



中国科学院高能物理研究所  
Institute of High Energy Physics, Chinese Academy of Sciences

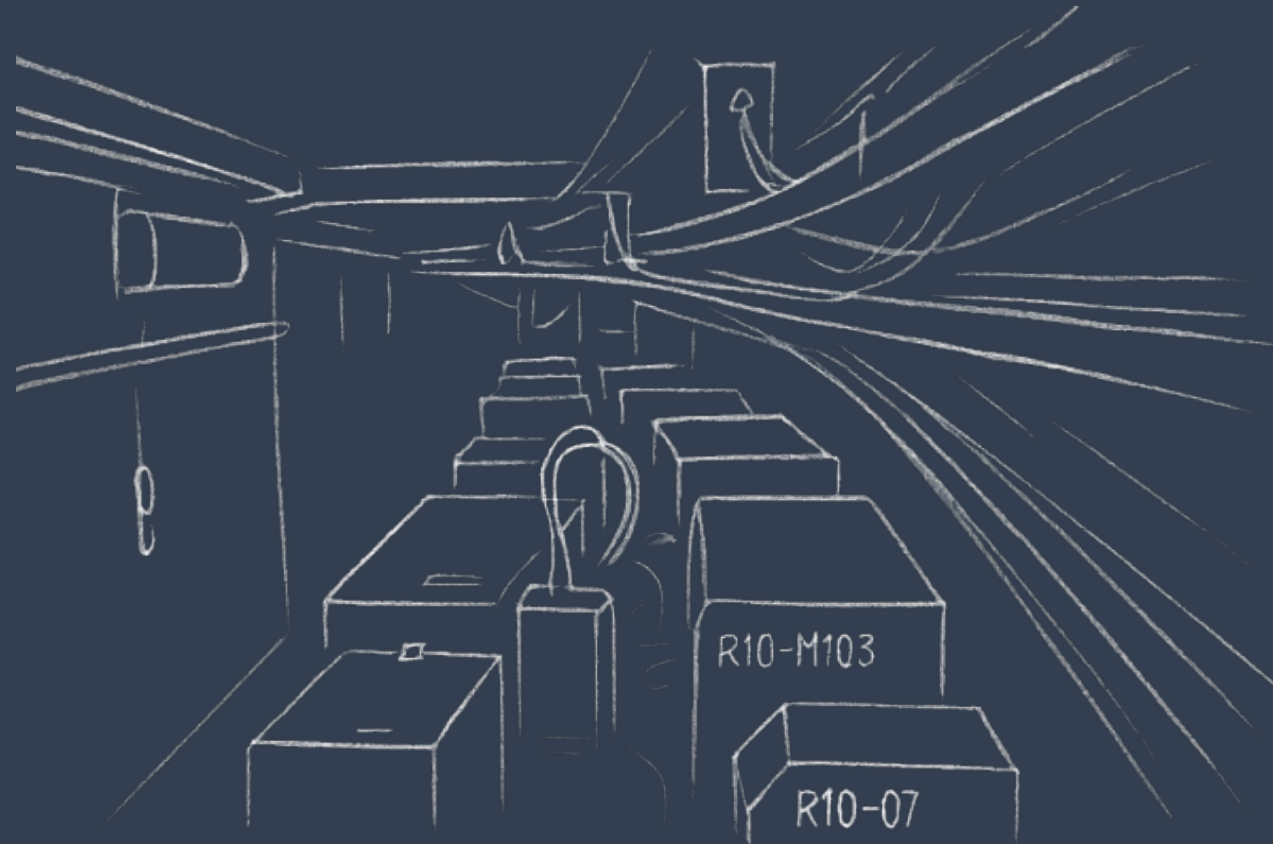


# IHEP SUSY Group Meeting

*Chengxin Liao*

**Institute of High Energy Physics  
Chinese Academy of Sciences**

*Jul 9, 2025*



# Fake Factor for Run2 and Run3

Selection:

nBaseTau == 1

nBaseLep >= 1, SigLep >= 1

MET trigger, MET >= 200

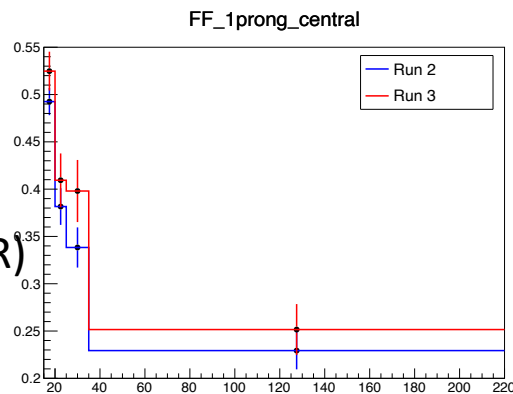
Same-Signal(Orthogonal with SR)

bVeto

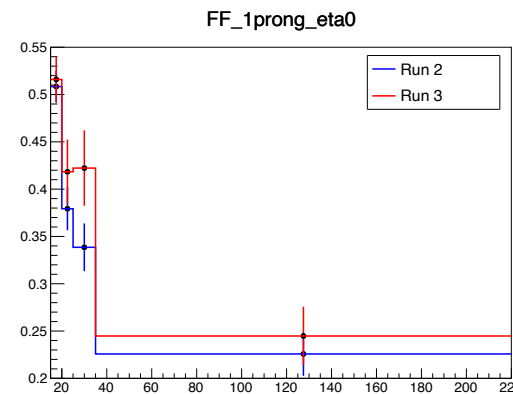
ID: nMediumTau == 1

antiID: nMediumTau < 1

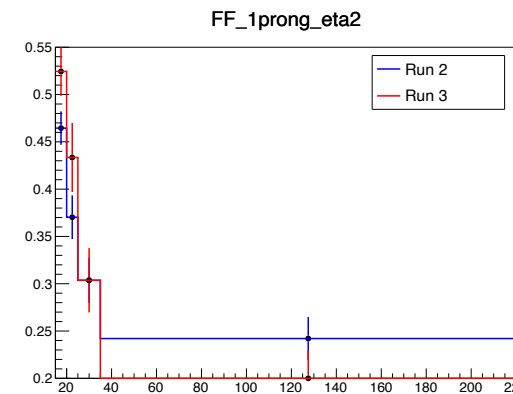
$0 < |\eta| < 1$



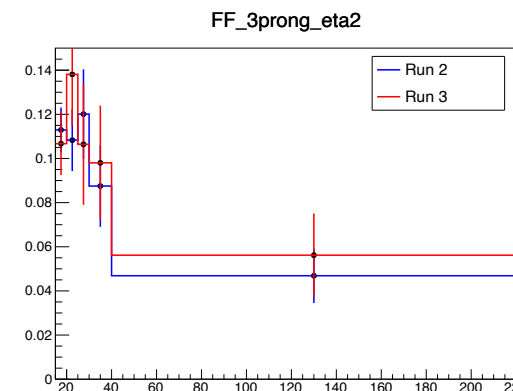
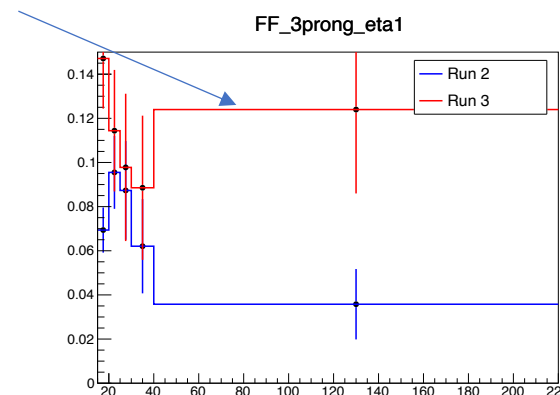
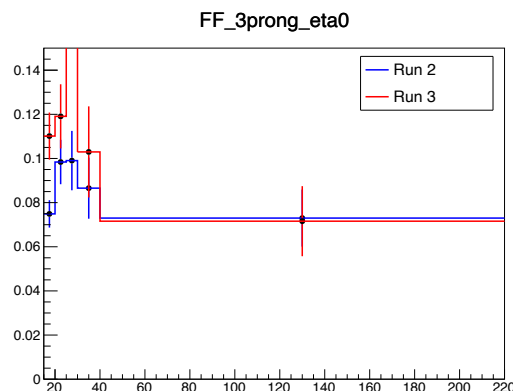
$1 < |\eta| < 1.37$



$1.52 < |\eta| < 2.5$



A small bump show in the last bin



Wait for wenyi's result to cross-check



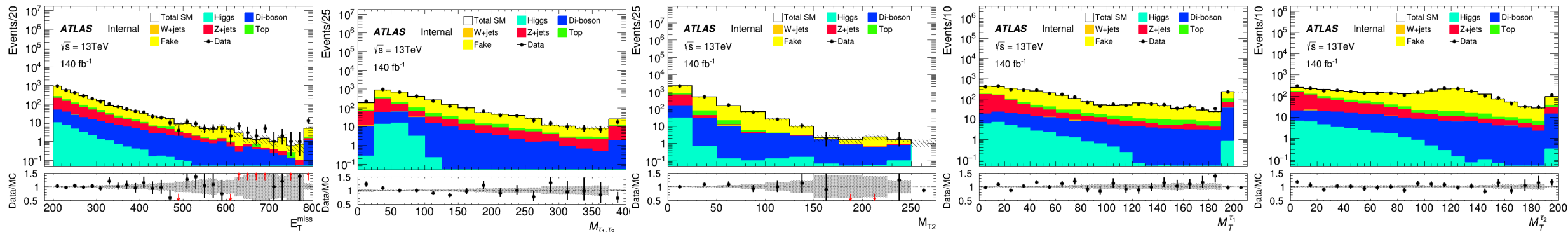
HH Pre-selection	LH Pre-selection
$\geq 2$ medium taus	$\geq 1$ medium taus
0 base lepton	1 base lepton, 1 signal lepton
$\text{MET} \geq 150$ ; pass MET trigger	$\text{MET} \geq 200$ ; pass MET trigger
$1 \leq n_{\text{Jet}}$	$1 \leq n_{\text{Jet}}$
Opposite-sign hadronic-hadronic tau pair	Opposite-sign lepton-hadronic tau pair
bveto	bveto
jet $p_t > 100$ GeV	jet $p_t > 100$ GeV

# MC modeling in Pre-Selection(HH)

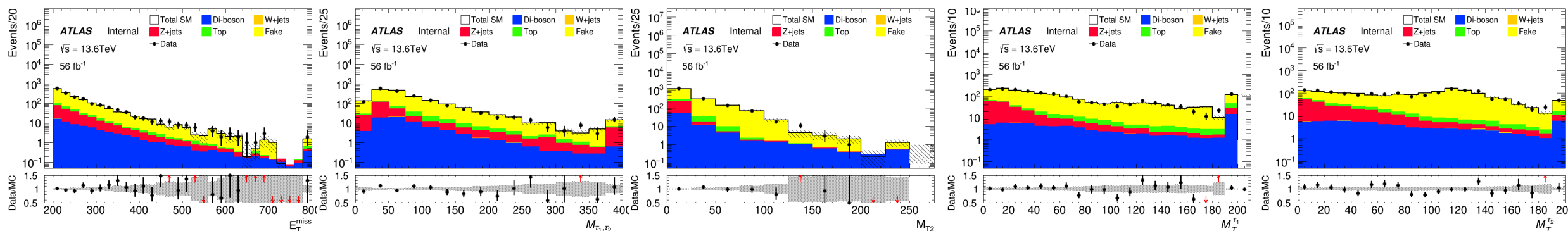


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run2

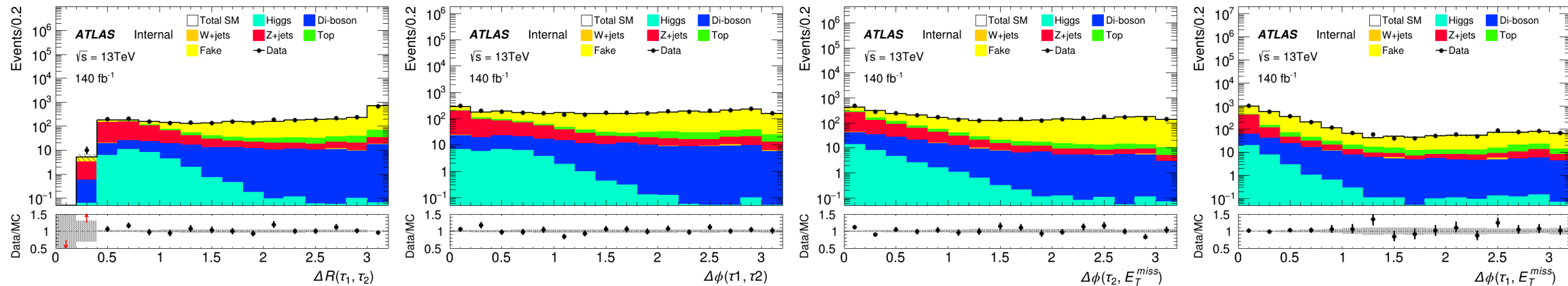


run3

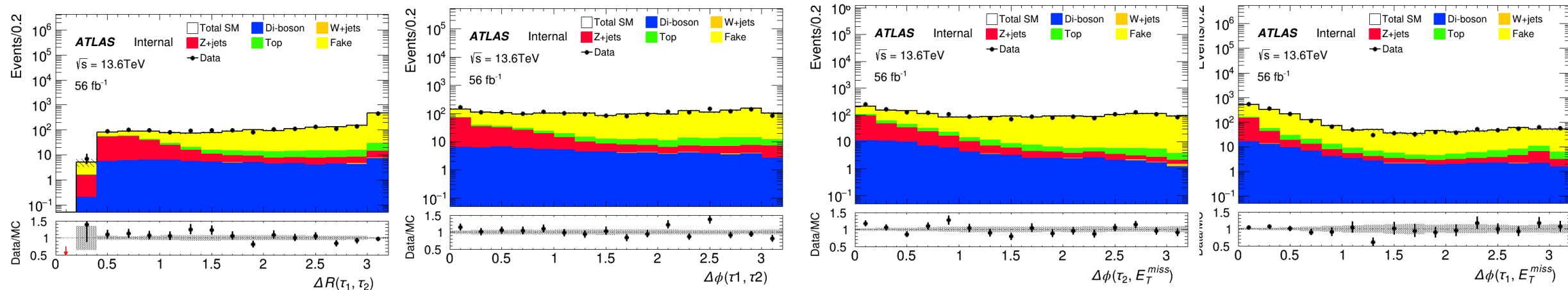


# MC modeling in Pre-Selection(HH)

run2

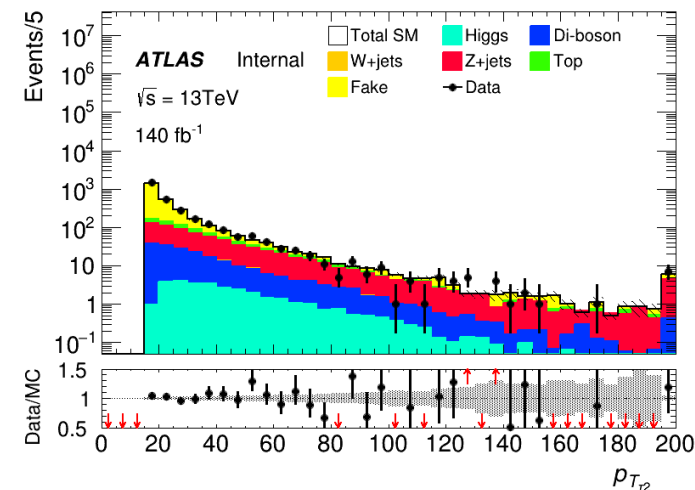
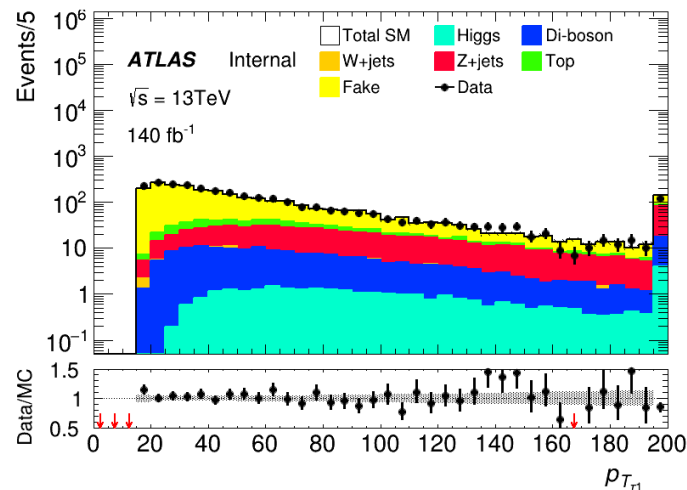
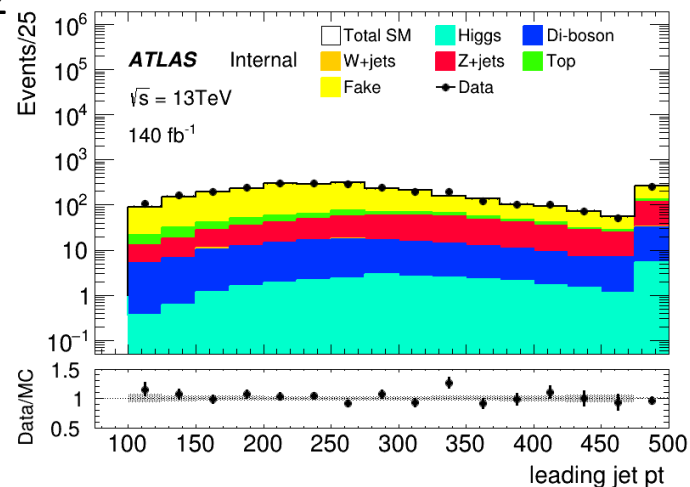


run3

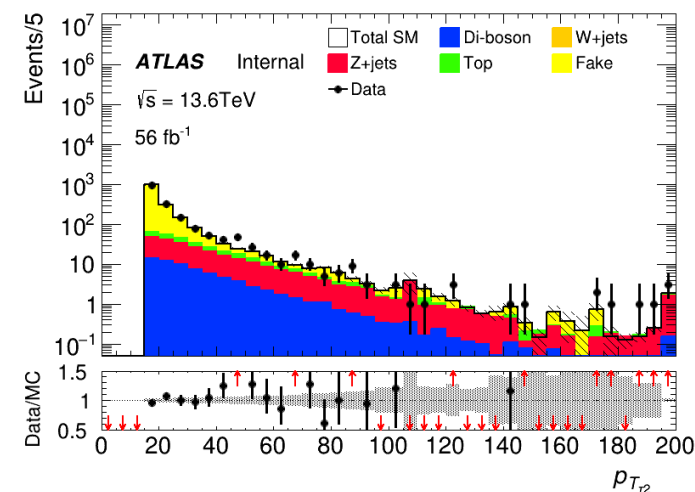
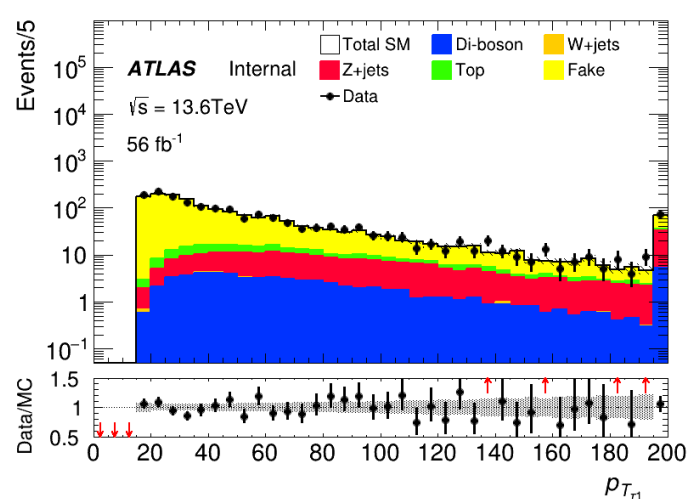
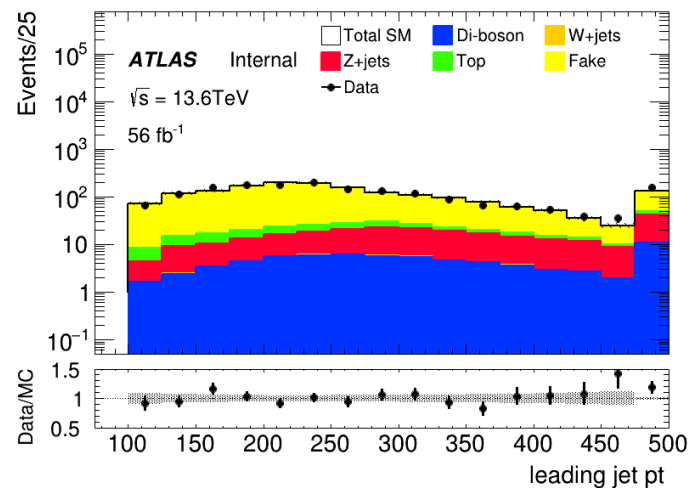


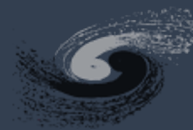
# MC modeling in Pre-Selection(HH)

run2



run3





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# Backup

