

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

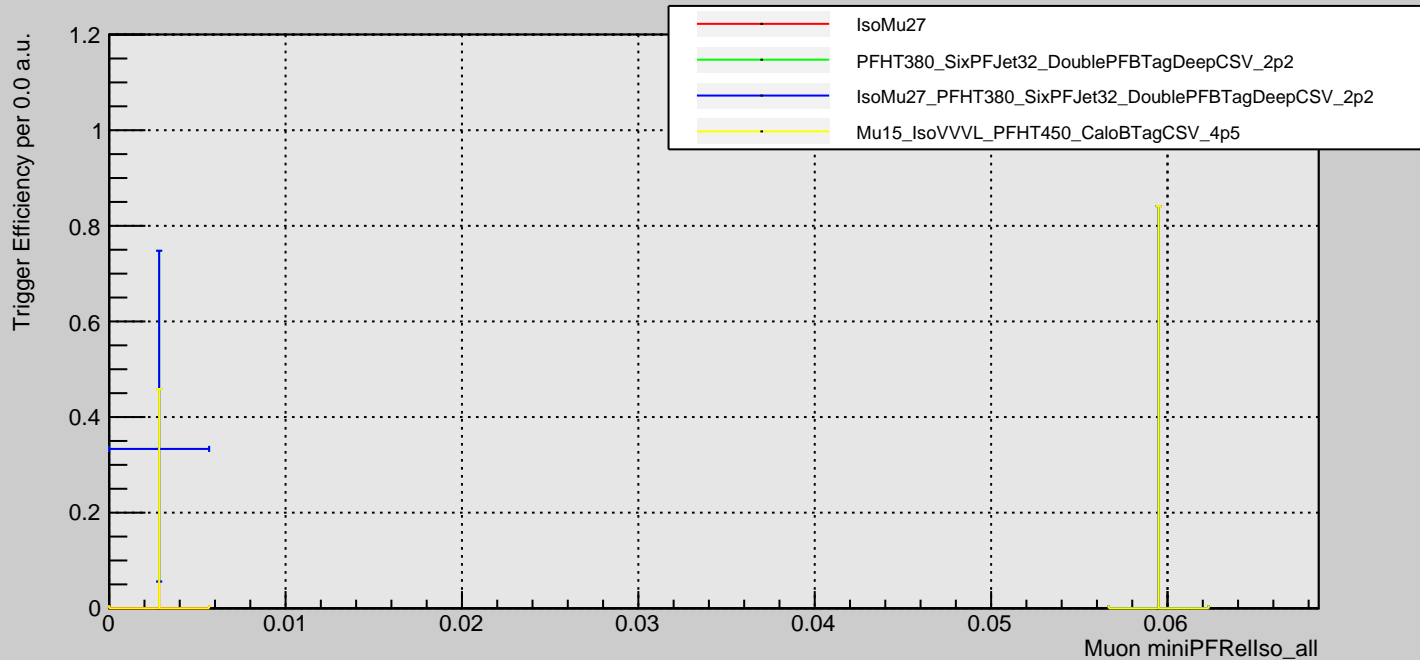
- **Jets:** number  $> 5$
- **Muons plus Electrons:** number  $> 0$

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

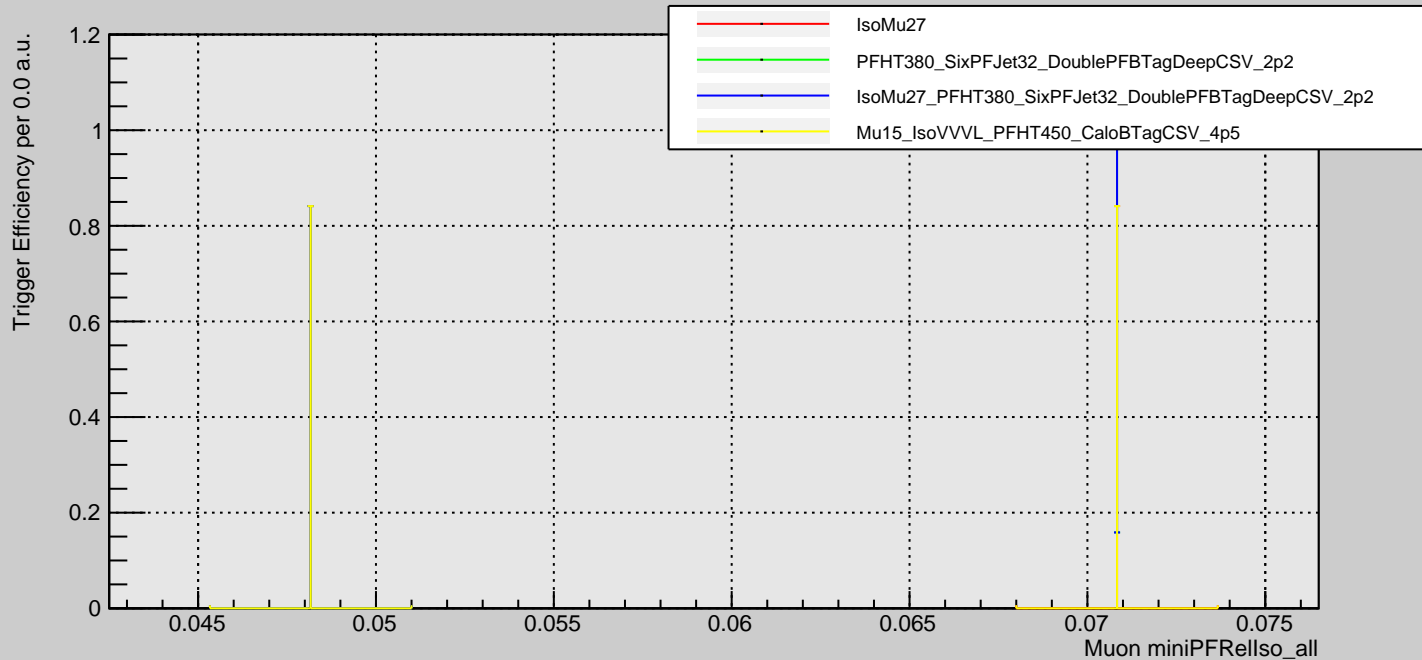
**Off-line (post-)selection Requisites for:**

- **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)
- **Muons:** has  $\text{tightId}$ ,  $|\eta| < 2.4$  and  $\text{PFRelIso\_all} < 0.15$  (for at least 1)

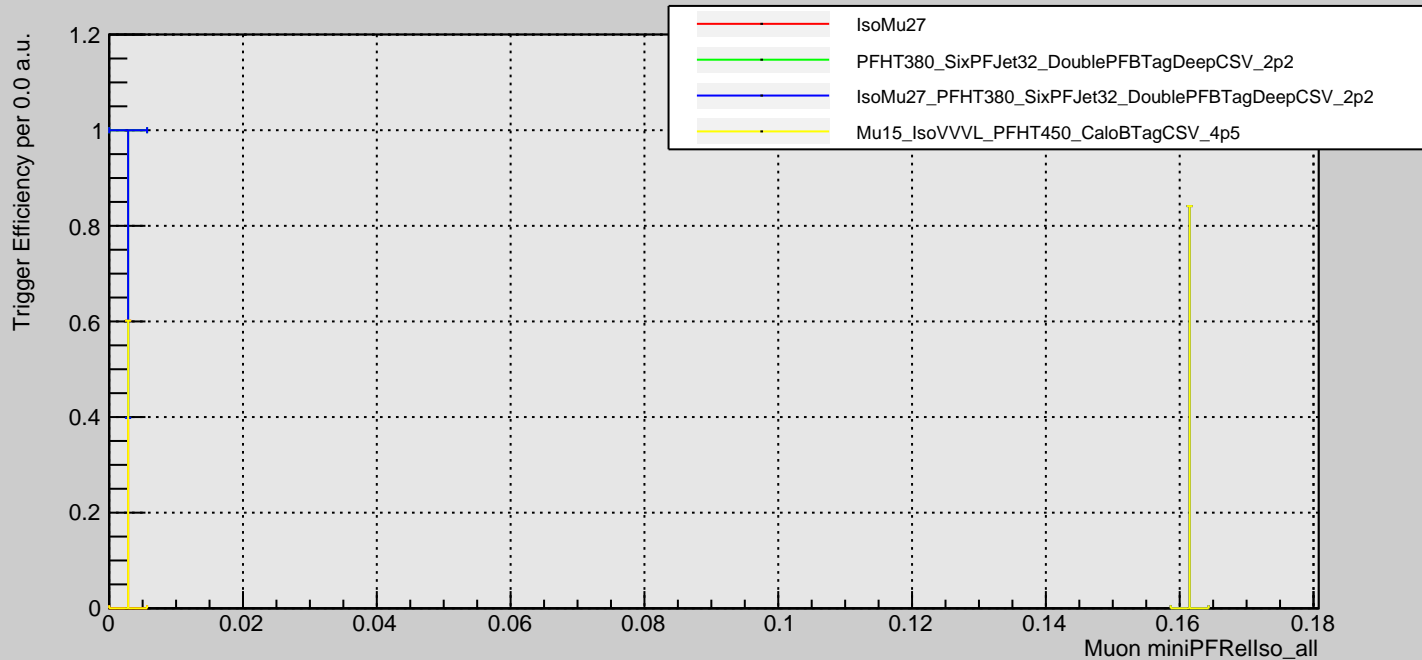
**Muon Pt = 5**



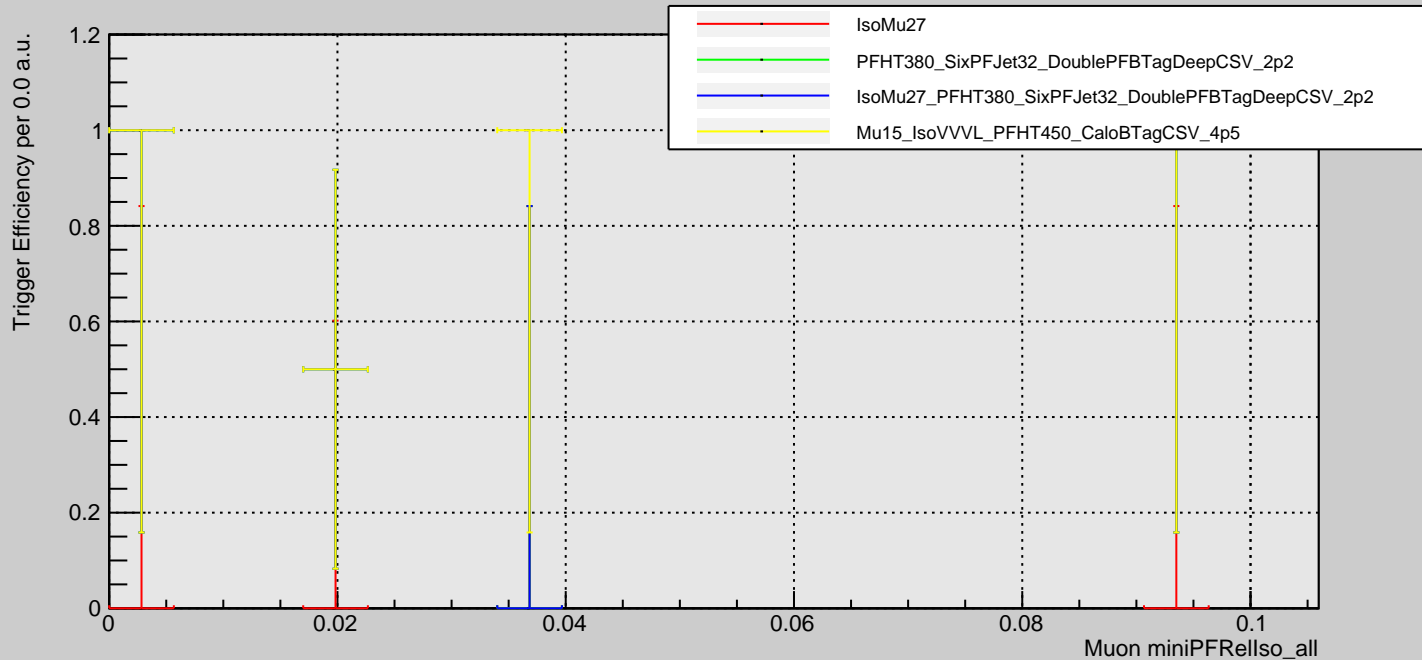
**Muon Pt = 10**



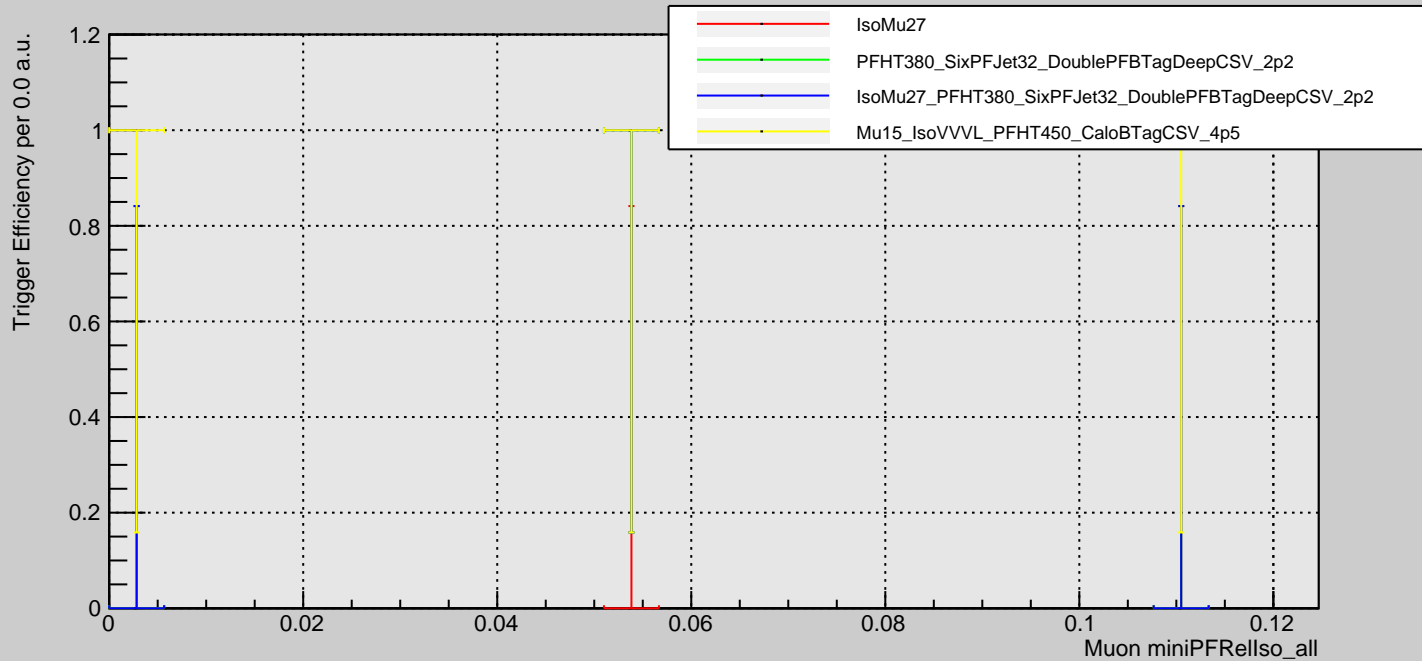
**Muon Pt = 15**



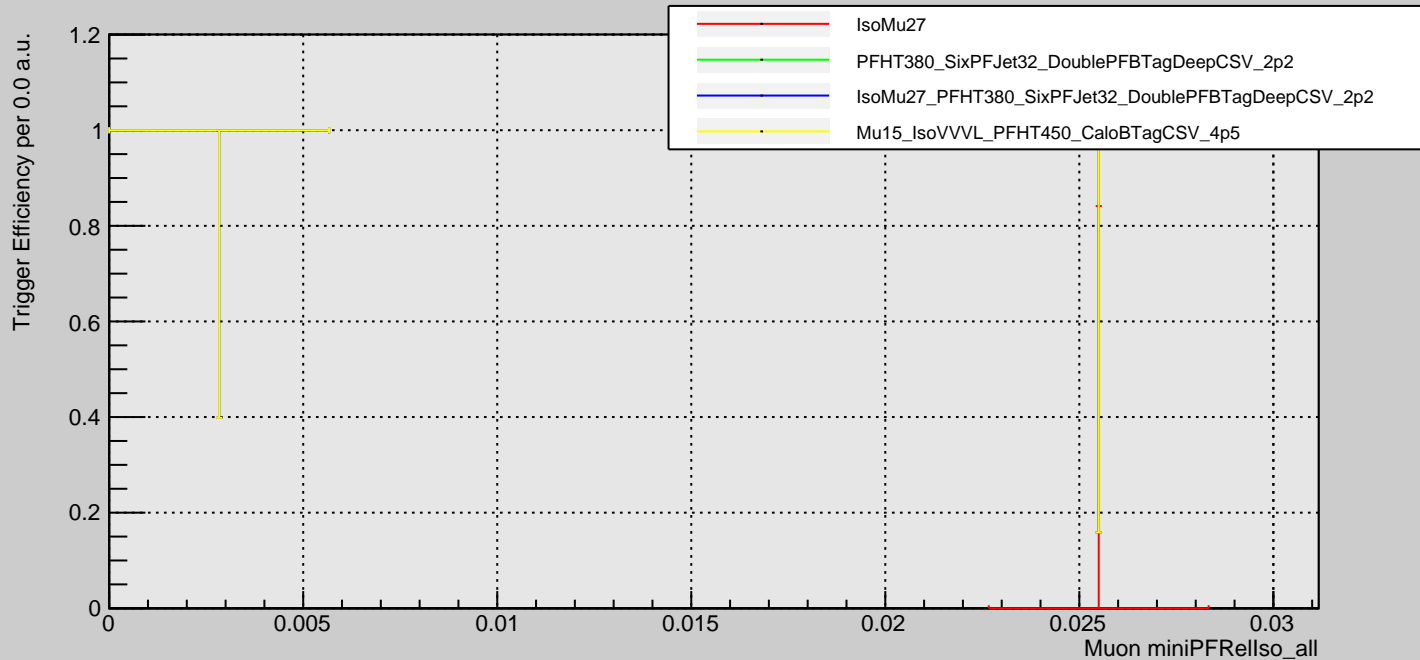
**Muon Pt = 20**



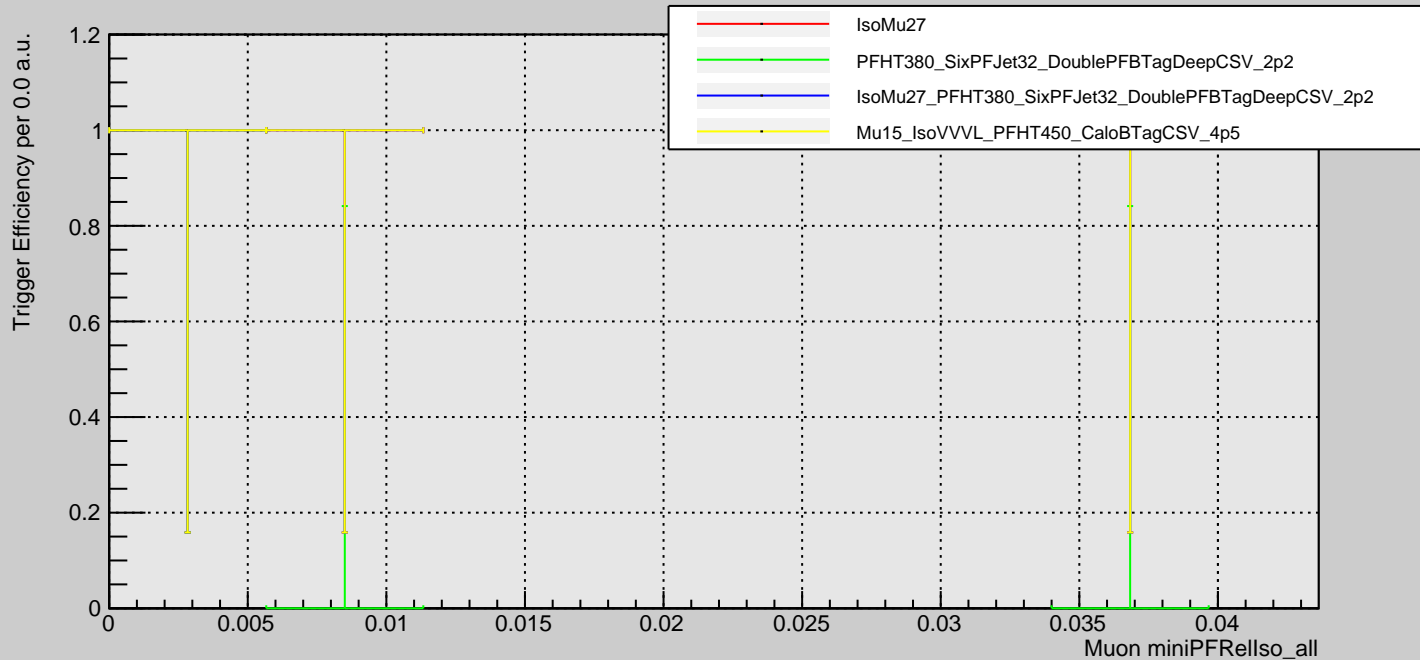
**Muon Pt = 25**



**Muon Pt = 30**

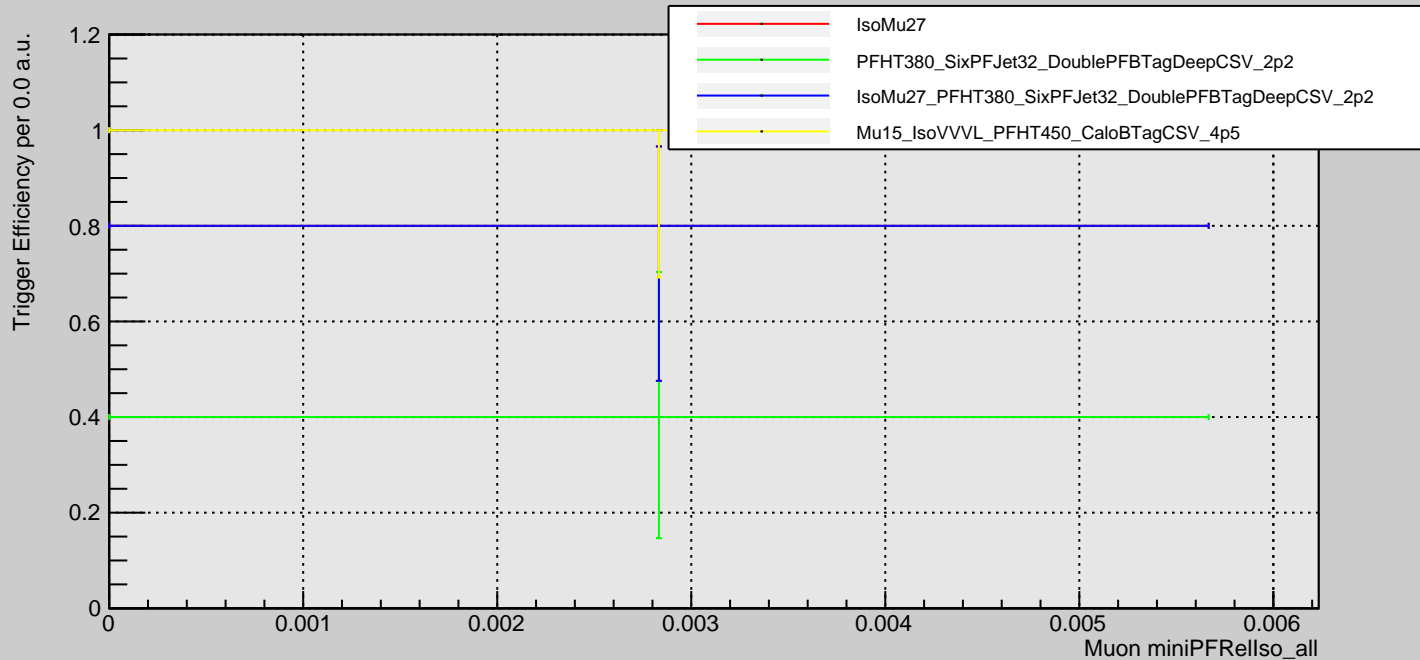


**Muon Pt = 35**

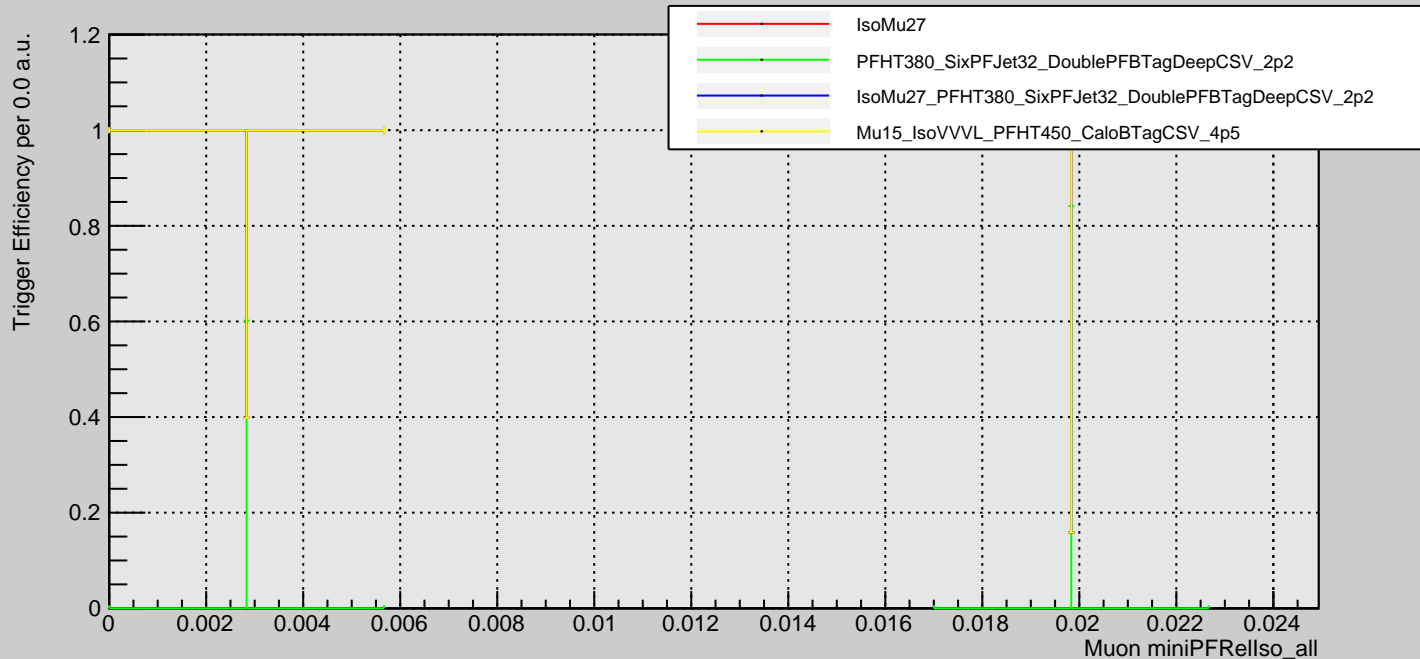




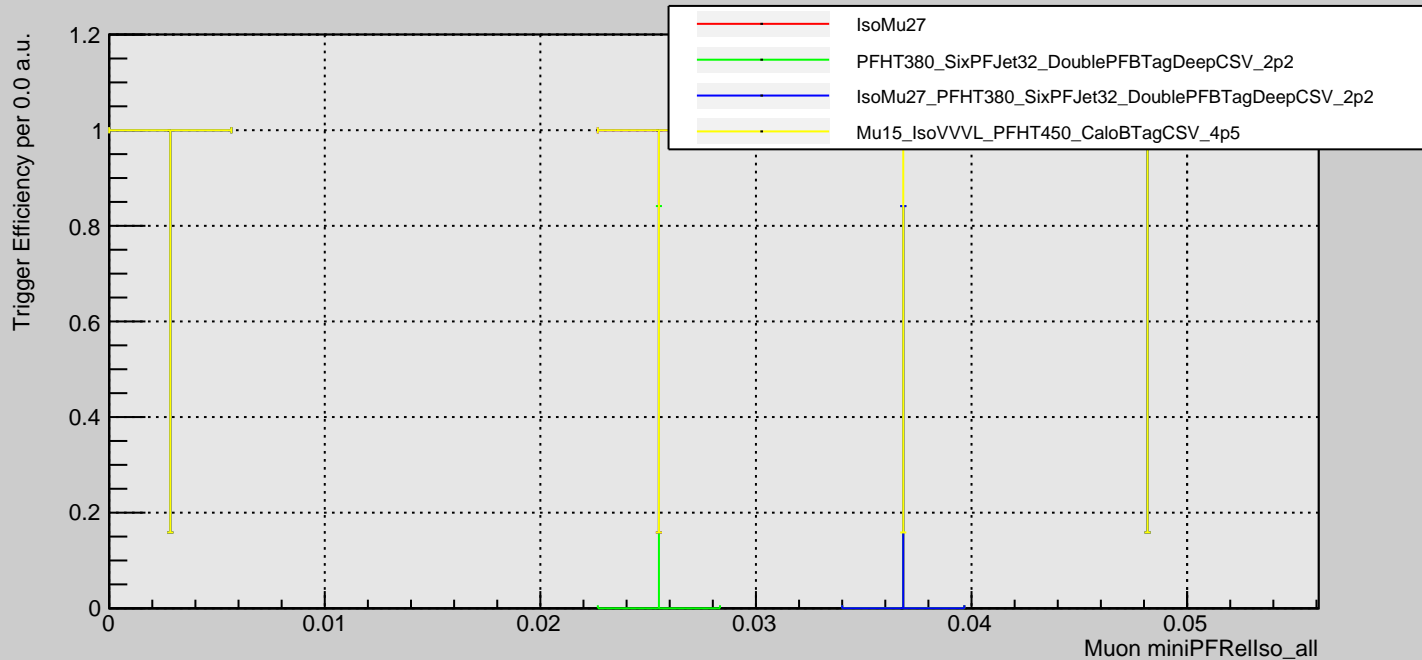
**Muon Pt = 40**



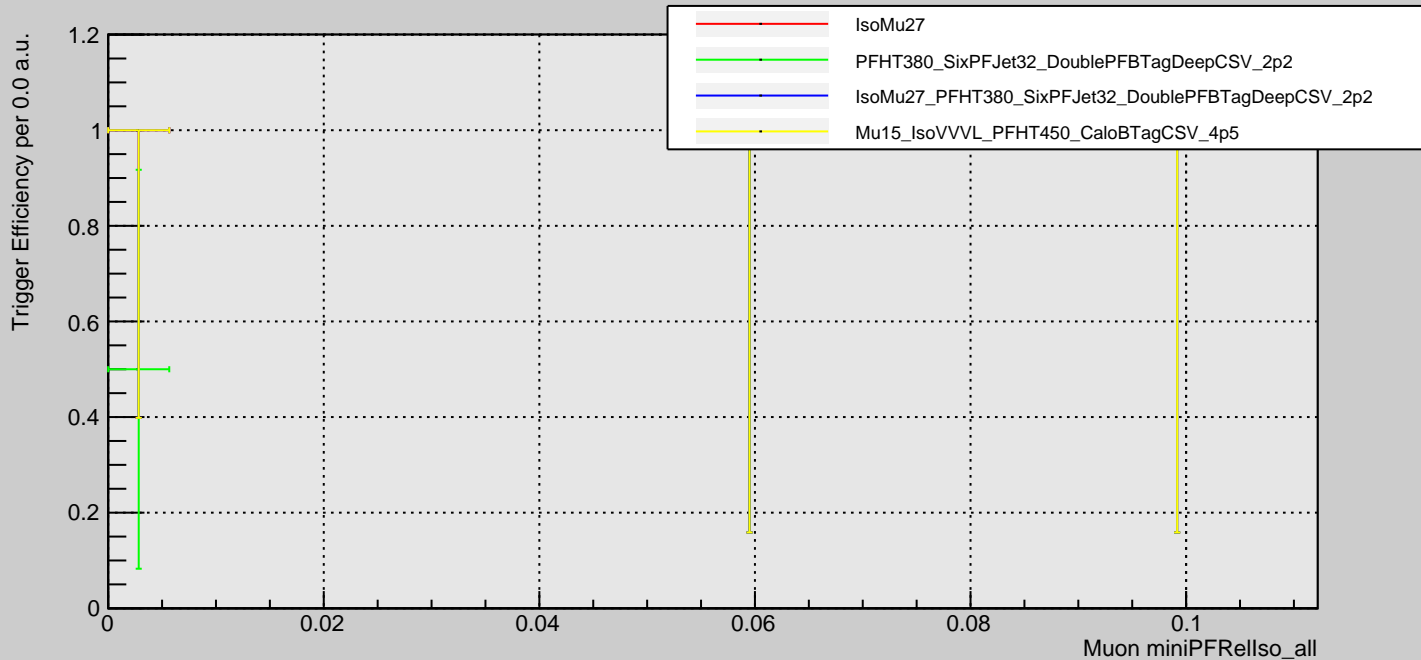
**Muon Pt = 45**



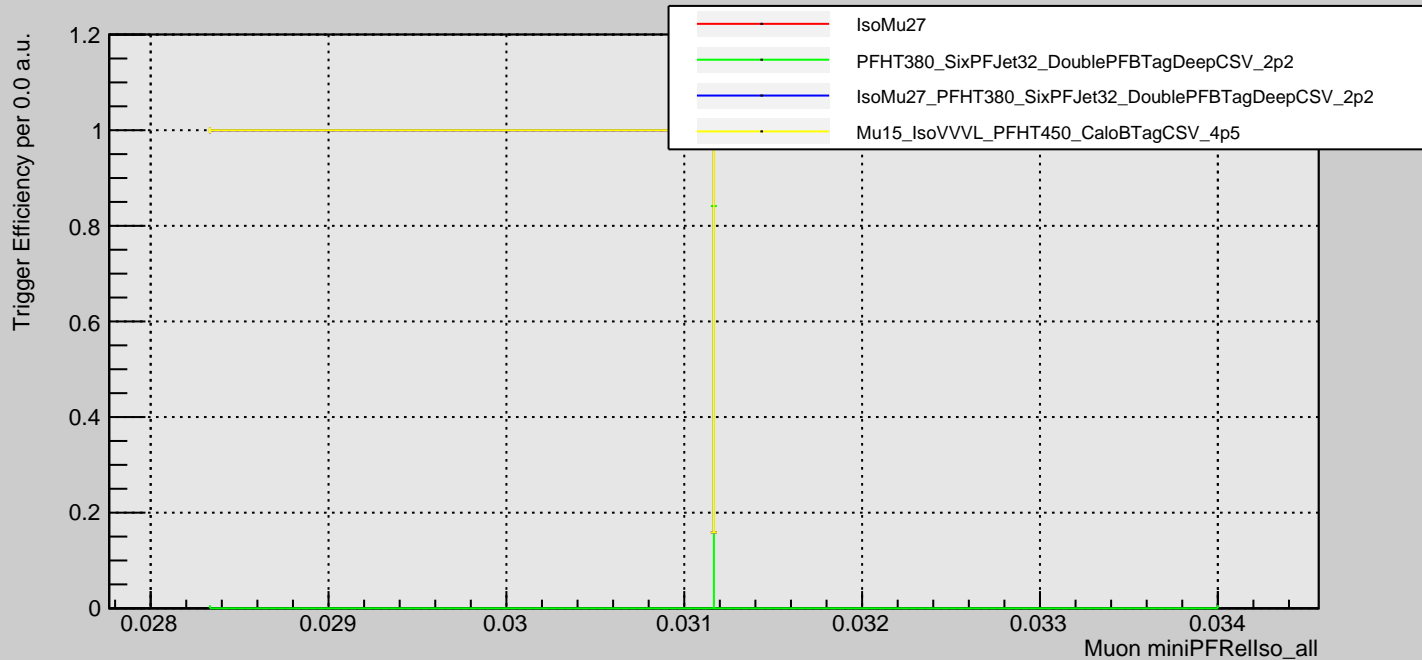
**Muon Pt = 50**



**Muon Pt = 55**



**Muon Pt = 60**



## Muon Pt = 65



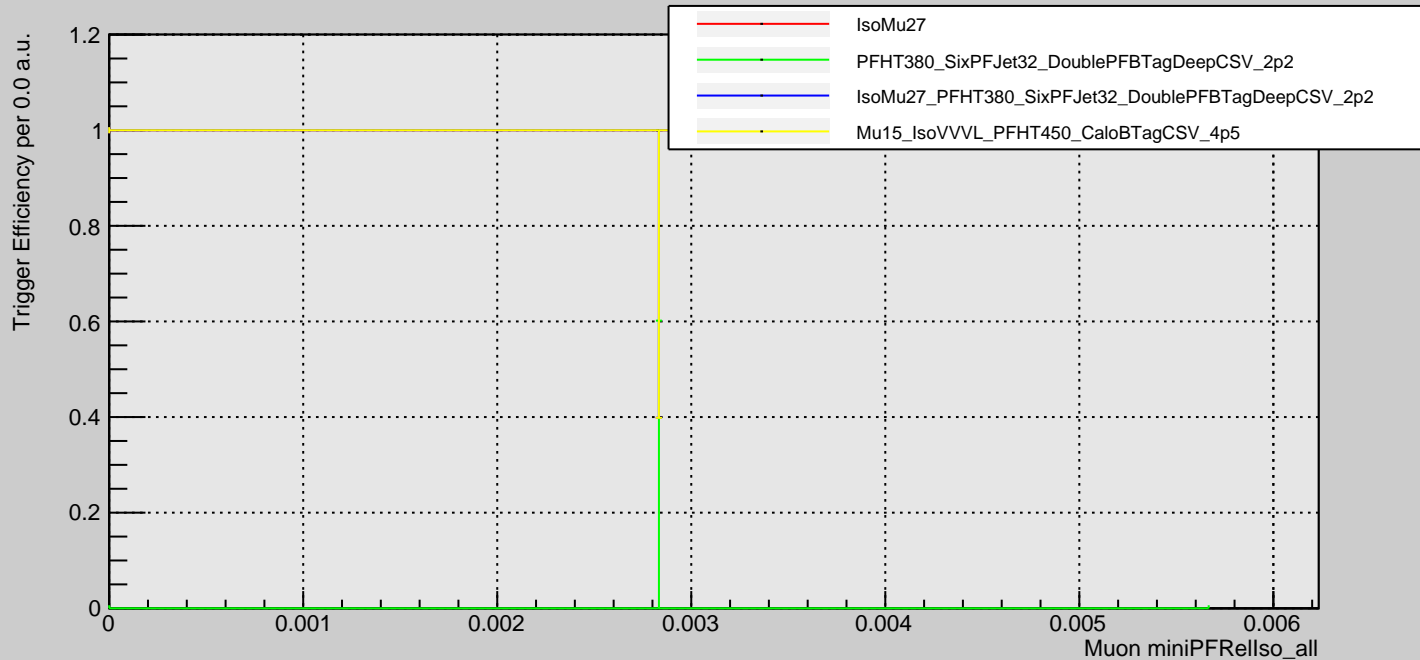
IsoMu27

PFHT380\_SixPFJet32\_DoublePFBTagDeepCSV\_2p2

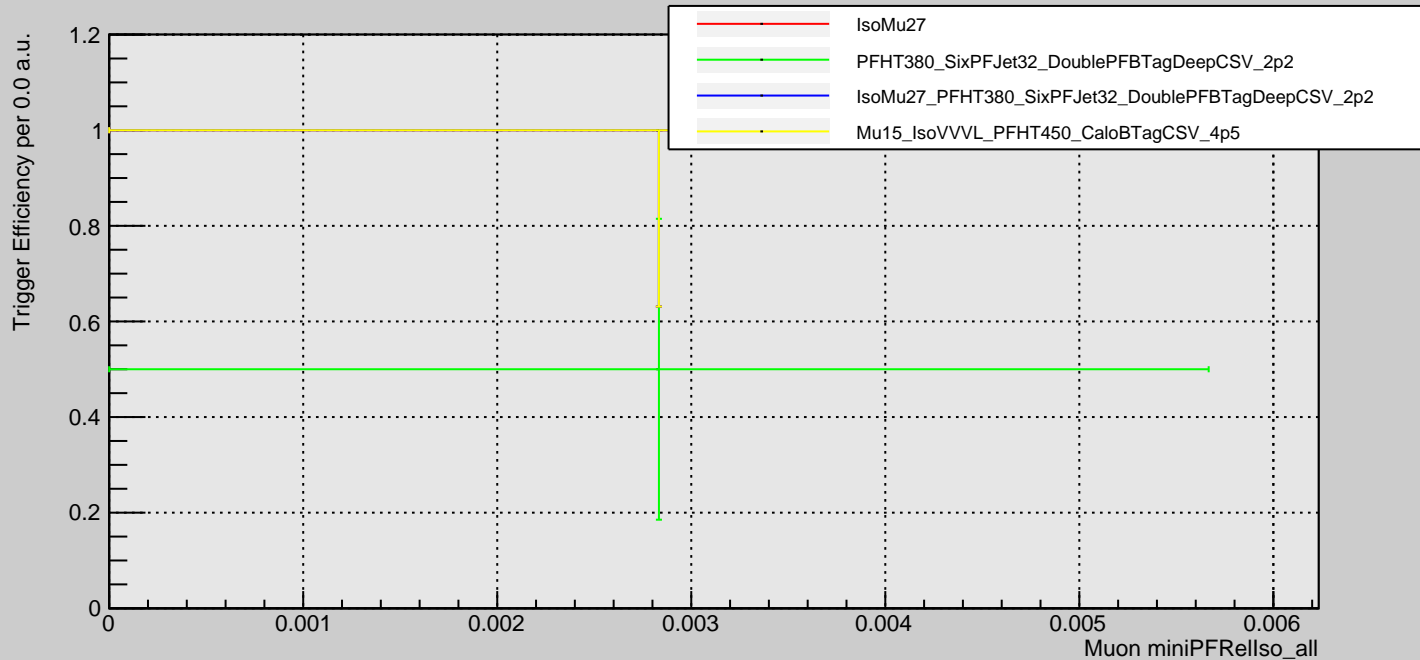
IsoMu27\_PFHT380\_SixPFJet32\_DoublePFBTagDeepCSV\_2p2

Mu15\_IsoVVVL\_PFHT450\_CaloBTagCSV\_4p5

**Muon Pt = 70**

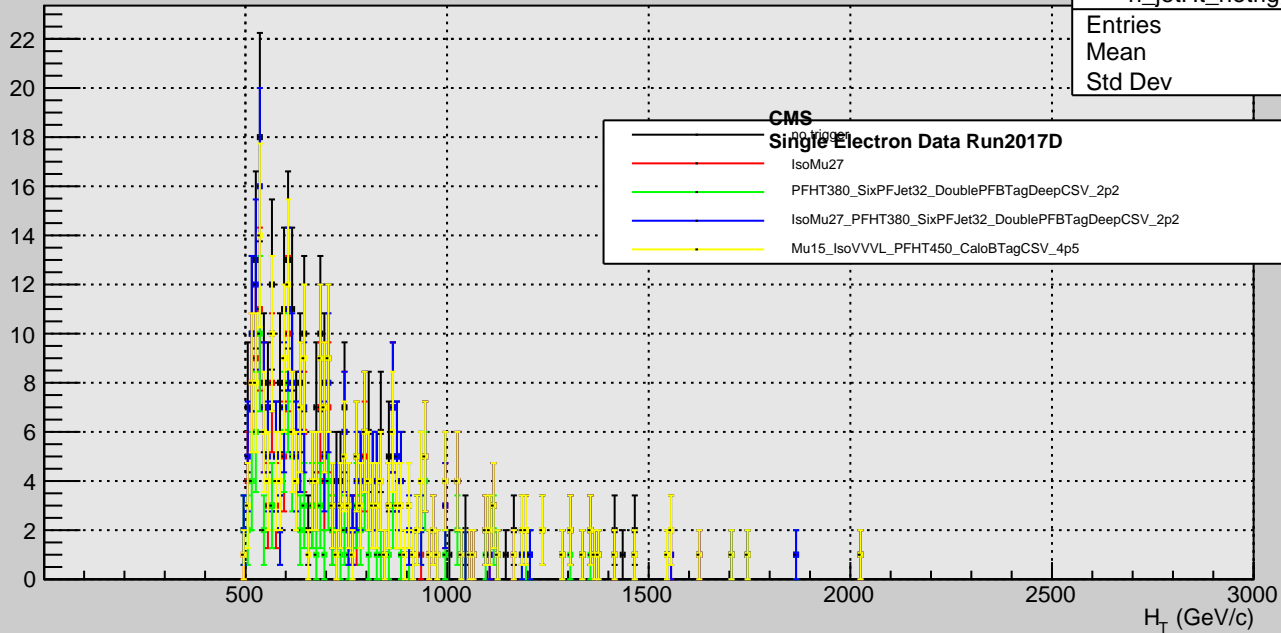


**Muon Pt = 75**



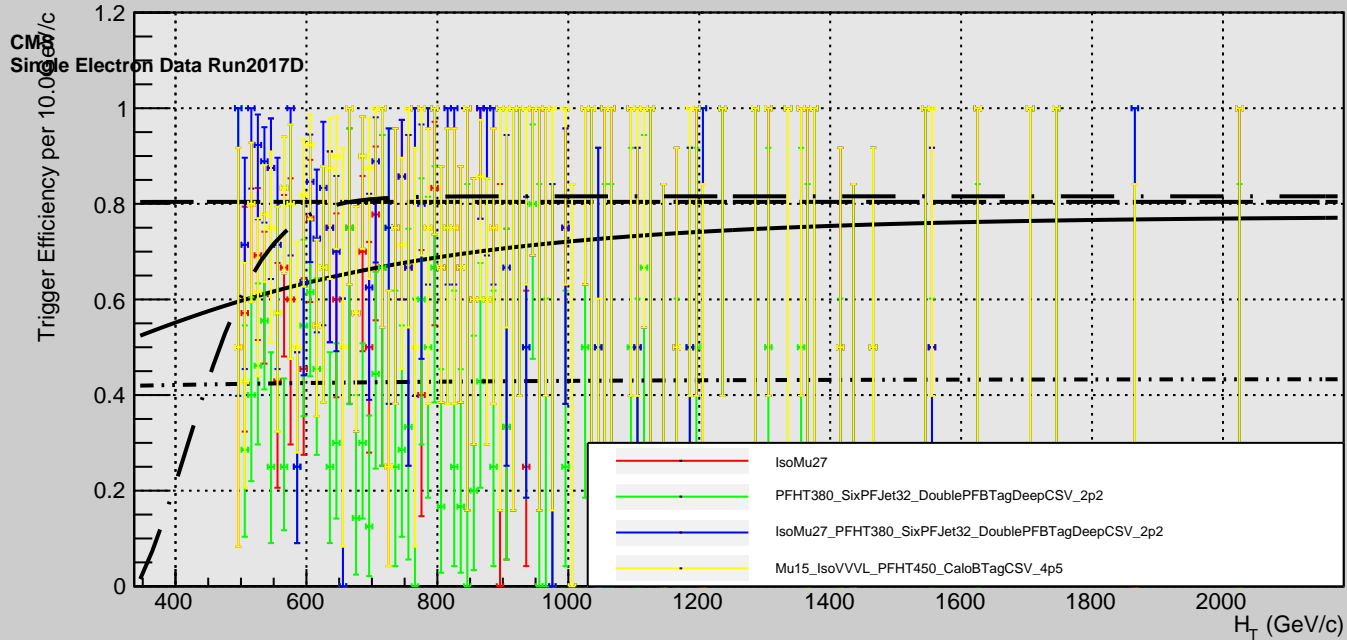


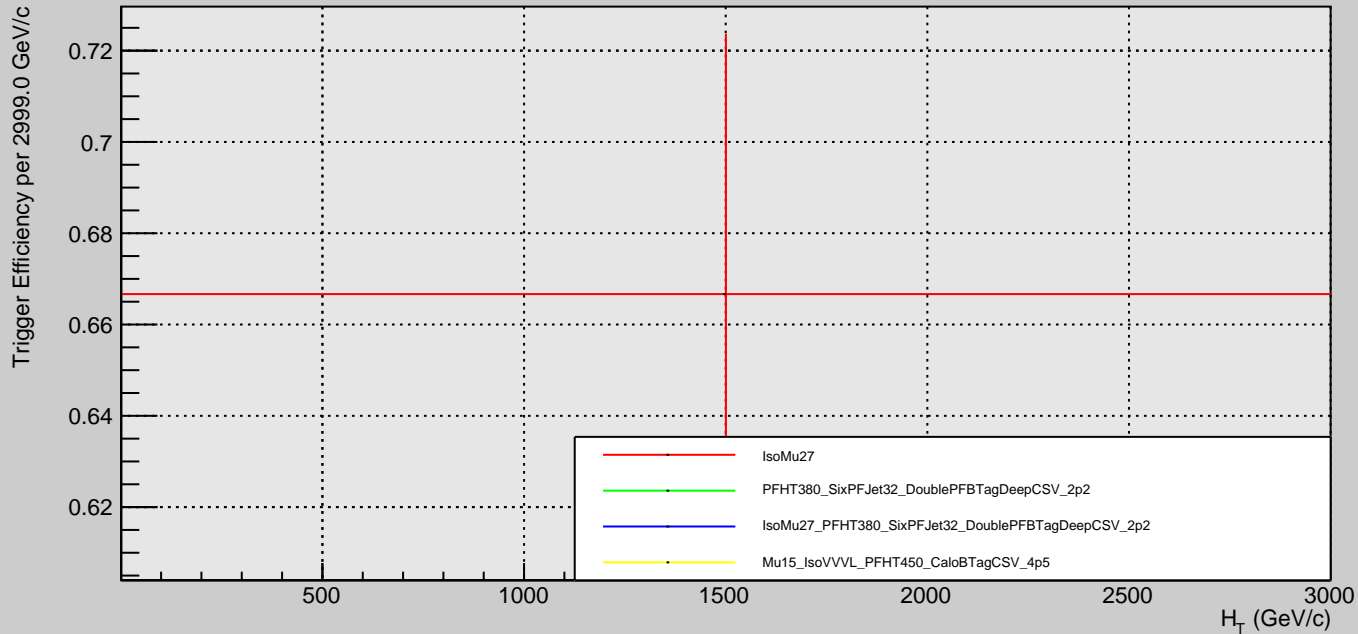
Number of Events per 10 GeV/c



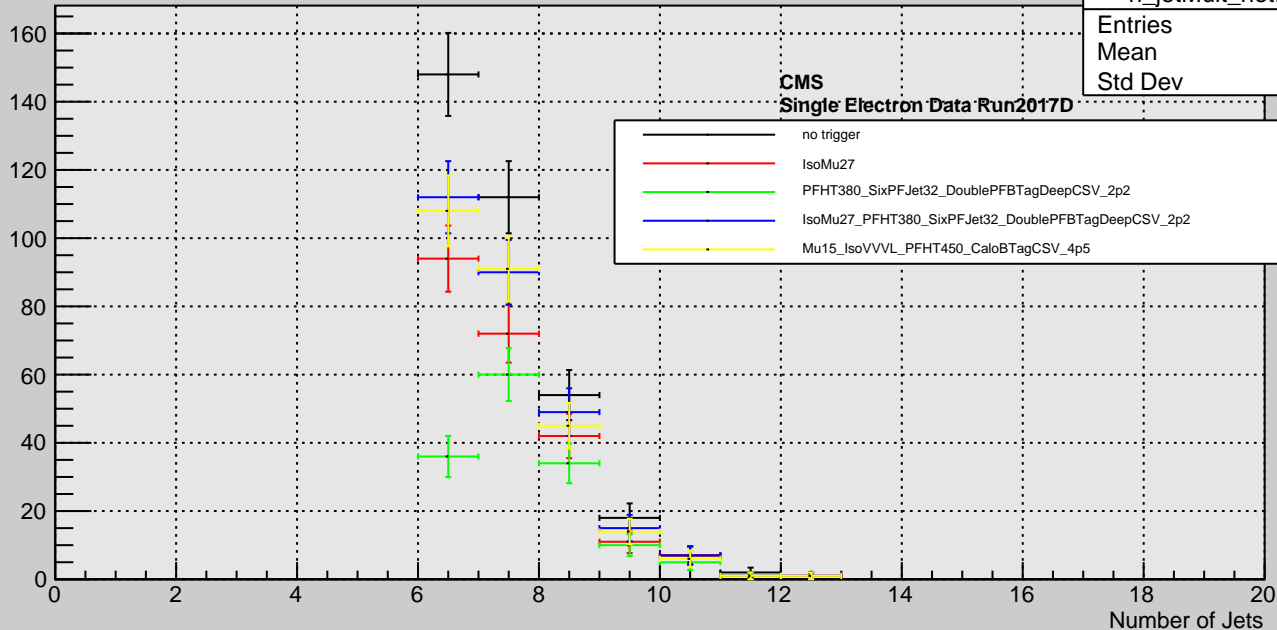
h\_jetHt\_notrigger

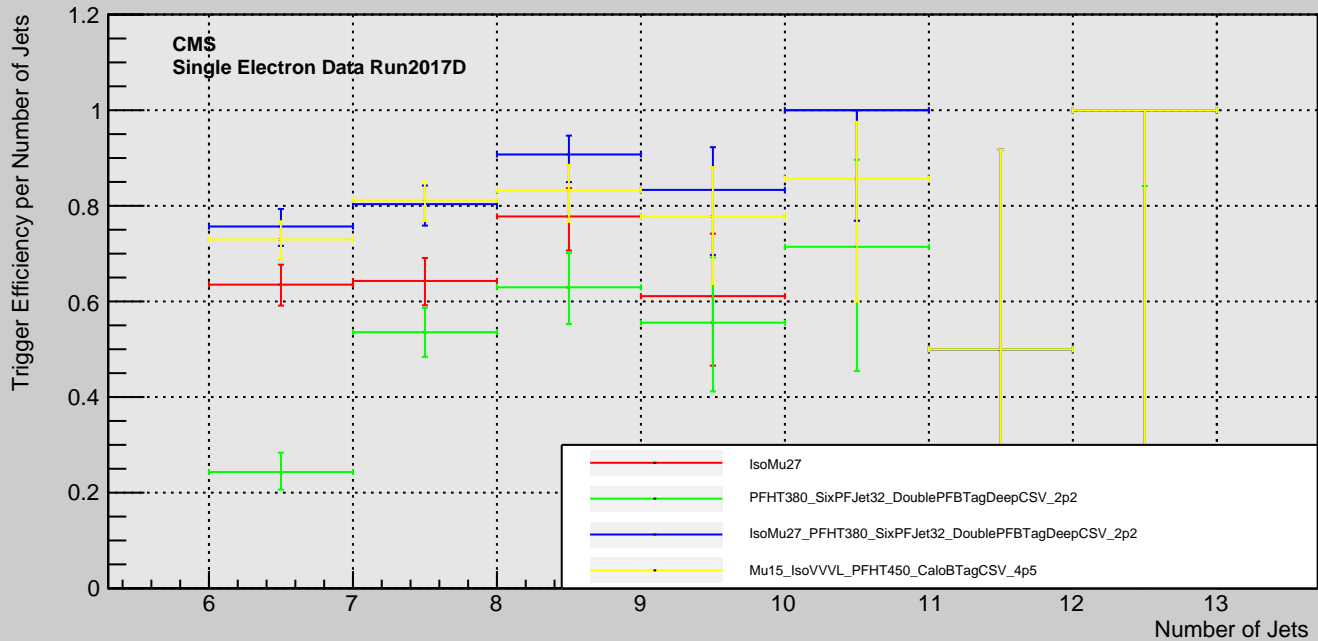
|         |       |
|---------|-------|
| Entries | 342   |
| Mean    | 767.4 |
| Std Dev | 258.7 |



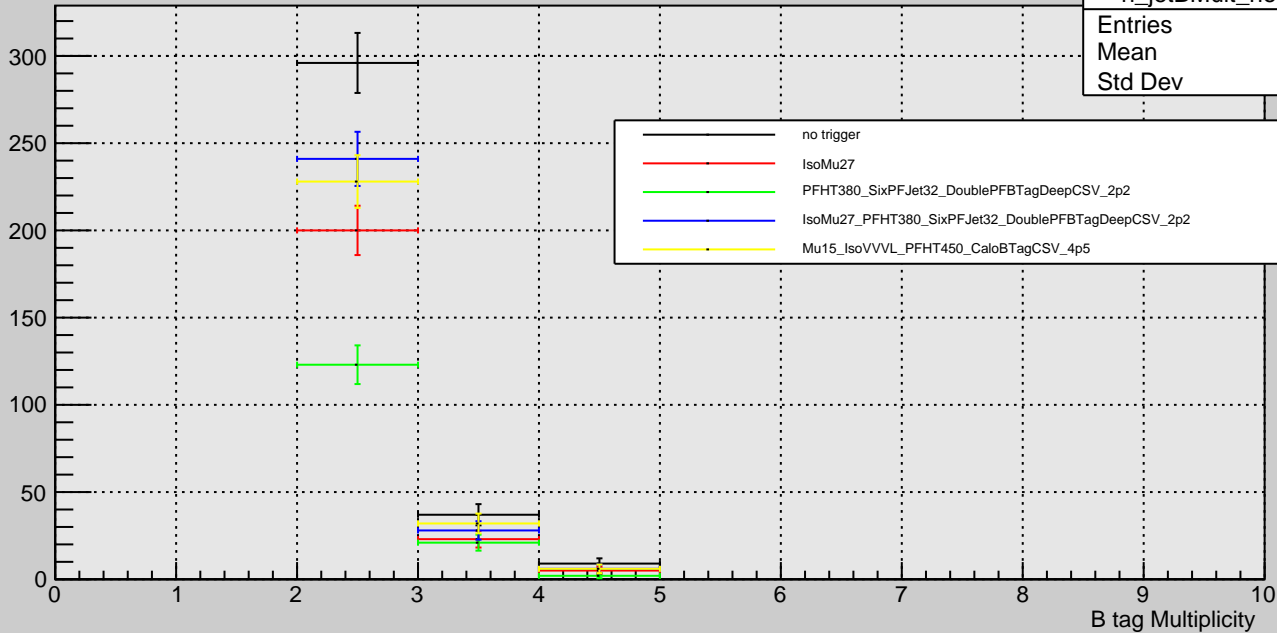


Number of Events per Number of Jets

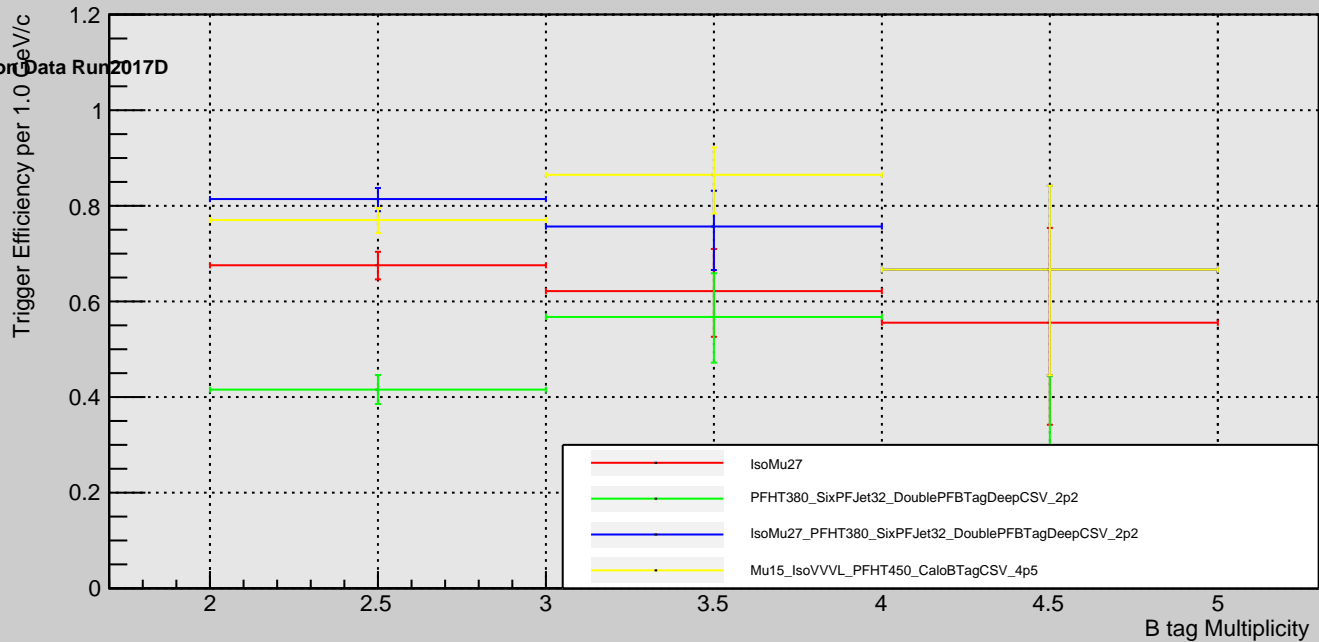




Number of Events per Number of Jets



electron Data Run 2017D



Number of Events per 1 GeV/c

| h_muonPt_notrigger |       |
|--------------------|-------|
| Entries            | 342   |
| Mean               | 65.28 |
| Std Dev            | 52.22 |

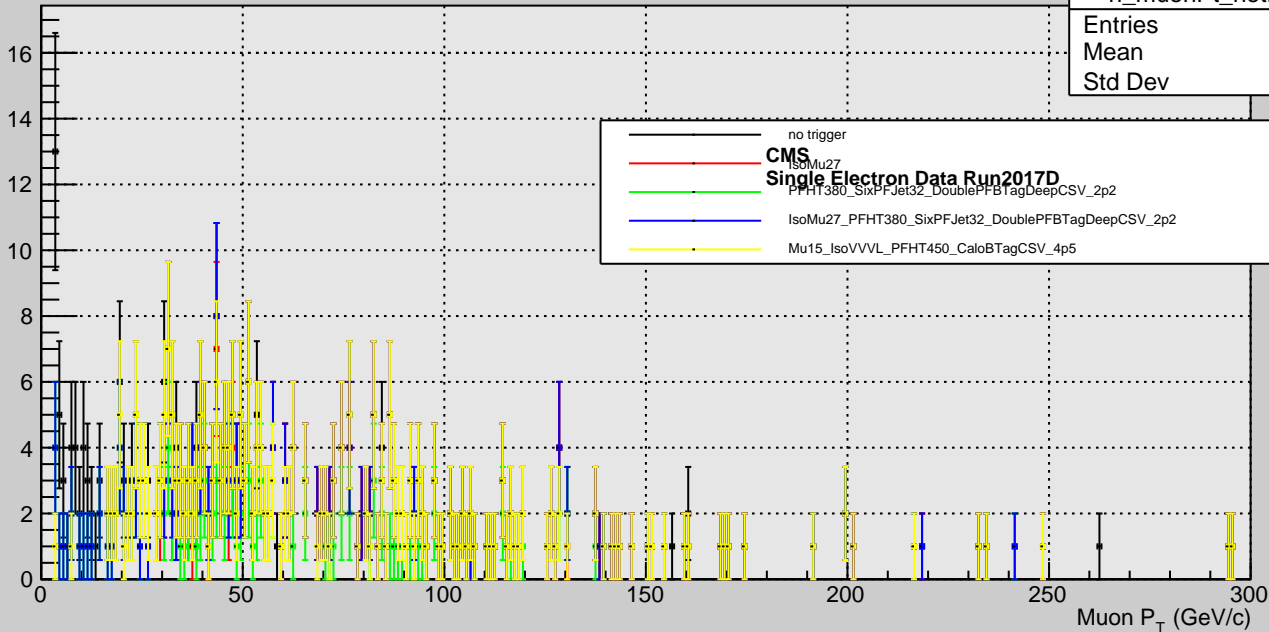
no trigger

**CMS**  
IsoMu27

**Single Electron Data Run2017D**  
PFHT380\_SixPFJet32\_DoublePFBTagDeepCSV\_2p2

IsoMu27\_PFHT380\_SixPFJet32\_DoublePFBTagDeepCSV\_2p2

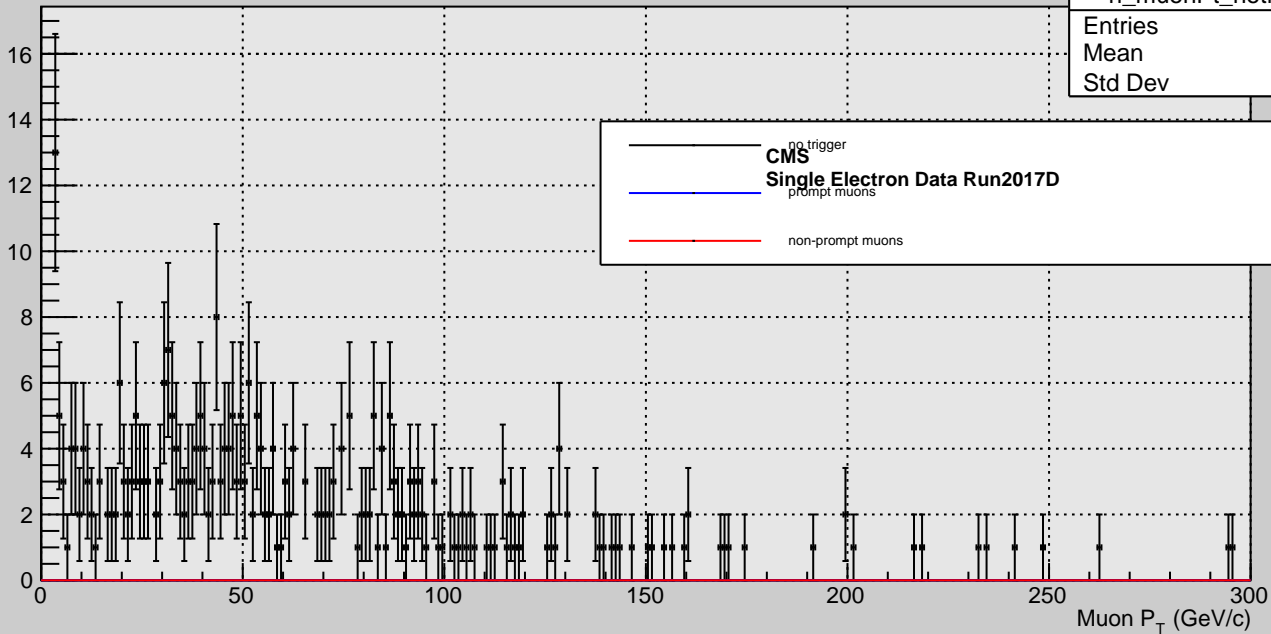
Mu15\_IsoVVVL\_PFHT450\_CaloBTagCSV\_4p5

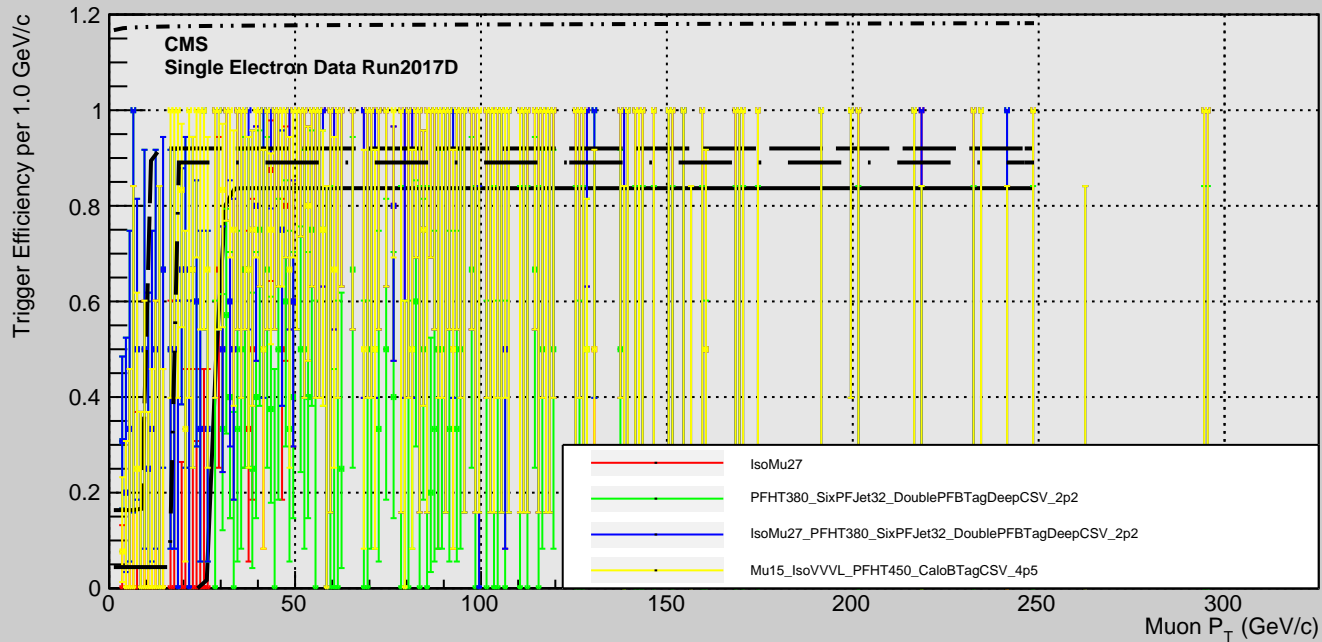


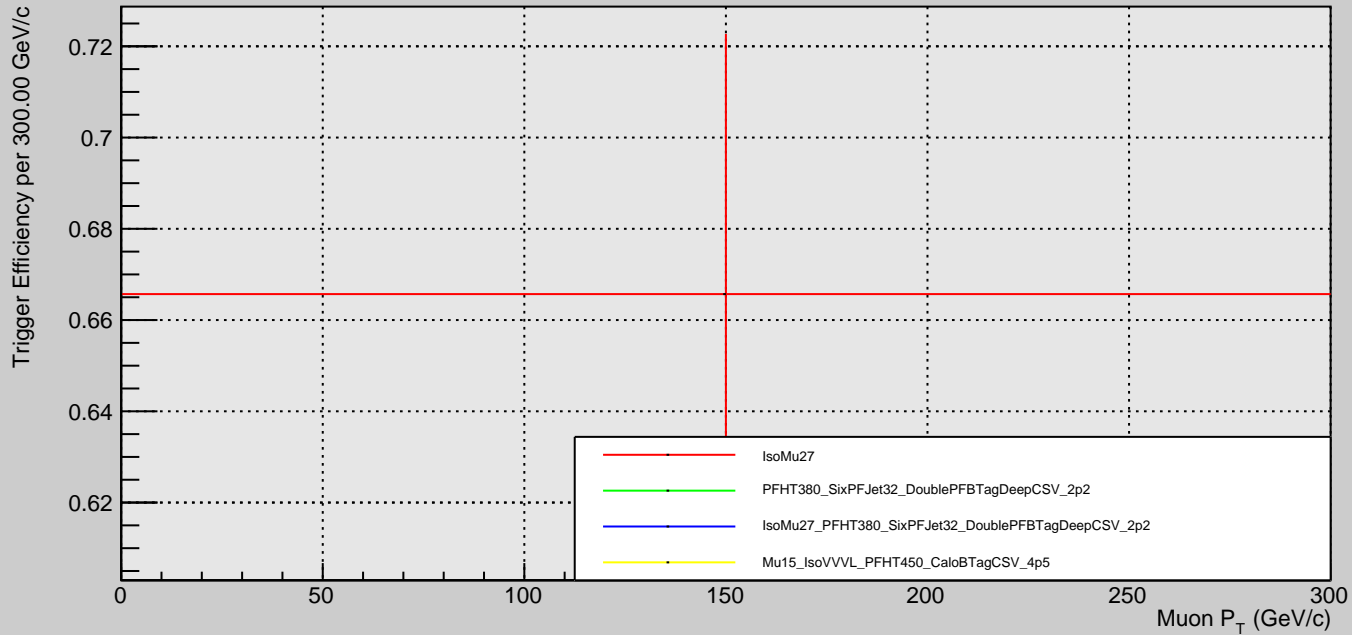


Number of Events per 1 GeV/c

| h_muonPt_notrigger |       |
|--------------------|-------|
| Entries            | 342   |
| Mean               | 65.28 |
| Std Dev            | 52.22 |

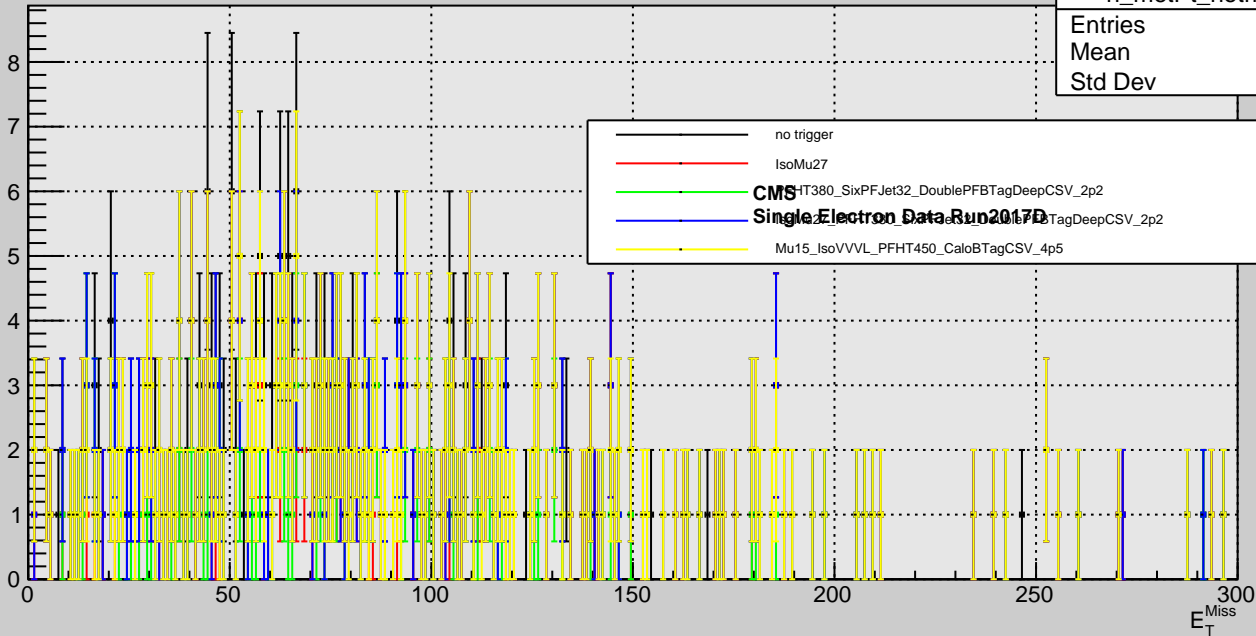
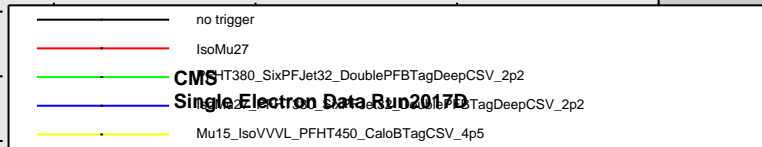


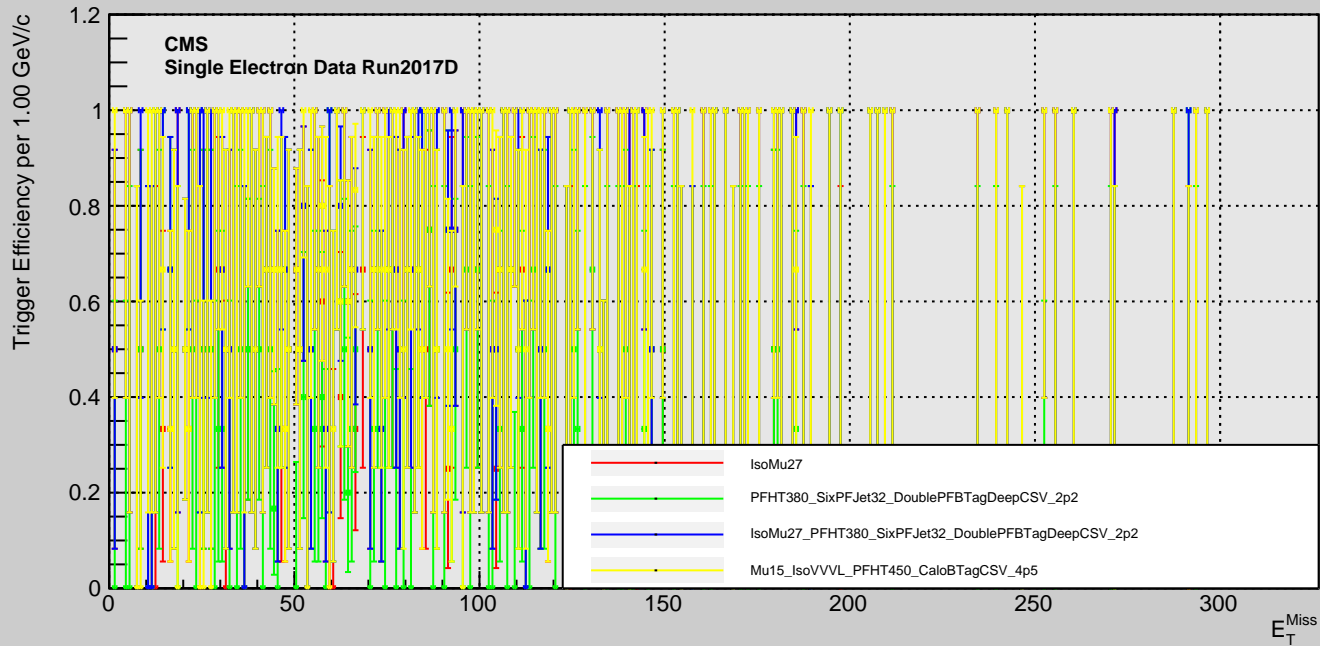




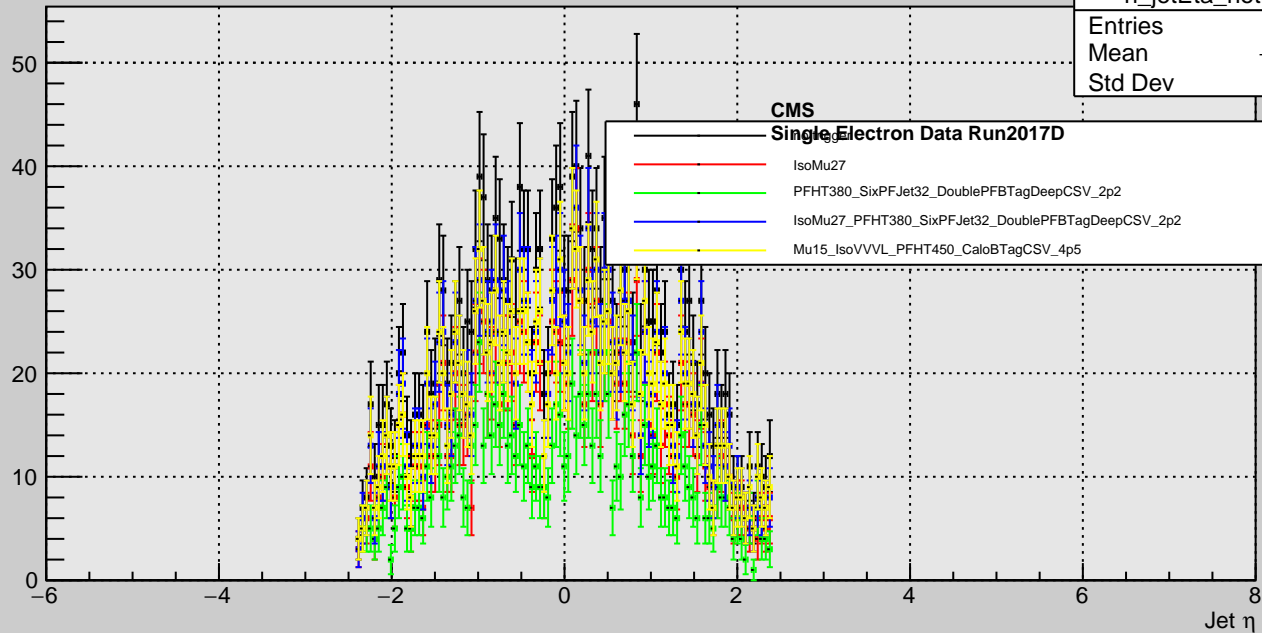
Number of Events per 1 GeV/c

| h_metPt_notrigger |       |
|-------------------|-------|
| Entries           | 342   |
| Mean              | 88.87 |
| Std Dev           | 59.01 |





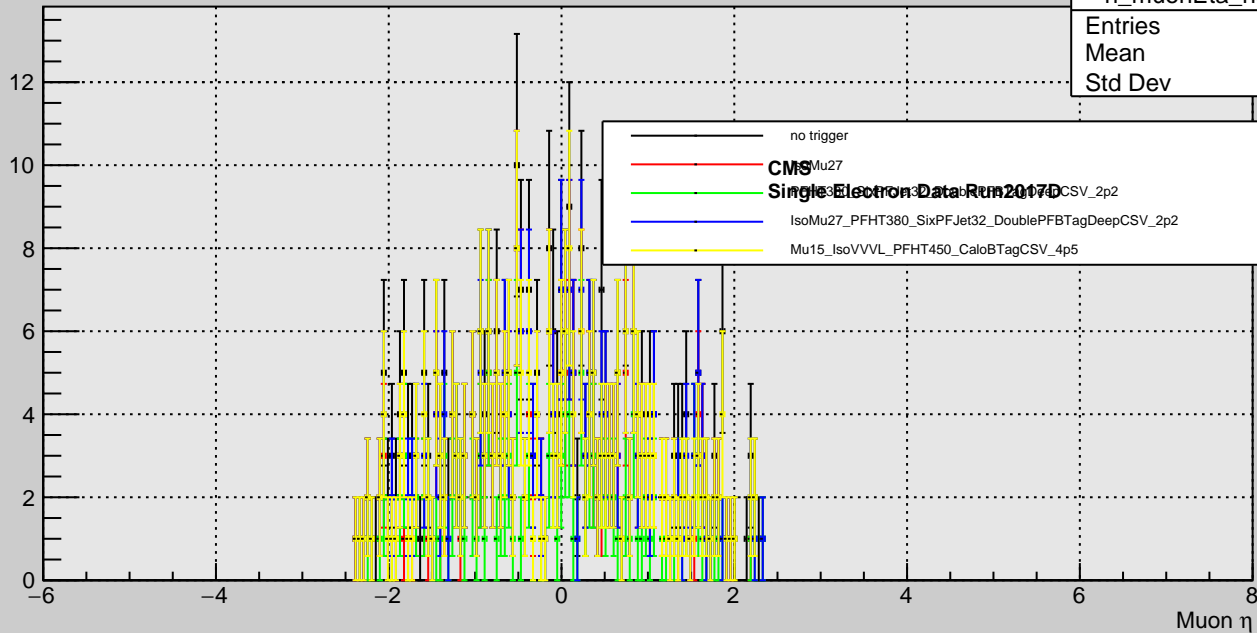
Number of Events per  $\delta\eta = 0.046$

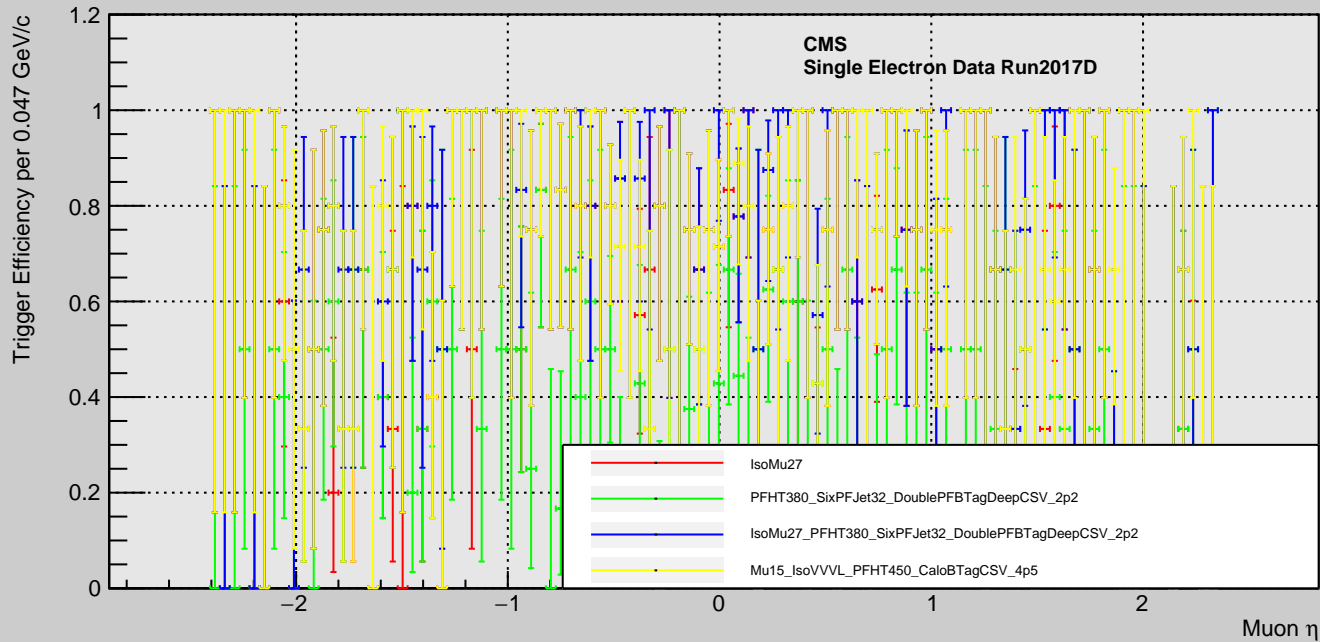


Number of Events per  $\delta\eta = 0.046$

h\_muonEta\_notrigger

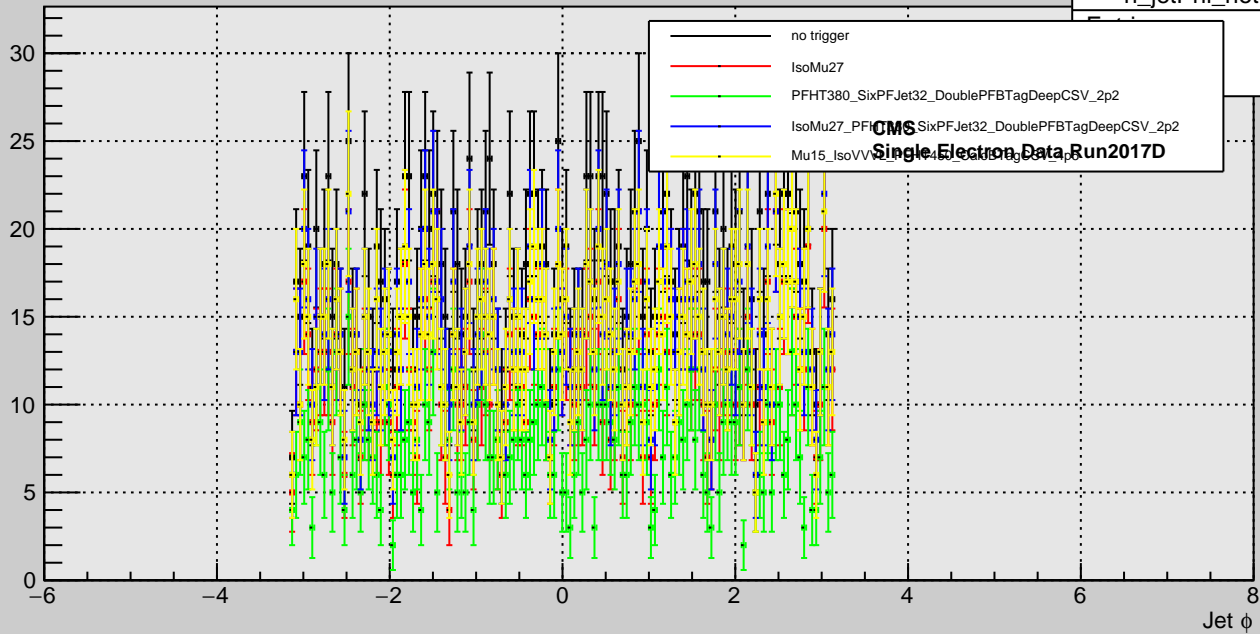
|         |         |
|---------|---------|
| Entries | 342     |
| Mean    | -0.1059 |
| Std Dev | 1.148   |







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



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

