

### On-line (pre-)selection Requisites for:

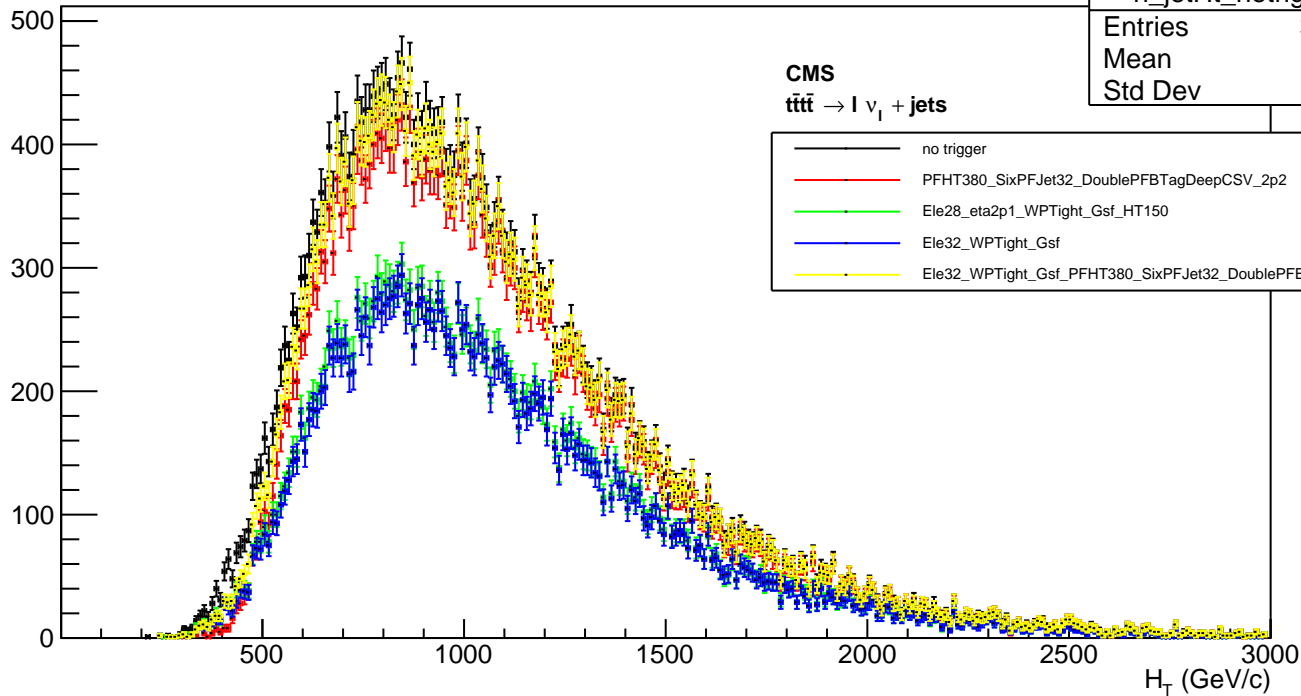
- **Jets:** number  $> 5$
- **Muons plus Electrons:** number  $> 0$

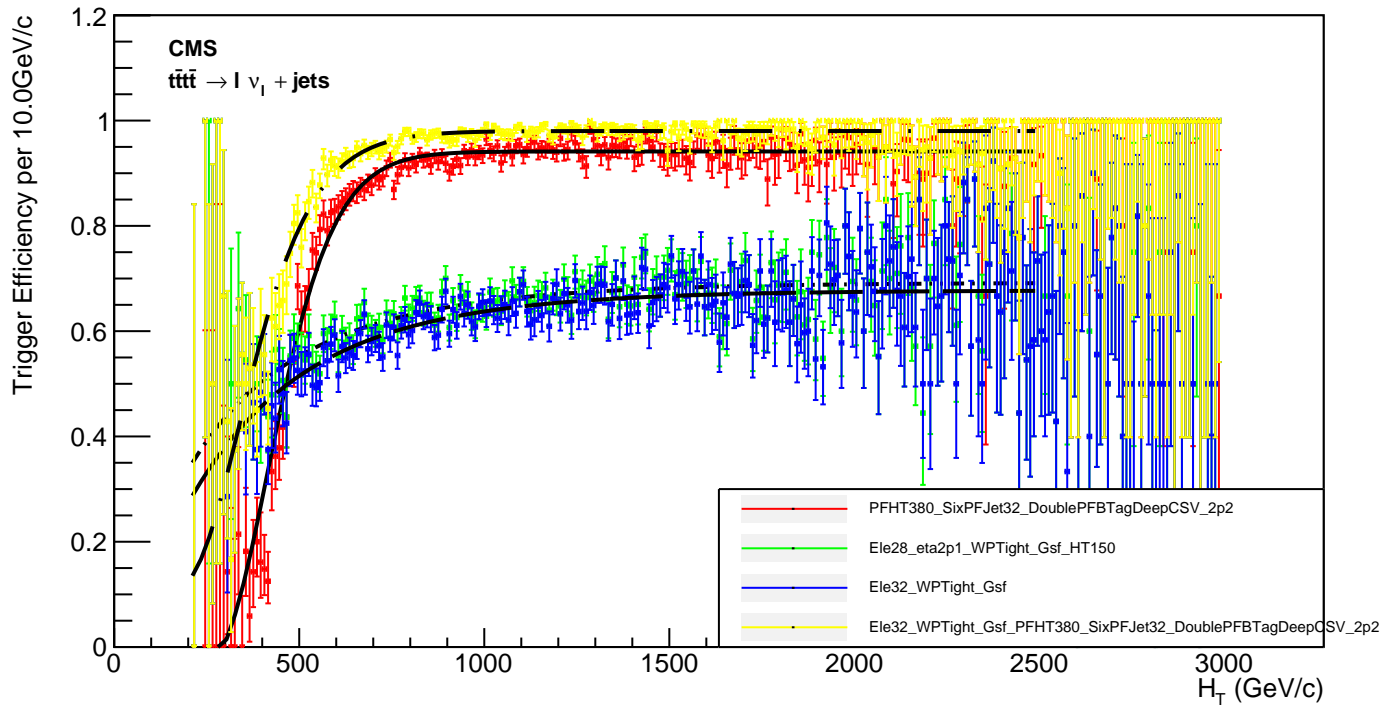
**Event Limit:** None (see last page)

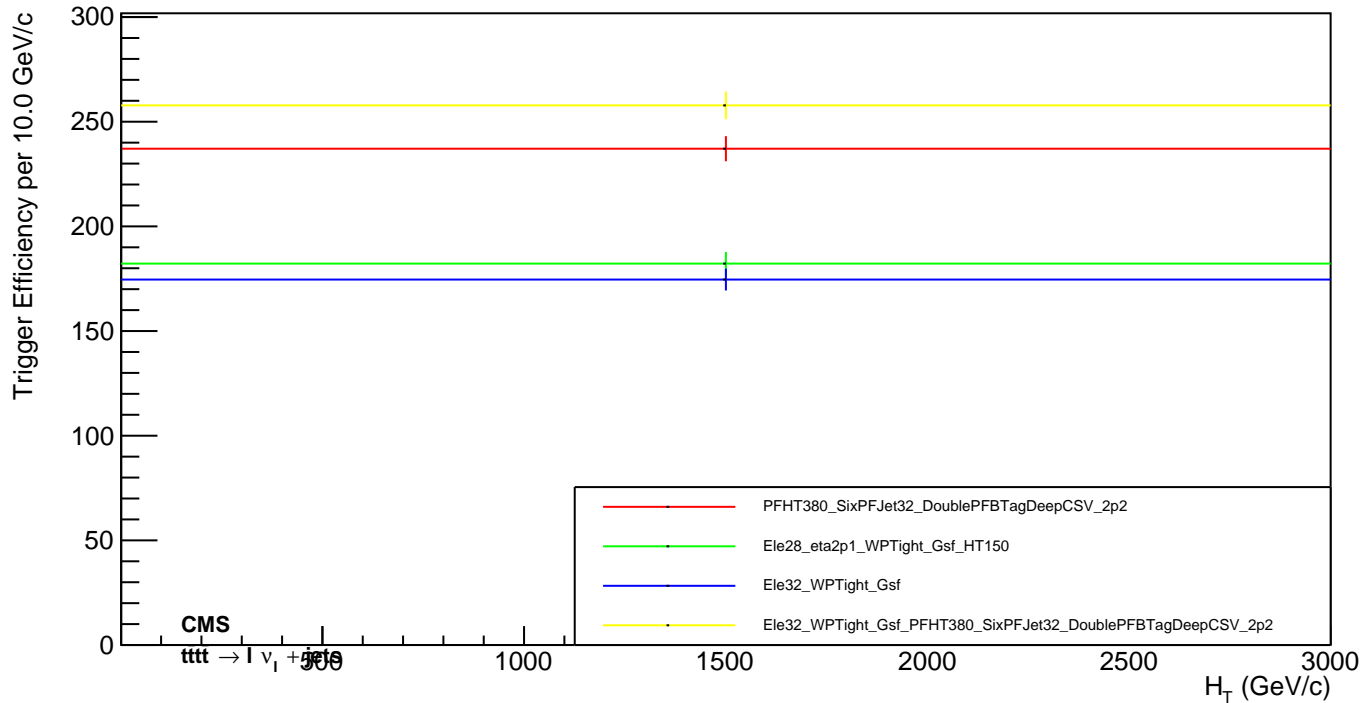
### Off-line (post-)selection Requisites for:

- **Jets:**  $\text{jetId} > 2$  ,  $p_T > 20$  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  $\text{miniPFRellso\_all} < 0.10$  (for at least 1)

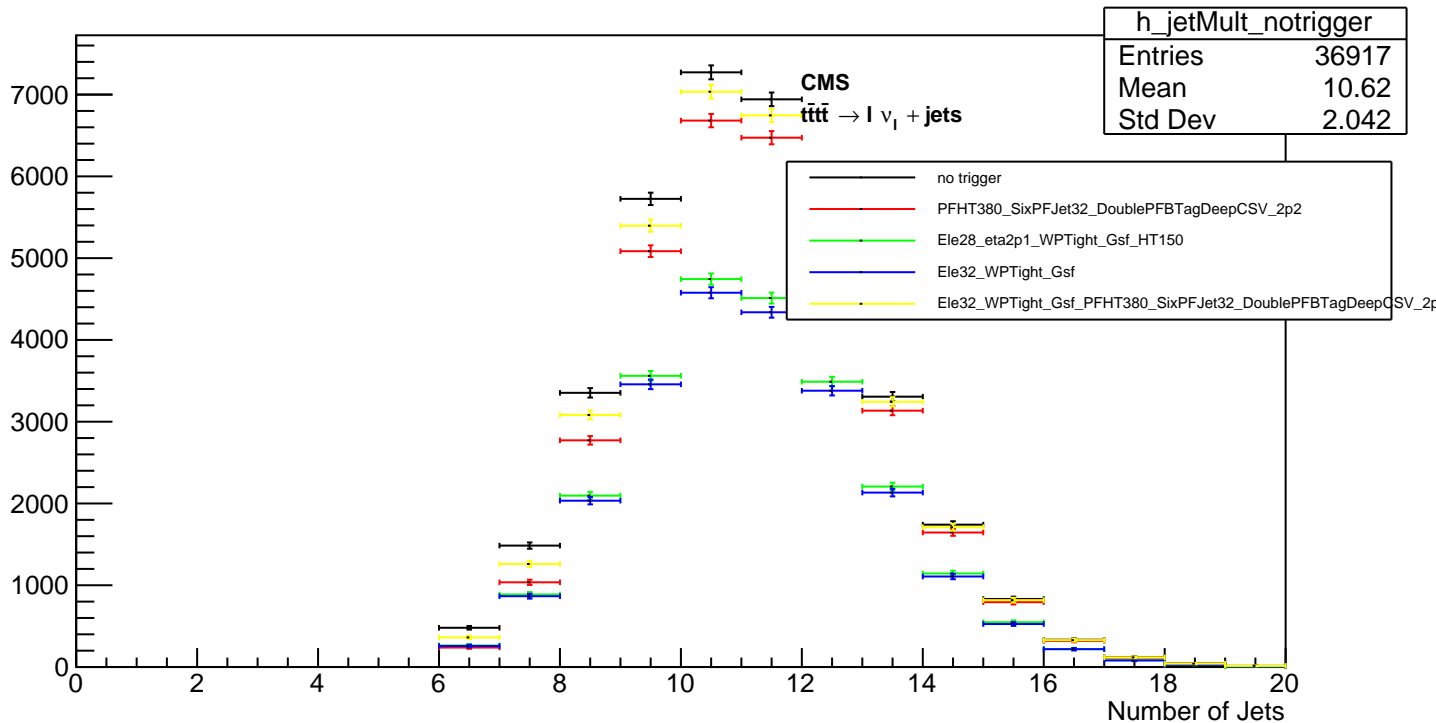
Number of Events per 10 GeV/c

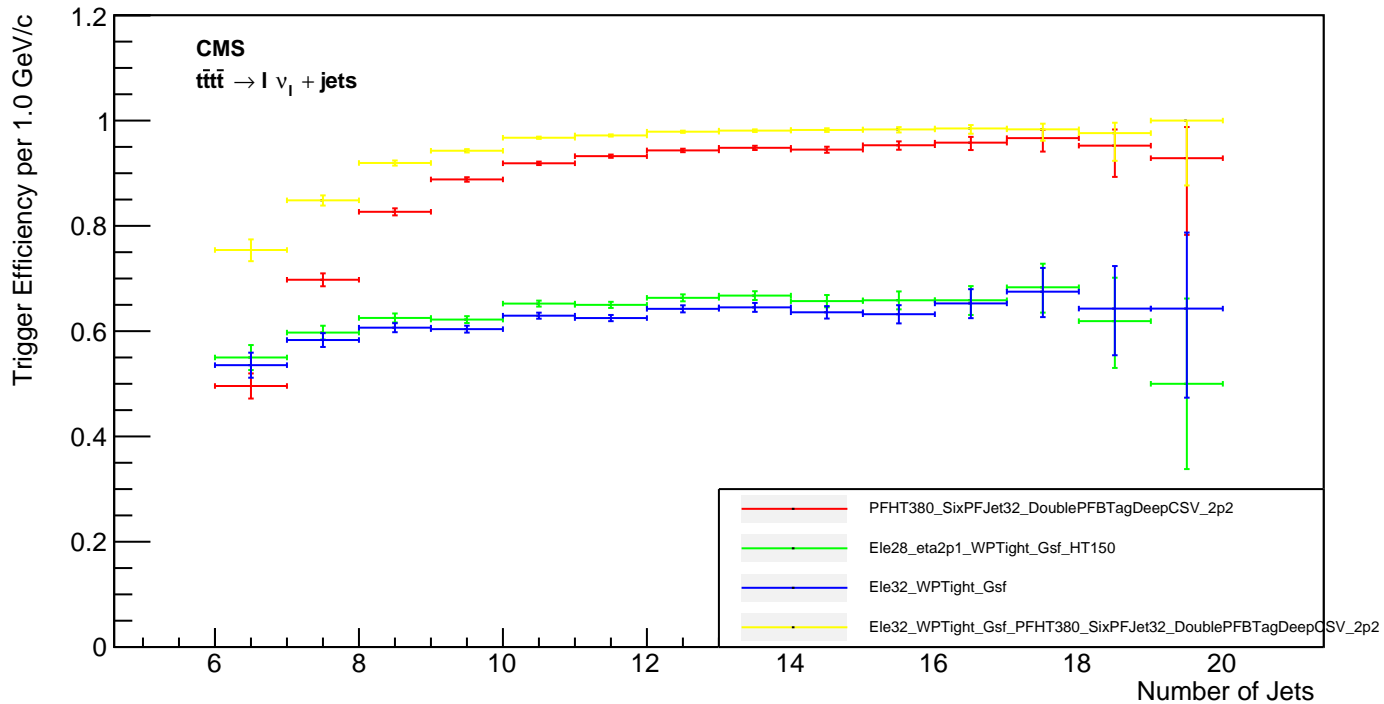




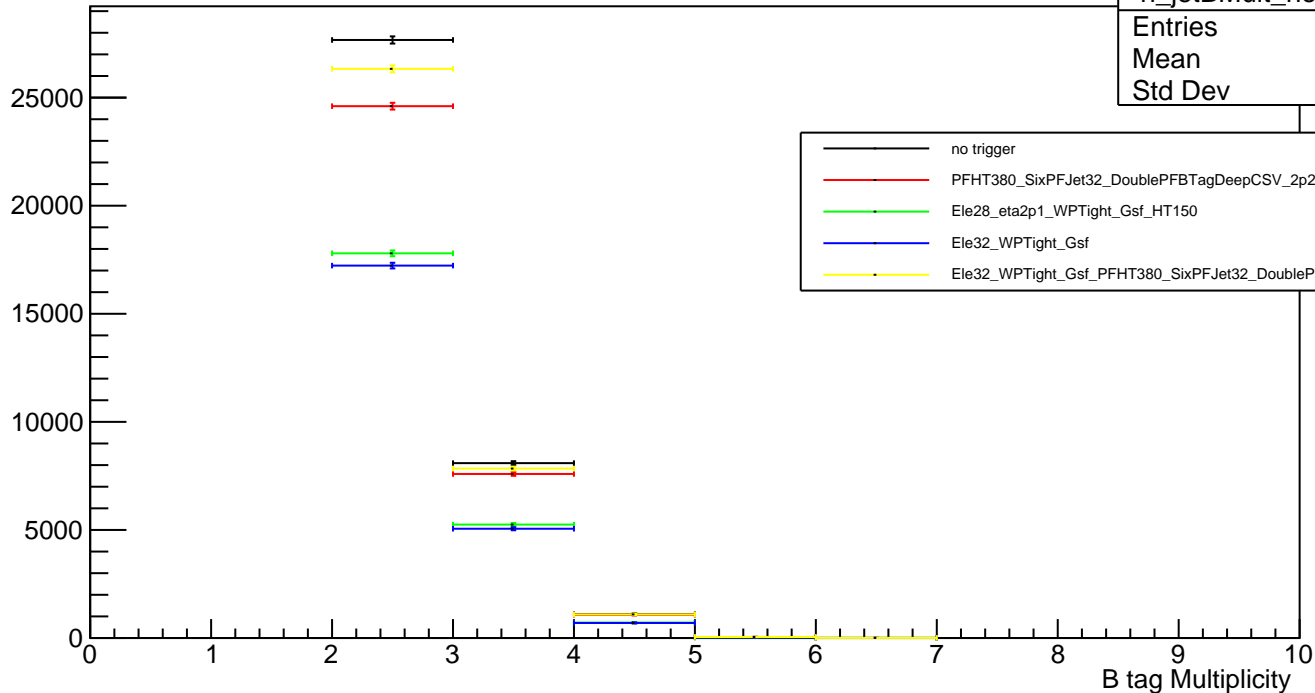


Number of Events per Number of Jets

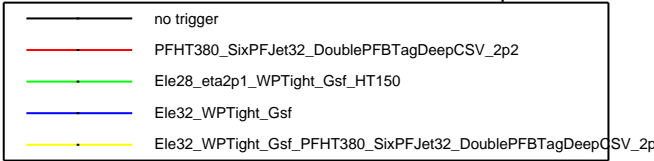


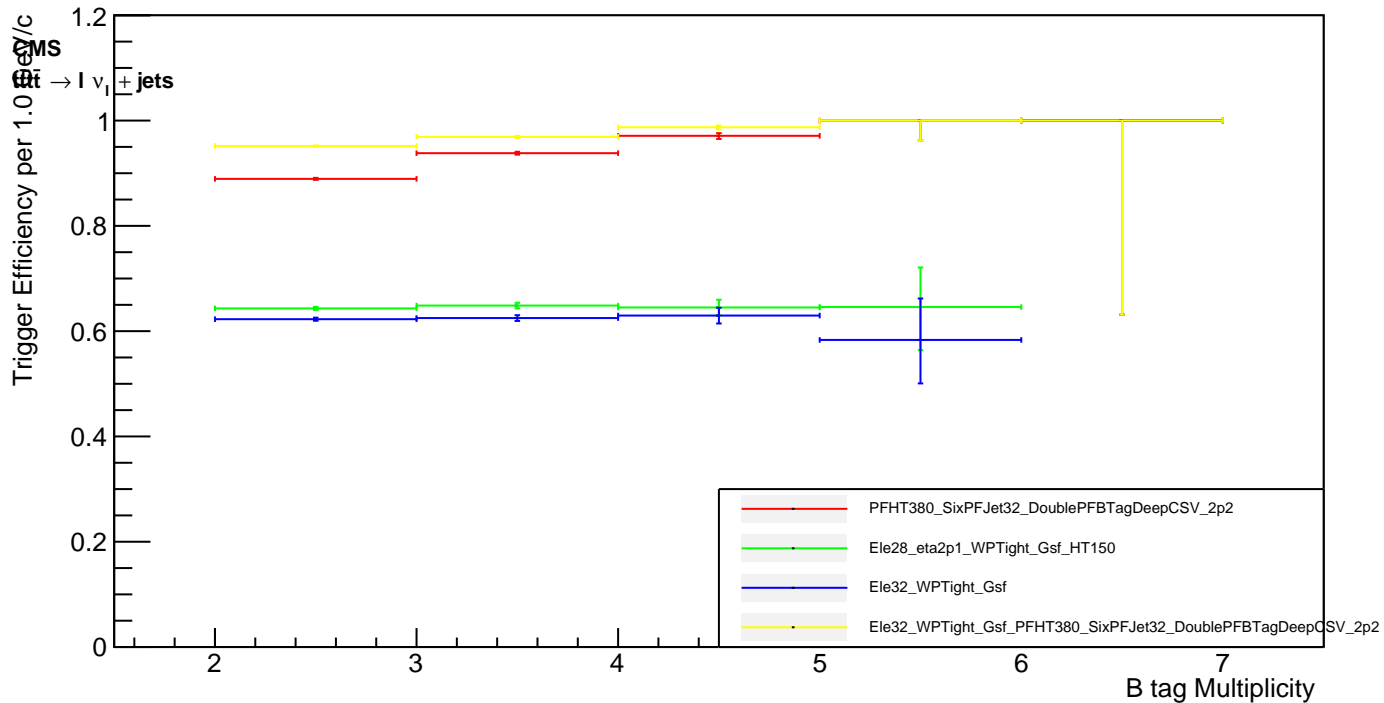


Number of Events per Number of Jets



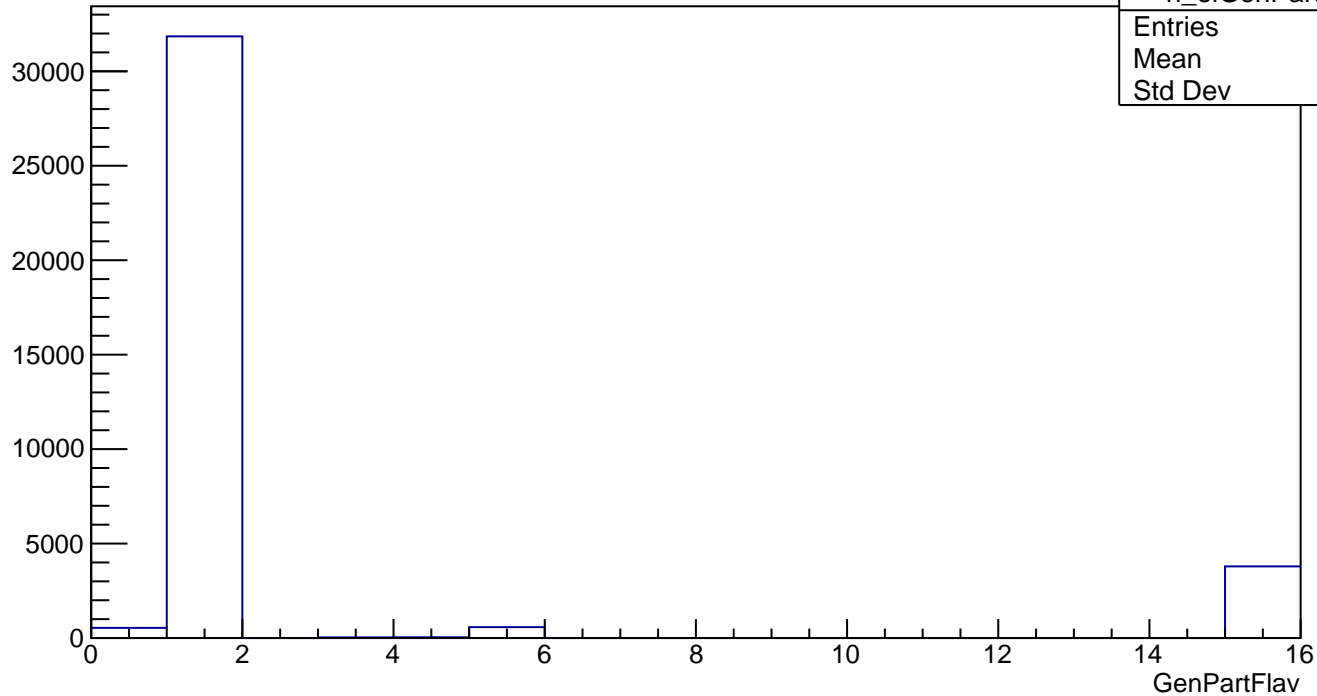
| h_jetBMult_notrigger |        |
|----------------------|--------|
| Entries              | 36917  |
| Mean                 | 2.783  |
| Std Dev              | 0.5217 |



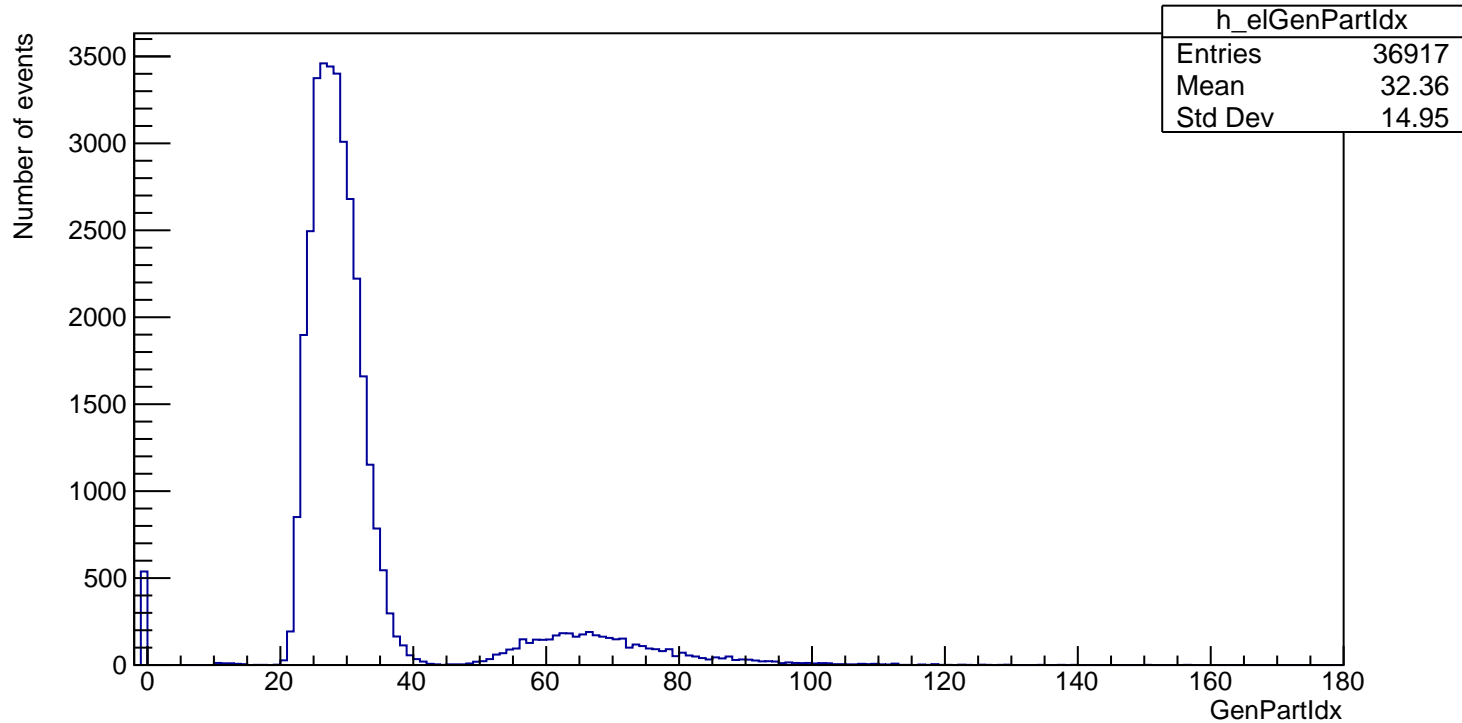


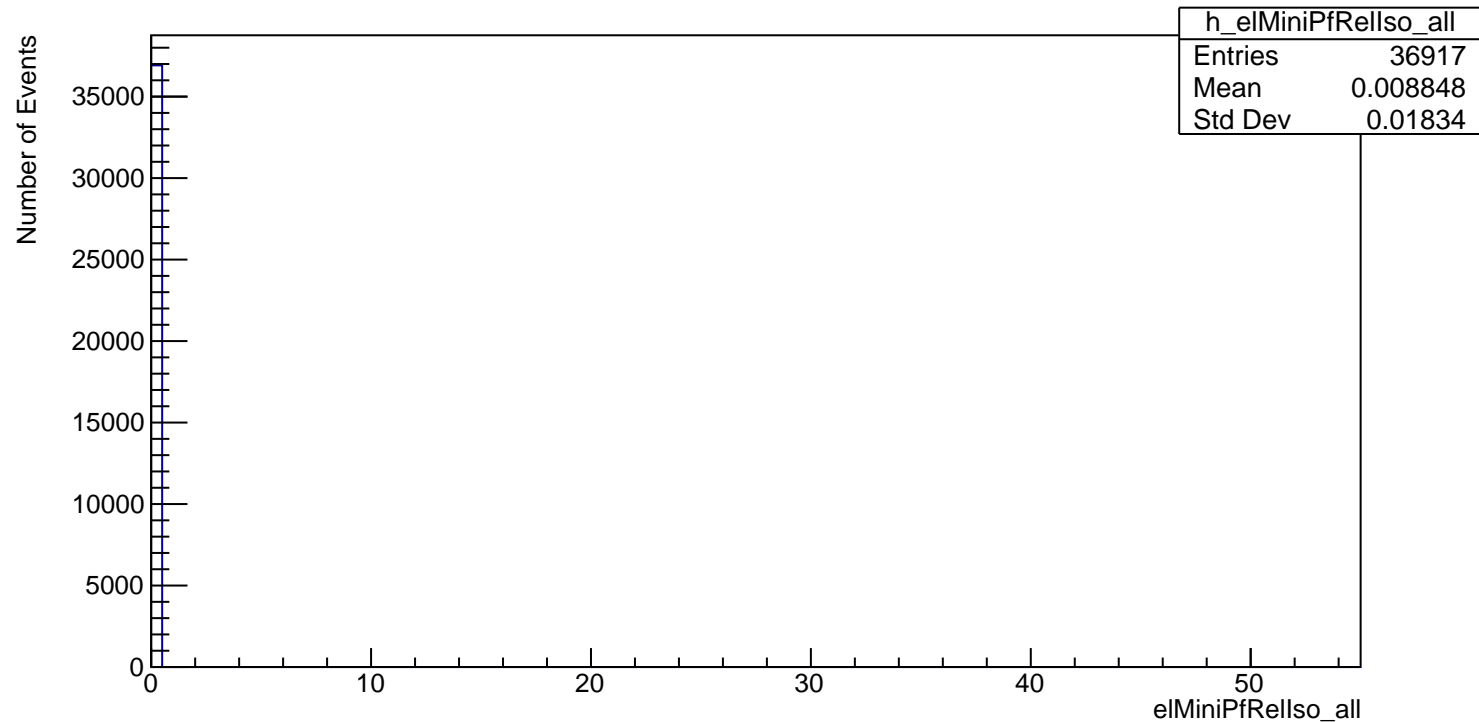


Number of events



| h_elGenPartFlav |       |
|-----------------|-------|
| Entries         | 36917 |
| Mean            | 2.495 |
| Std Dev         | 4.269 |





Number of Events per 1 GeV/c

**CMS**

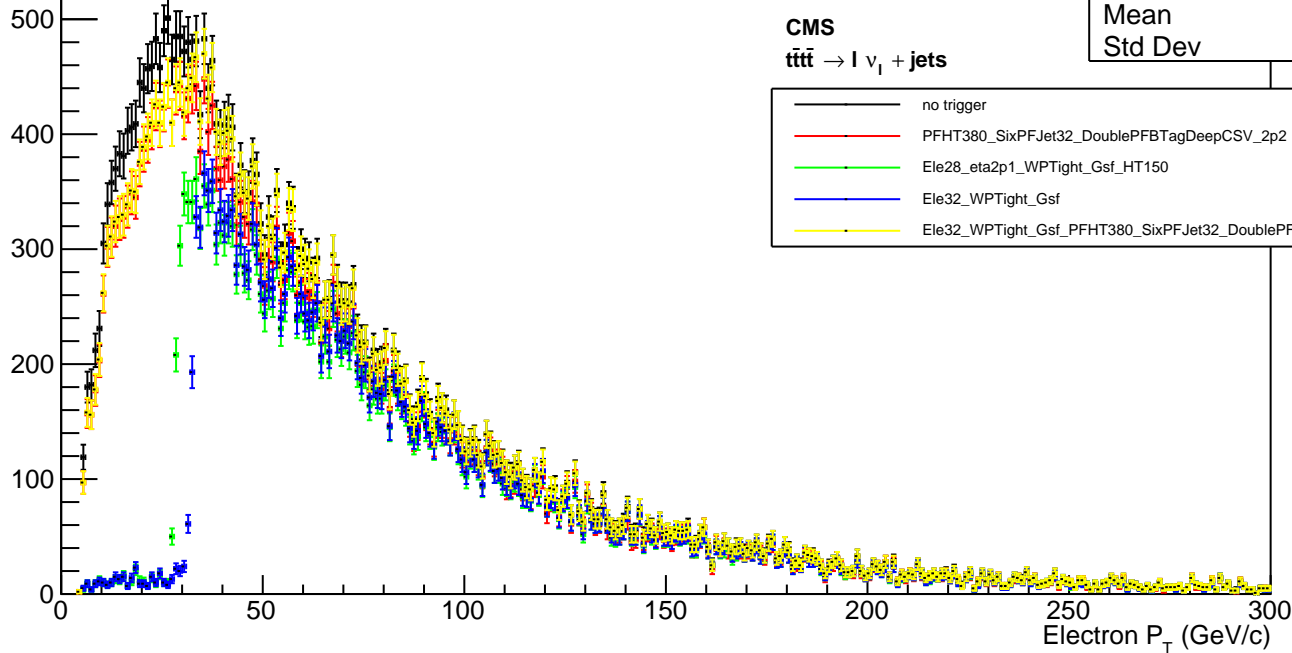
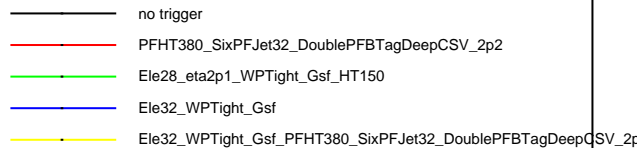
$t\bar{t}t\bar{t} \rightarrow l \nu_l + \text{jets}$

h\_elPt\_notrigger

Entries 36917

Mean 66.94

Std Dev 52.07

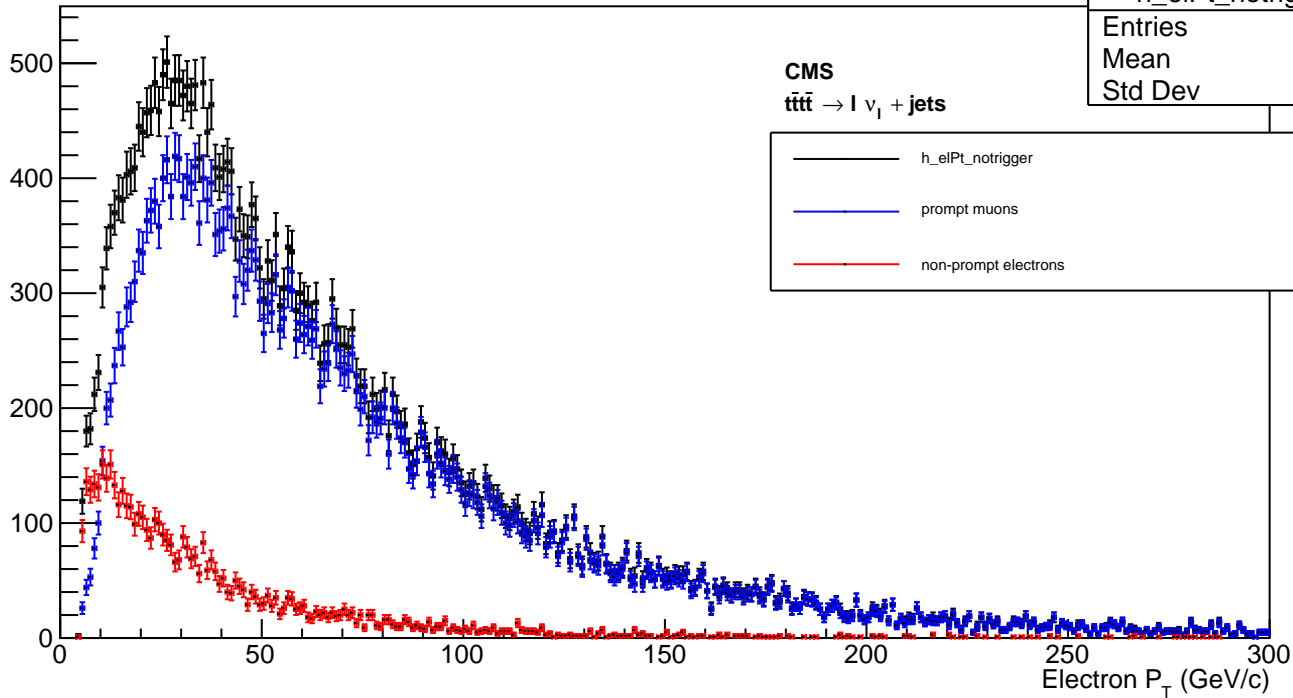
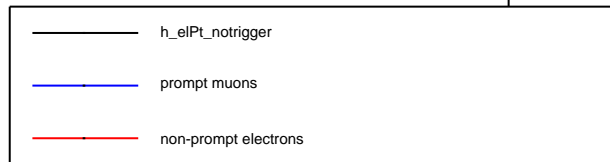


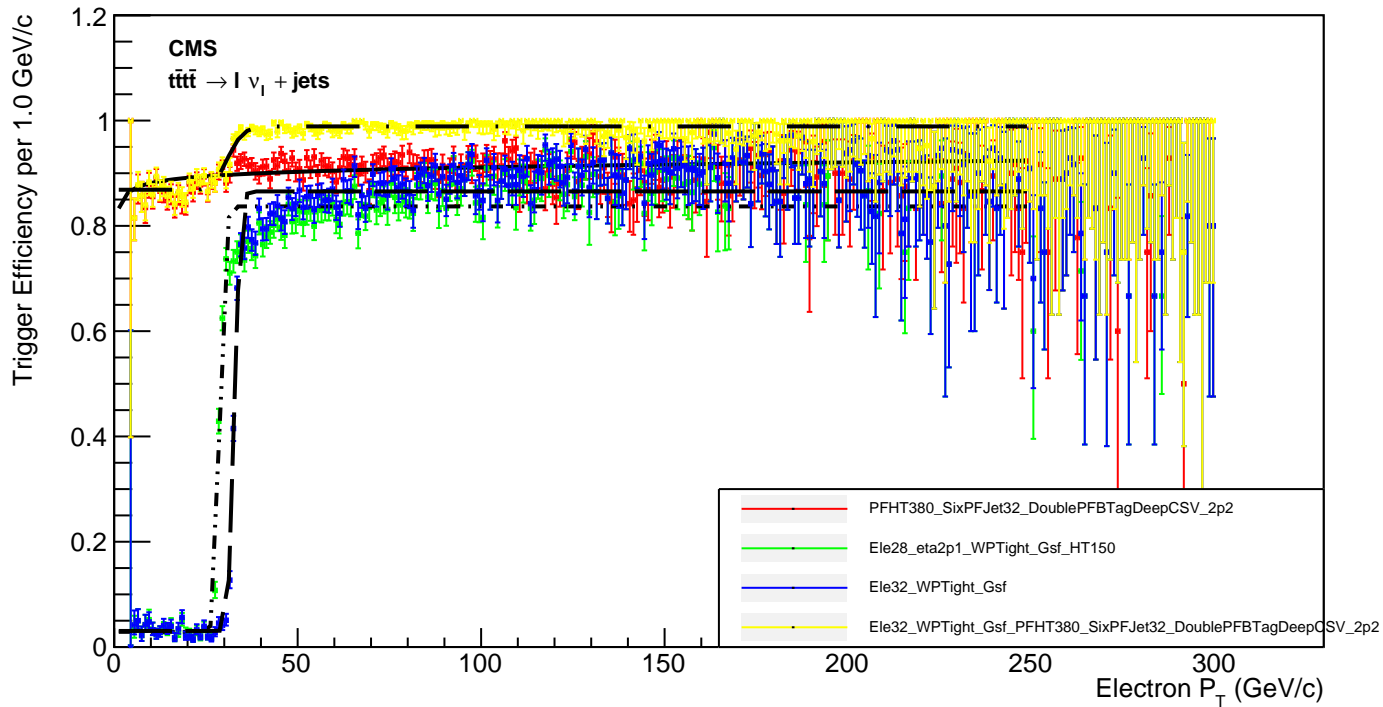
Number of Events per 1 GeV/c

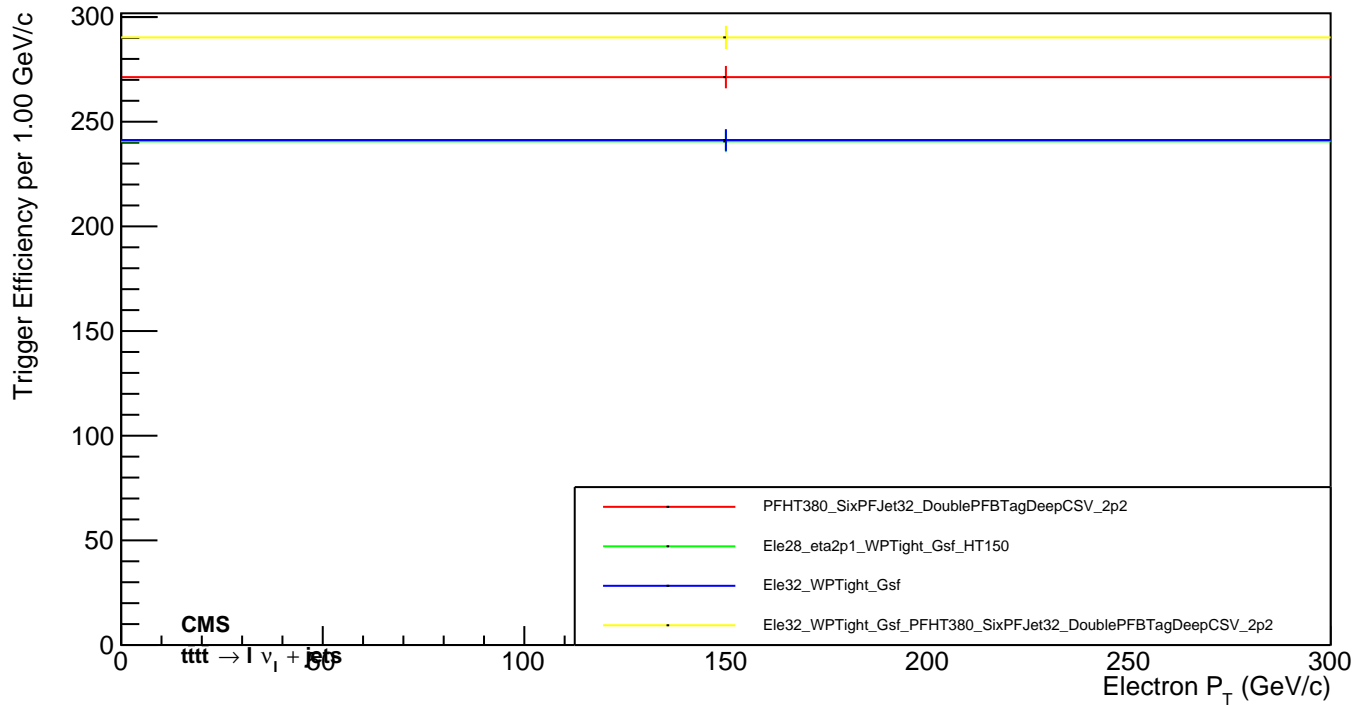
**CMS**

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

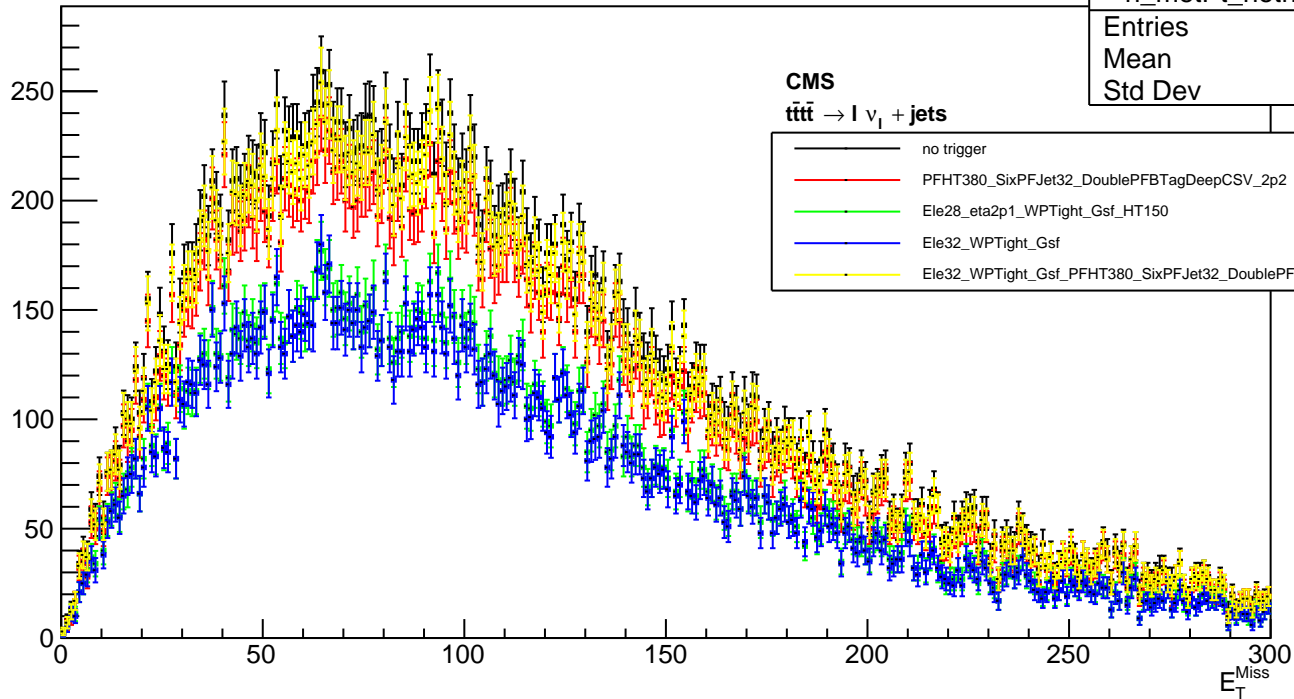
| h_elPt_notrigger |       |
|------------------|-------|
| Entries          | 36917 |
| Mean             | 66.94 |
| Std Dev          | 52.07 |





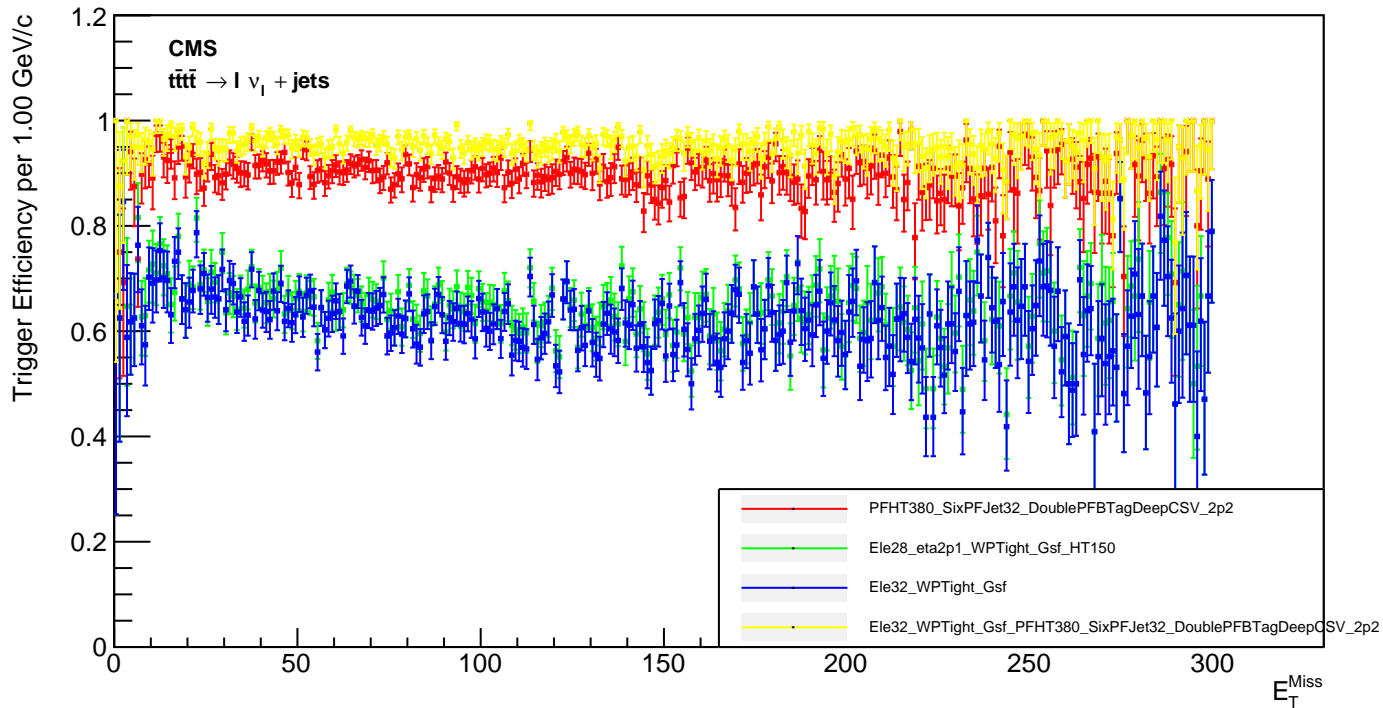


Number of Events per 1 GeV/c

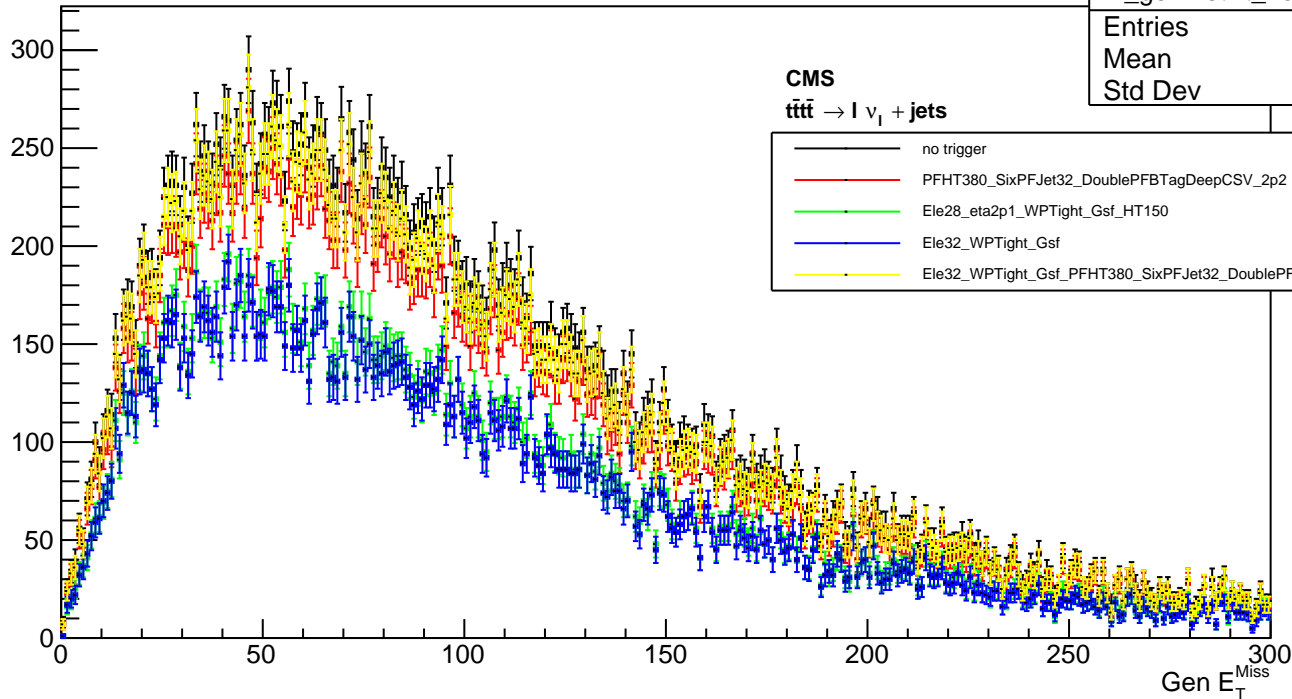


| h_metPt_notrigger |       |
|-------------------|-------|
| Entries           | 36917 |
| Mean              | 110.4 |
| Std Dev           | 65.25 |

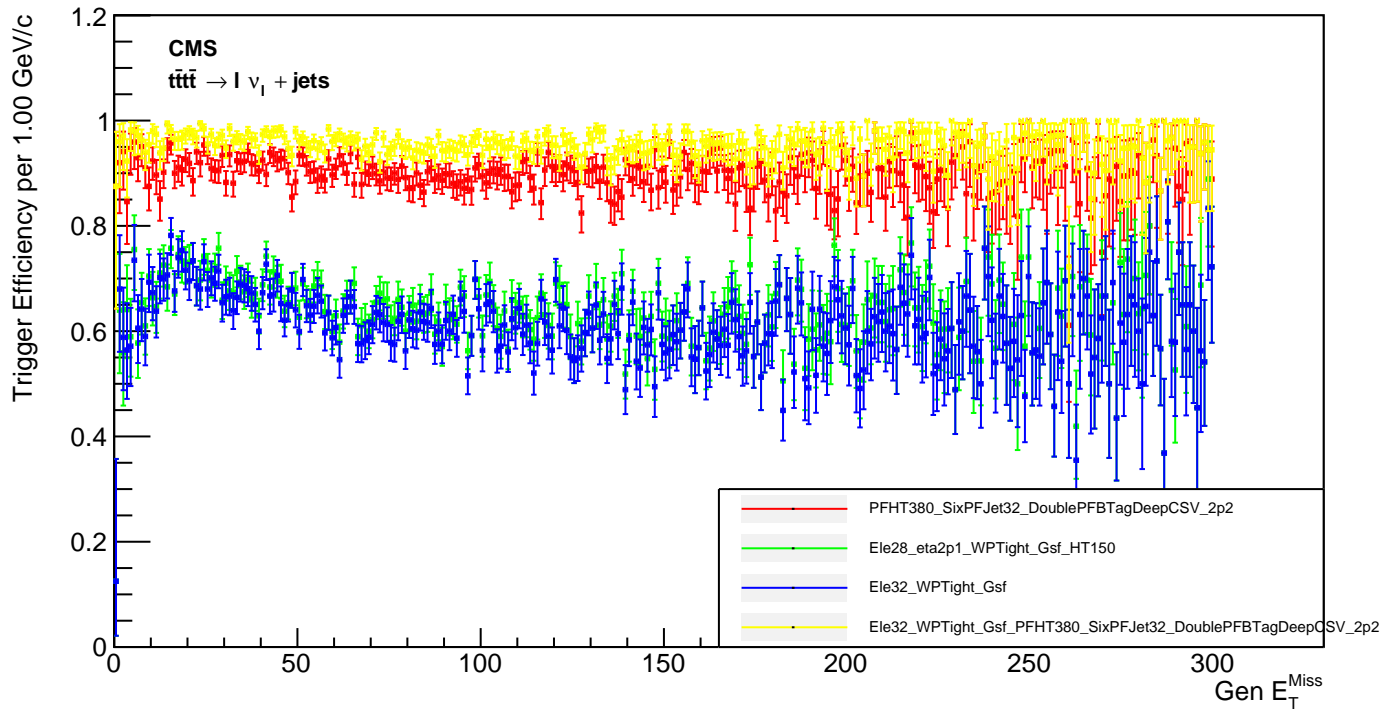




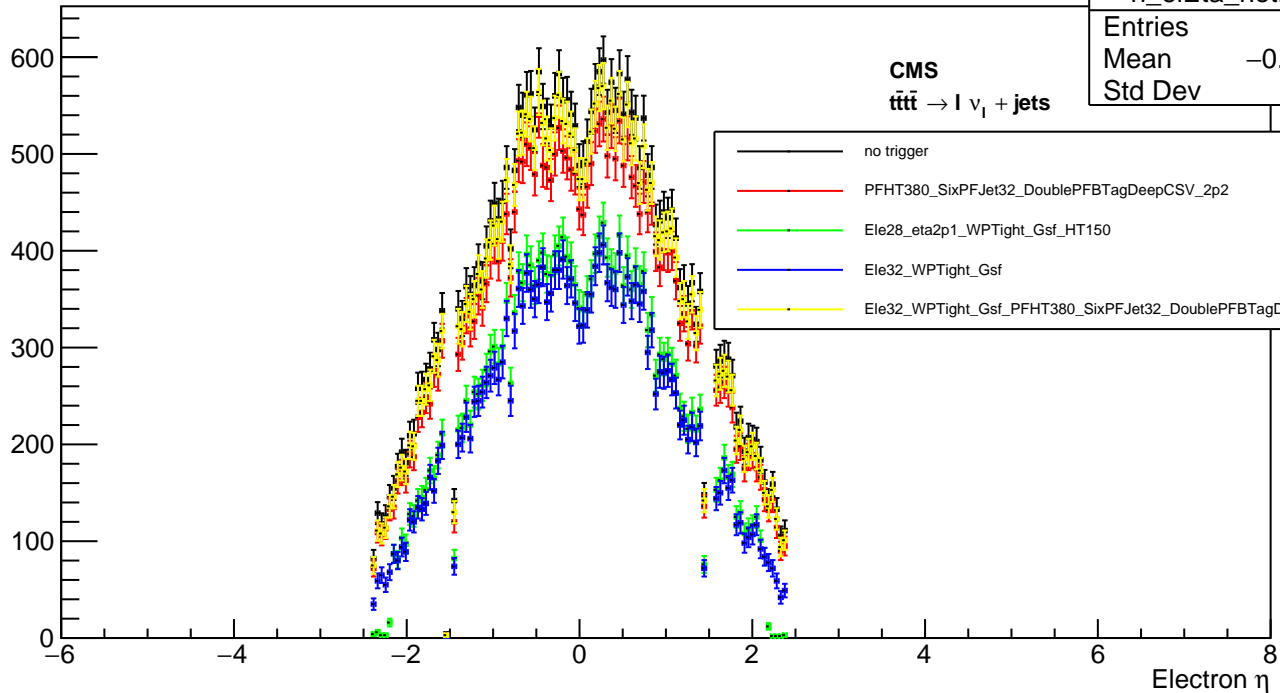
Number of Events per 1GeV/c



| h_genMetPt_notrigger |       |
|----------------------|-------|
| Entries              | 36917 |
| Mean                 | 100.4 |
| Std Dev              | 65.4  |



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



**CMS**

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

h\_elEta\_notrigger

Entries 36917

Mean -0.002024

Std Dev 1.102

no trigger

PFHT380\_SixPFJet32\_DoublePFBTagDeepCSV\_2p2

Ele28\_eta2p1\_WPTight\_Gsf\_HT150

Ele32\_WPTight\_Gsf

Ele32\_WPTight\_Gsf\_PFHT380\_SixPFJet32\_DoublePFBTagDeepCSV\_2p2

Trigger Efficiency per 0.04666666666666667 GeV/c

