Asymmetry FB
in 7 TeV

Youn Roh

Analysis information

1. CMSSW_3_3_5
2. MC data

   /Zmumu/Summer09-MC_31X_V3_7TeV-v1/GEN-SIM-RECO
   /InclusiveMu15/Summer09-MC_31X_V3_7TeV-v1/GEN-SIM-RECO

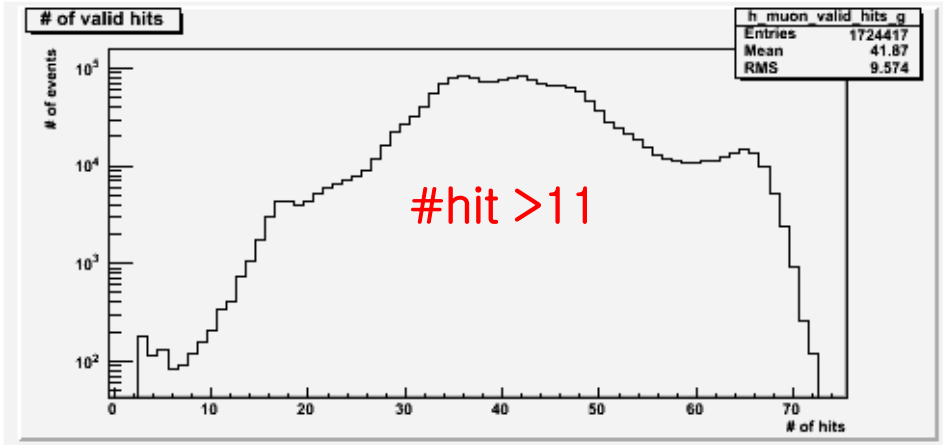
3. Basic cut

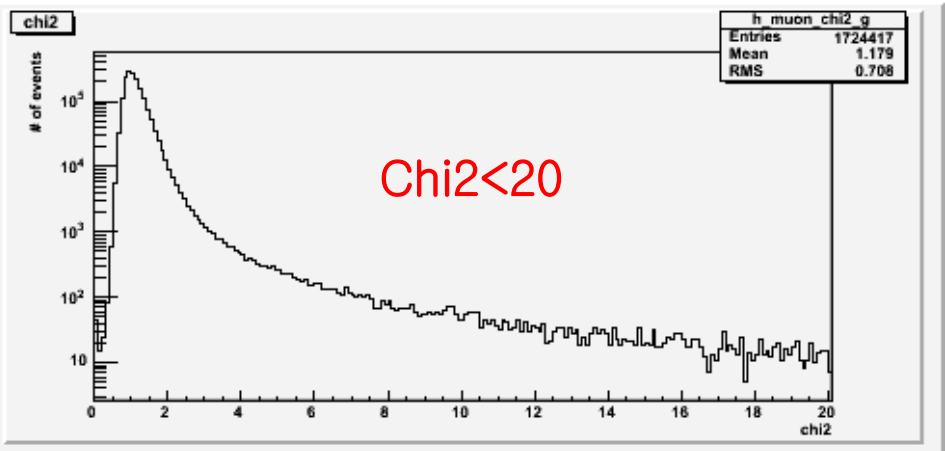
- Bit (40 or 41) && not (36,37,38,39)
- Primary Vertex >0 (not Fake && ndof>4)

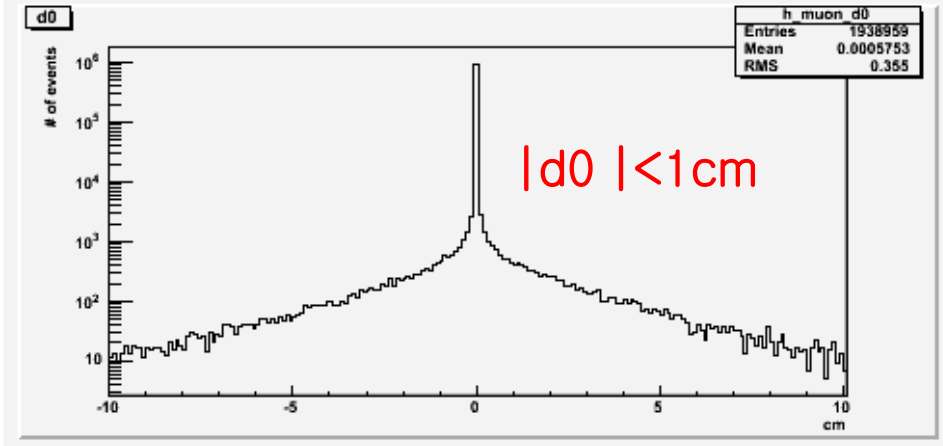
4. Muon cut

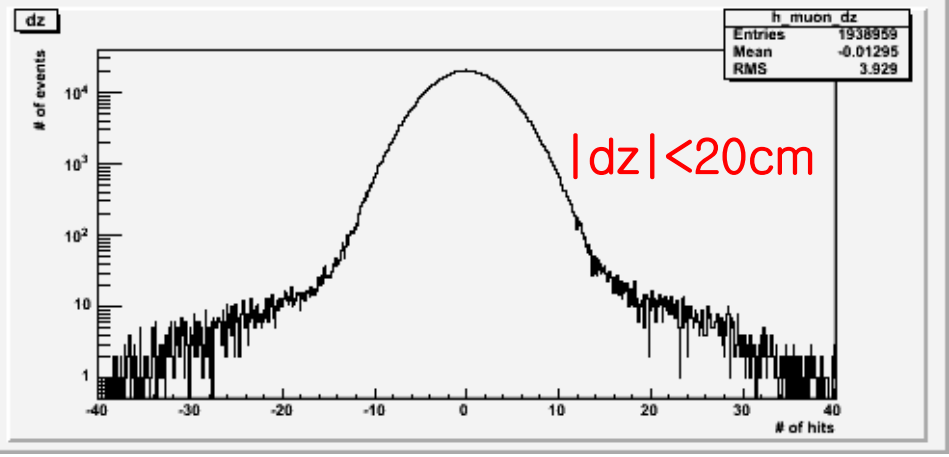
- Global Muon
- MuonID: GlobalMuonPromptTight,
- #hit>11, chi2<20, |d0|<1cm, |dz|<20cm, no jet near dR=0.3

Muon

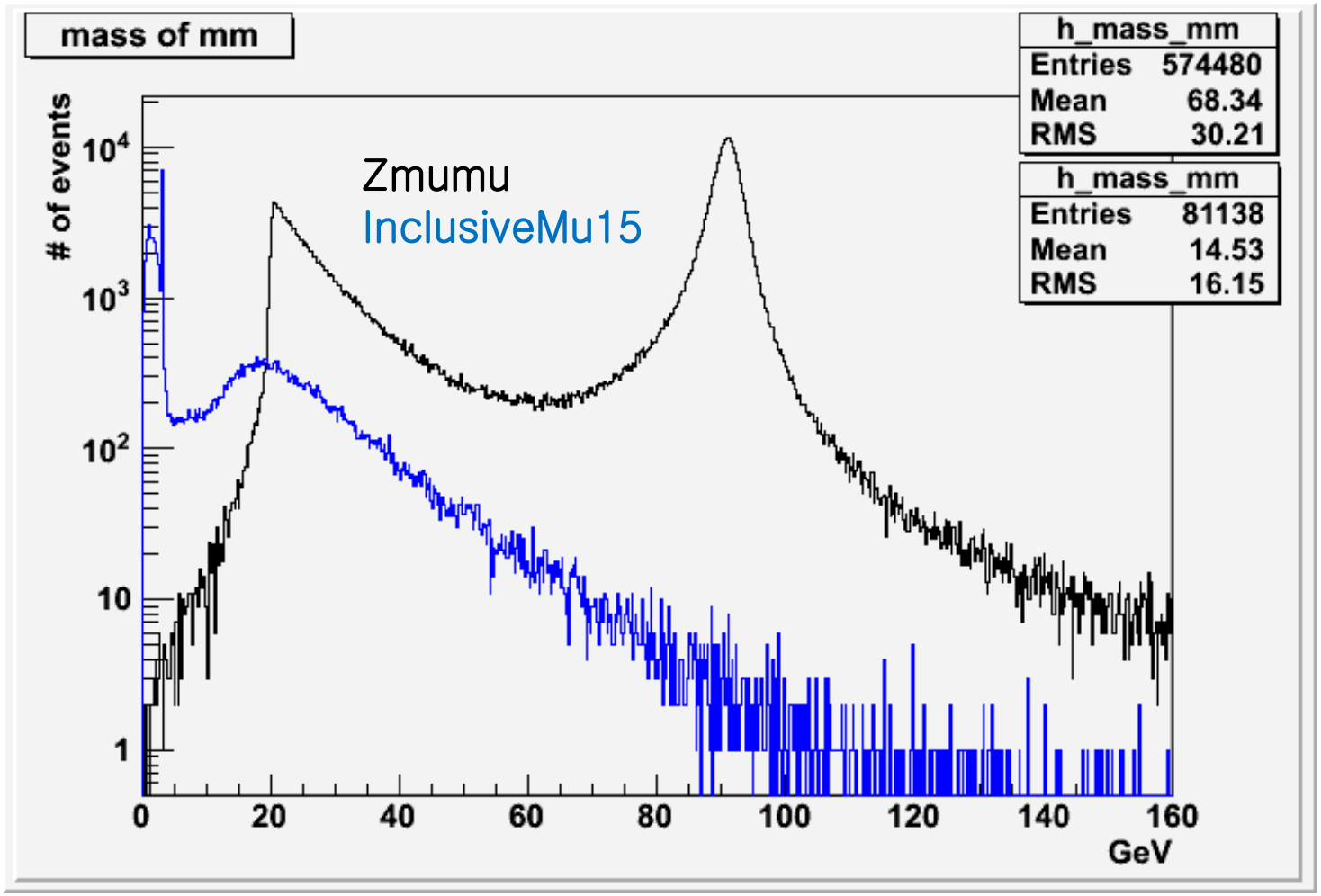

# of valid hits
h_muon_valid_hits_g
Entries 1724417
Mean 41.87
RMS 9.574
# of events
# of hits
#hit >11


chi2
h_muon_chi2_g
Entries 1724417
Mean 1.179
RMS 0.708
# of events
chi2
Chi2<20

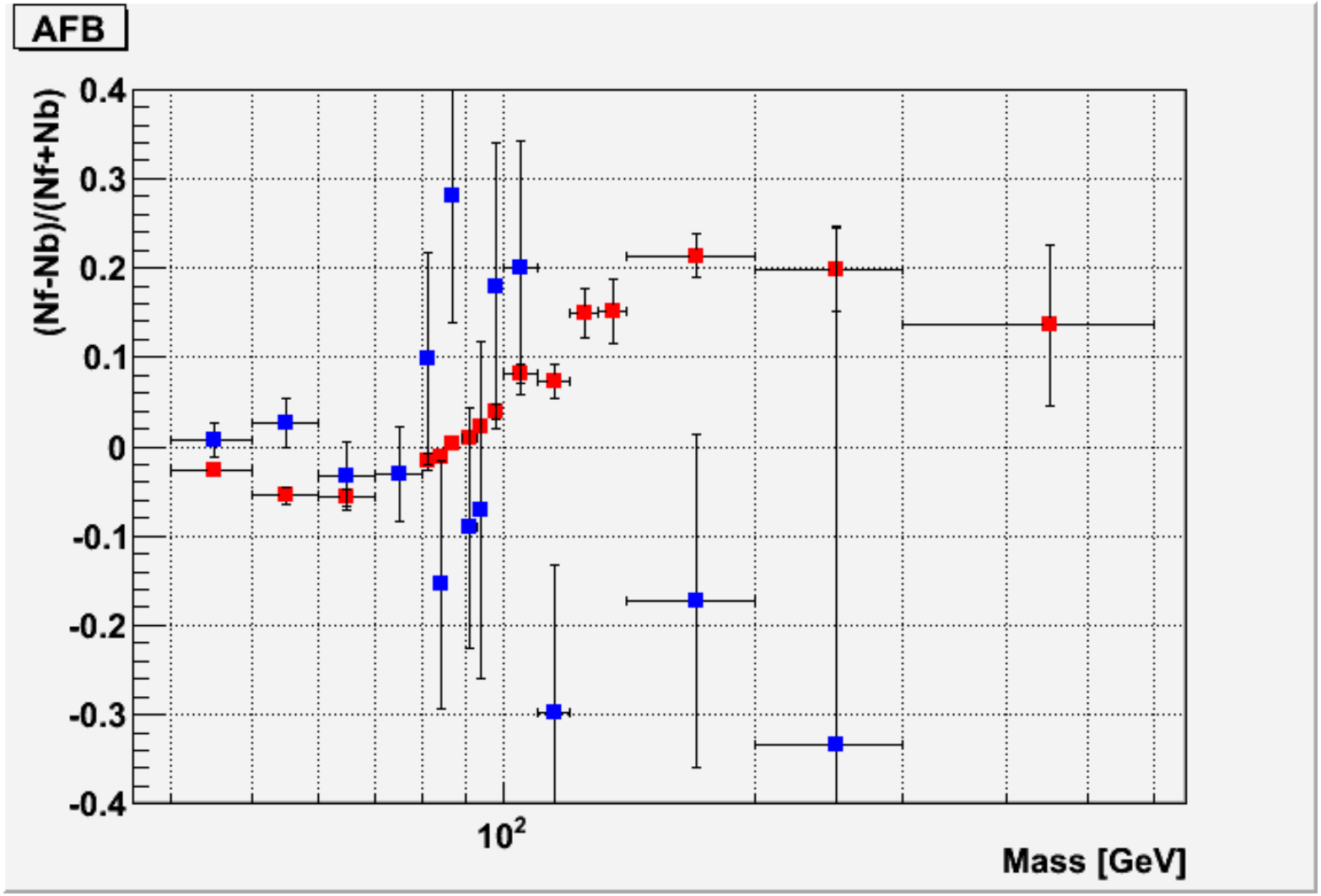

d0
h_muon_d0
Entries 1938959
Mean 0.0005753
RMS 0.355
# of events
cm
|d0 |<1cm


dz
h_muon_dz
Entries 1938959
Mean -0.01295
RMS 3.929
# of events
# of hits
|dz|<20cm

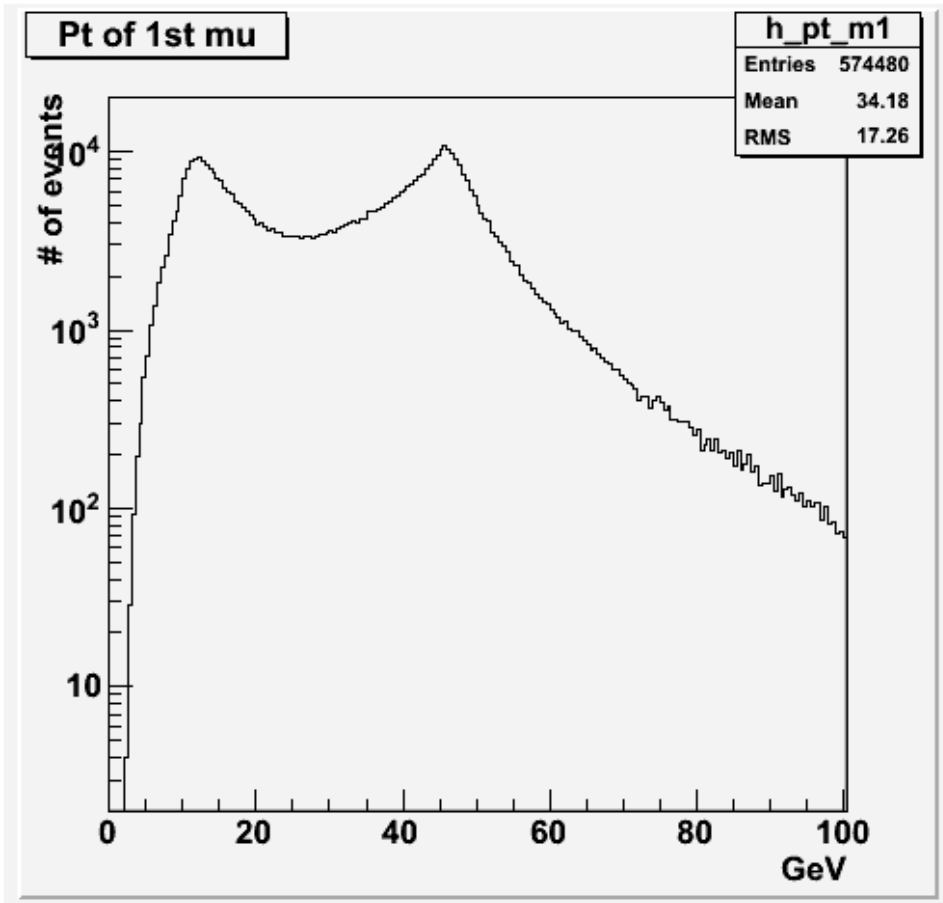
Mass of dimuon

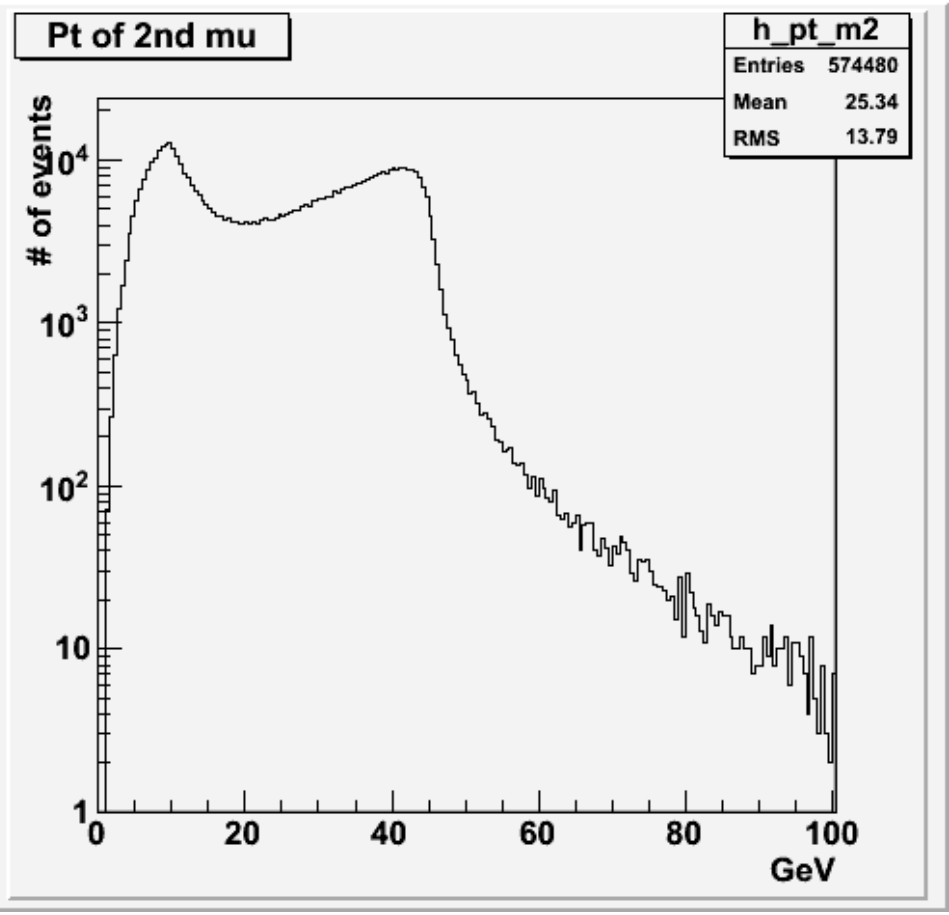


Asymmetry



Pt of muon


Pt of 1st mu
h_pt_m1
Entries 574480
Mean 34.18
RMS 17.26
# of events
10^4
10^3
10^2
10
0
20
40
60
80
100
GeV


Pt of 2nd mu
h_pt_m2
Entries 574480
Mean 25.34
RMS 13.79
# of events
10^4
10^3
10^2
10
1
0
20
40
60
80
100
GeV

Plan

1. Apply eta cut for muon |eta|<2.4
2. Dimuon behavior : Rapidity, Pt, d0…
3. AFB (pt>20GeV,|eta|<1.2, |eta|>1.2) with background
4. Looked at more background samples
   - QDC enchriched
   - Ztautau
   - Ttbar
   - Z'700GeV (Next week)
5. Isolation cut values