

Btagging validation of 2011 legacy HLT menu: ReVal 53x and 42x

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1 Introduction

2 Results



- RelVals:

- 44x:

- ```
/RelValTTbar/CMSSW_4_2_patch8-PU-START44_V11/*-HLTDEBUG
```

- 53x:

- ```
/RelValTTbar/CMSSW_5_3_patch3-PU-START53_LV2/*-HLTDEBUG
```

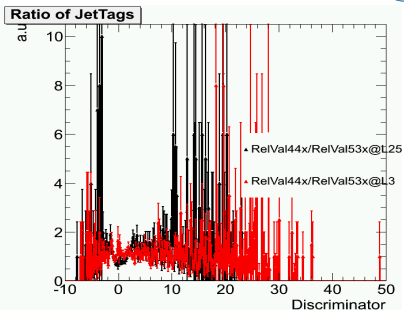
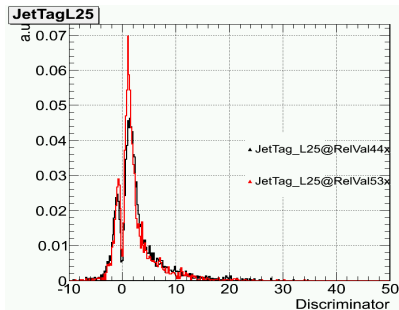
- Trigger:

- ▶ HLT_DiCentralJet36_BTagIP3DLoose

- Key collections:

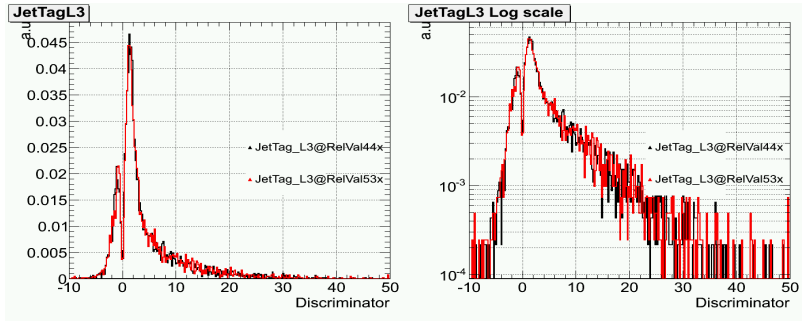
- ▶ *_hltBLifetimeLEVEL{TagInfos,BJets,BJetTags}Hbb_*_* , where
LEVEL: L25 or L3

Result: Jet Tag L25



- L25 discriminator (TCHP)
- on the right side: $\frac{L25@44x}{L25@53x}$ (black) and $\frac{L3@44x}{L3@53x}$ (red)

Results: Jet Tag L3



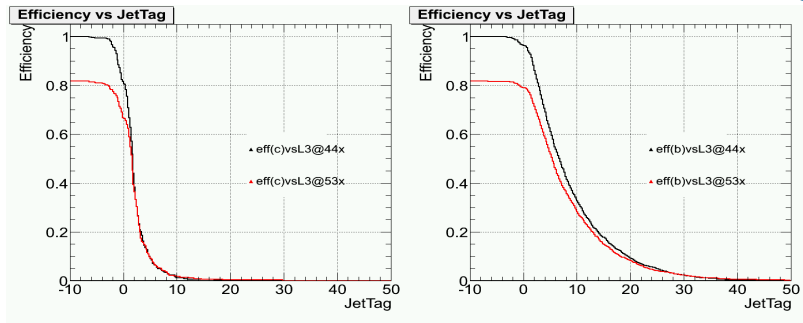
- L3 discriminator
- Normalization to unity (log scale on the right plot)

Results: Eff vs L25



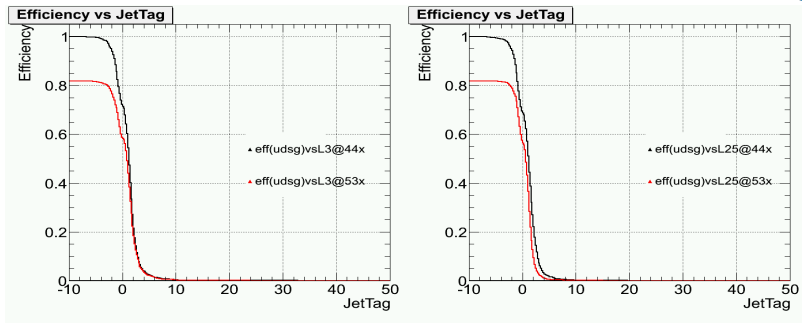
- Eff. vs L25
 - ▶ for c-jets (left)
 - ▶ for b-jets (right)
- Some problems with 53X:
 - ▶ a few tagged jets w/o MC flavors

Results: Eff vs L23



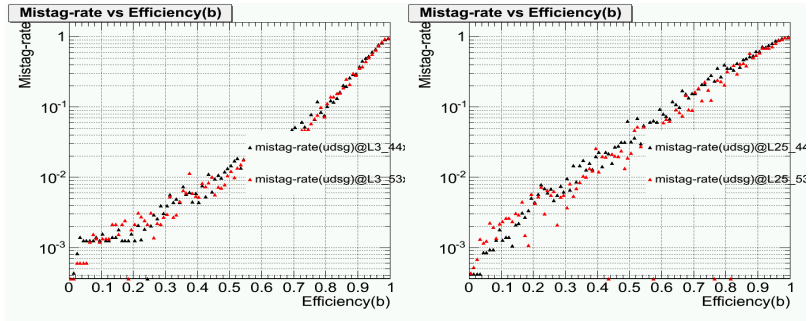
- Eff. vs L3
 - ▶ for c-jets (left)
 - ▶ for b-jets (right)
- Some problems with 53X:
 - ▶ a few tagged jets w/o MC flavors

Results: Eff vs L3 and Eff vs L25 for udsg-jets

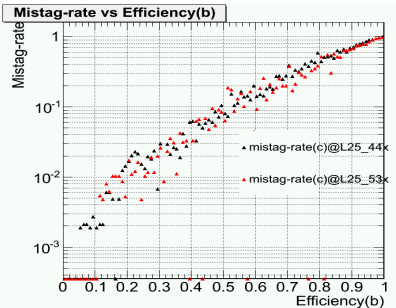
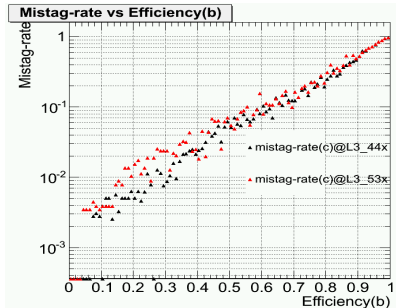


- Some problems with 53X:
 - ▶ a few tagged jets w/o MC flavors

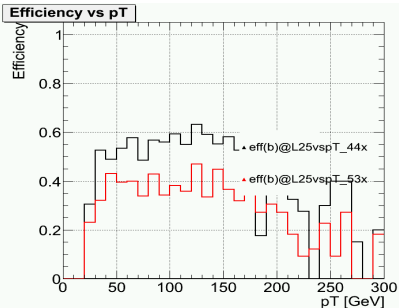
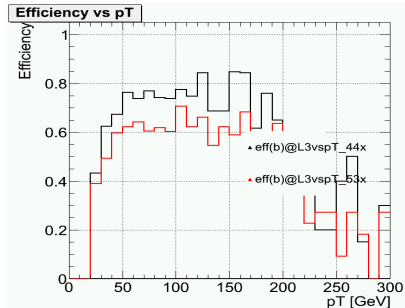
Results: mistag vs eff(b)@L3,L25 for udsg-jets



Results: mistag vs eff(b)@L3,L25 for c-jets



Results: Eff(b) vs Pt@L3,L25



Plans



- Start validating the 13 TeV ReVal samples with $BX=25$ ns