

On-line (pre-)selection Requisites for:

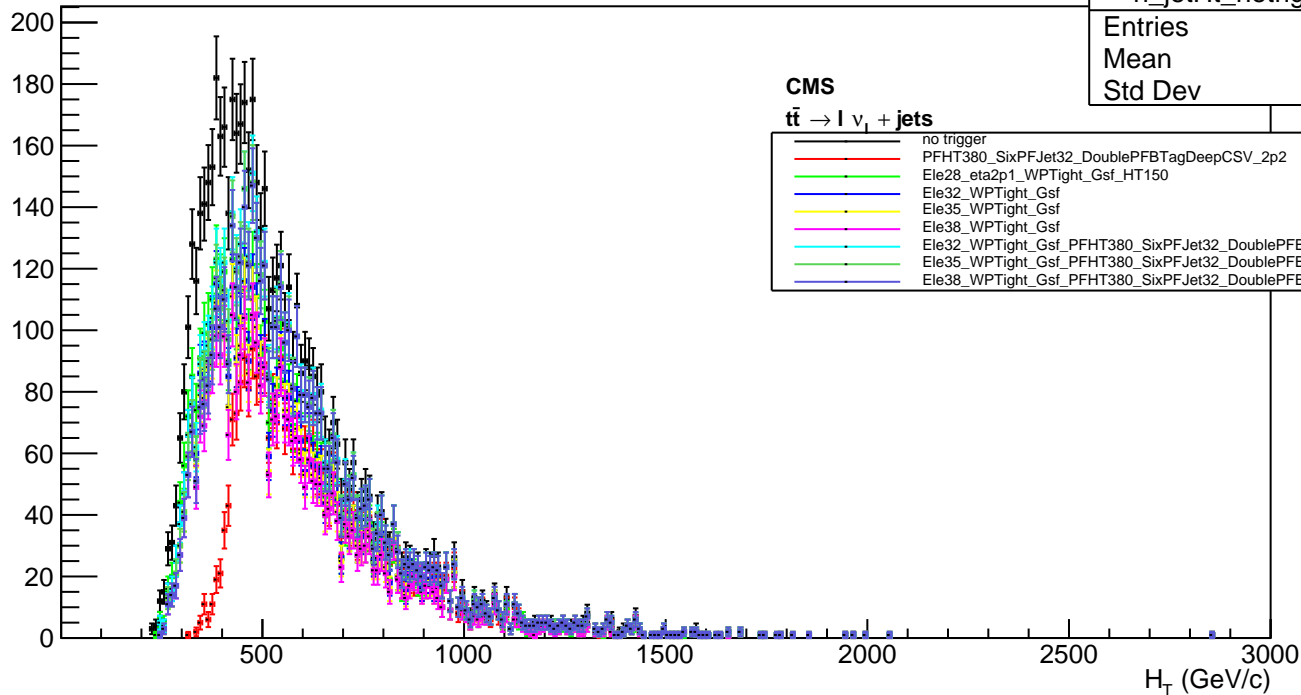
- **Jets:** number > 5
- **Muons plus Electrons:** number > 0

Event Limit: None (see last page)

Off-line (post-)selection Requisites for:

- **Jets:** $\text{jetId} > 2$, $p_T > 30$ and $|\eta| < 2.4$ (for at least 6 jets)
 $\text{btagDeepFlavB} > 0.7489$ (for at least one jet)
- **Electrons:** has tightId, $|\eta| < 2.4$ and $\text{miniPFRelIso_all} < 0.10$ (for at least 1)

Number of Events per 10 GeV/c



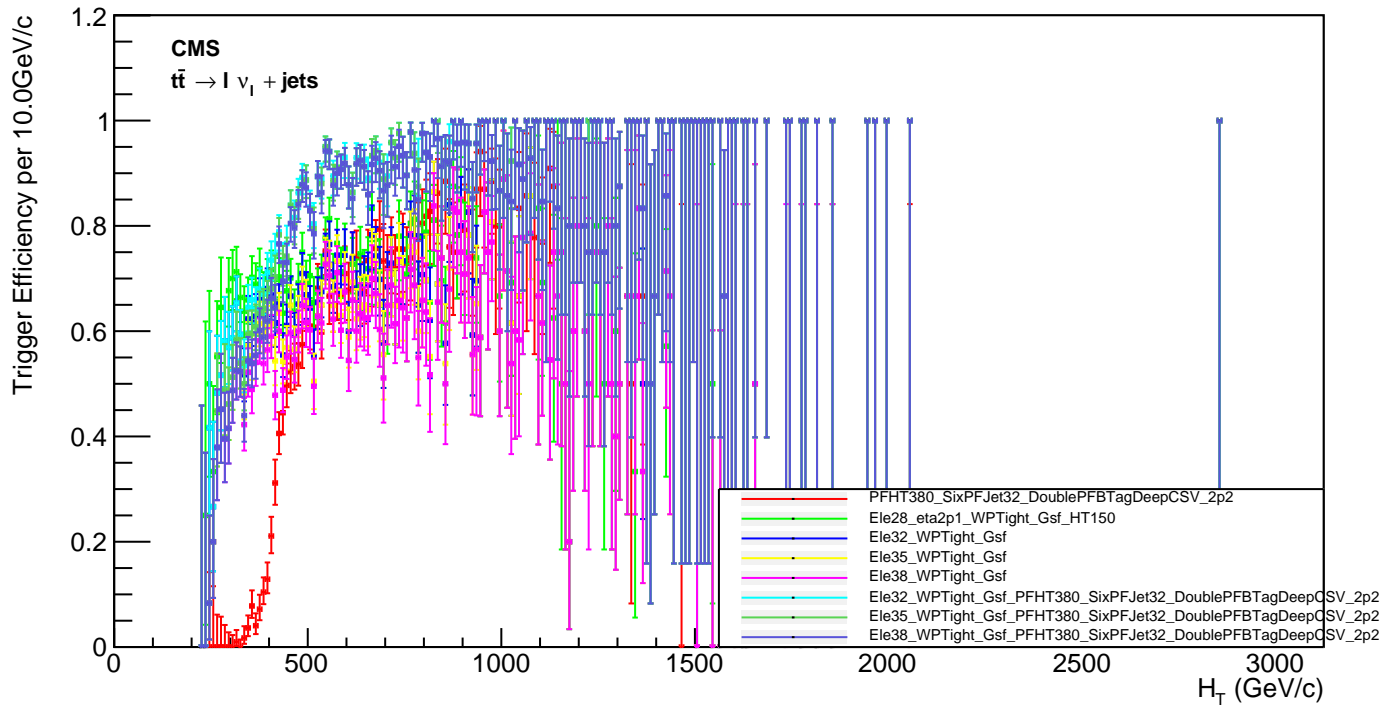
CMS

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

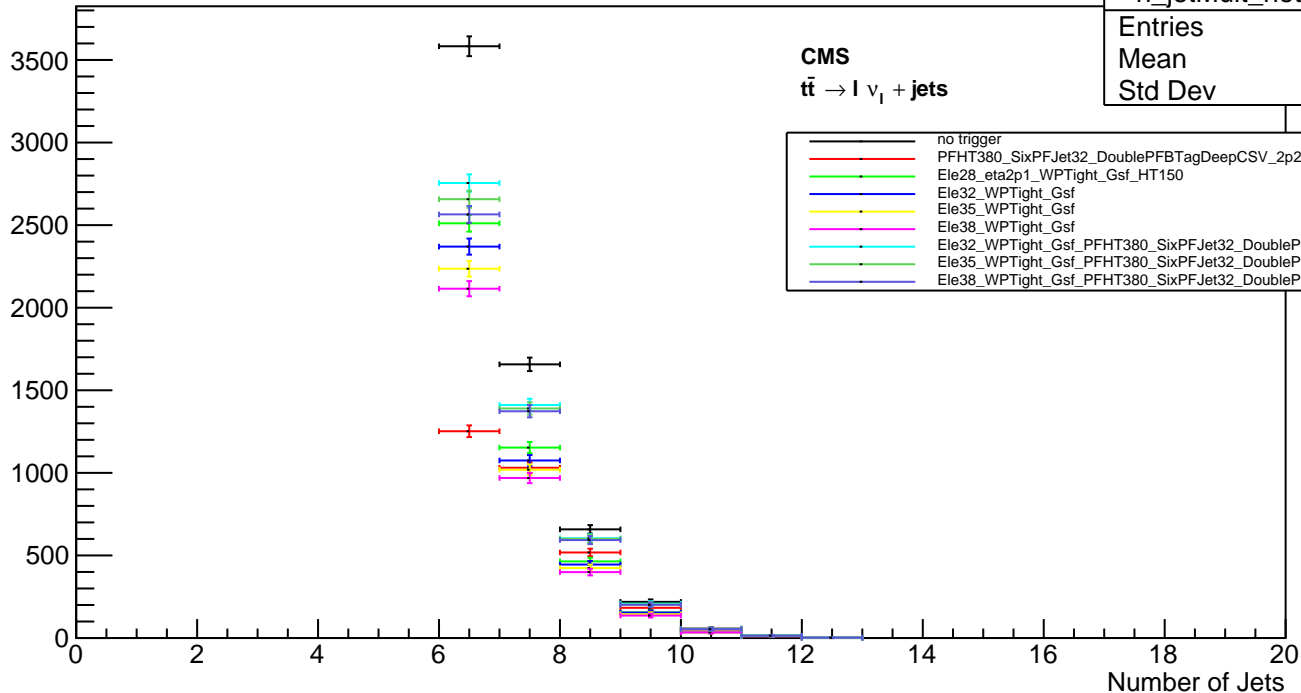
no trigger	
PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2	
Ele28_eta2p1_WPTight_Gsf_HT150	
Ele32_WPTight_Gsf	
Ele35_WPTight_Gsf	
Ele38_WPTight_Gsf	
Ele32_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2	
Ele35_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2	
Ele38_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2	

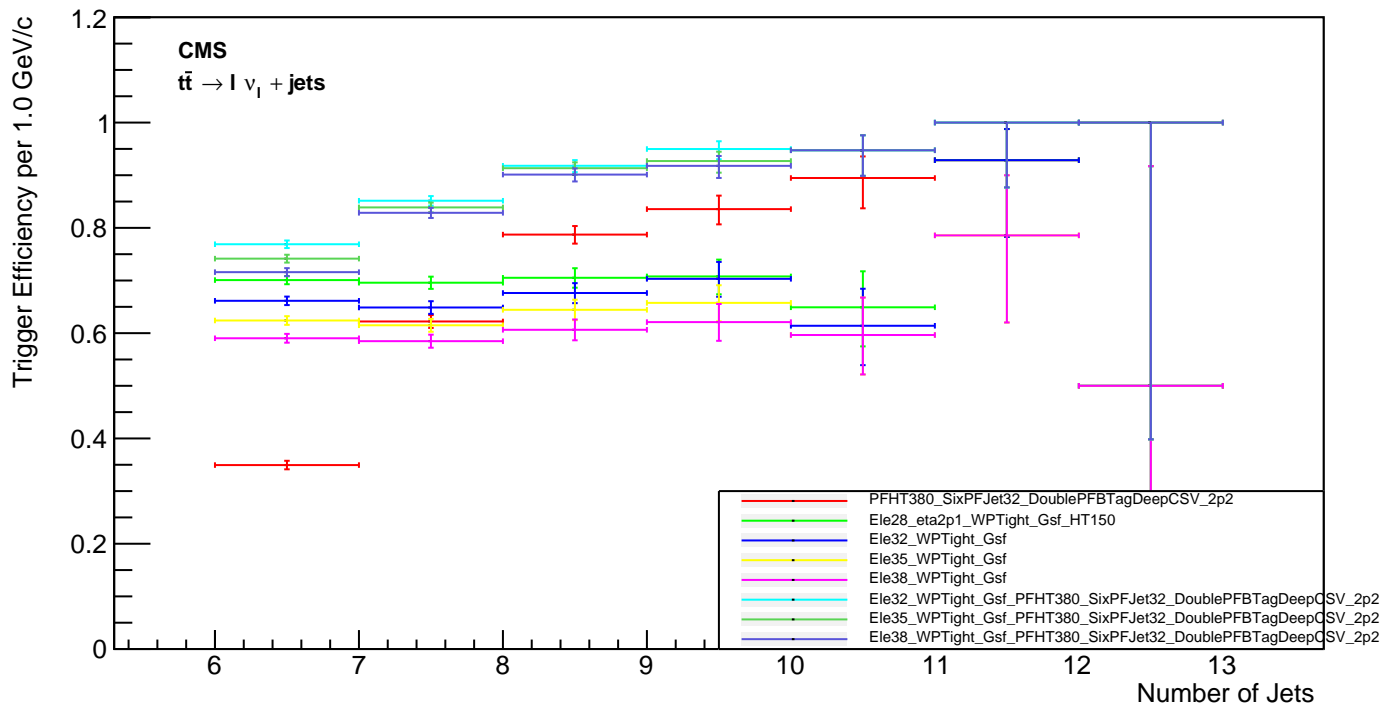
$h_{\text{jetHt_notrigger}}$

Entries	6190
Mean	556.8
Std Dev	226.8

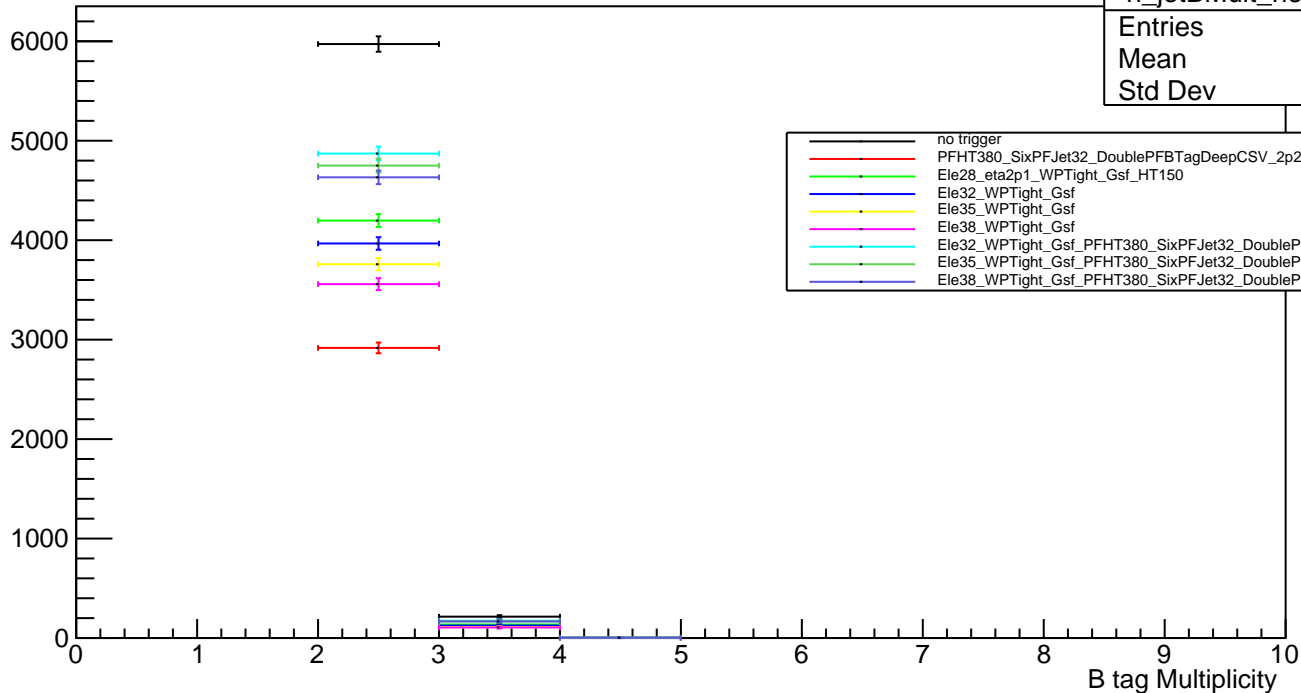


Number of Events per Number of Jets



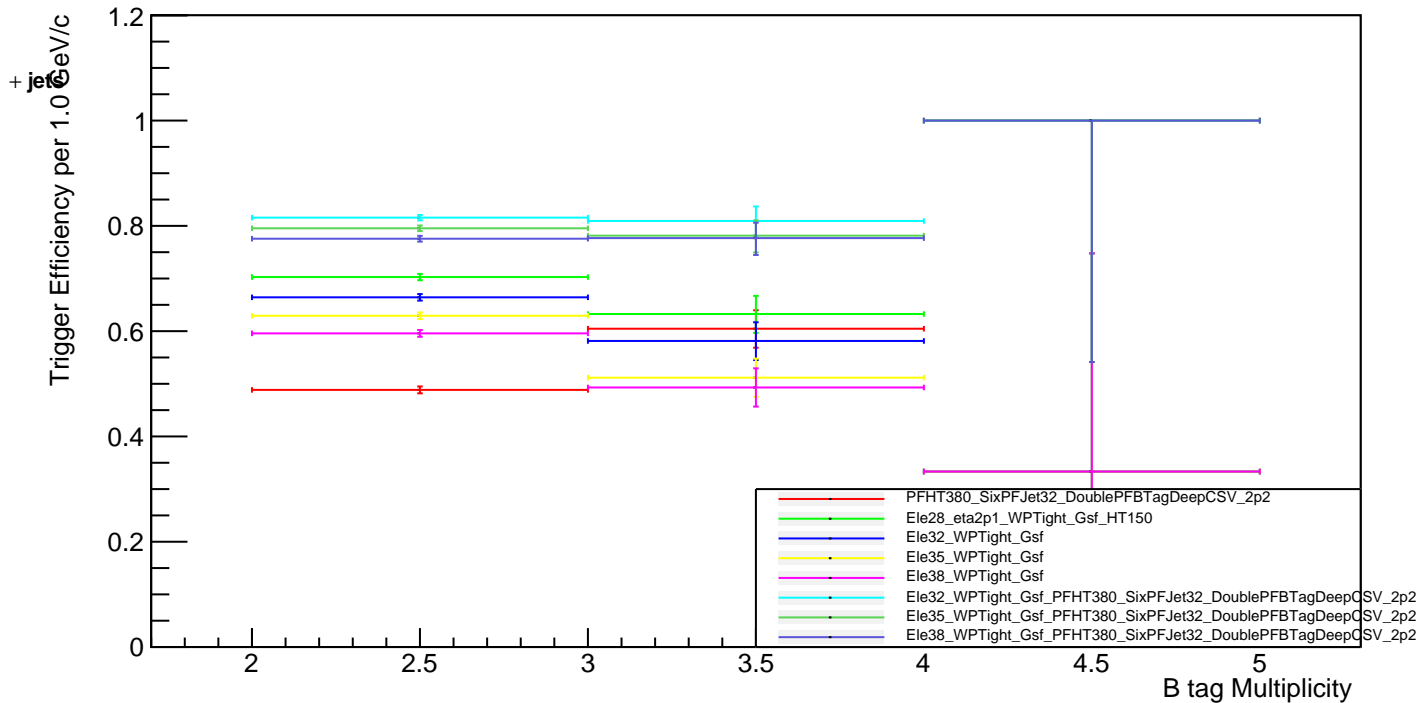


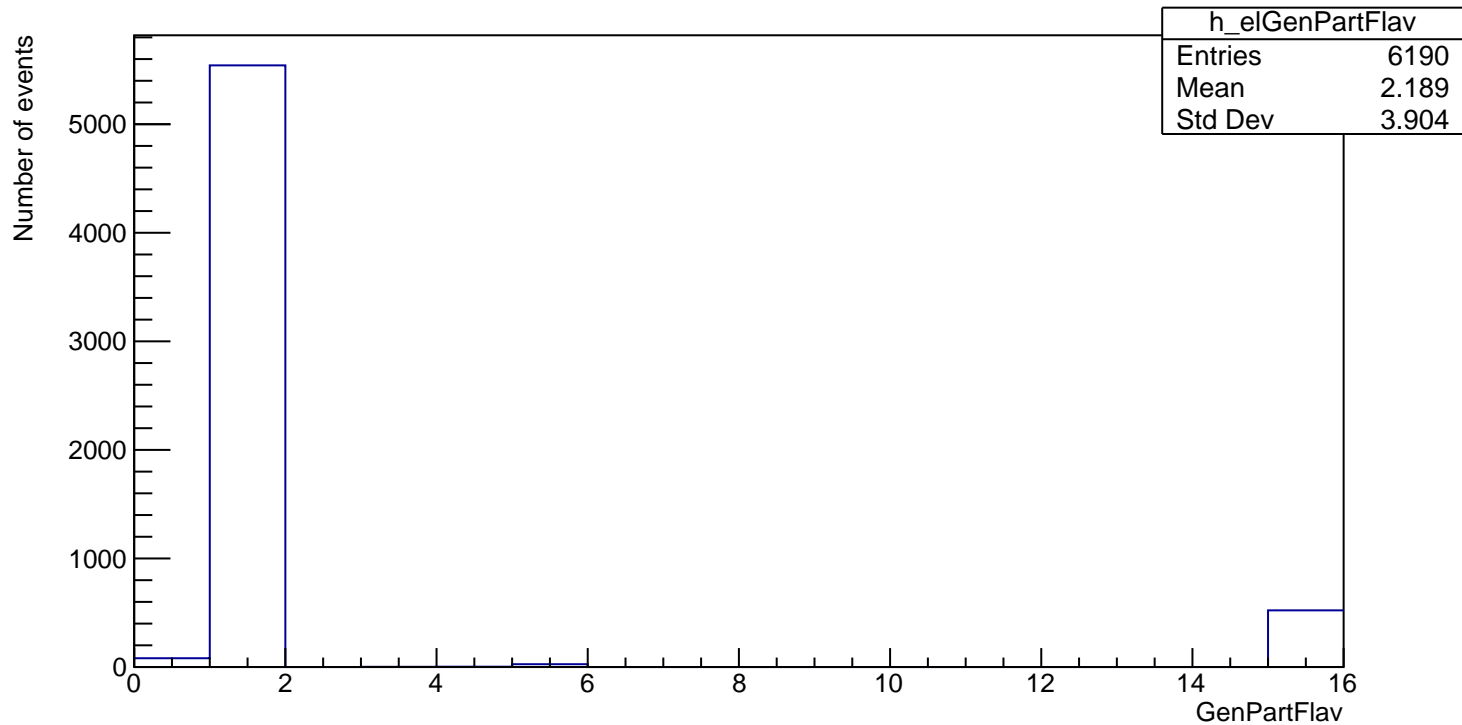
Number of Events per Number of Jets

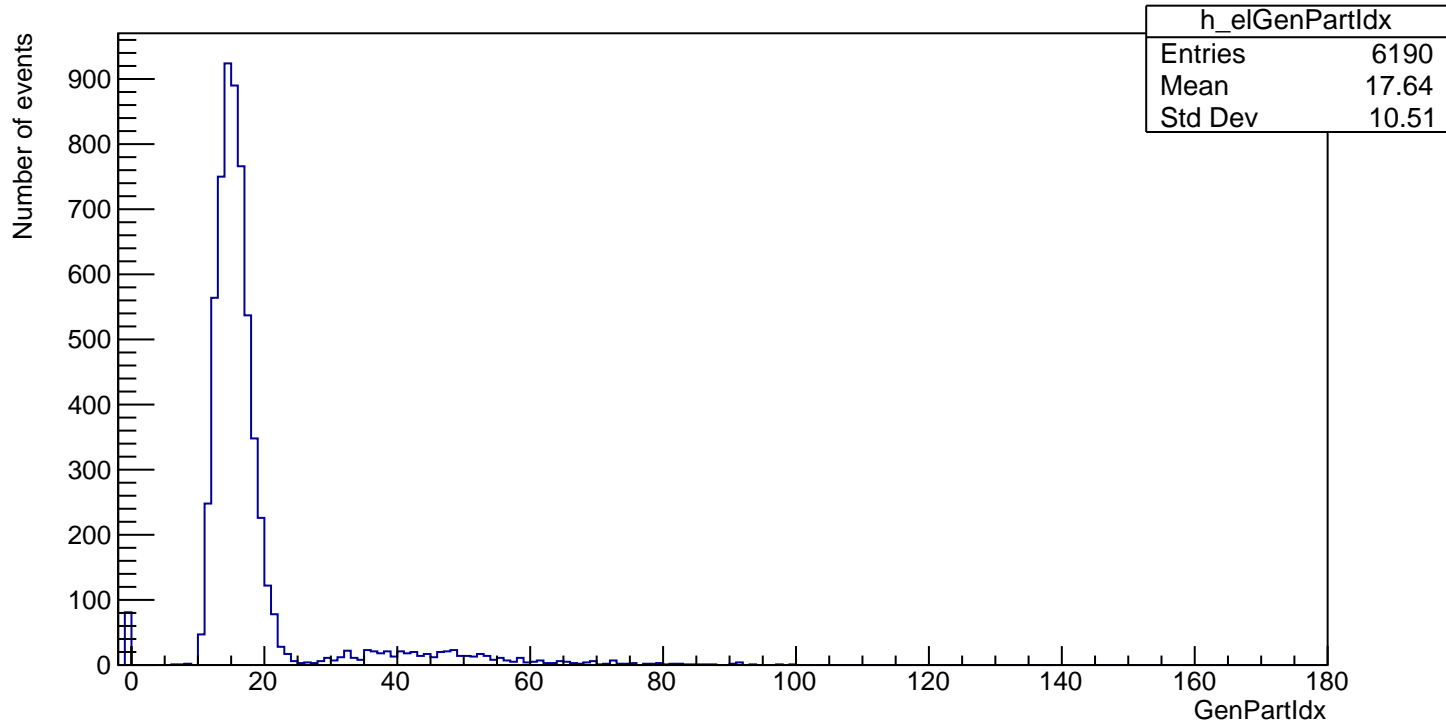


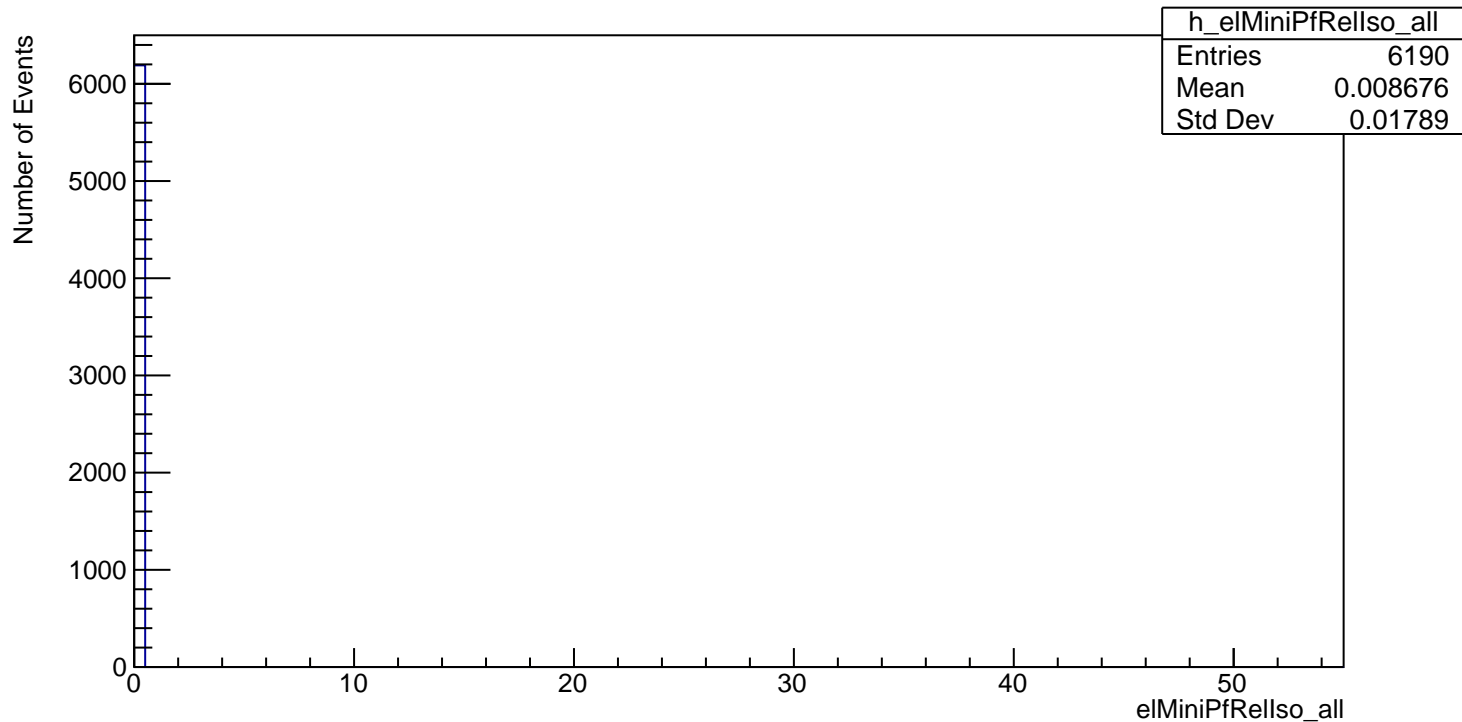
h_jetBMult_notrigger	
Entries	6190
Mean	2.536
Std Dev	0.1881

- no trigger
- PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2
- Ele28_eta2p1_WPTight_Gsf_HT150
- Ele32_WPTight_Gsf
- Ele35_WPTight_Gsf
- Ele38_WPTight_Gsf
- Ele32_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2
- Ele35_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2
- Ele38_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2

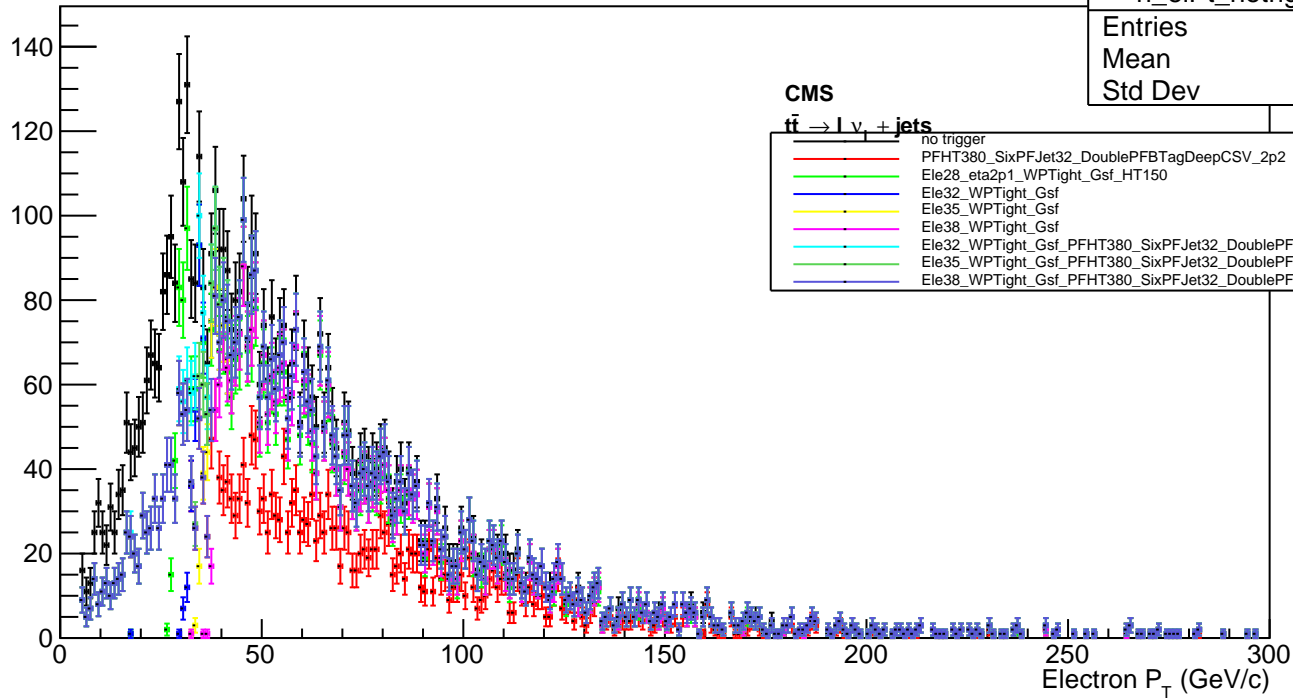








Number of Events per 1 GeV/c



h_elPt_notrigger	
Entries	6190
Mean	61.28
Std Dev	40.87

Number of Events per 1 GeV/c

CMS

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

h_elPt_notrigger

Entries 6190

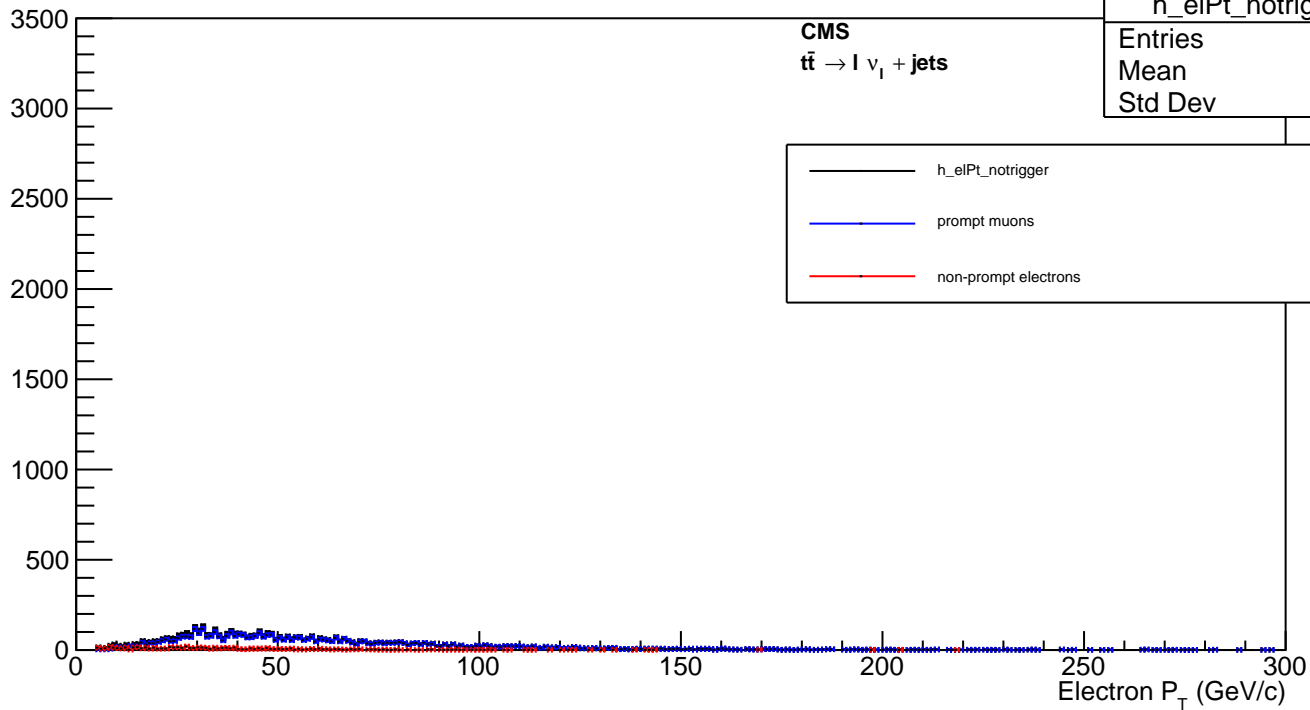
Mean 61.28

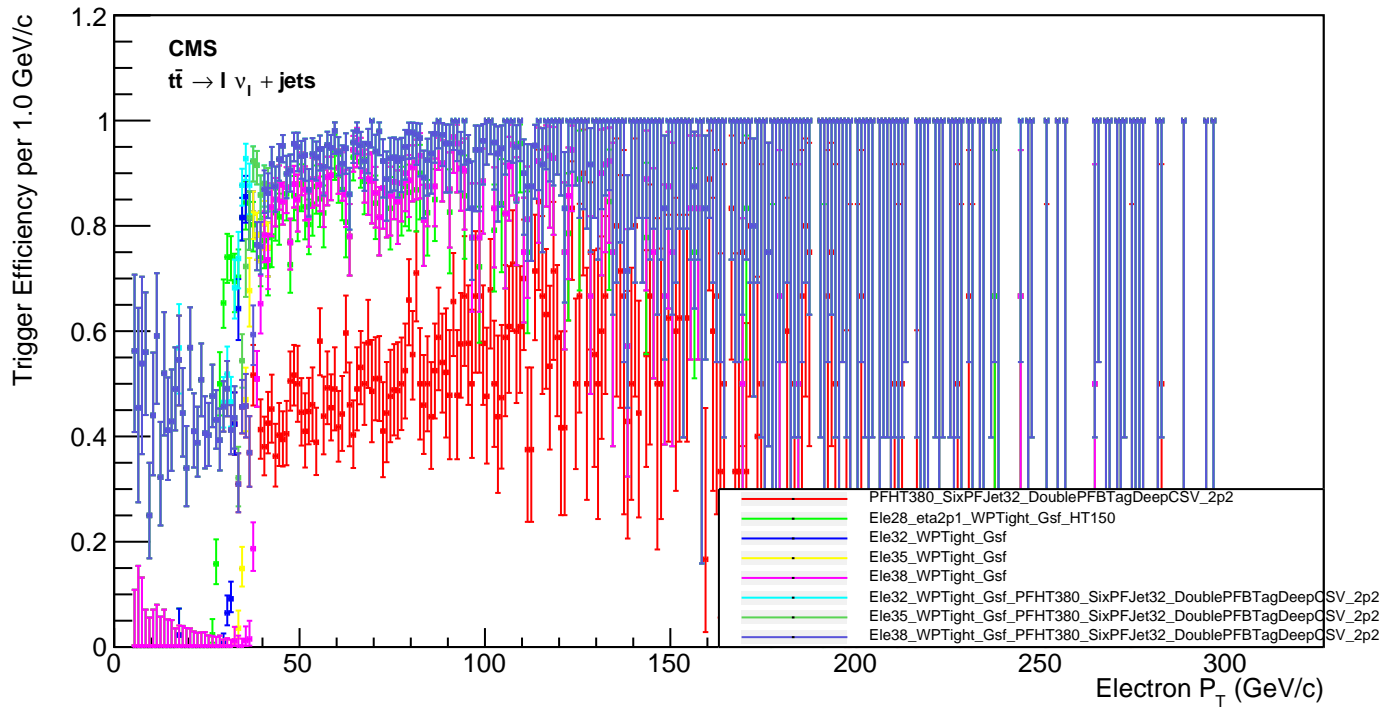
Std Dev 40.87

h_elPt_notrigger

prompt muons

non-prompt electrons





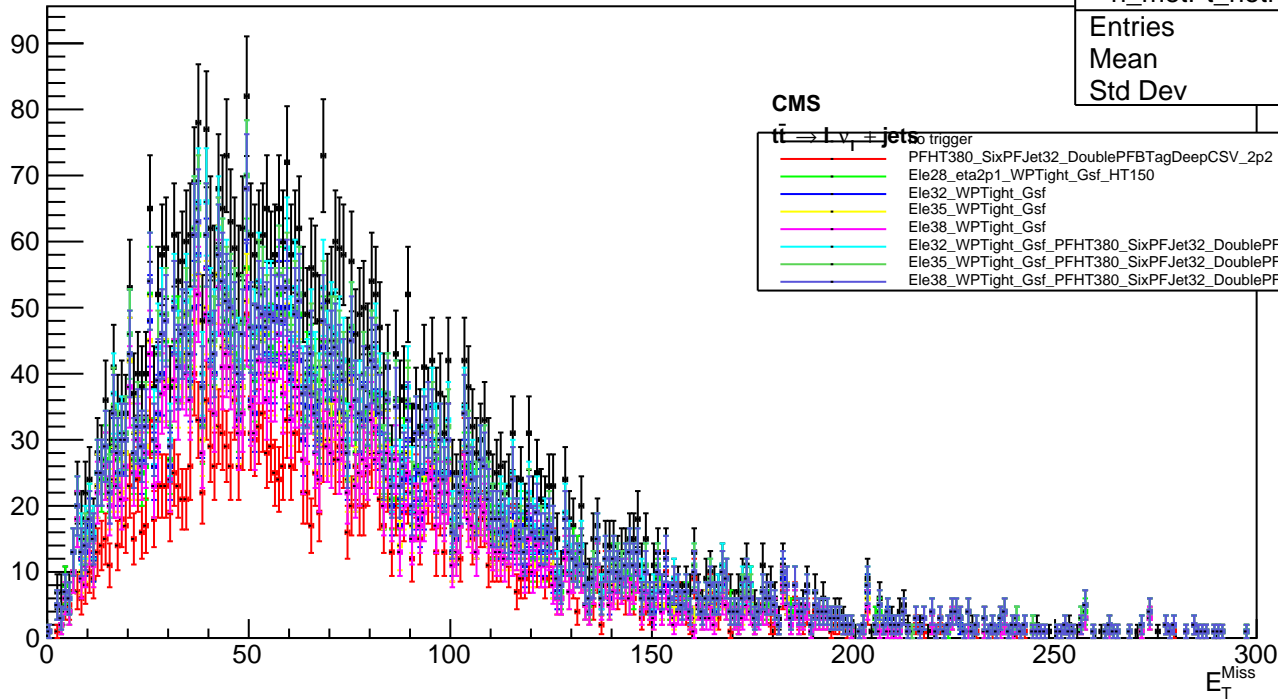
Number of Events per 1 GeV/c

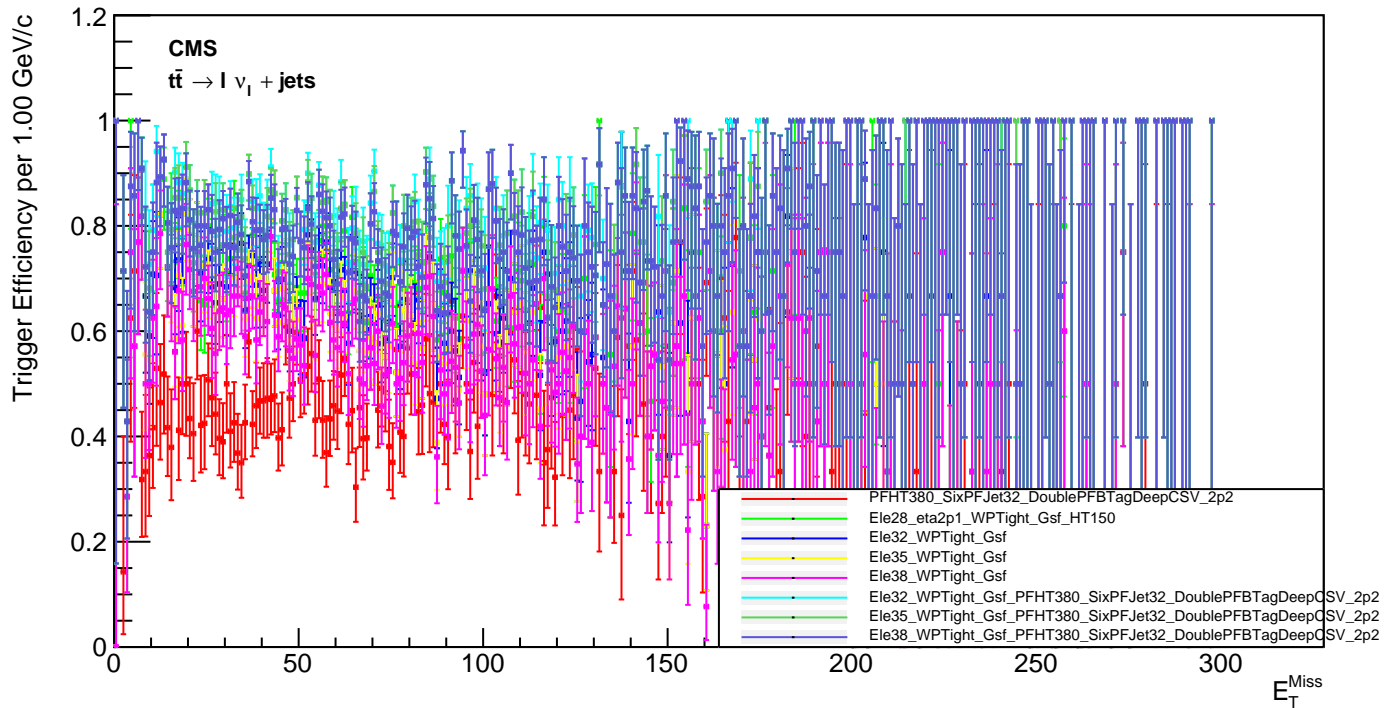
h_metPt_nottrigger	
Entries	6190
Mean	76.1
Std Dev	48.81

CMS

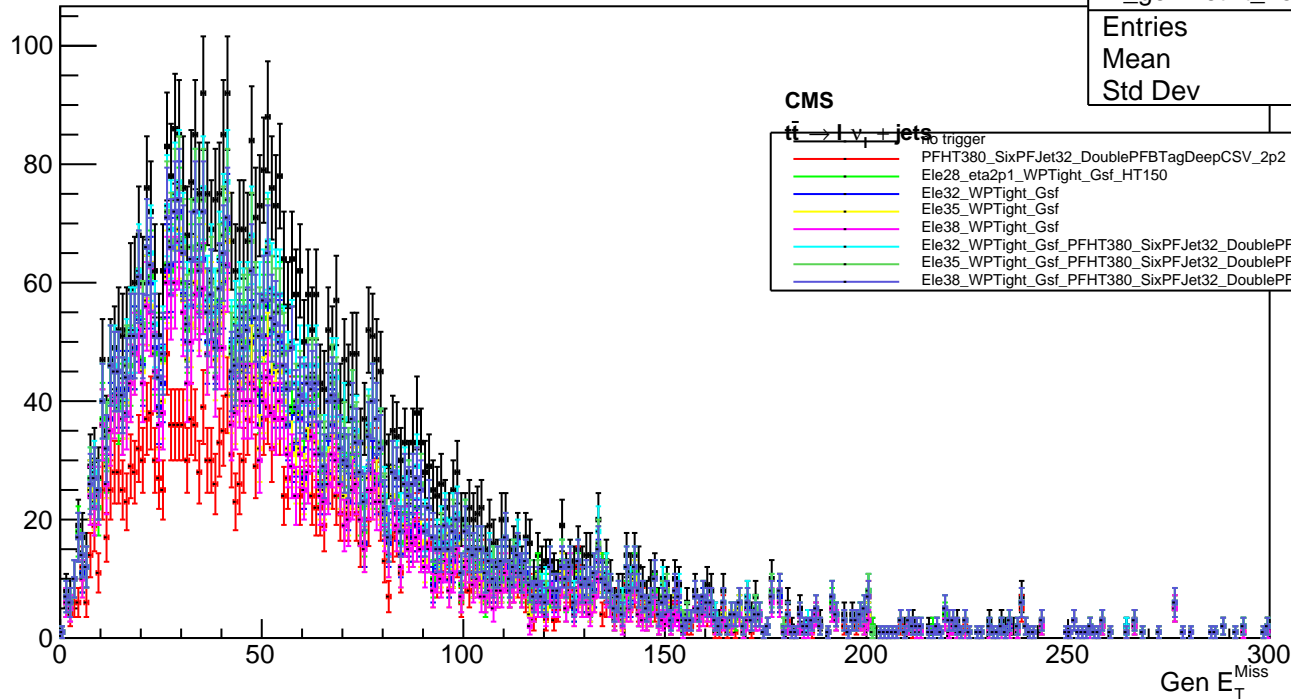
$t\bar{t} \rightarrow l\nu + \text{jets}$

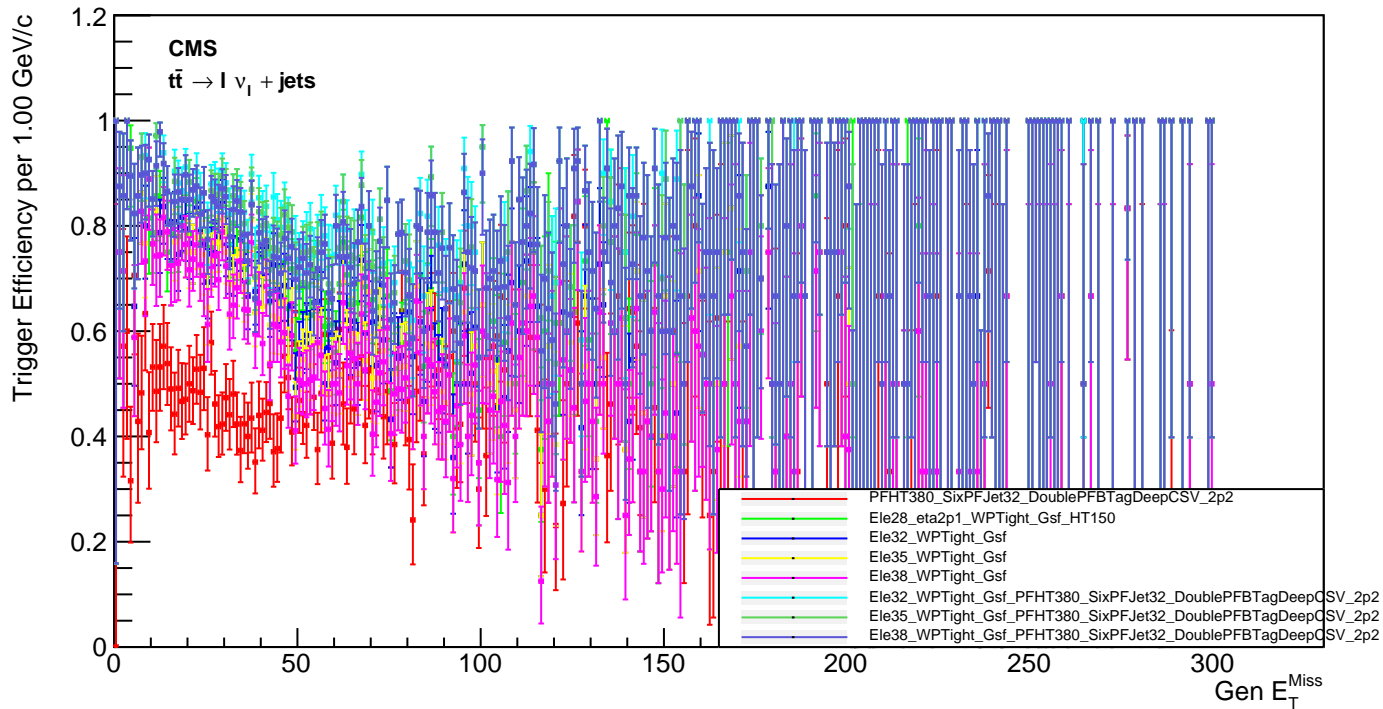
- no trigger
- PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2
- Ele28_eta2p1_WPTight_Gsf_HT150
- Ele32_WPTight_Gsf
- Ele35_WPTight_Gsf
- Ele38_WPTight_Gsf
- Ele32_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2
- Ele35_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2
- Ele38_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2



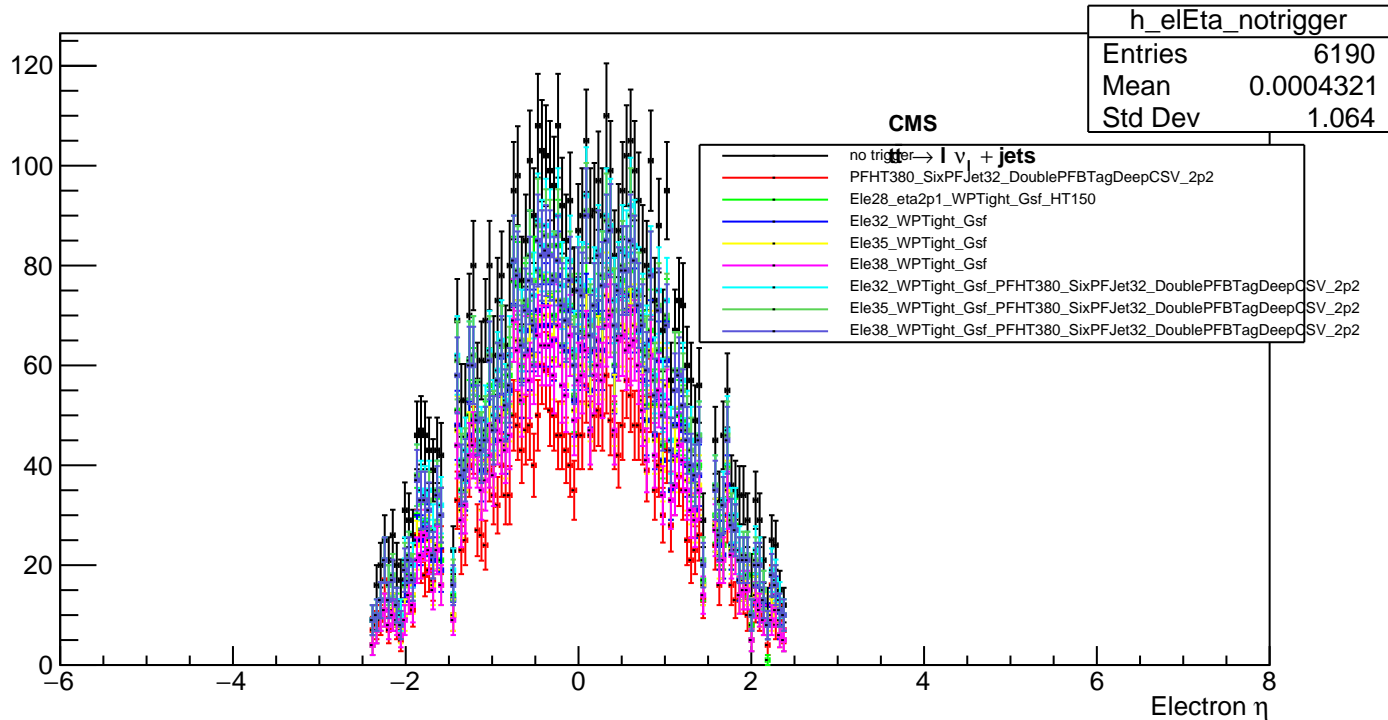


Number of Events per 1GeV/c

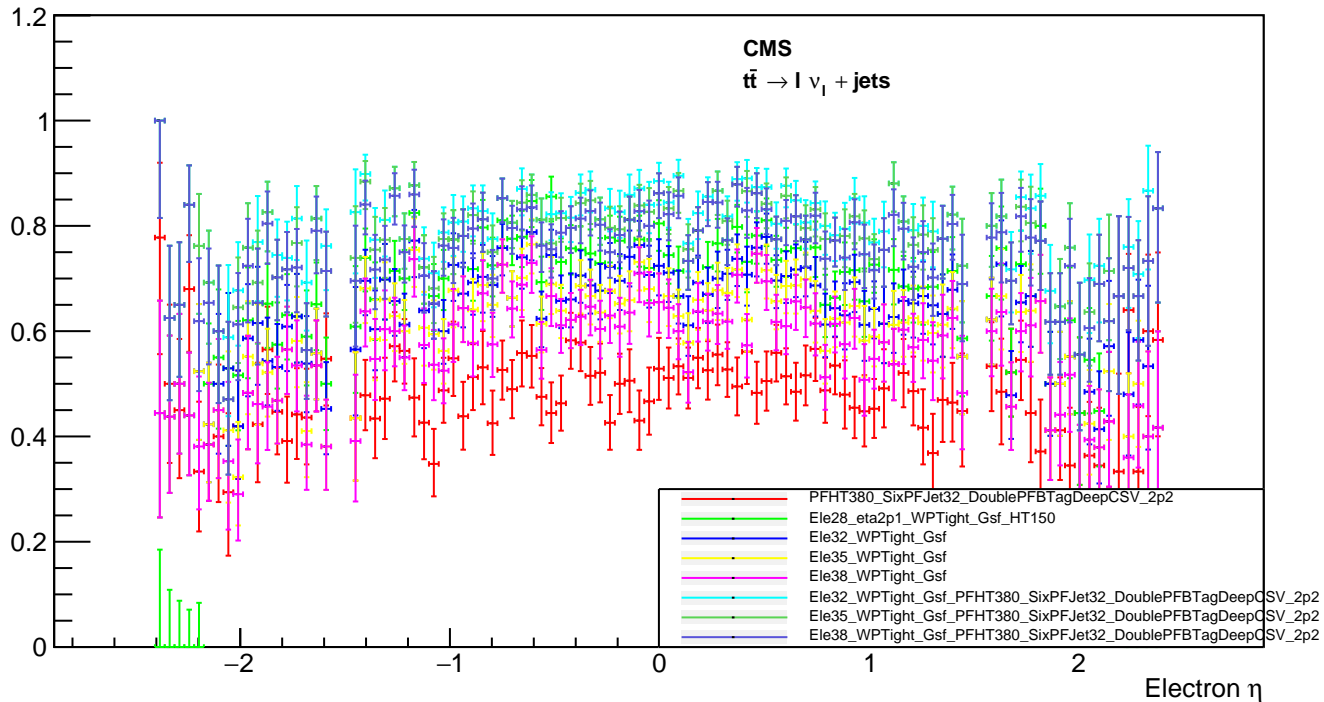




Number of Events per $\delta\eta = 0.046$



Trigger Efficiency per 0.04666666666667 GeV/c



Total Number of Accepted Events

 $\times 10^3$
2000
1800
1600
1400
1200
1000
800
600
400
200
0

Pre-selection

Post-selection

Ele38_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepC

Ele35_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepC

Ele32_WPTight_Gsf_PFHT380_SixPFJet32_DoublePFBTagDeepC

Ele38_WPTight_Gsf

Ele35_WPTight_Gsf

Ele32_WPTight_Gsf

Ele28_eta2p1_WPTight_Gsf_HT150

PFHT380_SixPFJet32_DoublePFBTagDeepCSV_2p2

Cuts and Triggers

h_eventsPrg

Entries	2047273
Mean	0.08531
Std Dev	0.6942