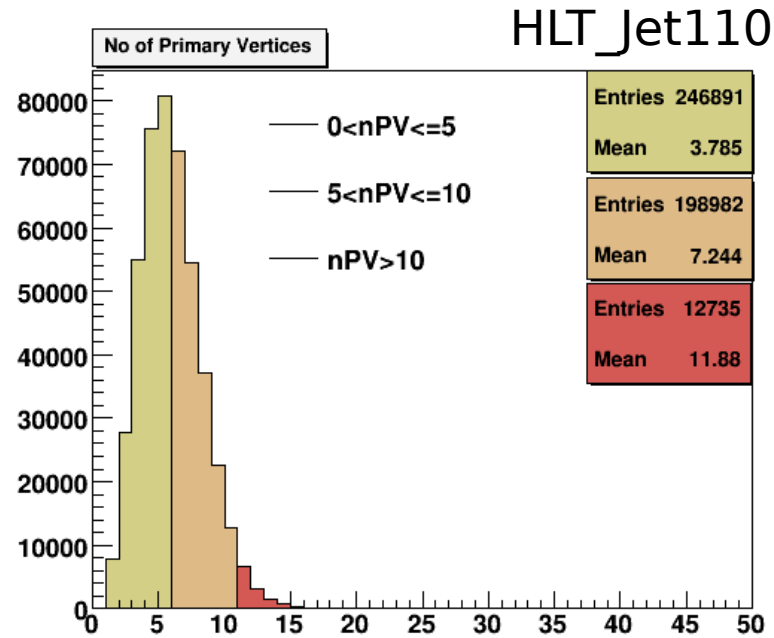
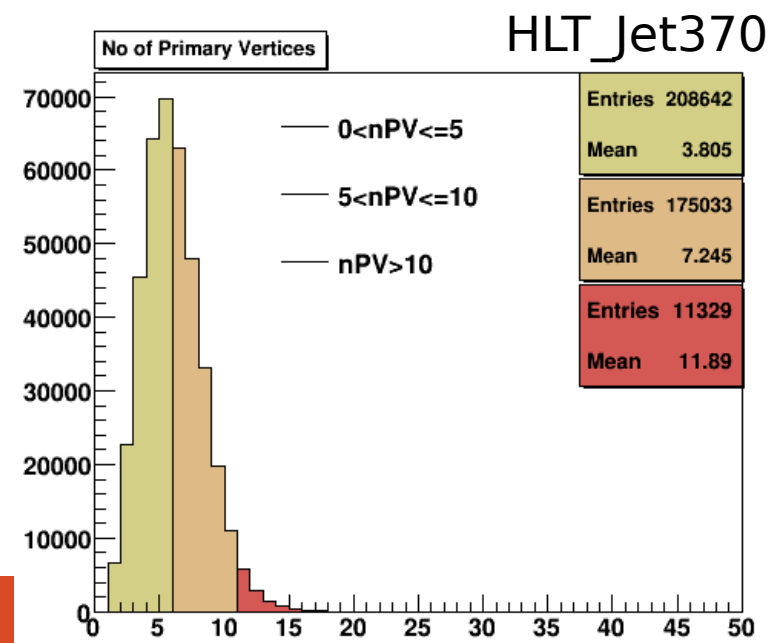
Pile Up Study for Dijet Angular (χ)

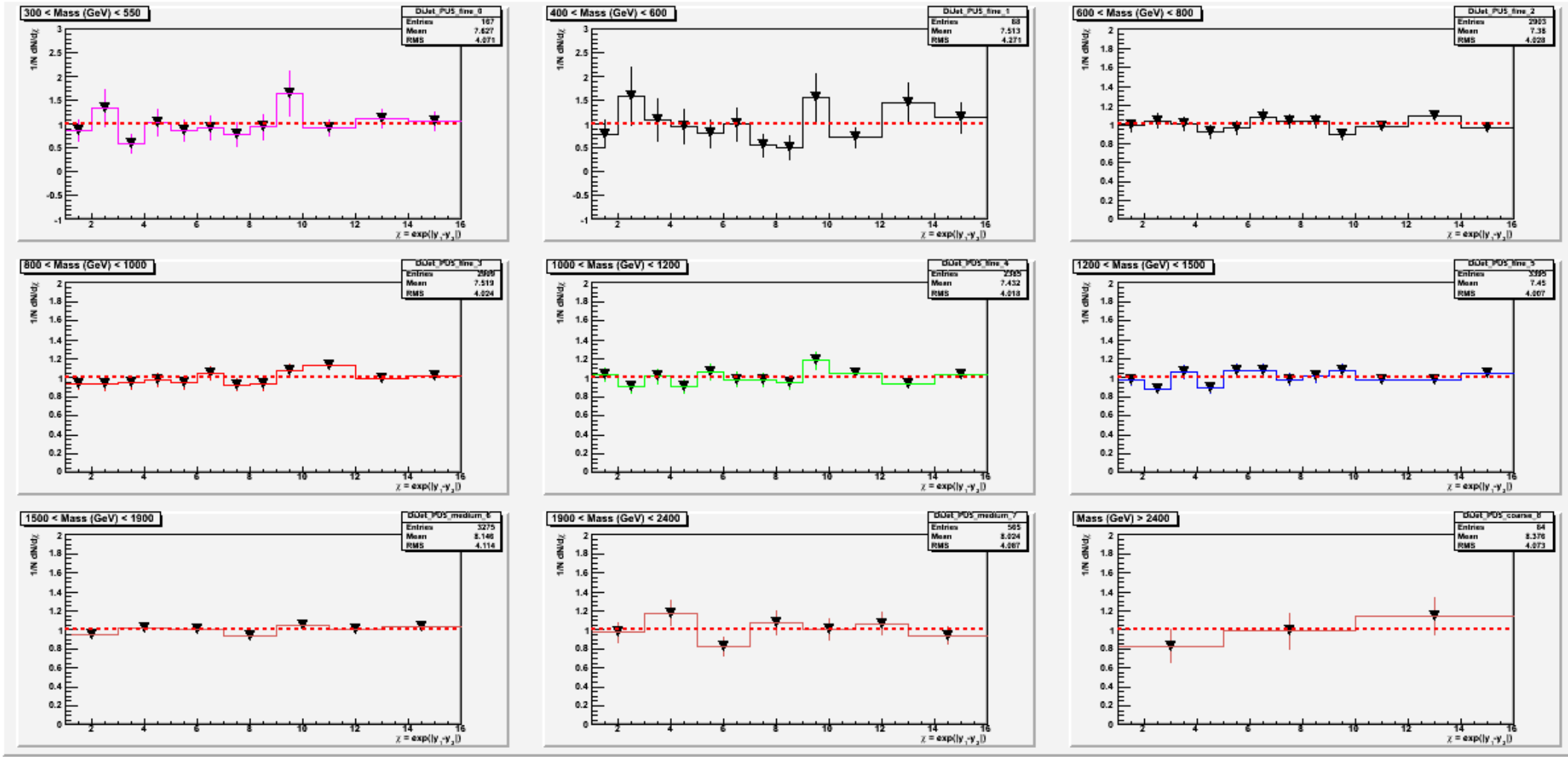
All the plots are done with 2011 Data
May10ReReco: L = 206 pb^{-1}
PromptReco: L = 500 pb^{-1}
Total : 706 pb^{-1} of data
JEC=**L1FastL2L3**
(and only L2L3 for comparison)
Jet Algo: **AK5 PFlow**

<u>For Mass Bins:</u>
300-550 use HLT_Jet30 (for test purpose)
400-600 use HLT_Jet60
600-800 use HLT_Jet110
800-1000 use HLT_Jet150
1000-1200 use HLT_JET190
1200-1500 use HLT_Jet230
1500-1900 use HLT_Jet300
1900-2400 use HLT_Jet300
>2400 use HLT_Jet300

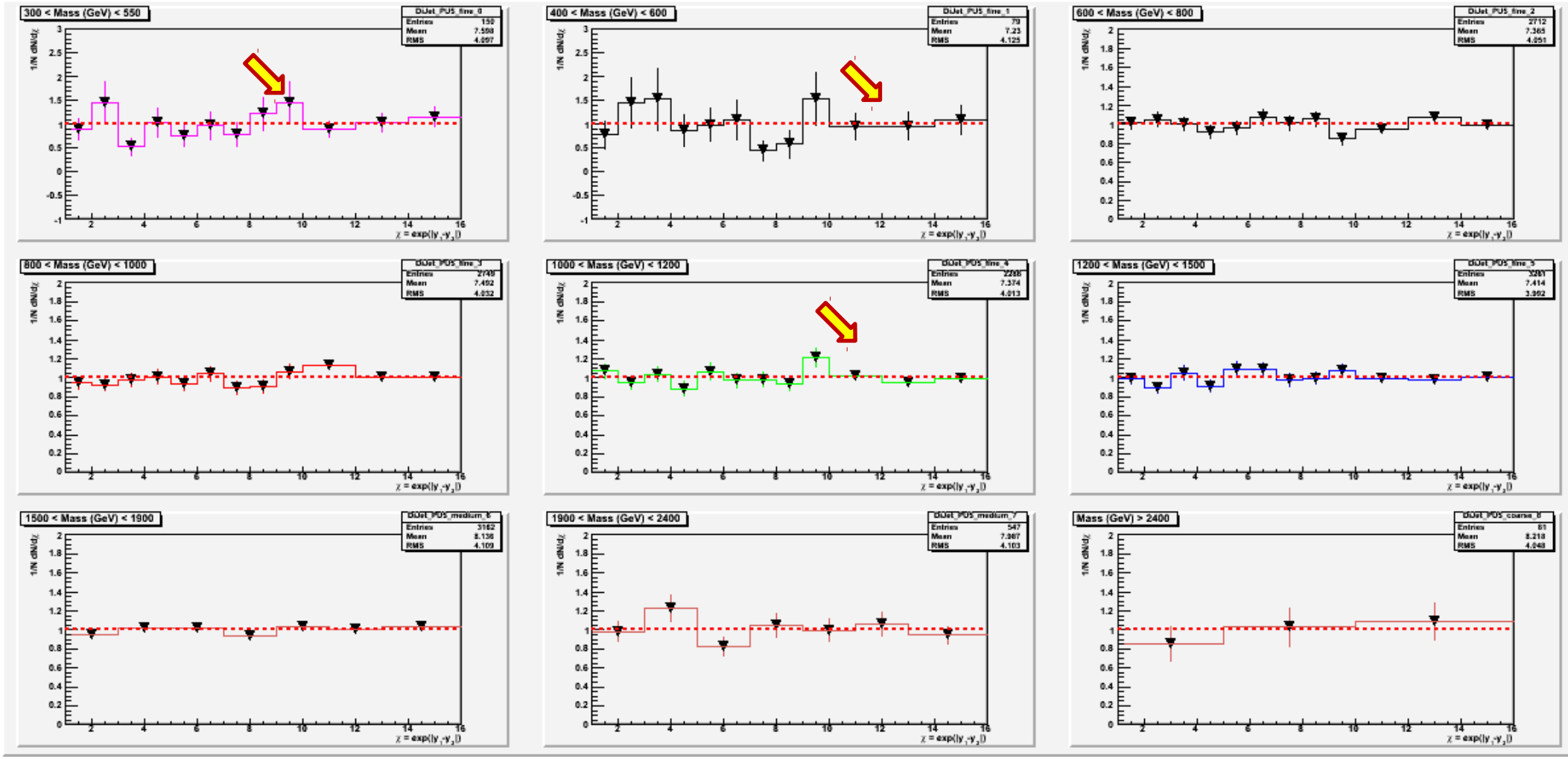




Ratio:(5<PV<=10)/(0<PV<=5) (JEC: L2L3)



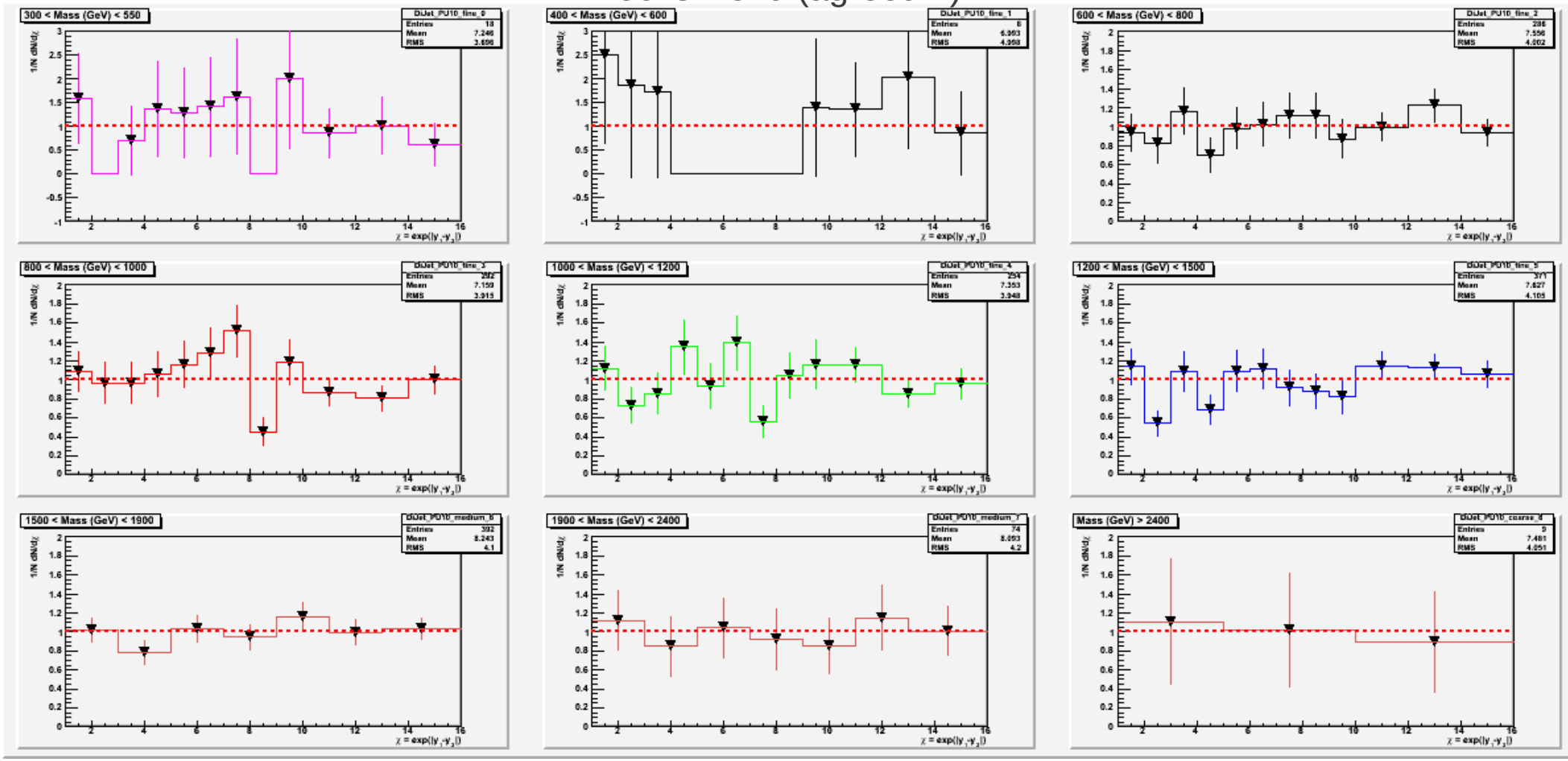
Ratio:(5<PV<=10)/(0<PV<=5) (JEC: L1FastL2L3)



If you flip back and forth, you see applying L1Fast correction reduces the fluctuation (more closer to 1). A zoomed plot shows it better.

Ratio:(PV>10)/(0<PV<=5) (JEC: L2L3)

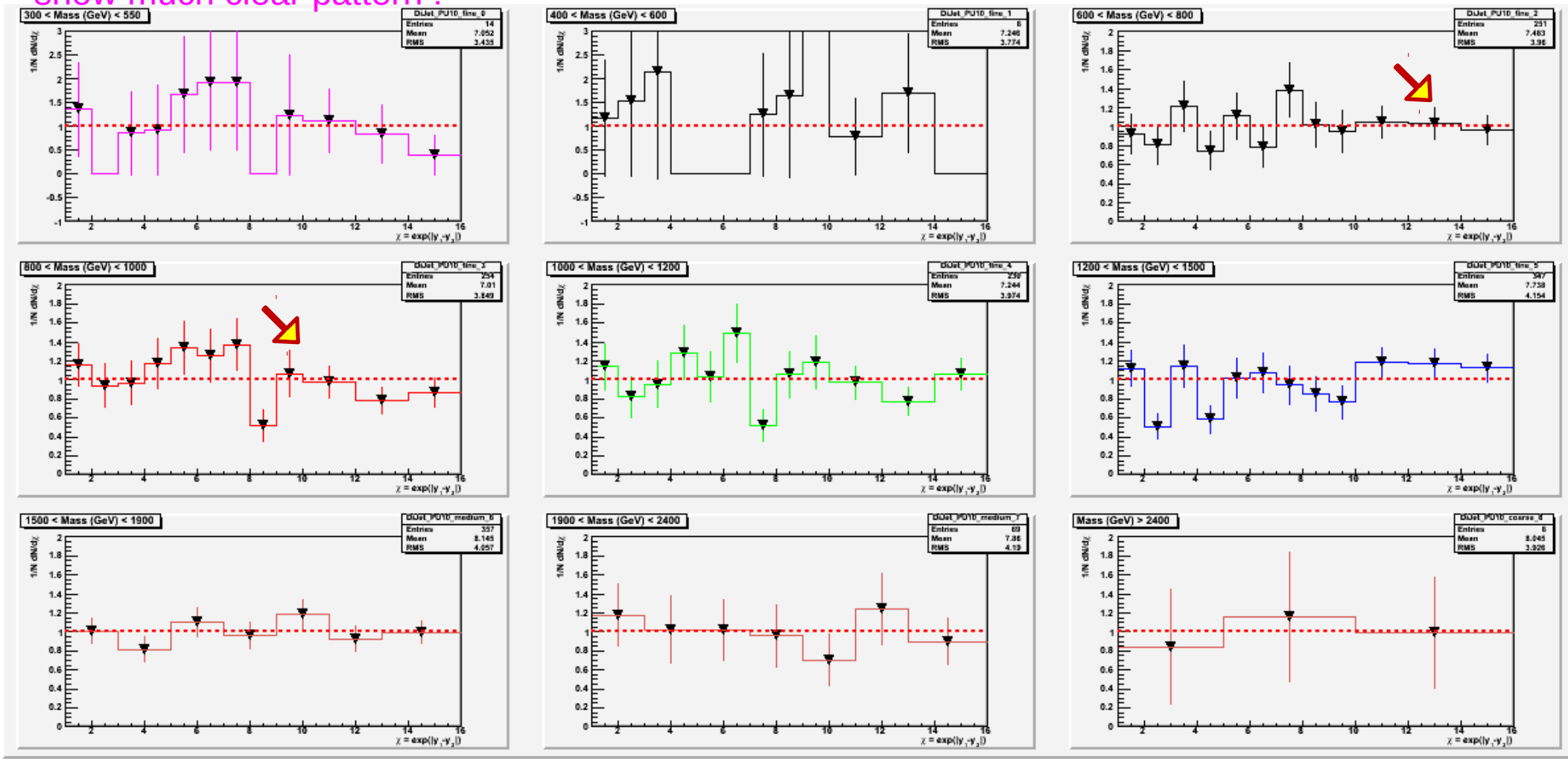
Looks weird (agreed !!)



Ratio:(PV>10)/(0<PV<=5) (JEC: L1FastL2L3)

So this test mass bin does not show much clear pattern !

This trigger is pretty much pre-scaled!



- Frankly, I am not sure whether one needs any cut for pile up in the event selection – as we do not see any clear see any systematic pattern from these graphs!