L2 Tau Trigger Report

A.Florez, M.Bachtis
November 12 2009

Samples

- I am using the following data samples:

  - ZTT :

    tteff_octoberX_Ztautau_Summer09_MC_31X_V3_v1.root

    It has 251786 entries

  - Wmunu :

    tteffAnalysis_Wmunu_Summer09_MC_31X_V3_v1_GEN_SIM_RE
    CO_Skim_run2.root

    It has 646918 entries

Efficiency Definition

The Reconstruction efficiency (L2RecoEff) is measured using:

Numerator =

PFTauIso==1&&PFTauEt>15&&abs(PFTauEta)<2.5&&(PFTauProng==1|| PFTauProng==3)&&(hasMatchedL1TauJet&&L1JetEt>30|| hasMatchedL1CenJet&&L1JetEt>60)&&L2JetEt>15"

Denominador =

PFTauIso==1&&PFTauEt>15&&abs(PFTauEta)<2.5&&(PFTauProng==1|| PFTauProng==3)&&(hasMatchedL1TauJet&&L1JetEt>30|| hasMatchedL1CenJet&&L1JetEt>60)

The L2 Isolation efficiency is:

L2IsoEff = L2RecoEff X L2JetEt>15

L2 Reconstruction

$$\Delta E = |L2JetEt - PFTauEt|$$

We should not have muon contamination, so is there a problem with the data or a bug in the code?

4
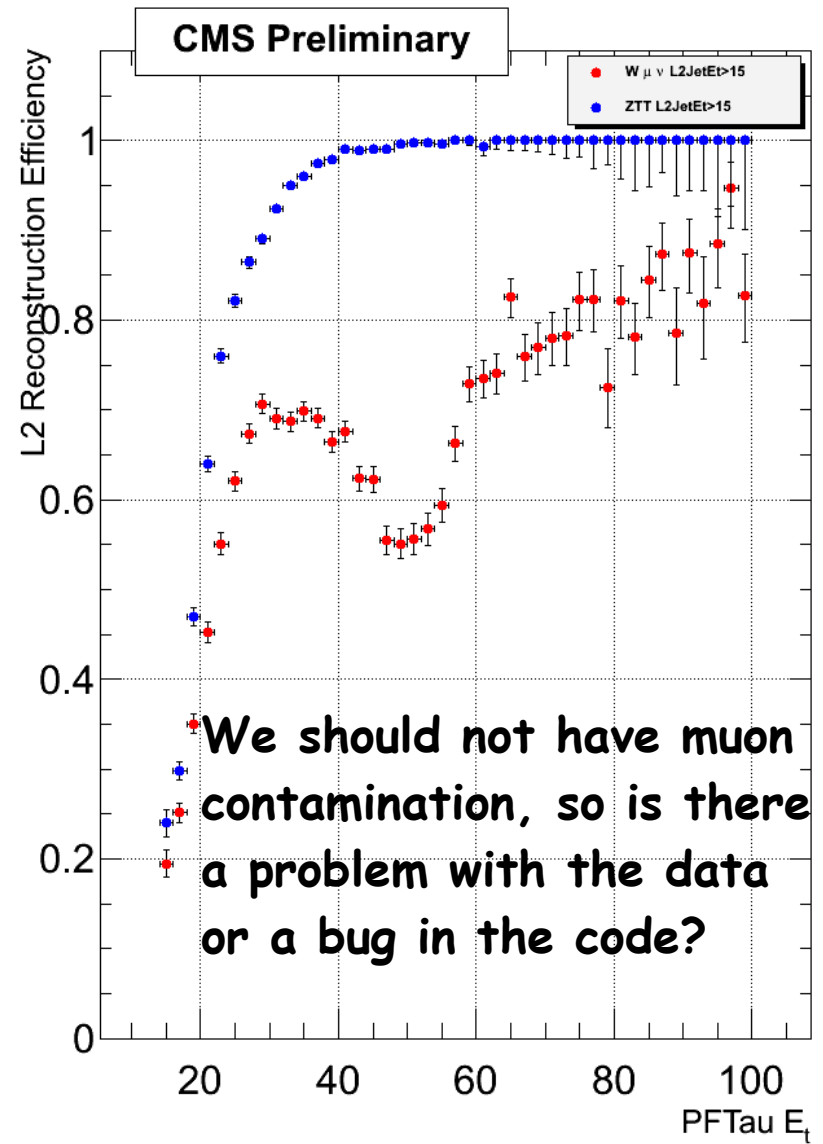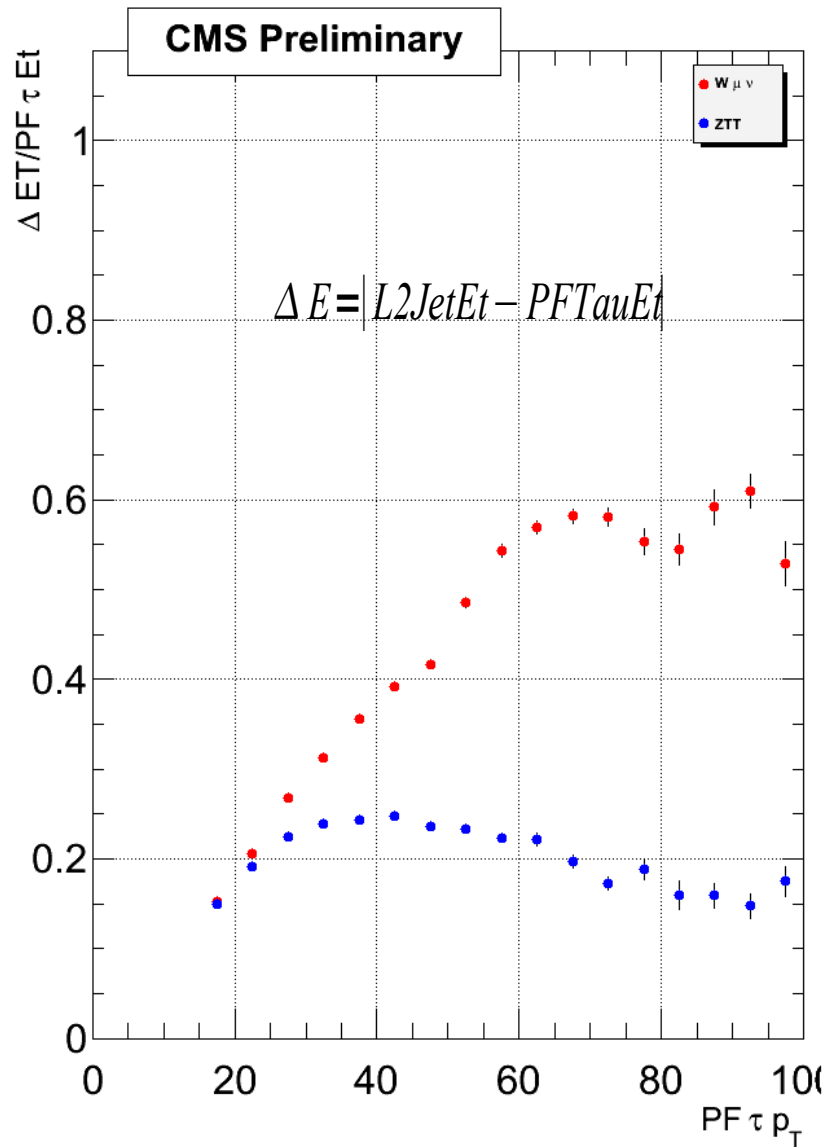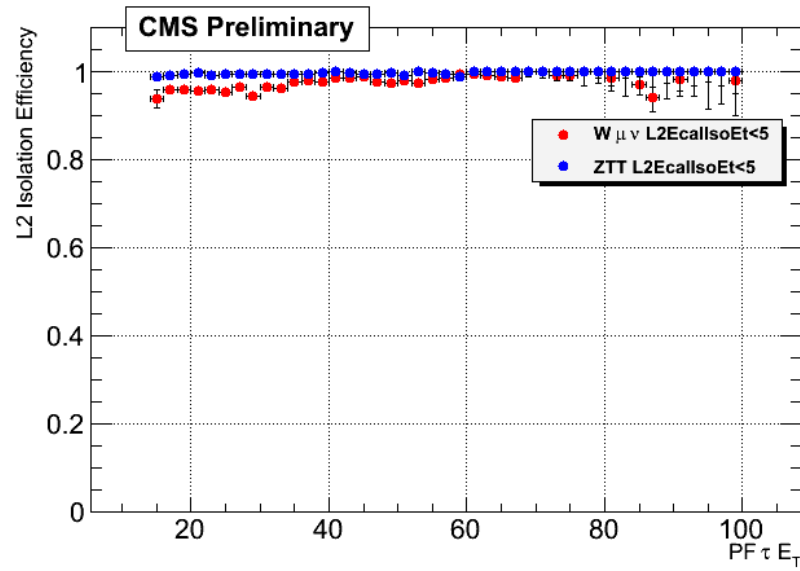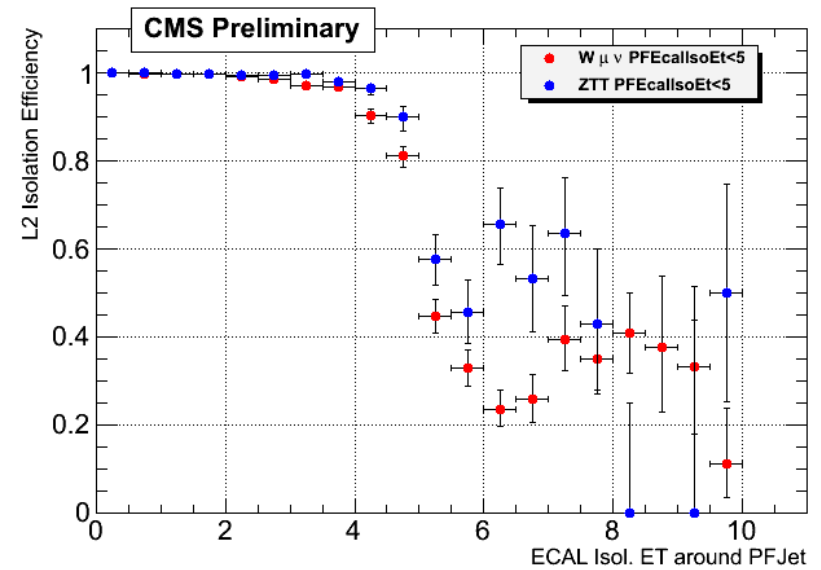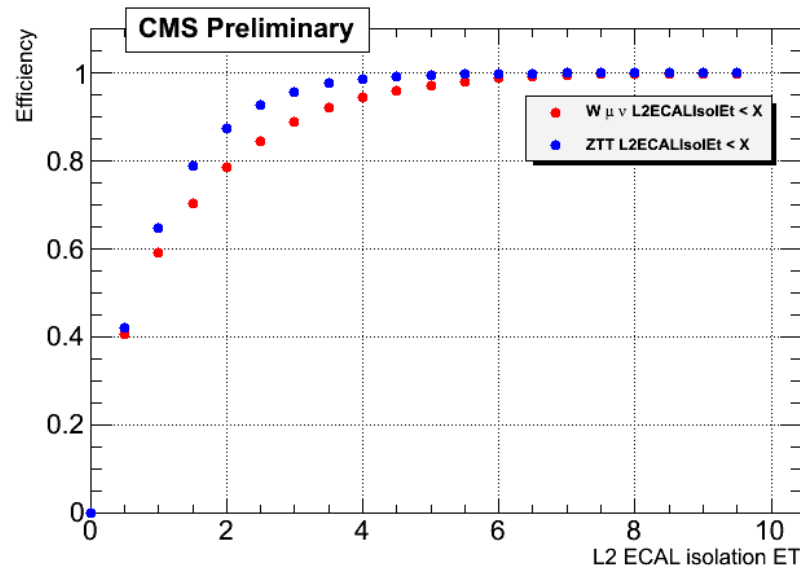
L2 Isolation

L2 Isolation efficiency looks fine