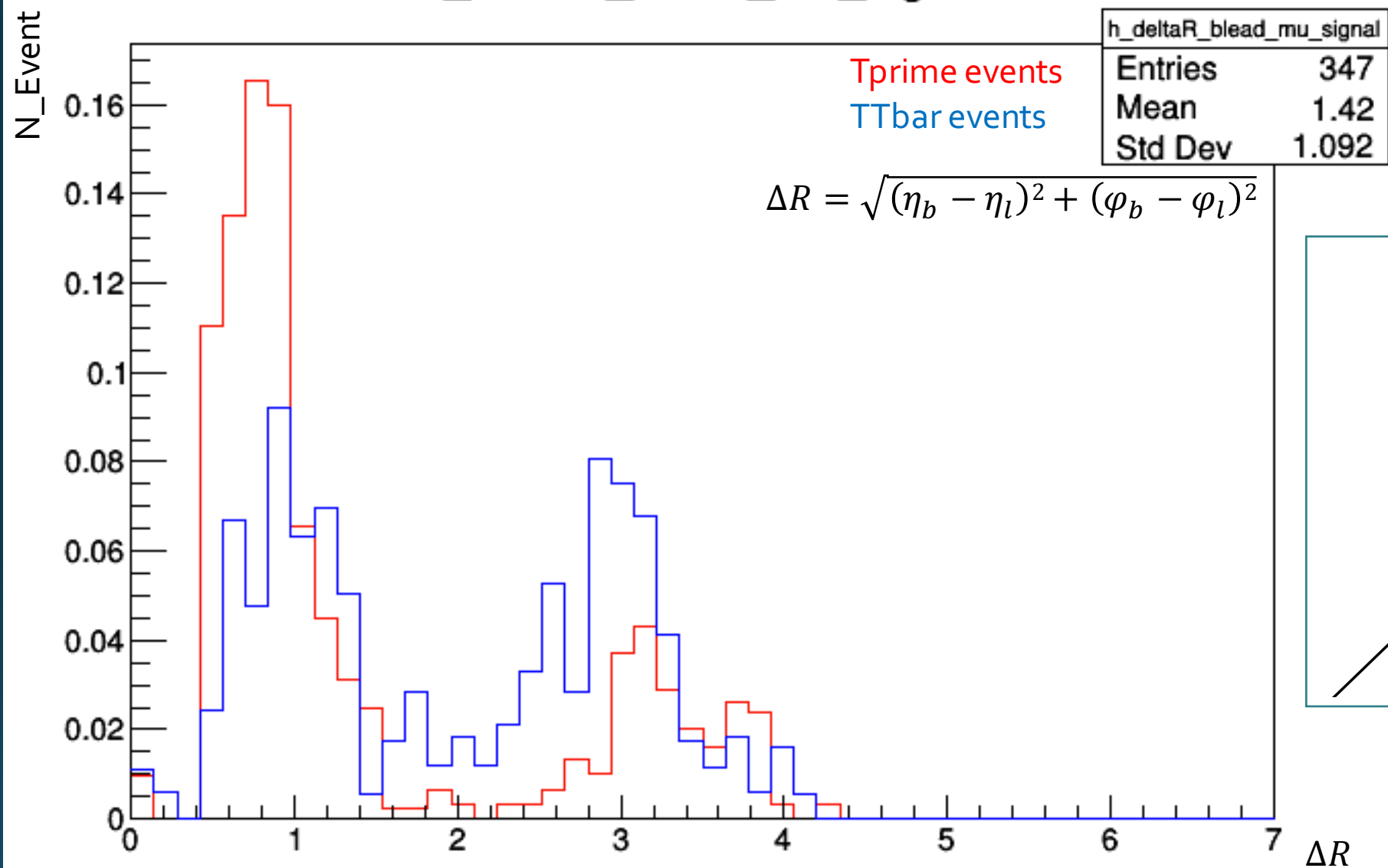


Event Pre-Selection

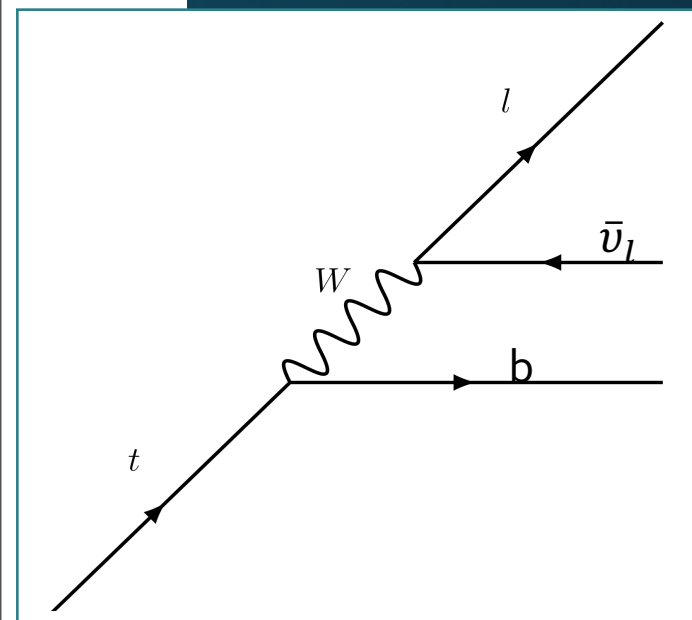
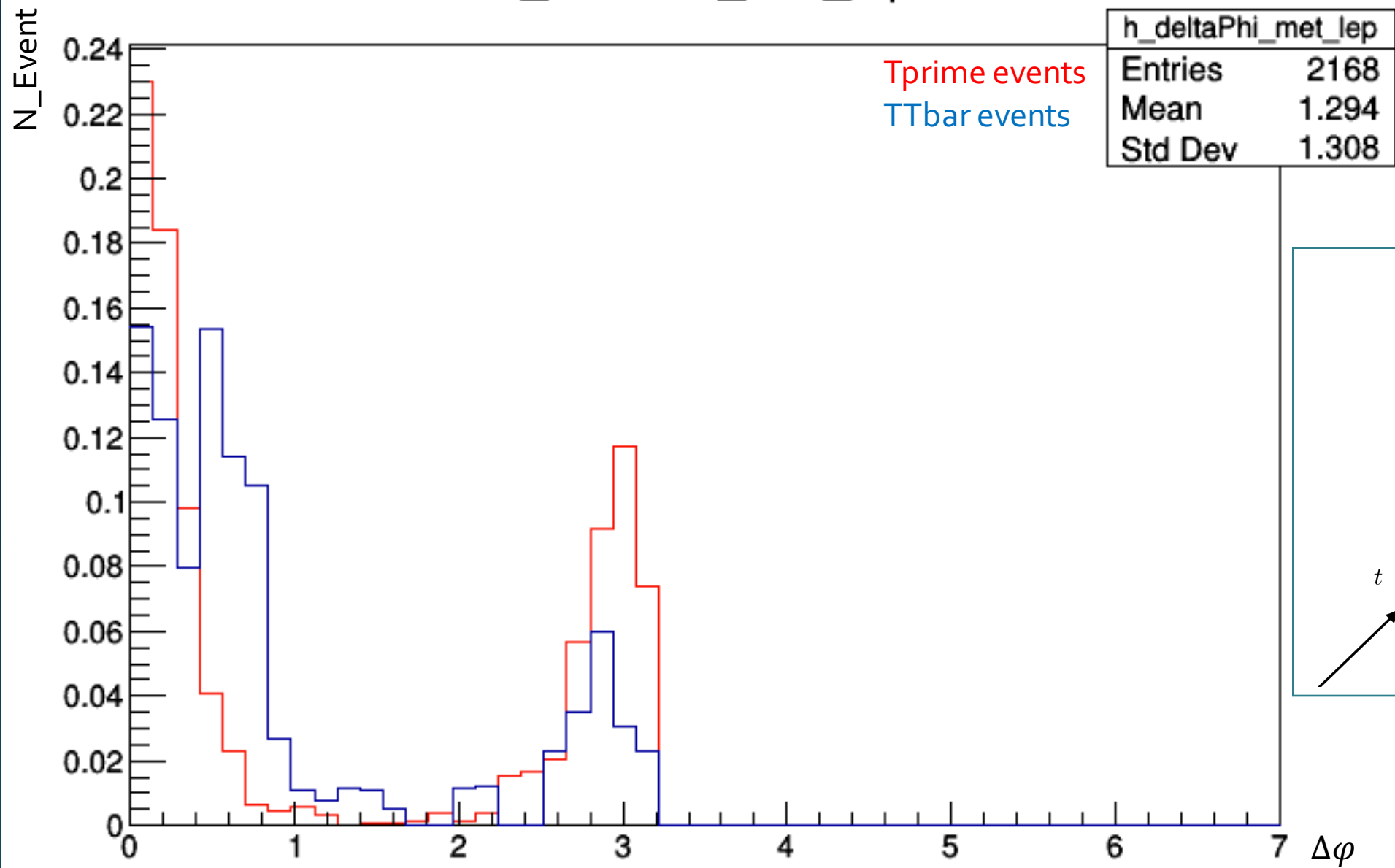


- 1 Lepton
 - MET with $P_T > 100 \text{ GeV}$
 - At least 1 b-tagged jet
-
- 1 AK8-tagget jet
 - $65 \text{ GeV} < m_{\text{AK8}} < 140 \text{ GeV}$

h_deltaR_bleed_mu_signal

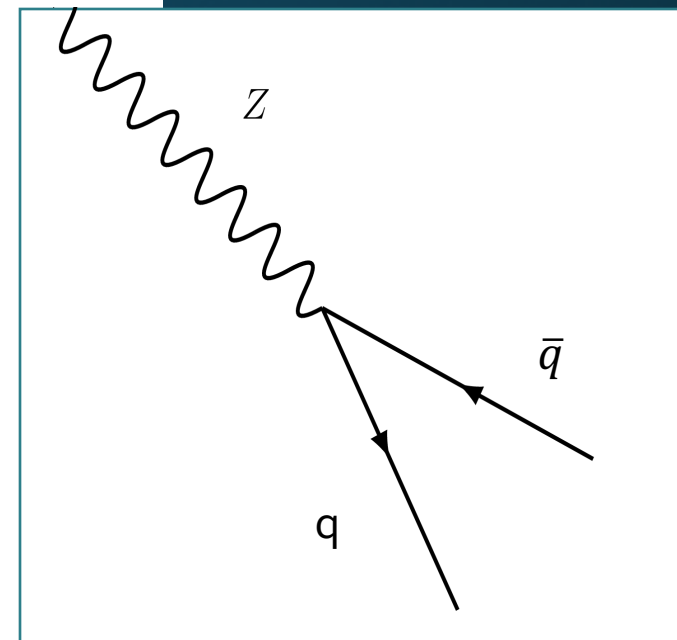
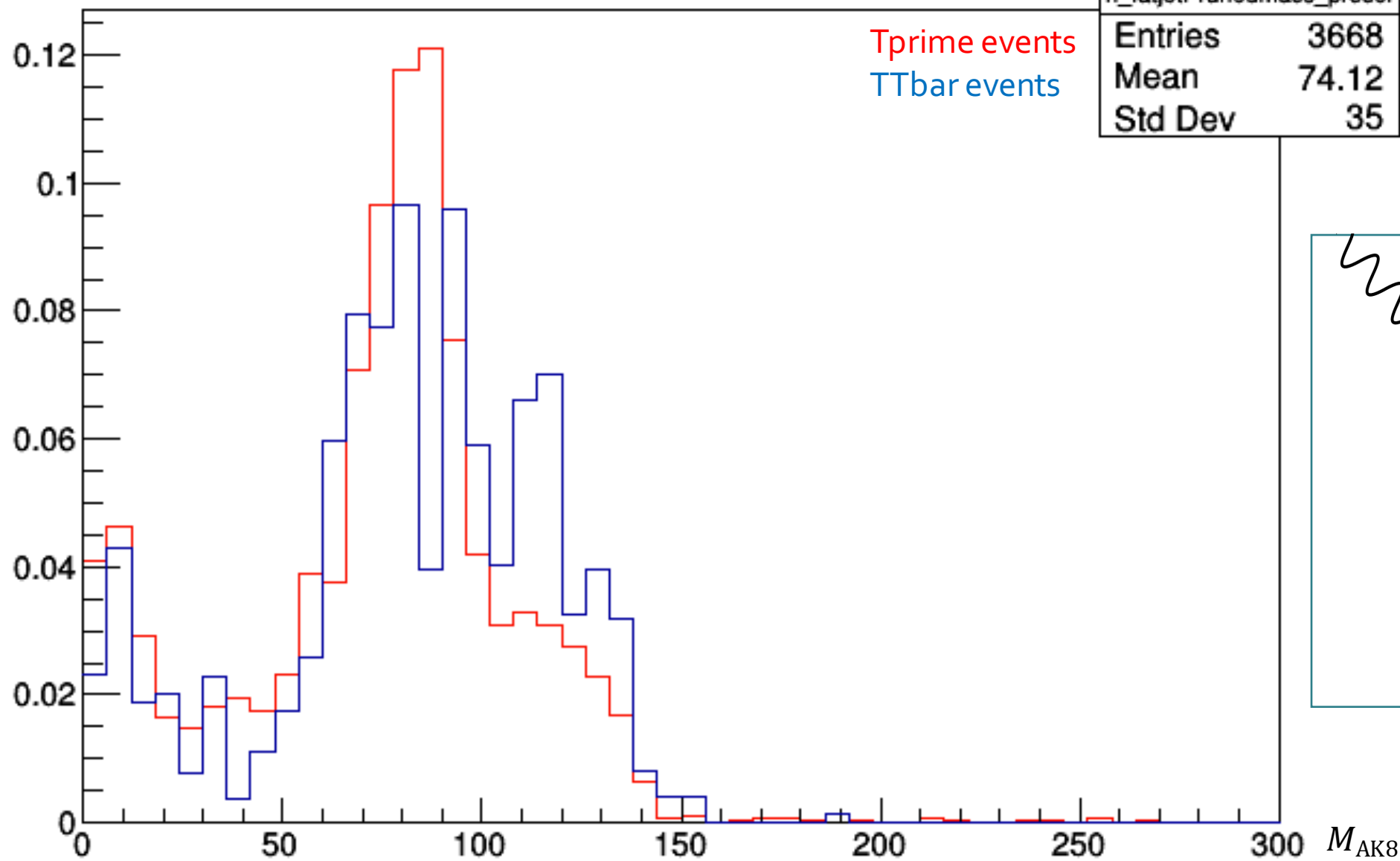


h_deltaPhi_met_lep



h_fatjetPrunedmass_presel

N_Event



What's Next

- Keep studying discriminating kinematic variables between signal and backgrounds
- Optimize selection cuts
- Define signal and control regions