

# Progress on 4Top analysis

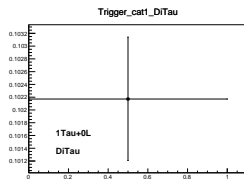
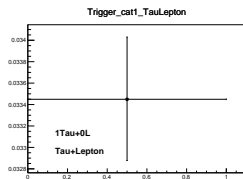
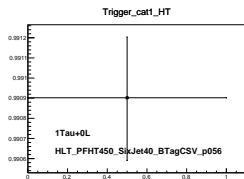
Huiling Hua<sup>1</sup>, Hongbo Liao<sup>1</sup>, Hideki Okawa<sup>2</sup>, Yu Zhang<sup>2</sup>

1,IHEP, 2,Fudan University

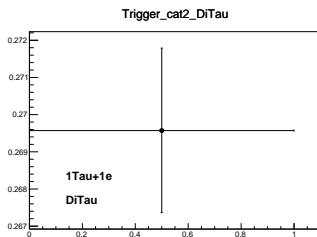
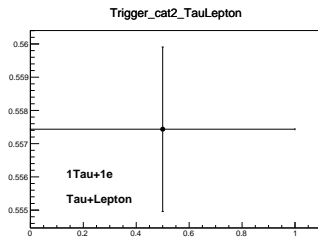
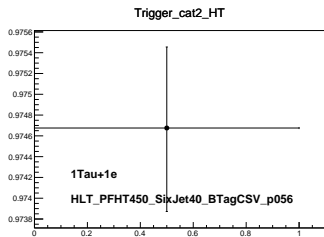
October 28, 2020

- multi-jet+b-jet : HLT\_PFHHT450\_SixJet40\_BTagCSV\_p056
- Tau+Lepton :
  - HLT\_Ele24\_eta2p1\_WPLoose\_Gsf\_LooseIsoPFTau20
  - HLT\_Ele24\_eta2p1\_WPLoose\_Gsf\_LooseIsoPFTau20\_SingleL1
  - HLT\_Ele24\_eta2p1\_WPLoose\_Gsf\_LooseIsoPFTau30
  - HLT\_IsoMu19\_eta2p1\_LooseIsoPFTau20\_SingleL1
- DiTau :
  - HLT\_DoubleMediumIsoPFTau35\_Trk1\_eta2p1\_Reg
  - HLT\_DoubleMediumCombinedIsoPFTau35\_Trk1\_eta2p1\_Reg
- There is no single tau trigger in Run2 trigger list.
- Check the trigger efficiency after pre-selection.

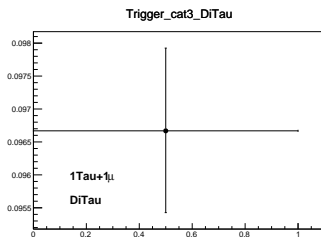
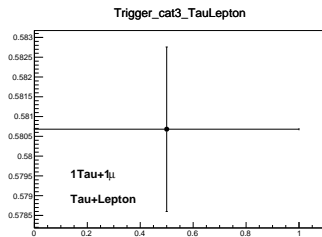
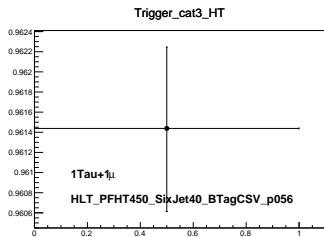
# Trigger efficiency



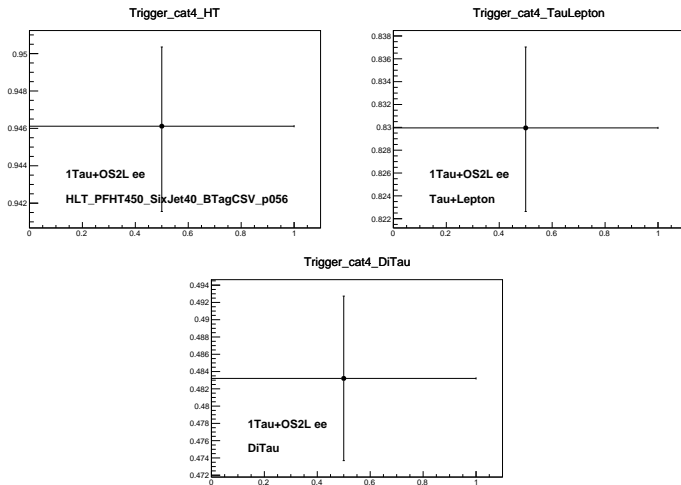
# Trigger efficiency



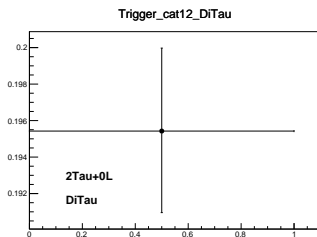
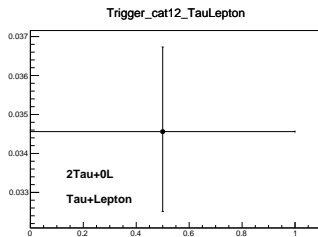
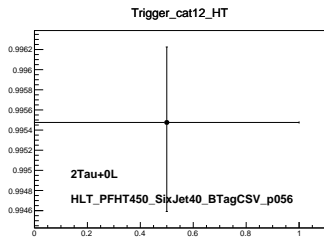
# Trigger efficiency



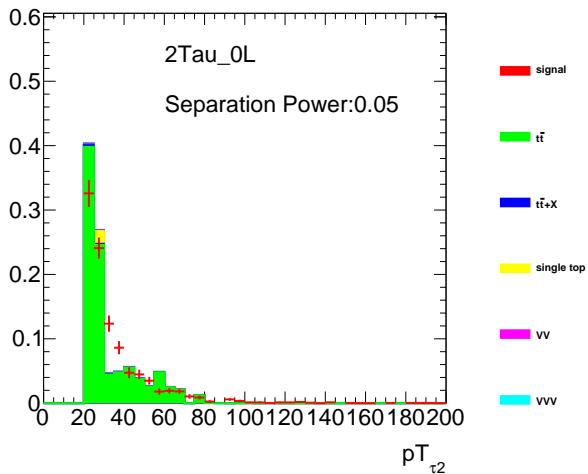
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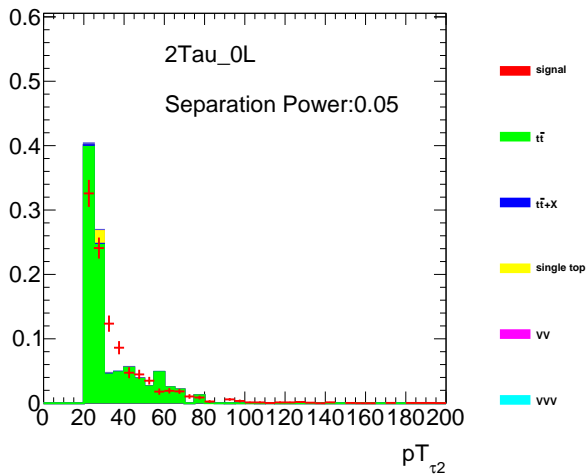


# Kinematics

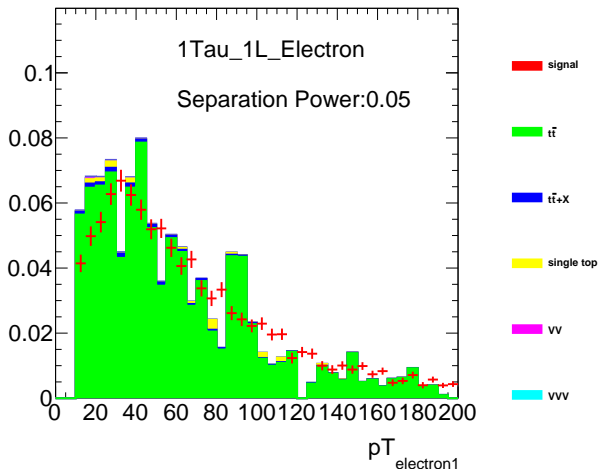




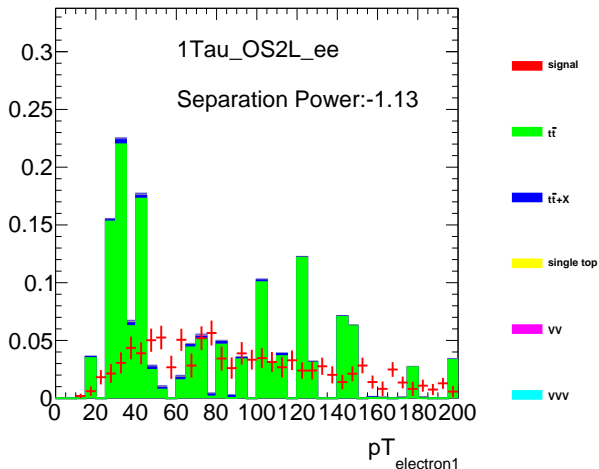
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# Summary

- multi-jet+b-jet trigger works well for most categories
- Tau+Lepton and DiTau trigger efficiency is a bit low due to lepton  $p_T$  and subleading tau  $p_T$ .

## Publication plan?

- Moriond time seems too tight. Will we change our plan?