

Status of 4Top analysis

Huiling Hua¹, Fabio Lemmi¹, Hongbo Liao¹, Hideki Okawa², Yu Zhang²

1,IHEP, 2,Fudan University

May 12, 2021

JER and JES uncertainty

- Apply single jet trigger and require $HT > 400 \text{ GeV}$
- We have the nominal JER and JES scale factor, but I don't apply it before.
- Correct the jet pt : $pT_{jet,corr} = pT_{jet,uncorr} * SF_{JER} * SF_{JES}$
- Re-do the cut with JER/JES up and down.
- So it will only affect jet variables.
- No correction on MET

Control region for top pt reweighting

- Control region definition :
 - single muon trigger : HLT_IsoMu24——HLT_IsoMu27, otherwise we need other data samples.
 - $1\mu, 2\mu$ or $1\mu+1\tau$ events with lower jet multiplicity
 - check the top pt by top tagger
 - Running

Issue with IHEP cluster

- The normal job on the HTCondor is 10 hours
- If I run the "mid" job, the walltime is less than 100 hours, but I can only run 58 jobs at one time.
- Previously, I run 1M events in one job, but now the "normal" job will be killed sometimes.
- I am thinking to run less events in one job.