

On-line (pre-)selection Requisites for:

- **Jets:** number > 5
- **Muons:** number > 0 and has softId

Event Limit: None (see last page)

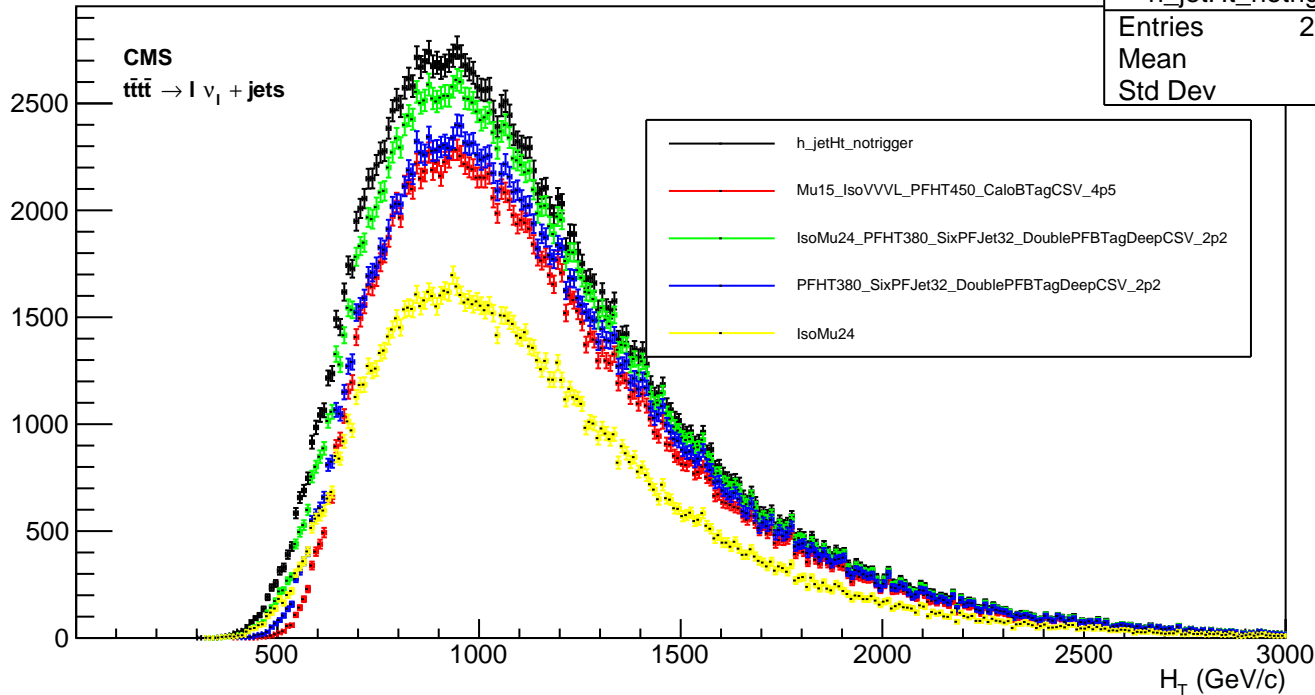
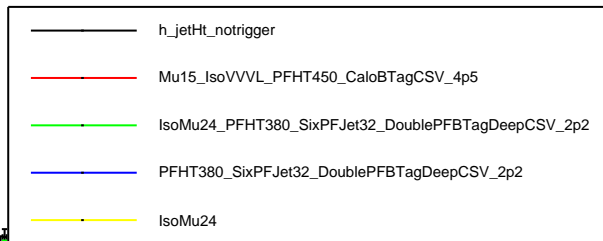
Off-line (post-)selection Requisites for:

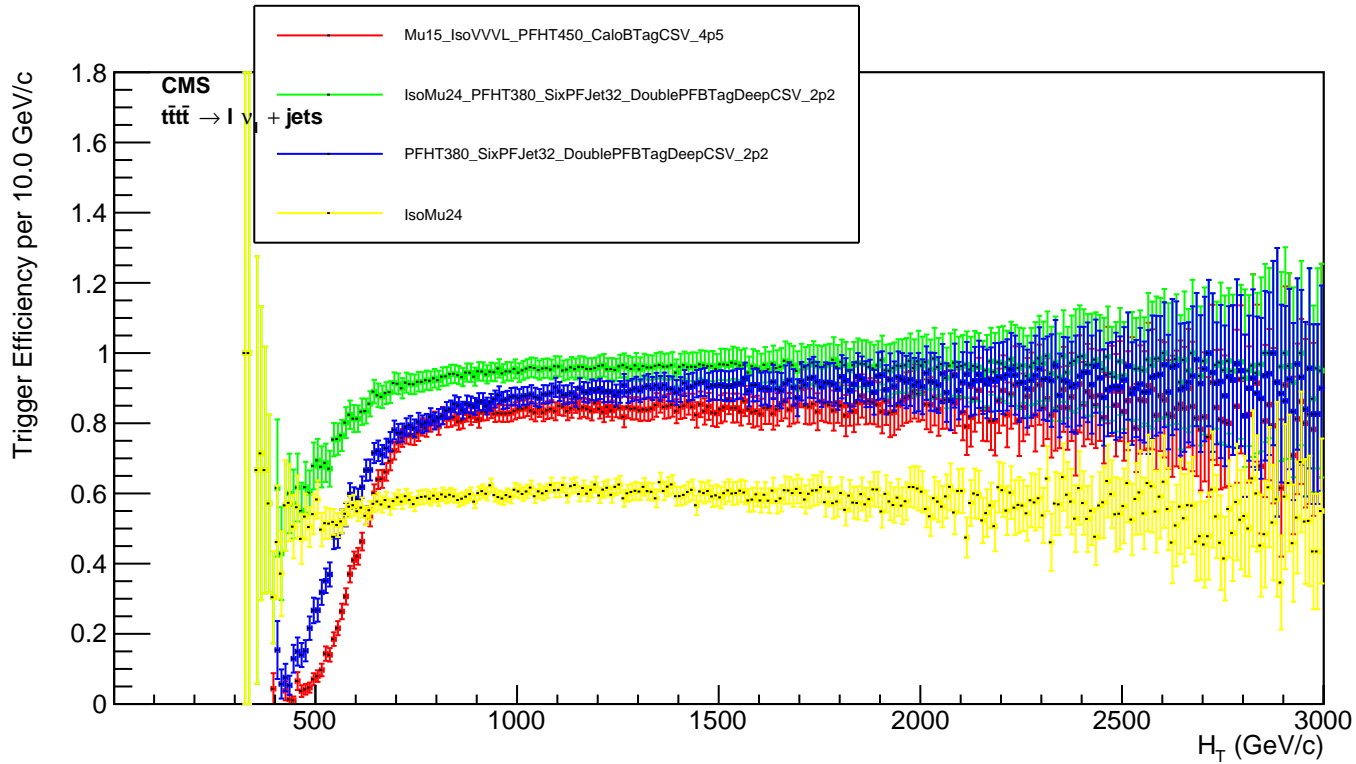
- **Jets:** jetId > 2 , $p_T > 30$ and $|\eta| < 2.4$ (for at least 6)
btagDeepFlavB > 0.7489 (for at least one jet)
- **Muons:** has tightId, $|\eta| < 2.4$ and miniPFRellso_all < 0.15 (for at least 1)

Number of Events per 10 GeV/c

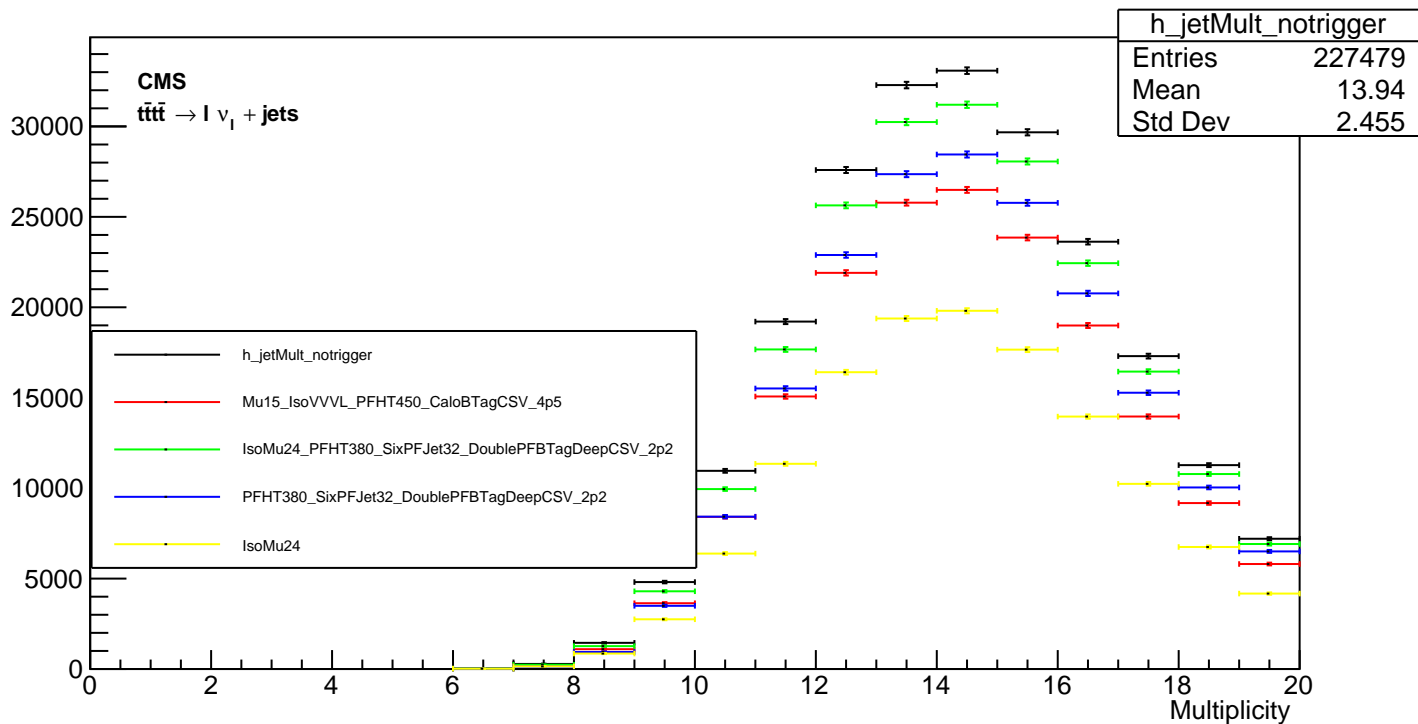
CMS
 $t\bar{t}\bar{t}\bar{t} \rightarrow l \nu_l + \text{jets}$

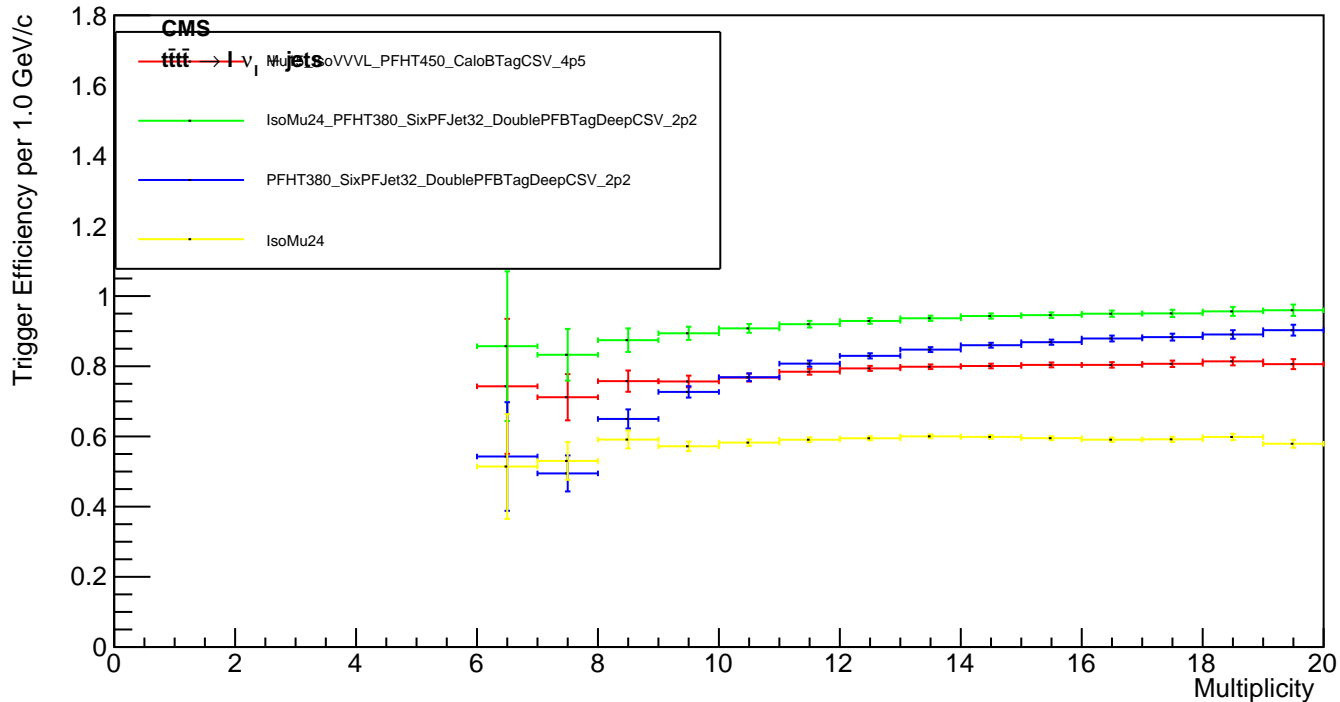
h_jetHt_notrigger	
Entries	227479
Mean	1148
Std Dev	414.9

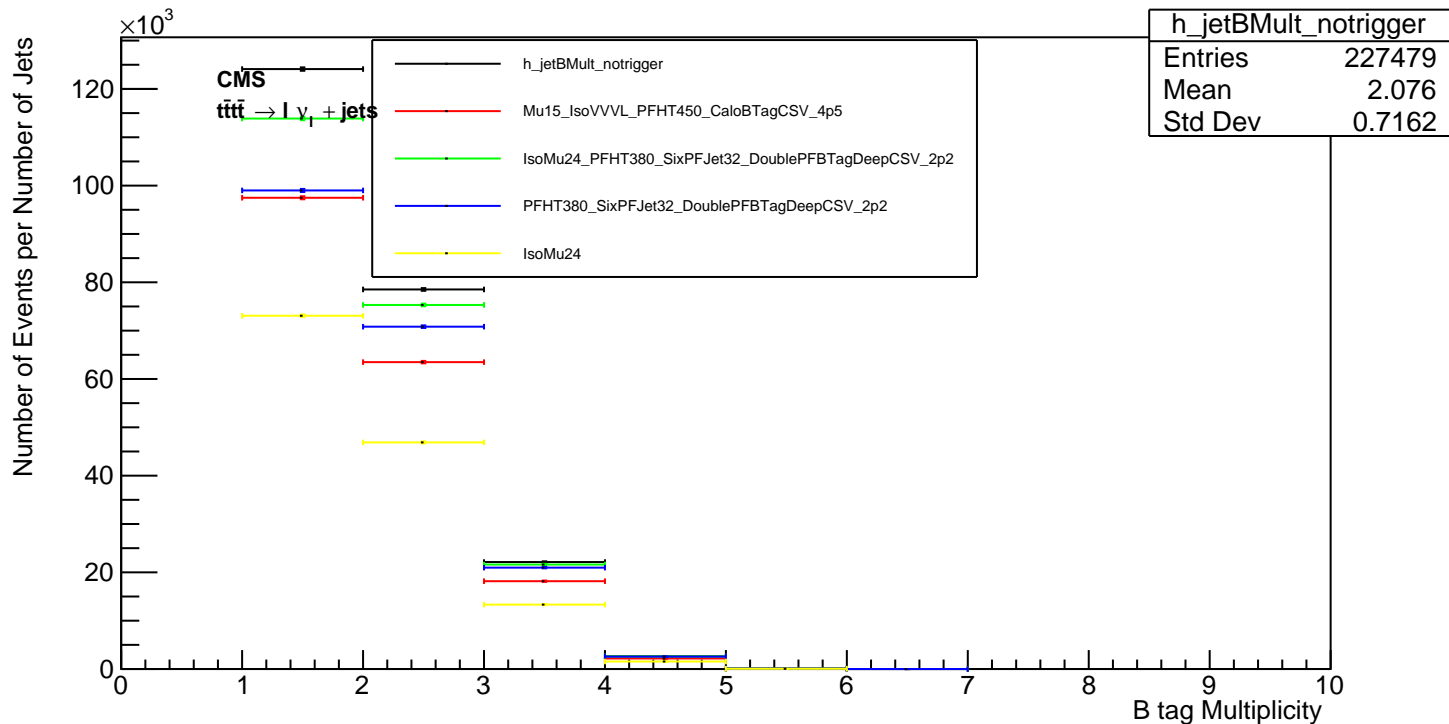


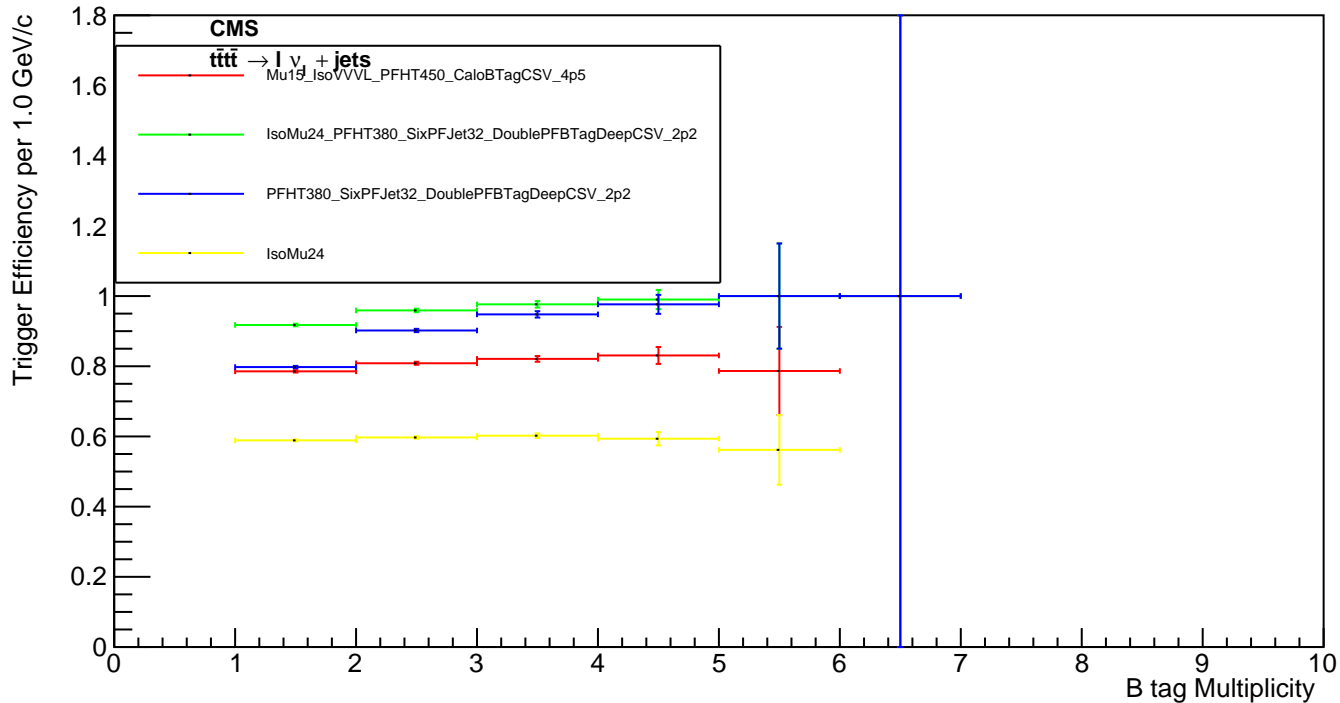


Number of Events per Number of Jets



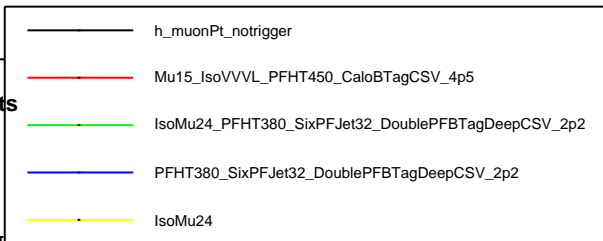




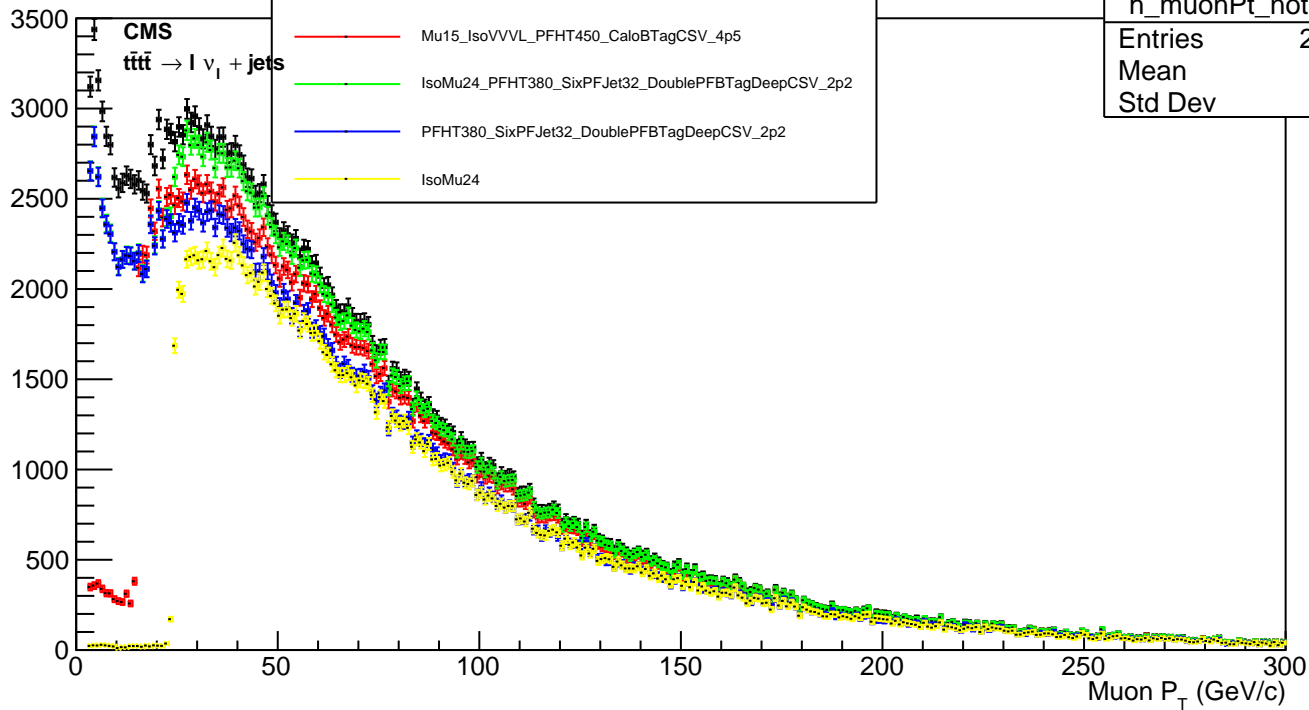


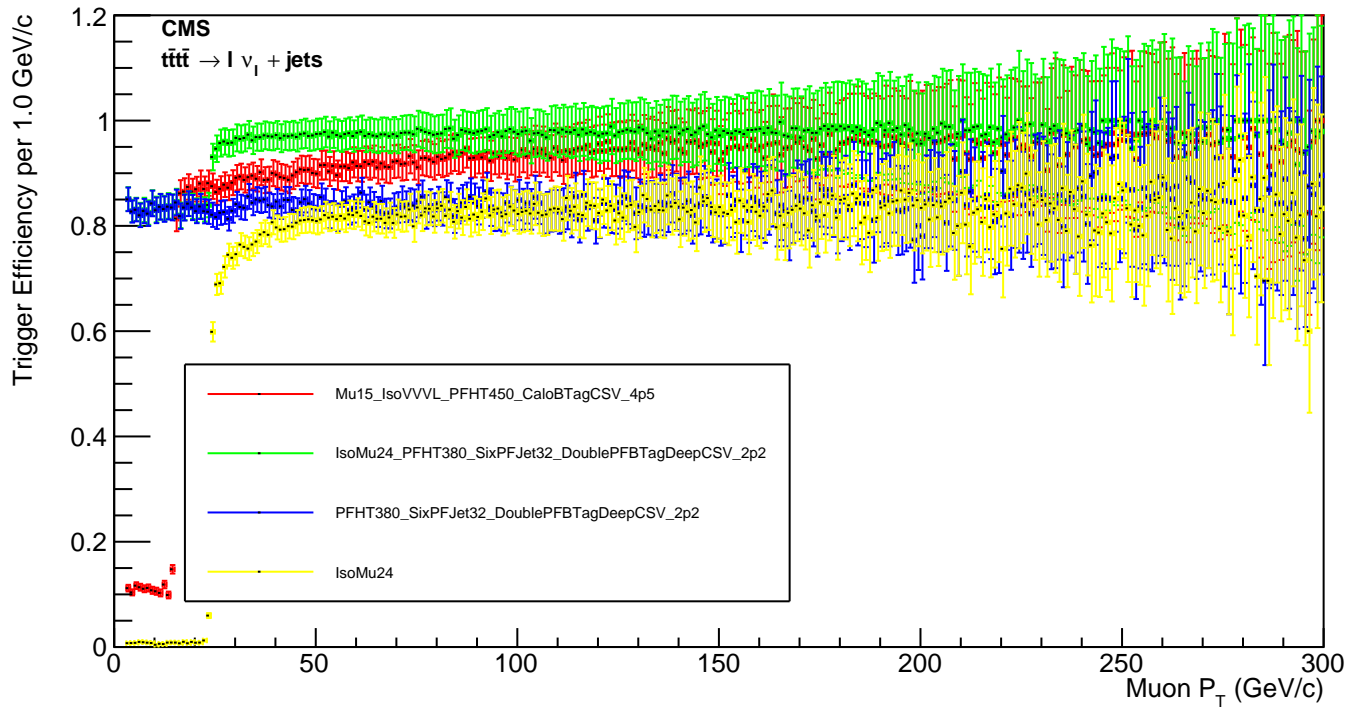
Number of Events per 1 GeV/c

CMS
 $t\bar{t} \rightarrow l \nu_l + \text{jets}$



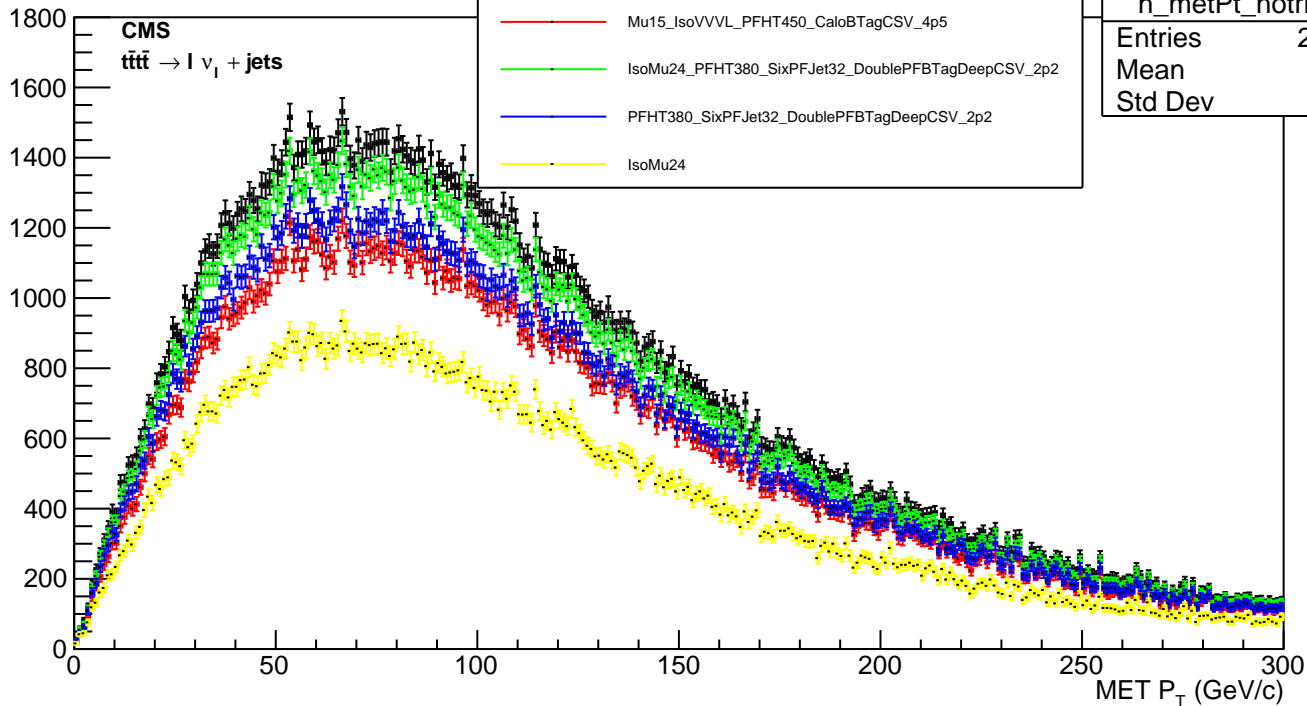
h_muonPt_notrigger	
Entries	278070
Mean	68.25
Std Dev	55.49

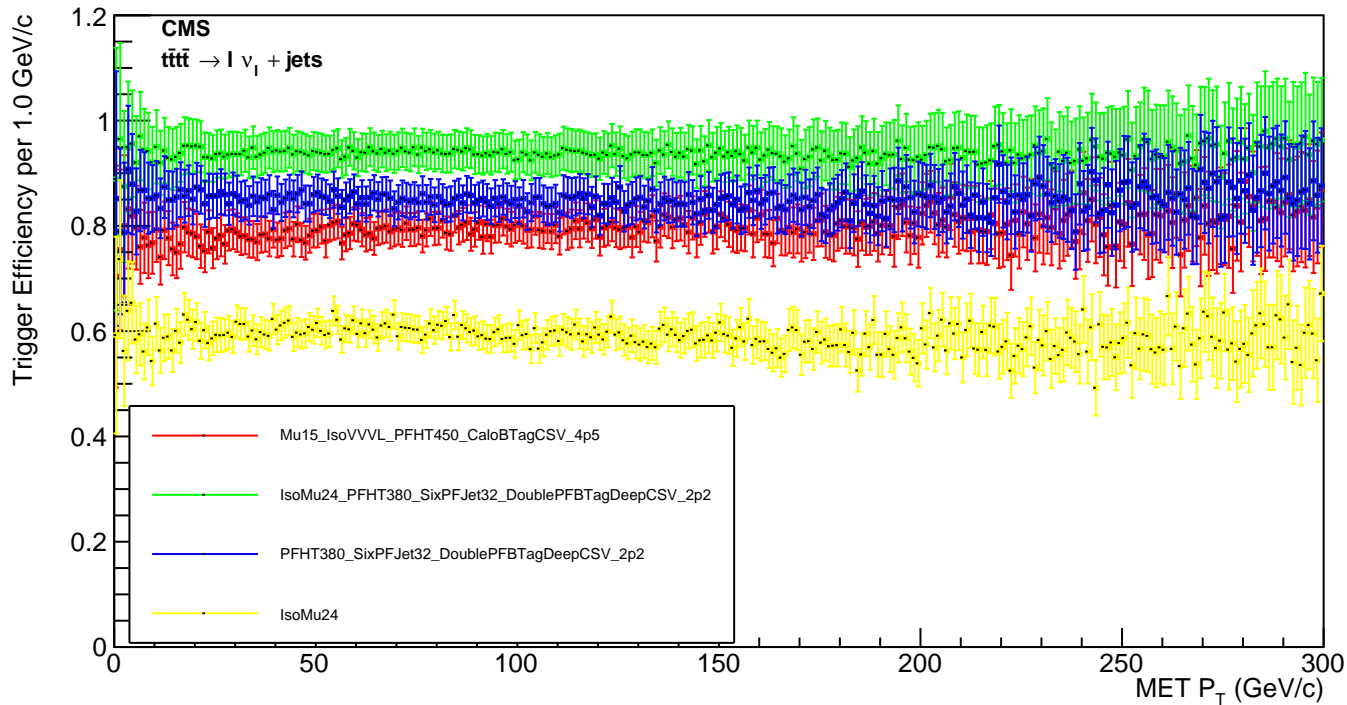




Number of Events per 1 GeV/c

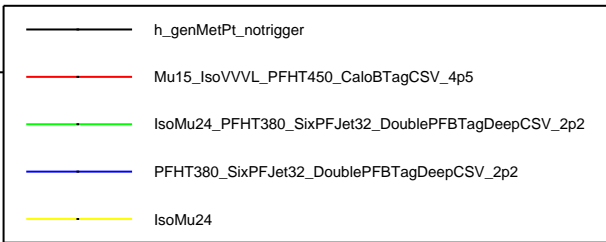
CMS
 $t\bar{t}\bar{t} \rightarrow l \nu_l + \text{jets}$



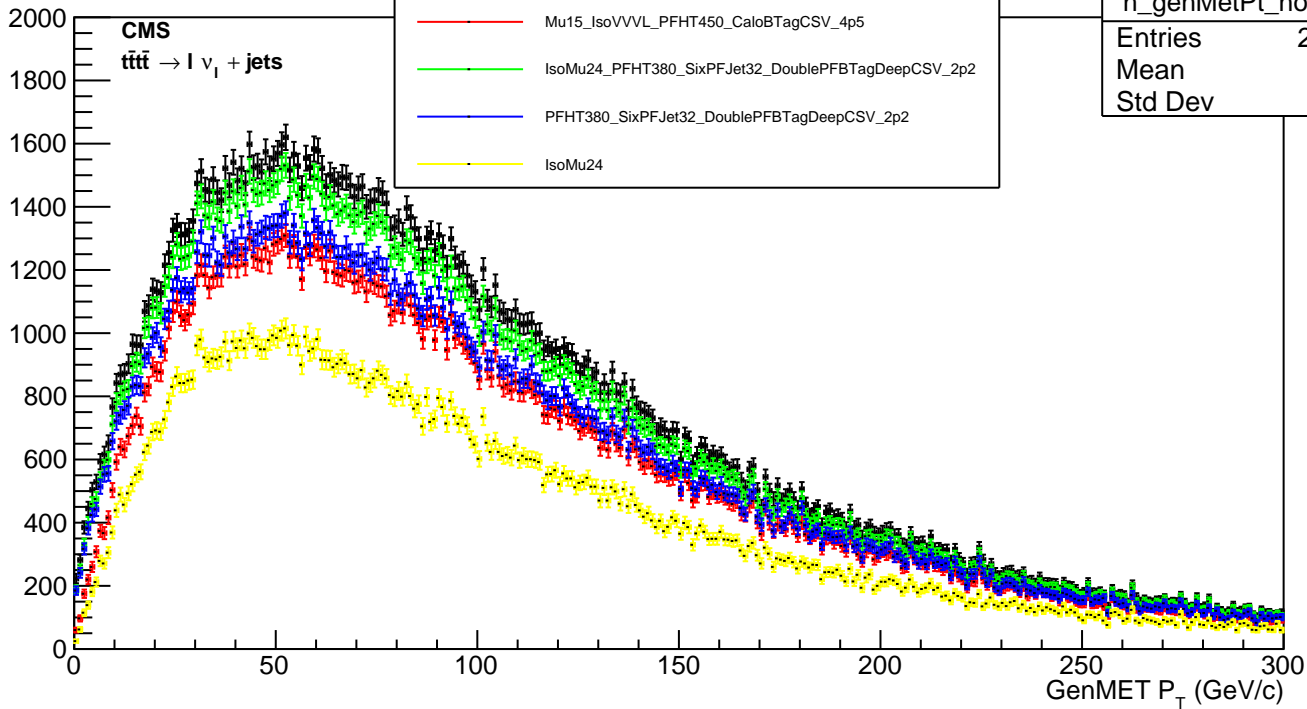


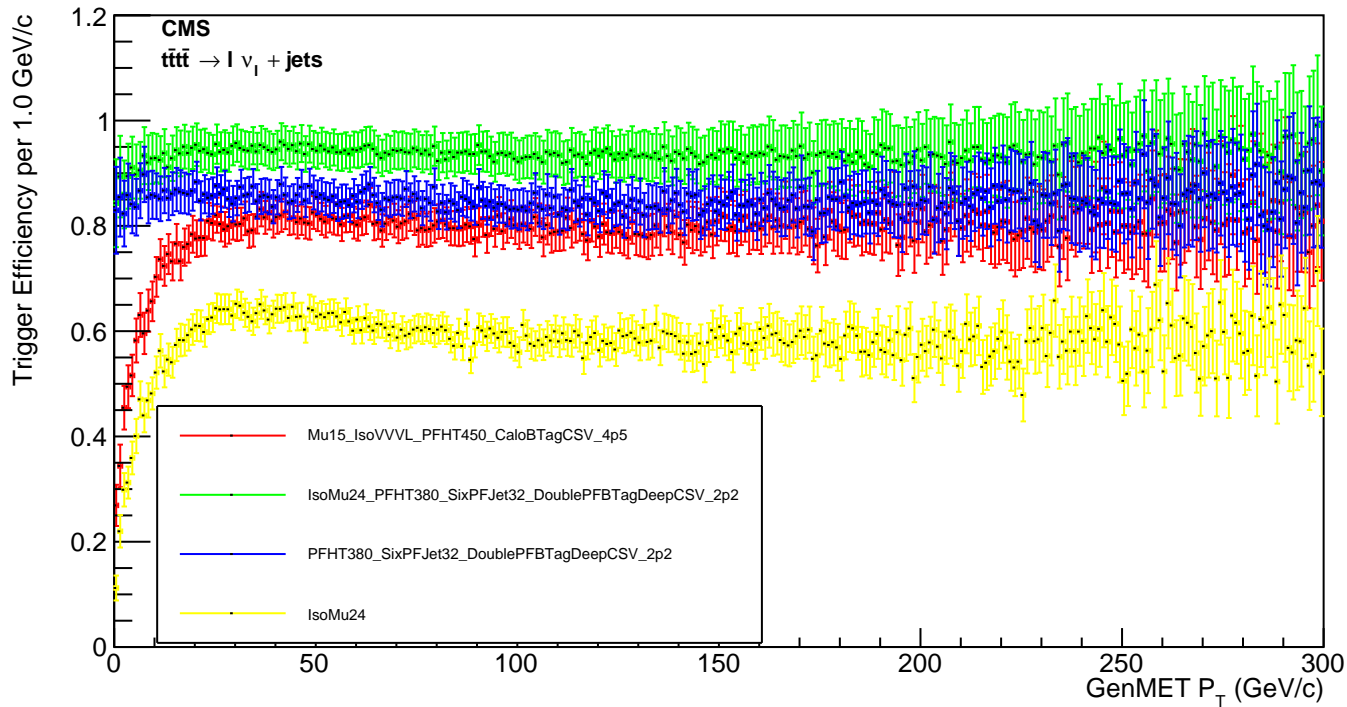
Number of Events per 1GeV/c

CMS
 $t\bar{t}t\bar{t} \rightarrow l \nu_l + \text{jets}$



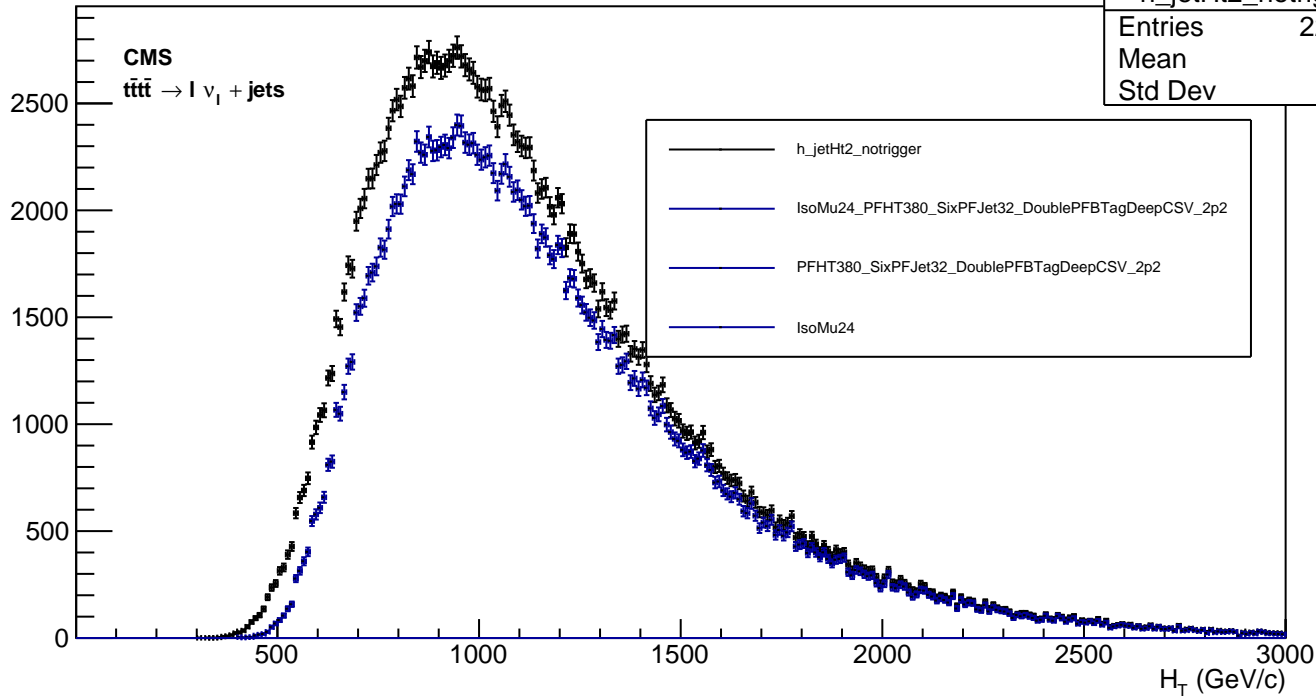
h_genMetPt_notrigger	
Entries	227479
Mean	99.49
Std Dev	65.95





Number of Events per 10 GeV/c

CMS
 $t\bar{t}t\bar{t} \rightarrow l \nu_l + \text{jets}$

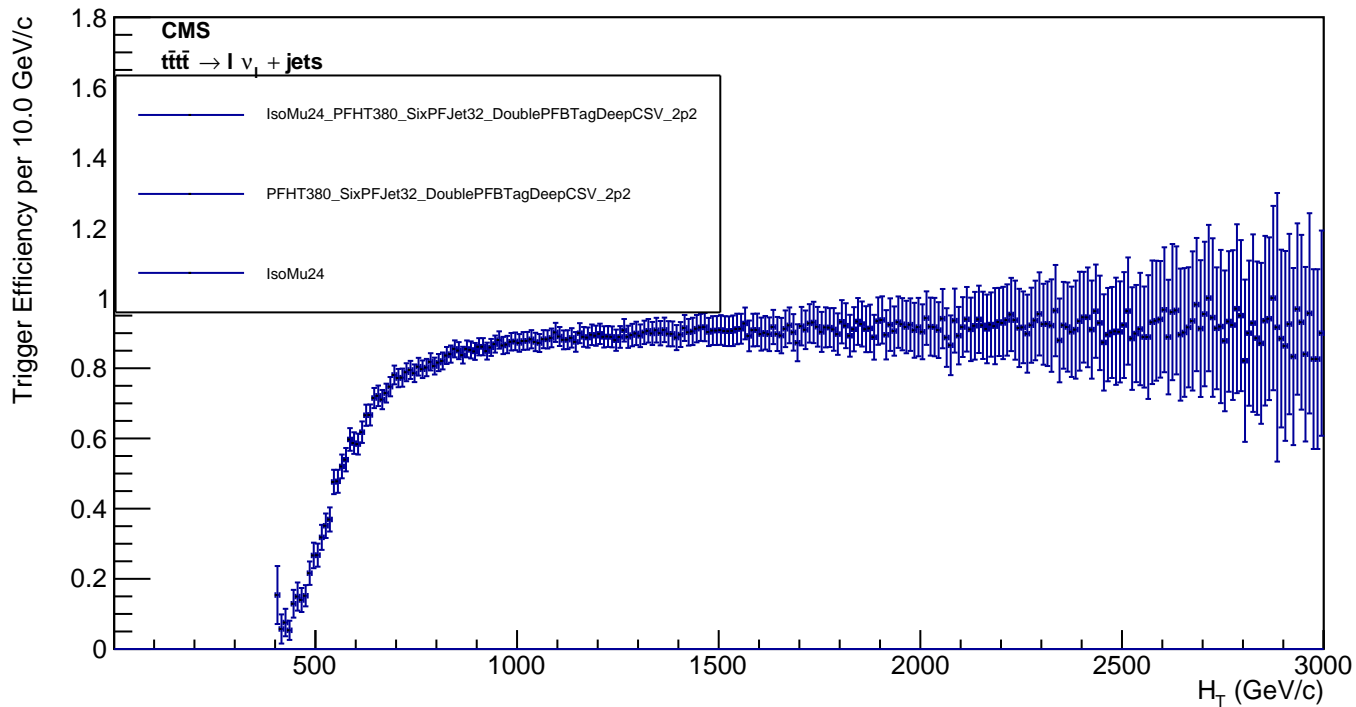


h_jetHt2_notrigger

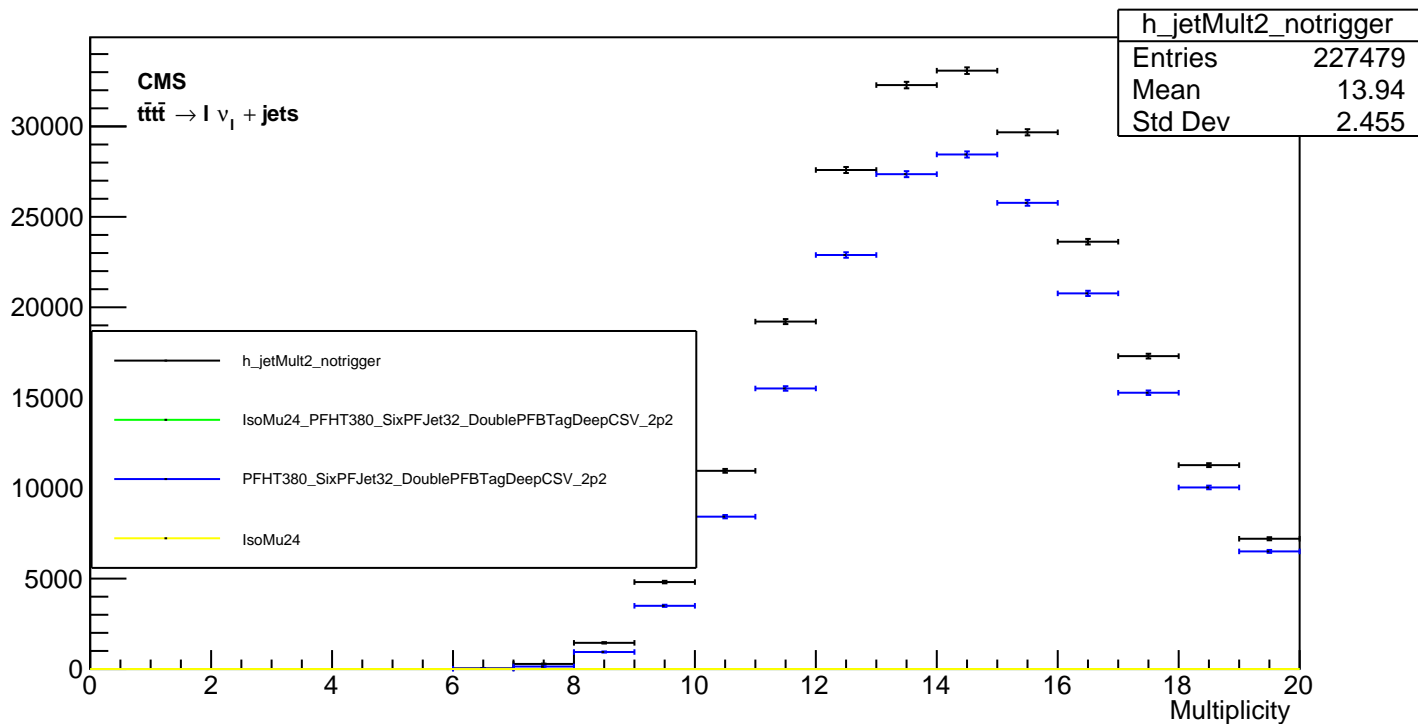
Entries 227479

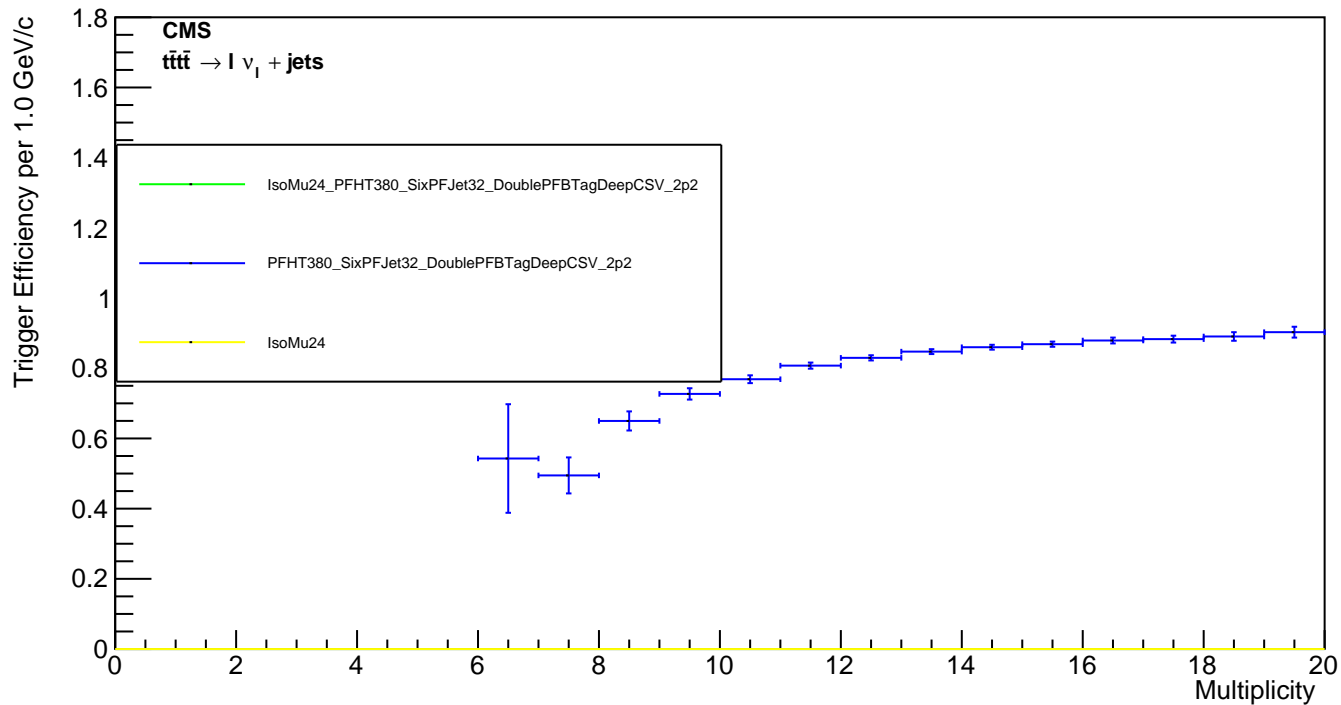
Mean 1148

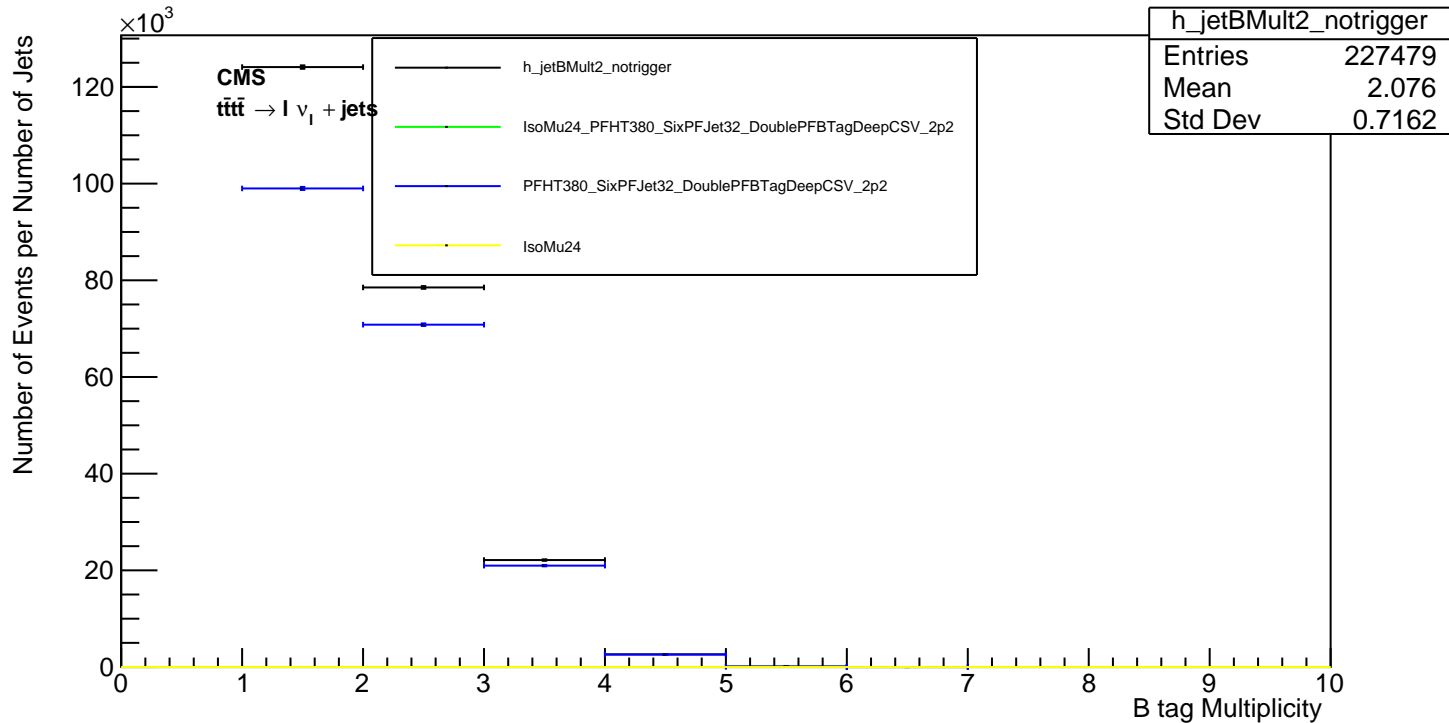
Std Dev 414.9

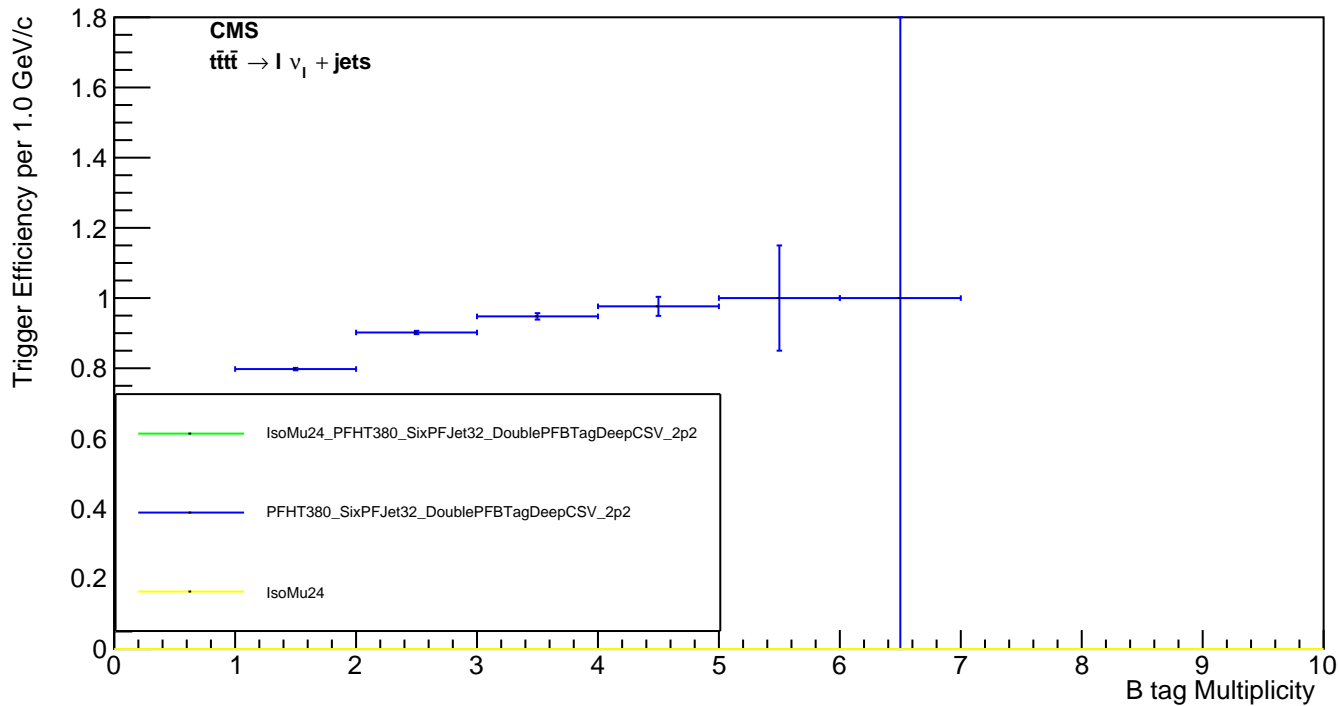


Number of Events per Number of Jets



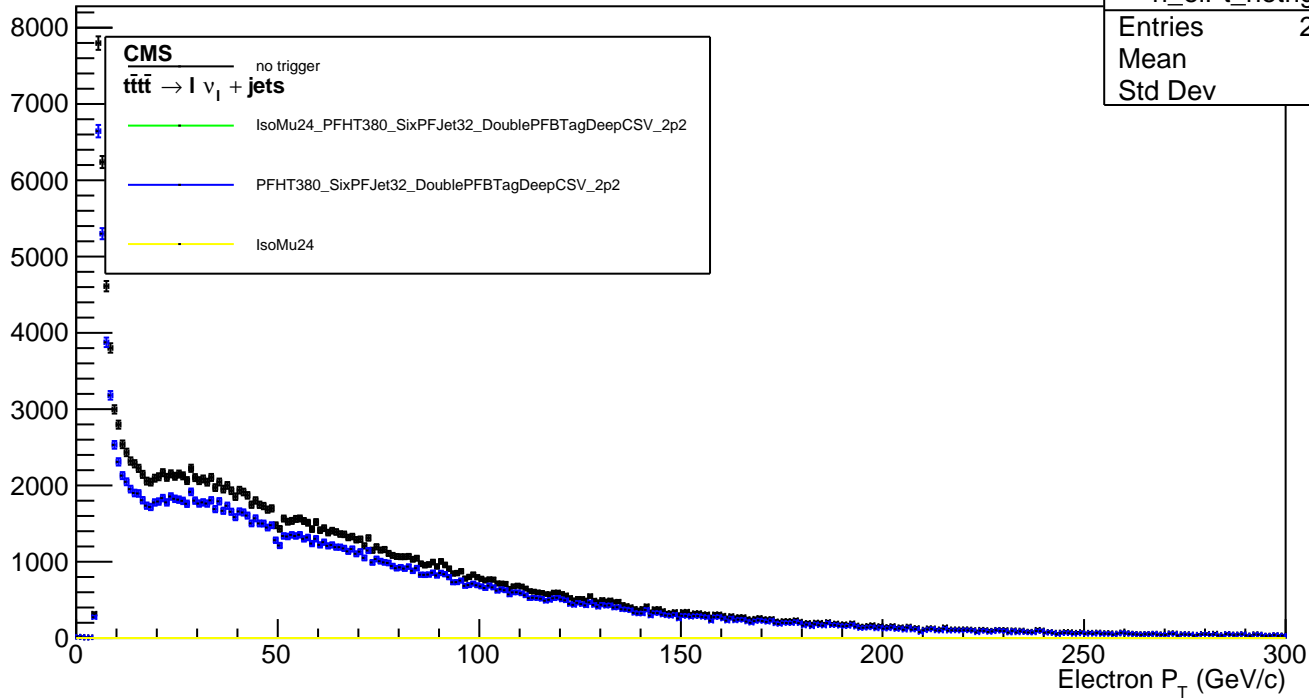






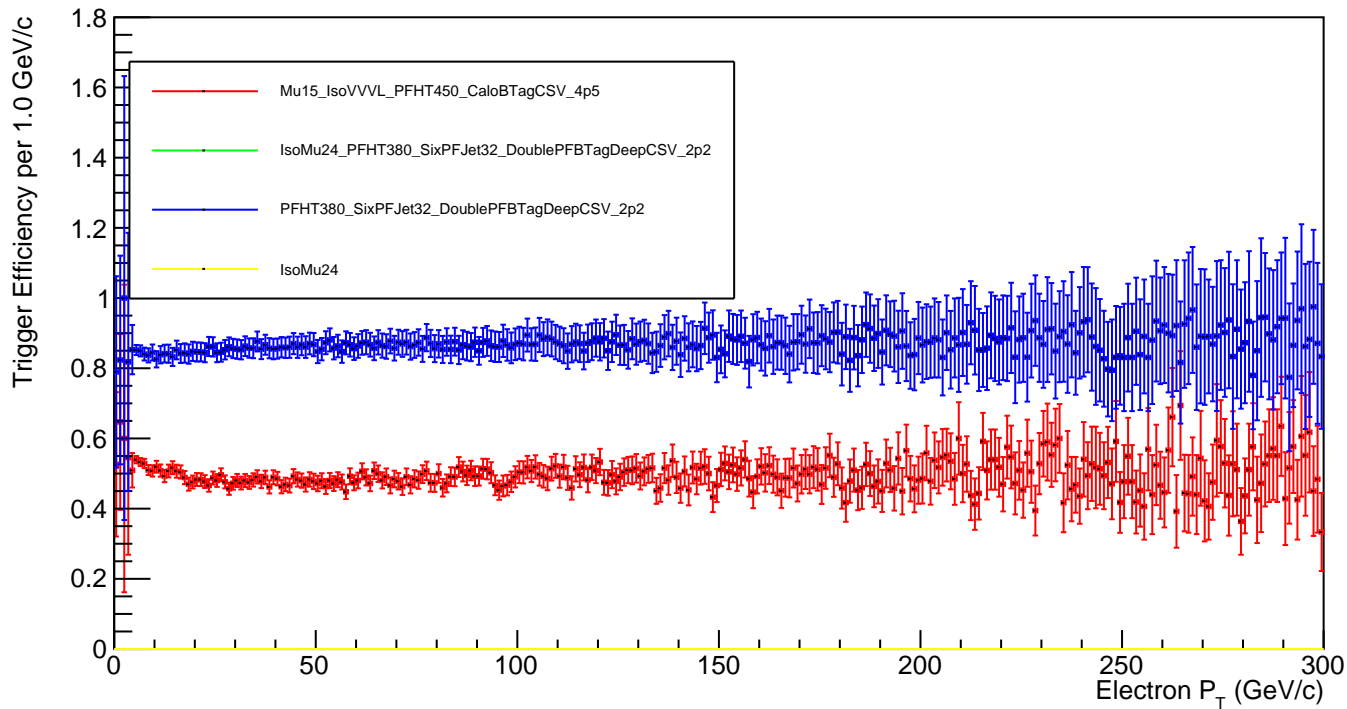
no trigger

Number of Events per 1 GeV/c



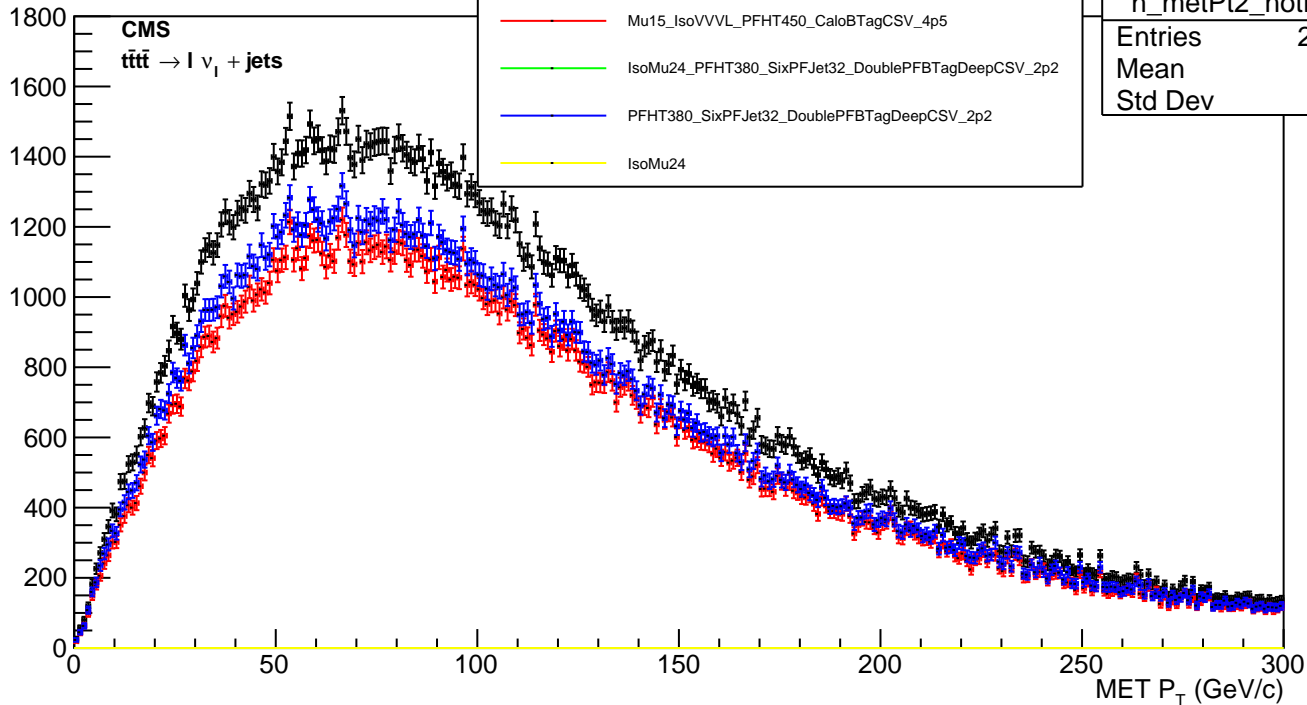
h_elPt_notrigger

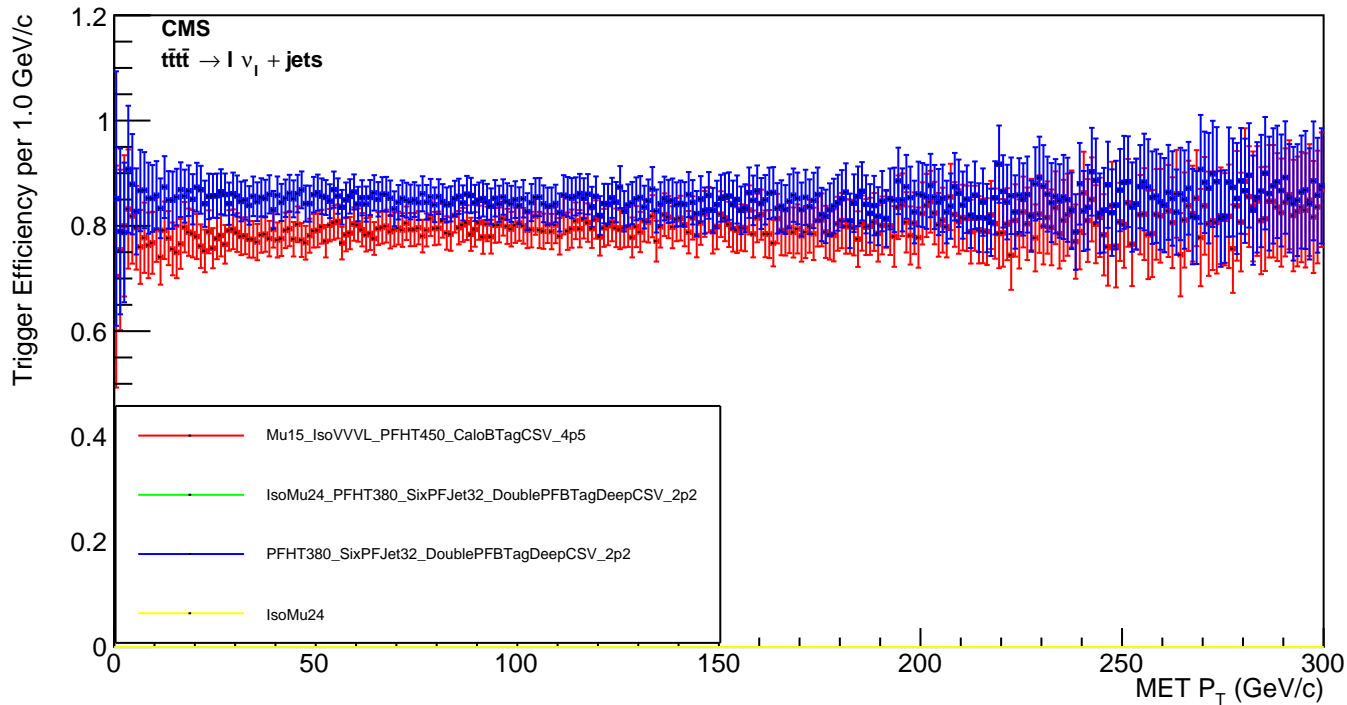
Entries	216015
Mean	65.26
Std Dev	56.73



Number of Events per 1 GeV/c

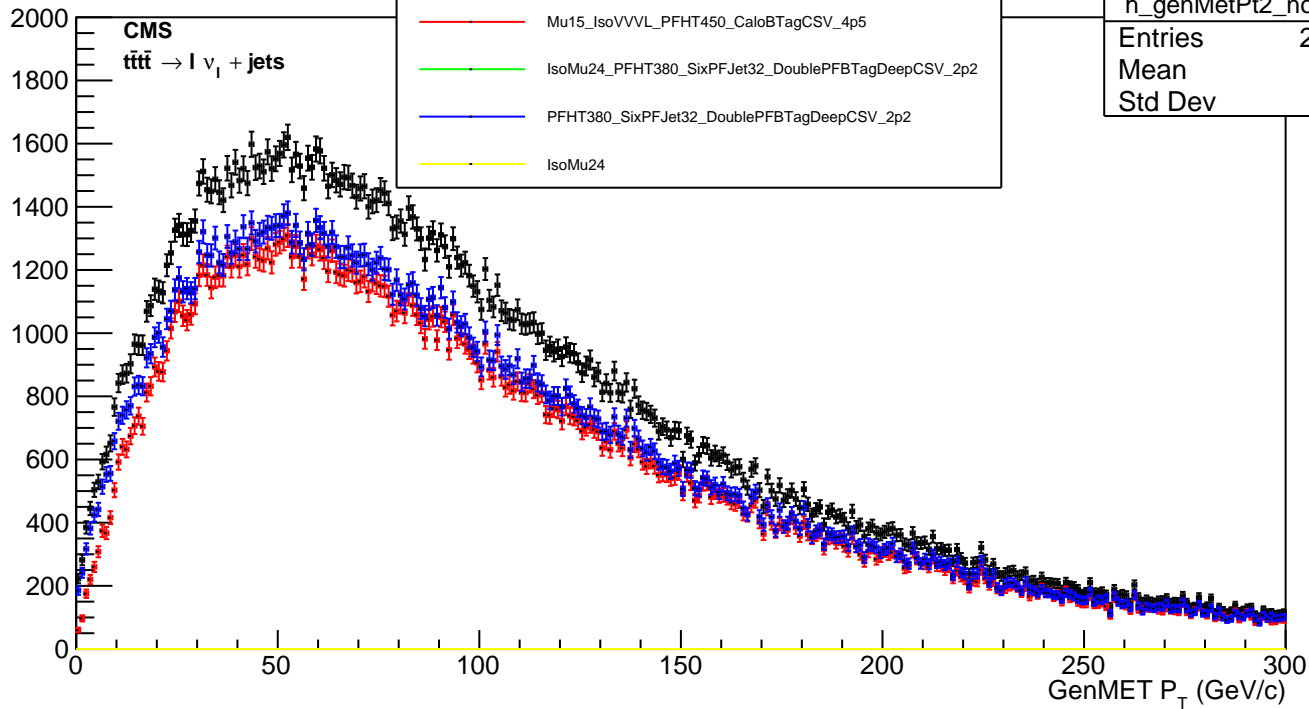
CMS
 $t\bar{t}t\bar{t} \rightarrow l \nu_l + \text{jets}$





Number of Events per 1GeV/c

CMS
 $t\bar{t}t\bar{t} \rightarrow l \nu_l + \text{jets}$

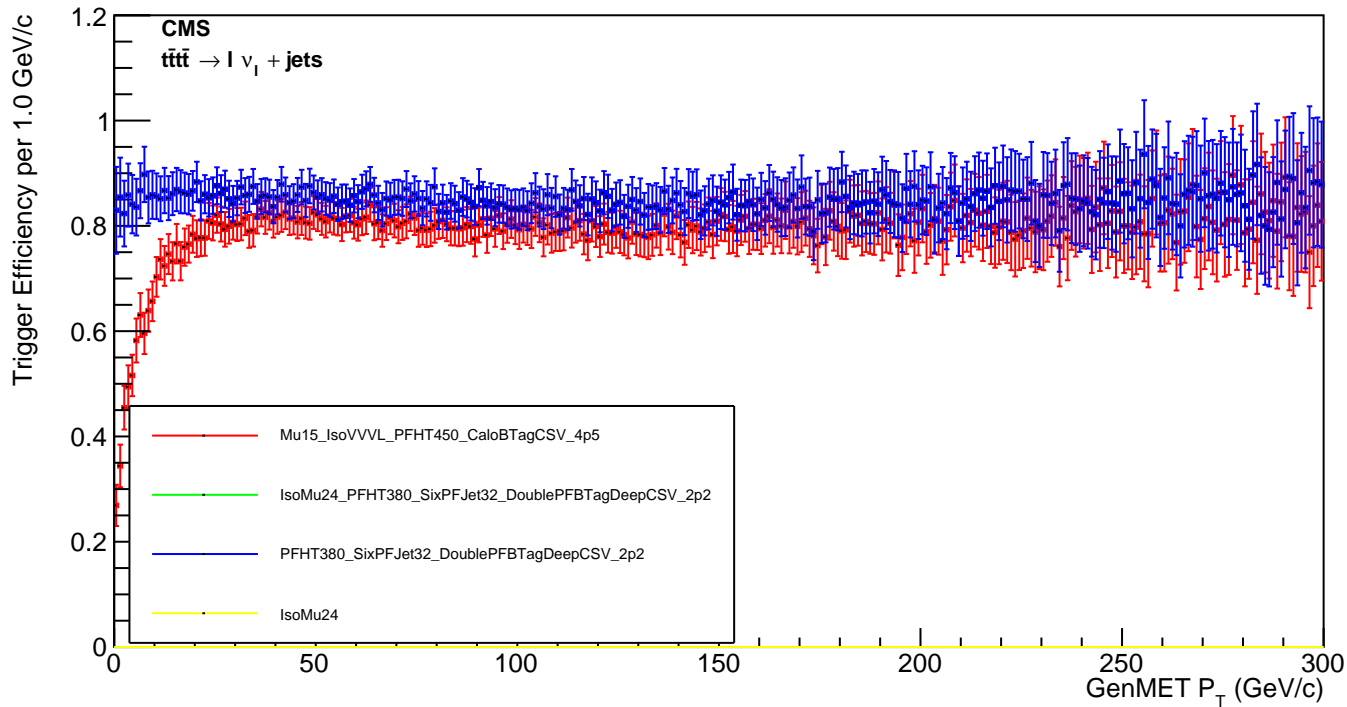


h_genMetPt2_notrigger

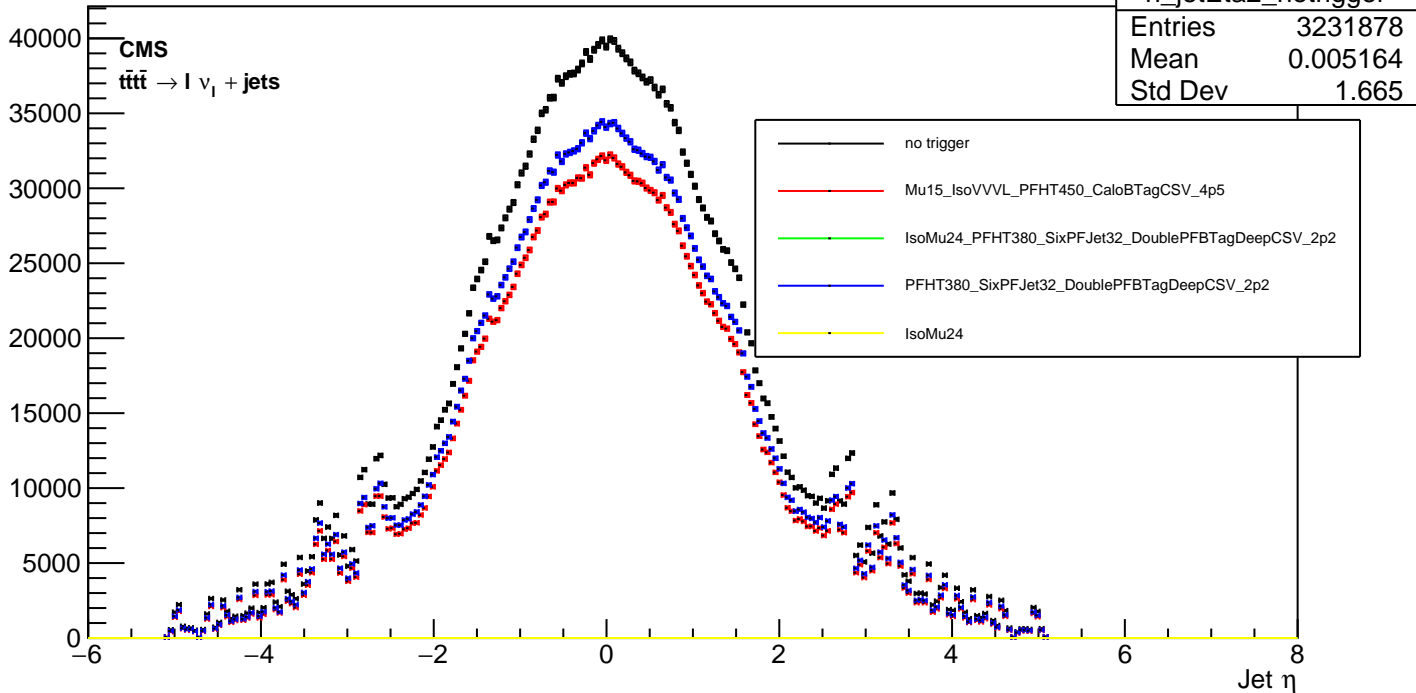
Entries 227479

Mean 99.49

Std Dev 65.95

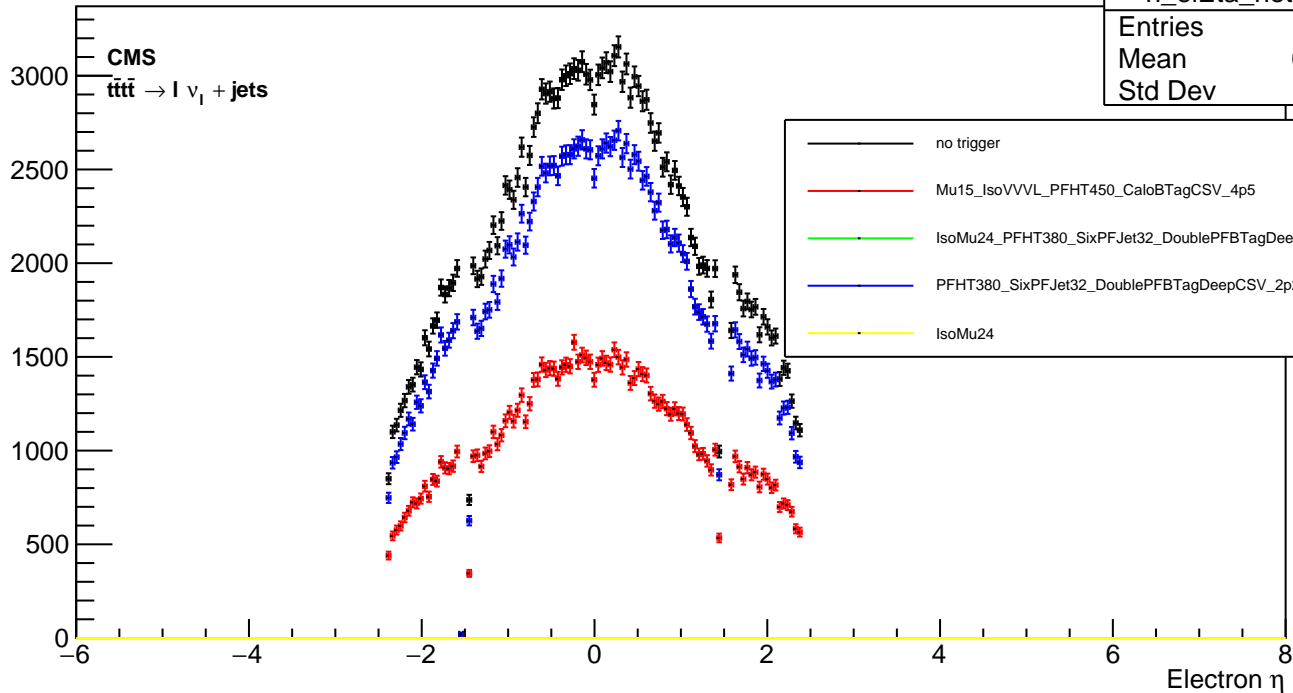


no trigger

Number of Events per $\delta\eta = 0.046$ 

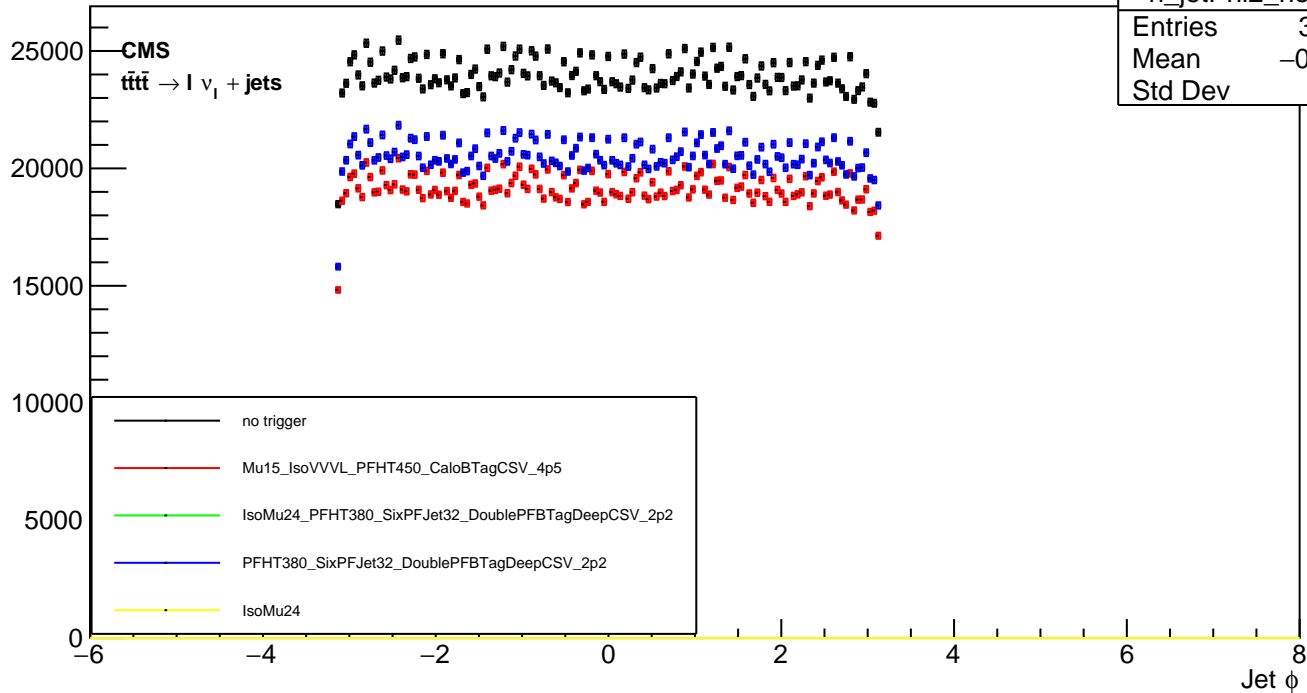
no trigger

Number of Events per $\delta\eta = 0.046$



h_elEta_notrigger	
Entries	216015
Mean	0.01269
Std Dev	1.196

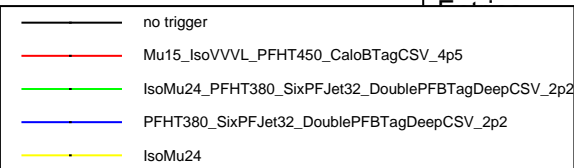
no trigger

Number of Events per $\delta\phi = 0.046$ 

no trigger

Number of Events per $\delta\phi = 0.046$

CMS
 $t\bar{t}t\bar{t} \rightarrow l \nu_l + \text{jets}$



h_elPhi_notrigger

216015

-0.01194

1.811

