

Exclusive $B \rightarrow J\psi K$ Analysis in CMSSW_3_1_2

Jingjing Zang

Zhen Wang

Guoming Chen

Efficiency of Muon Reconstruction

- Mont Carlo data sample
- Muon reco efficiency
 - ✓ GLB vs Trk
 - ✓ Barrel vs Endcap
- Fake rate for kaon and pion

Mont Carlo Data Sample

- $pp \rightarrow \mu X$ ($\sigma = 51.6 \text{ mb}$) **CMSSW_3_1_2** (EvtGen)
/ppMux/Summer09-MC_31X_V3-v1/GEN-SIM-RECO
- ECM: 10 TeV
- Filter Eff: 0.0023
- No. of evts: ($10 \text{ M} \approx 0.09 \text{ pb}^{-1}$)

7,69M events were used.

HL Trigger: SingleMu3

Muon Efficiency Calculation

- Muon type:

Glb $\equiv$ Global Muon

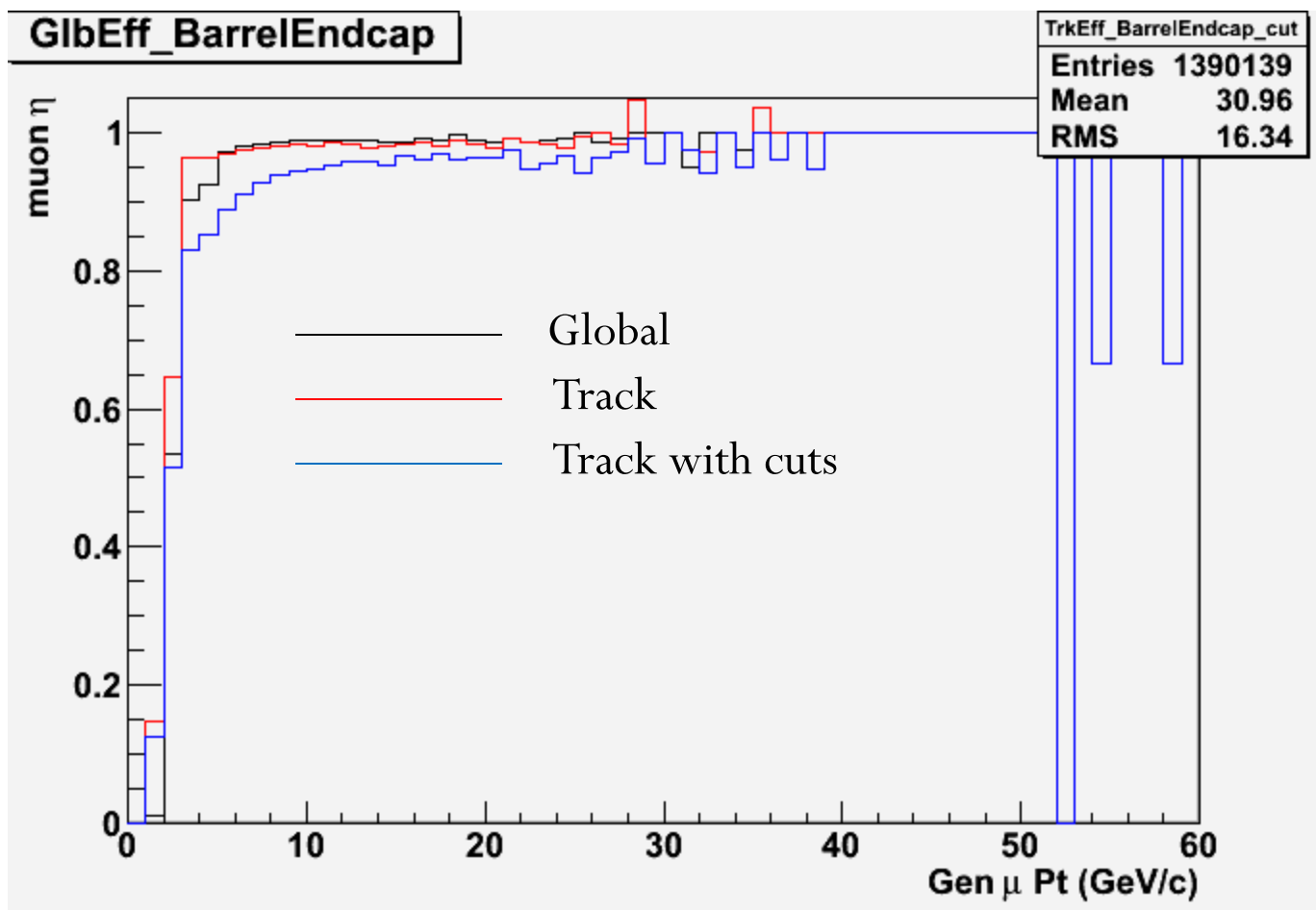
Trk $\equiv$ Track Muon

Trk' $\equiv$ Track Muon with $\chi^2 < 1.9$, inner track hit > 11

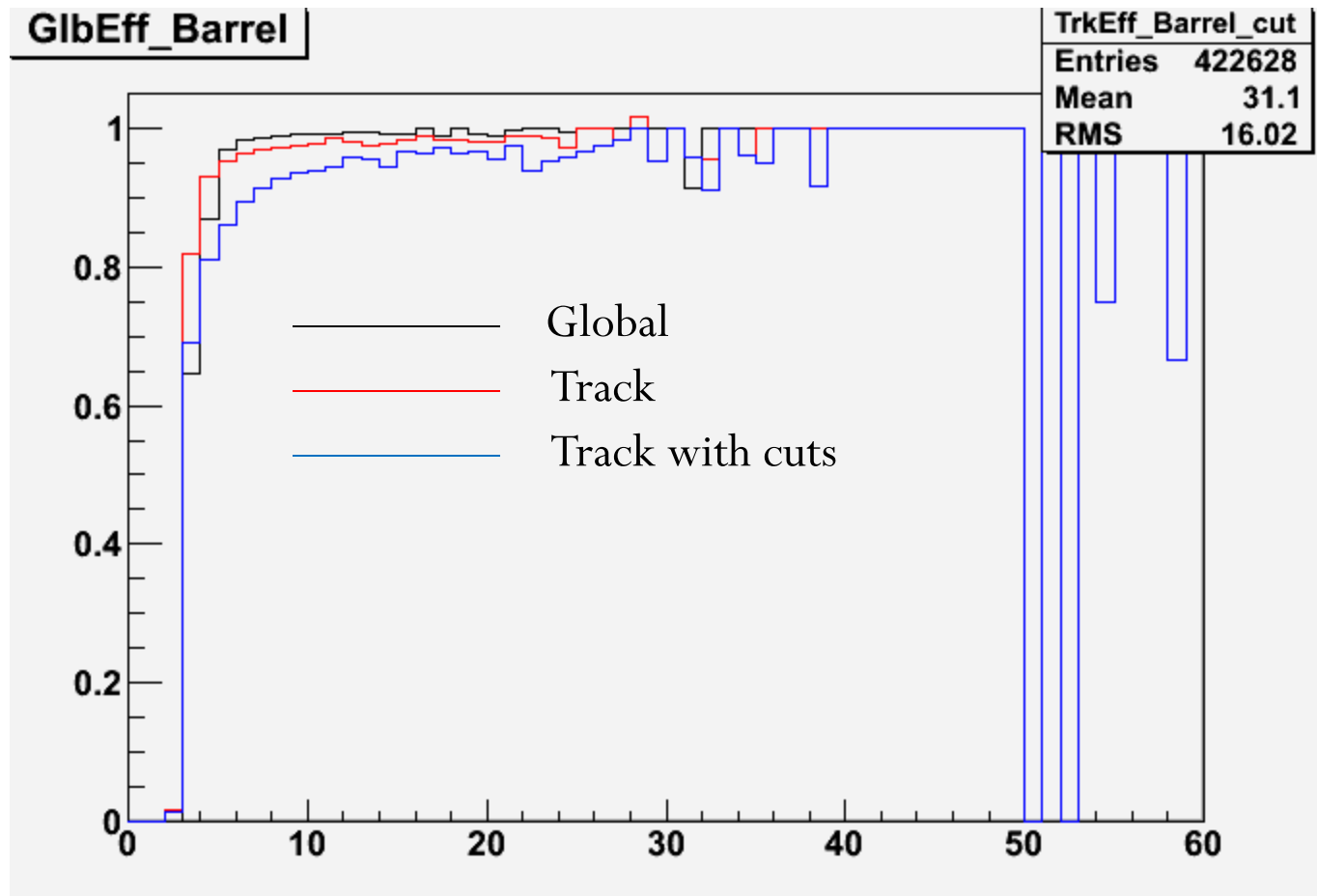
- Muon efficiency:

$$\varepsilon = \frac{N_{reco\mu}(MCTruthMatch)}{N_{gen\mu}}$$

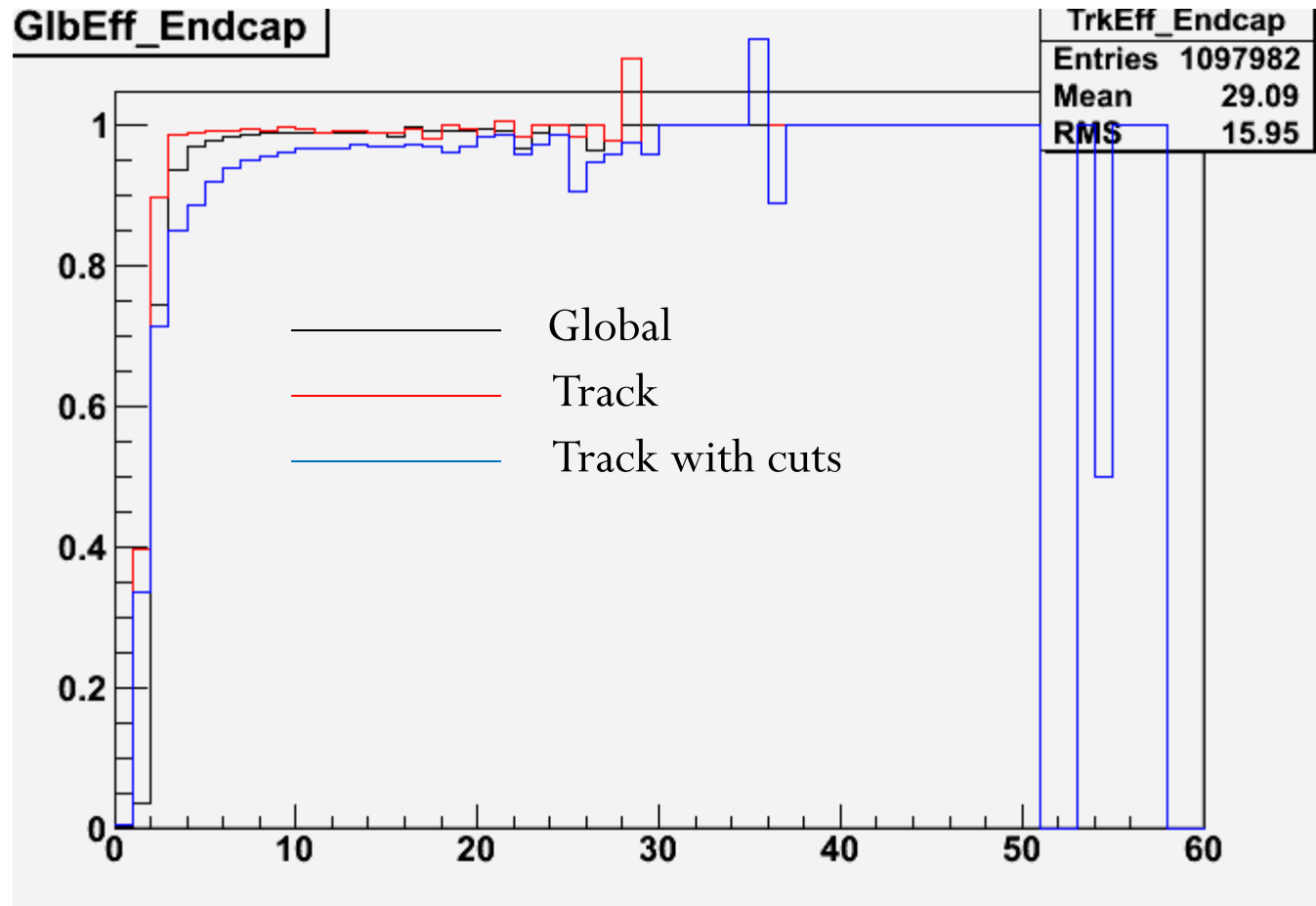
Muon Efficiency (Glb vs Trk&Trk')



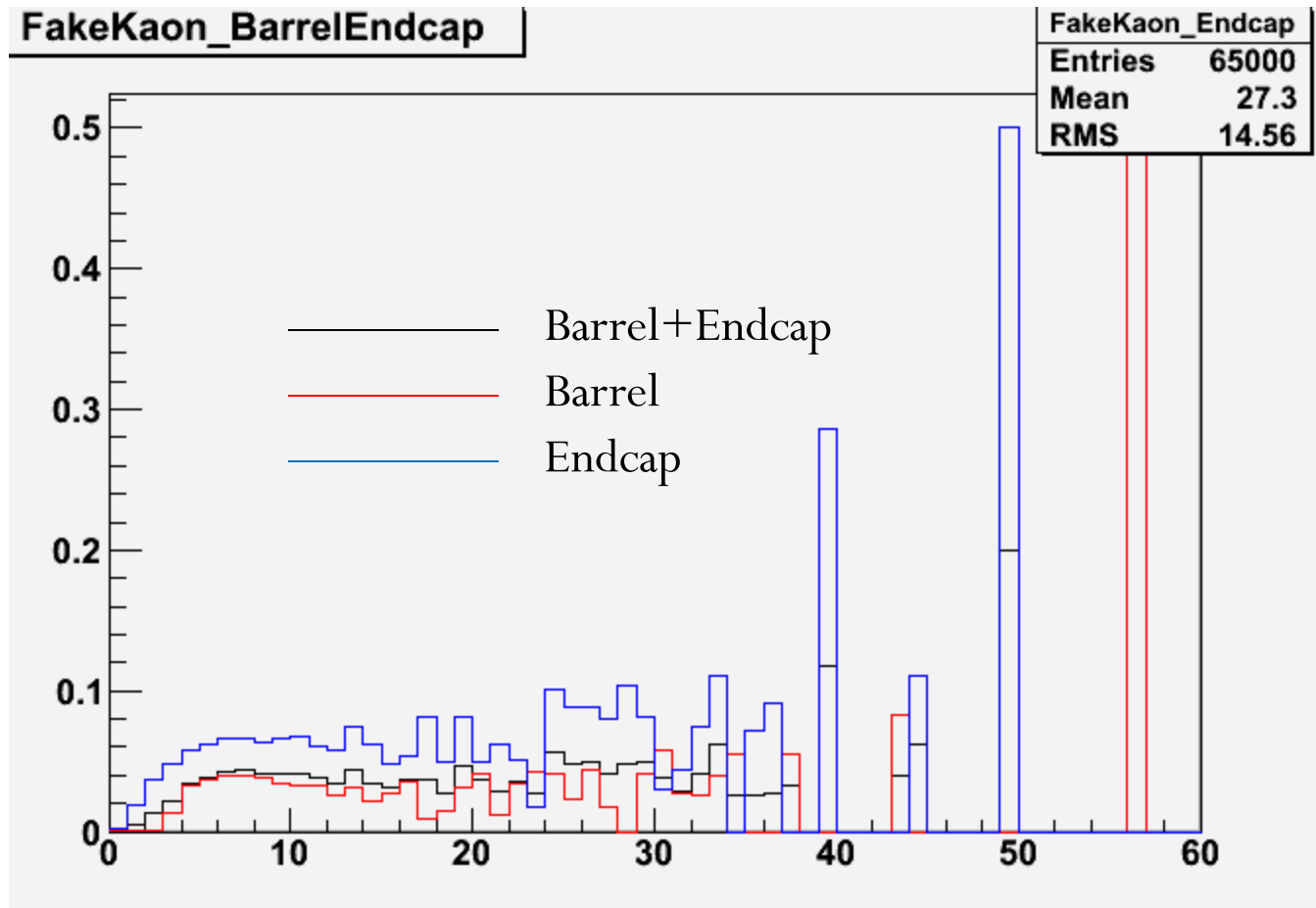
Muon Efficiency (Glb vs Trk)



Muon Efficiency (Glb vs Trk)



Fake Rate of Kaon



Fake Rate of Pion

