

Events / 20.00 GeV

$\times 10^3$

**ATLAS** Internal

$\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$

FCNC  $t\bar{q}H H \rightarrow \tau\tau$

$t_h \tau_{\text{lep}} \tau_{\text{had}}^{-3} j$

Other MC

b-jets fake  $\tau$

$\tau_W$

QCD Fake lep

$\bar{t}t \rightarrow bWcH \times 80$

$t\bar{t}$

lepton fake  $\tau$

Other Fake  $\tau$

data

Data/Bkg

1.4  
1.2  
1.0  
0.8  
0.6

200

300

400

500

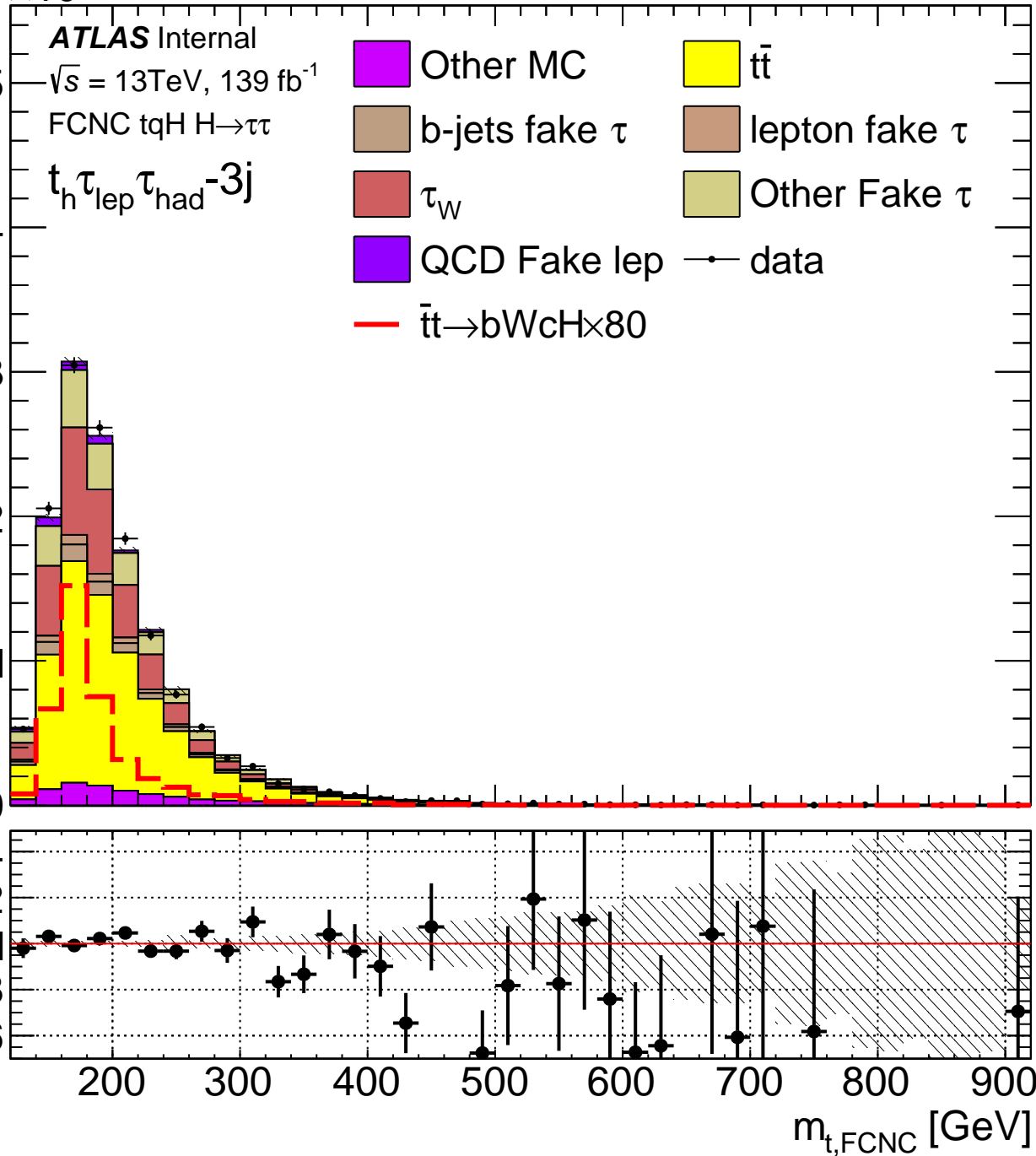
600

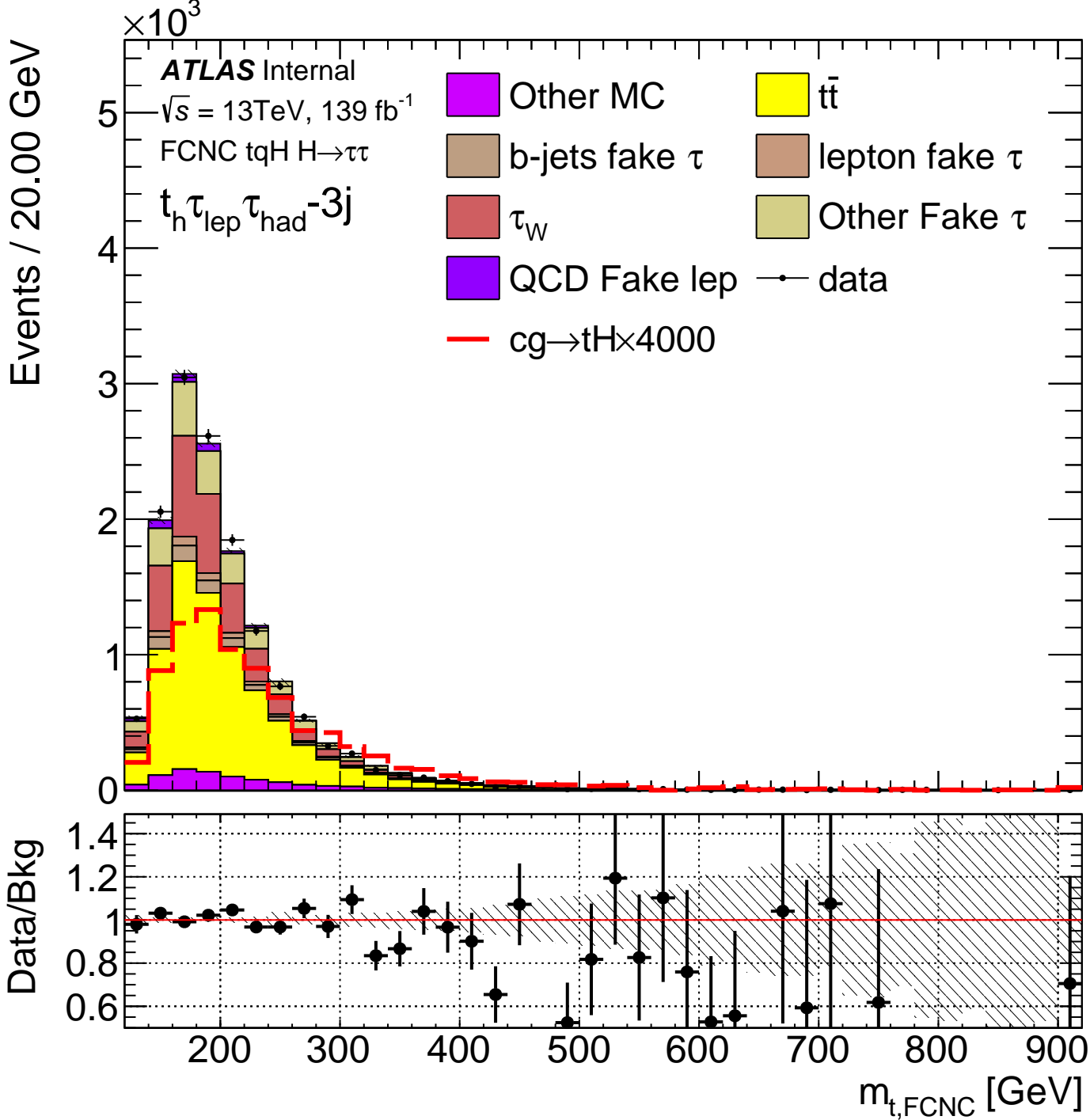
700

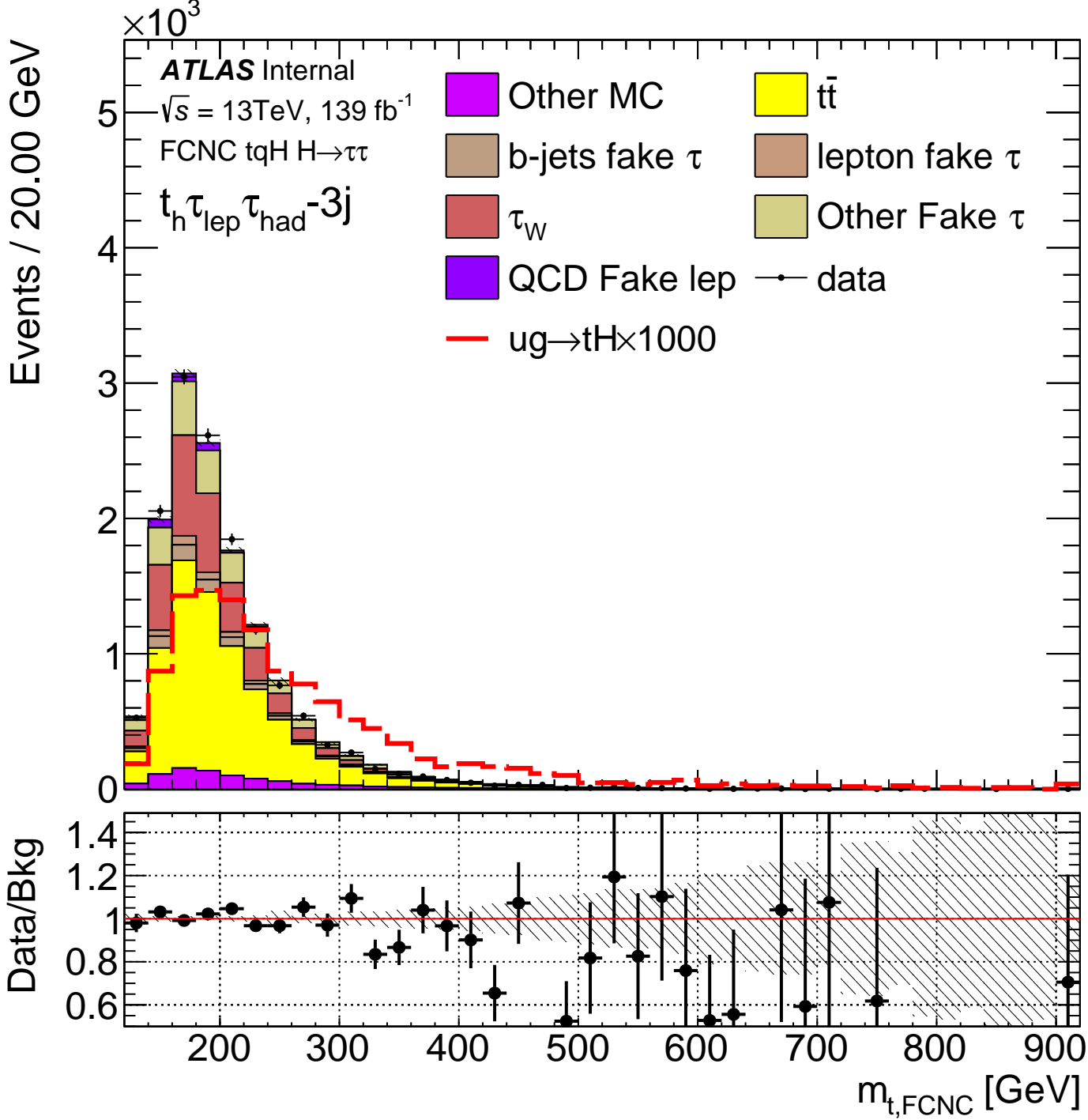
800

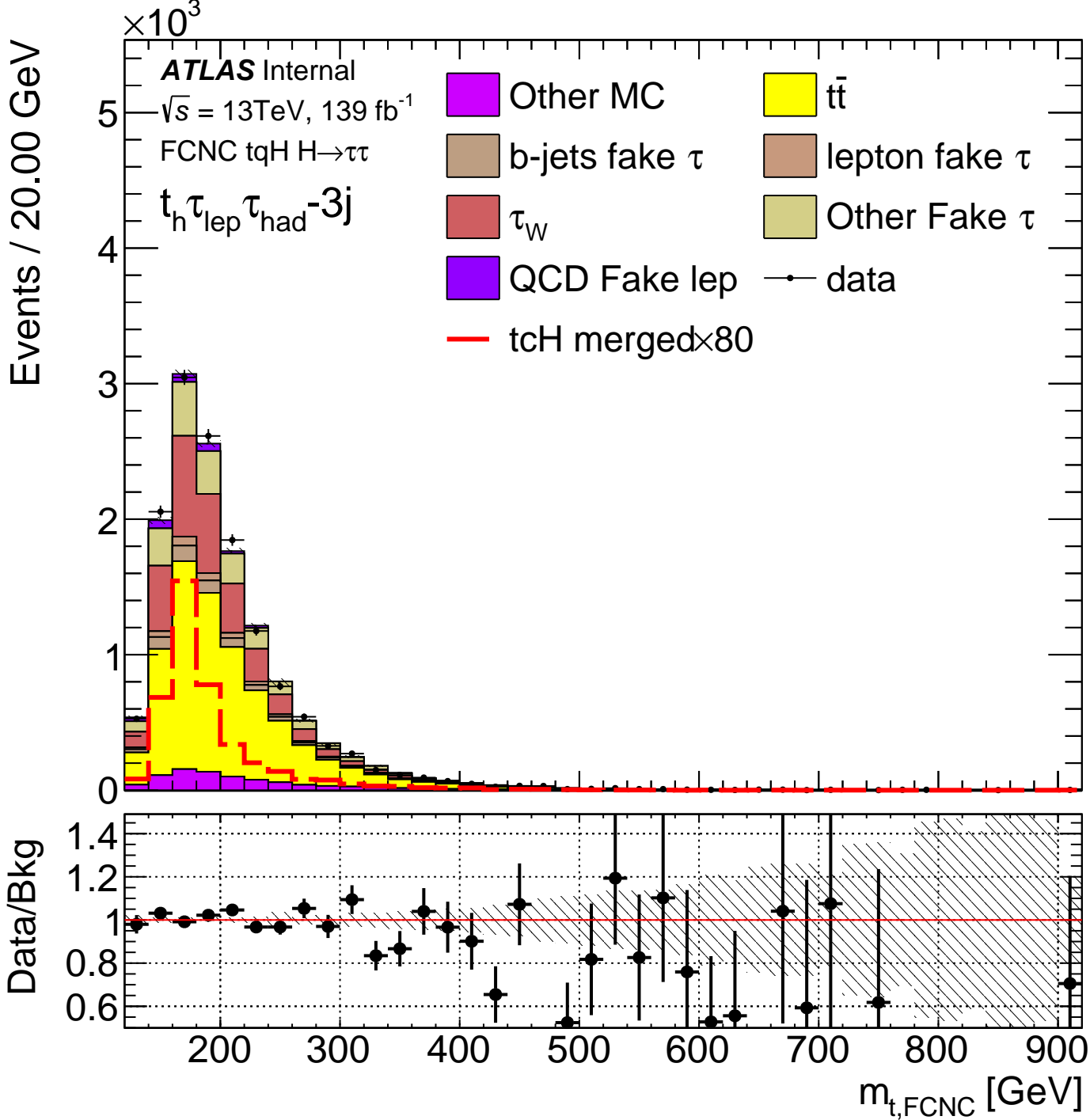
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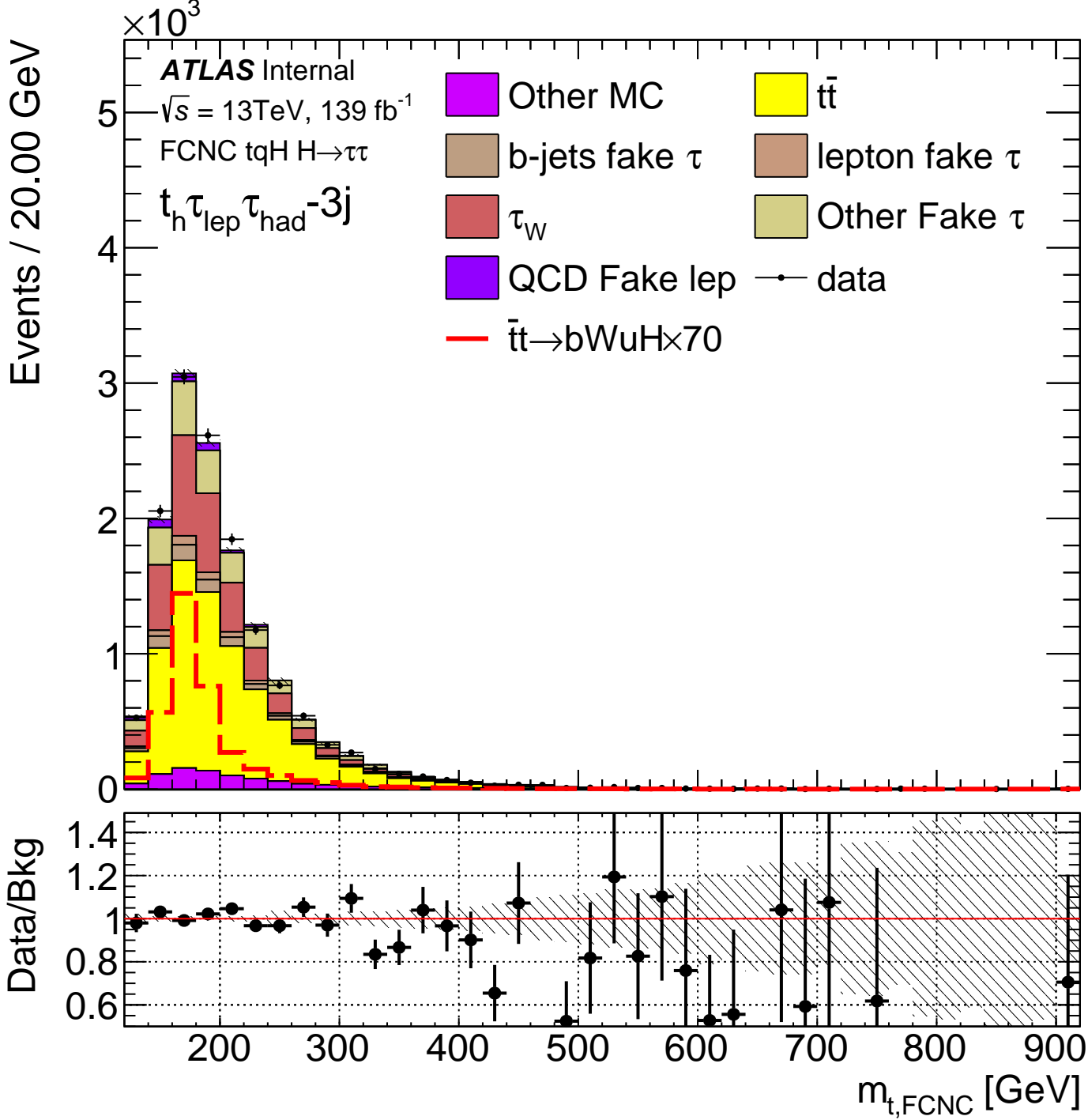
$m_{t,\text{FCNC}} [\text{GeV}]$

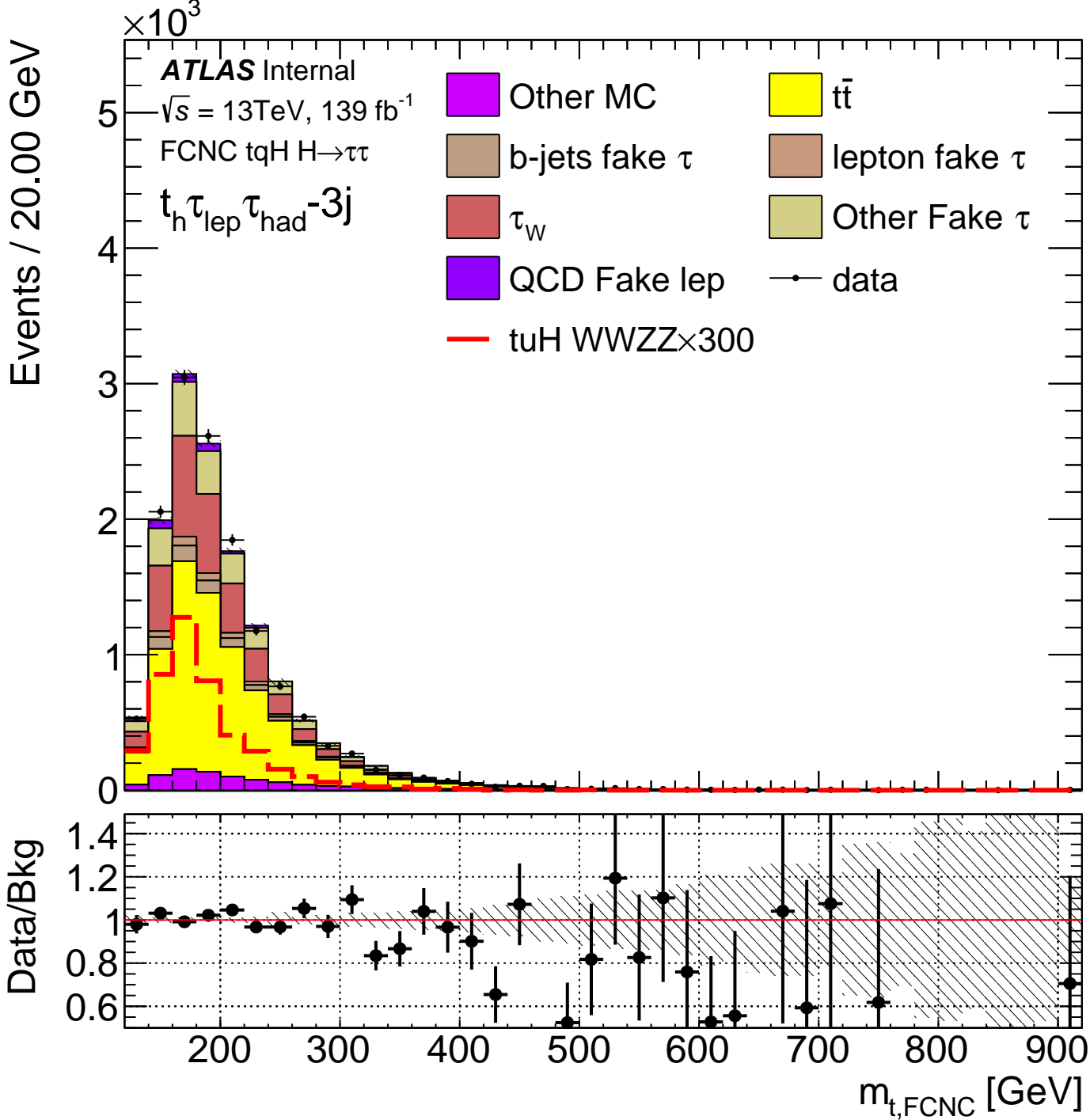


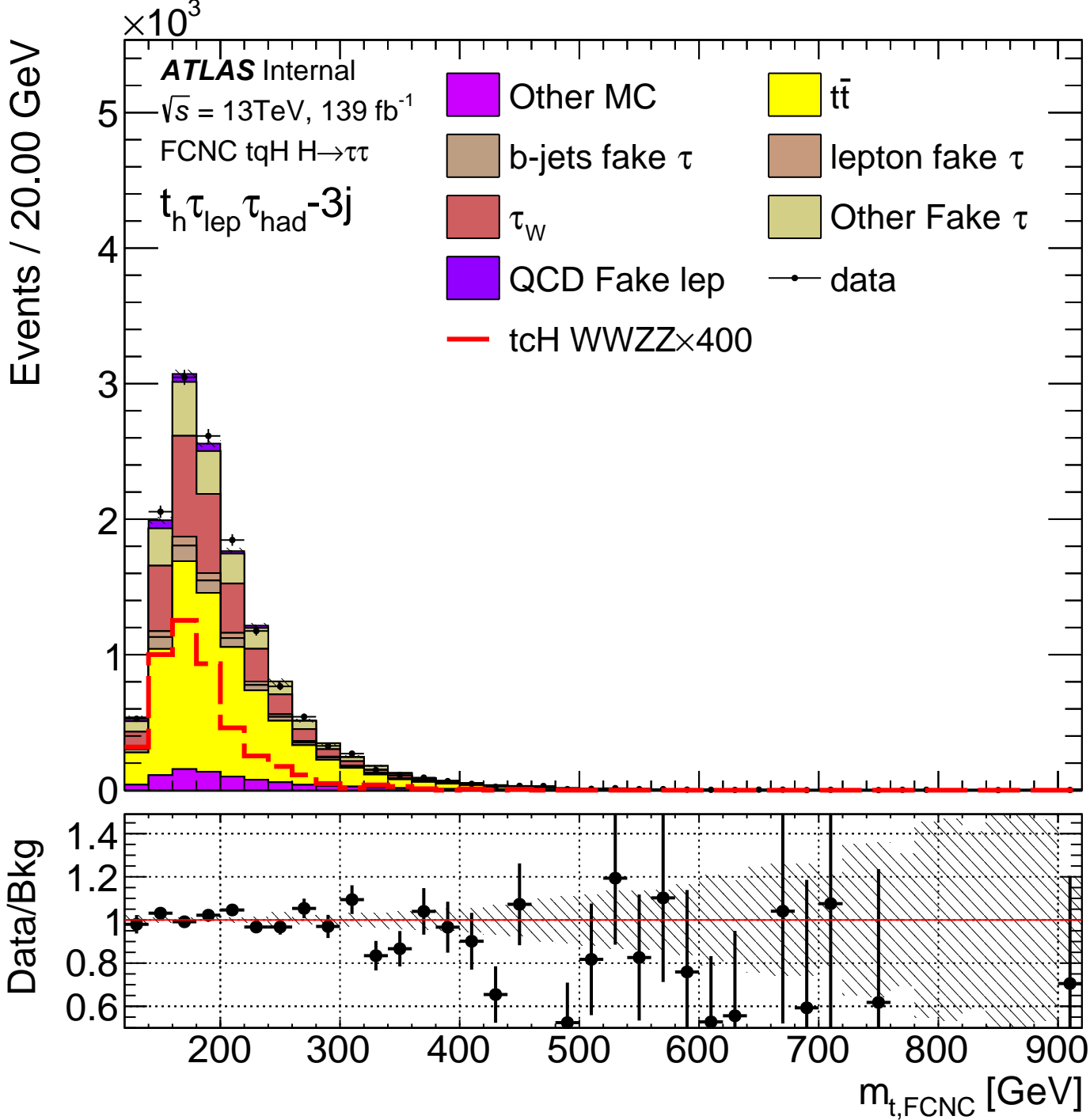


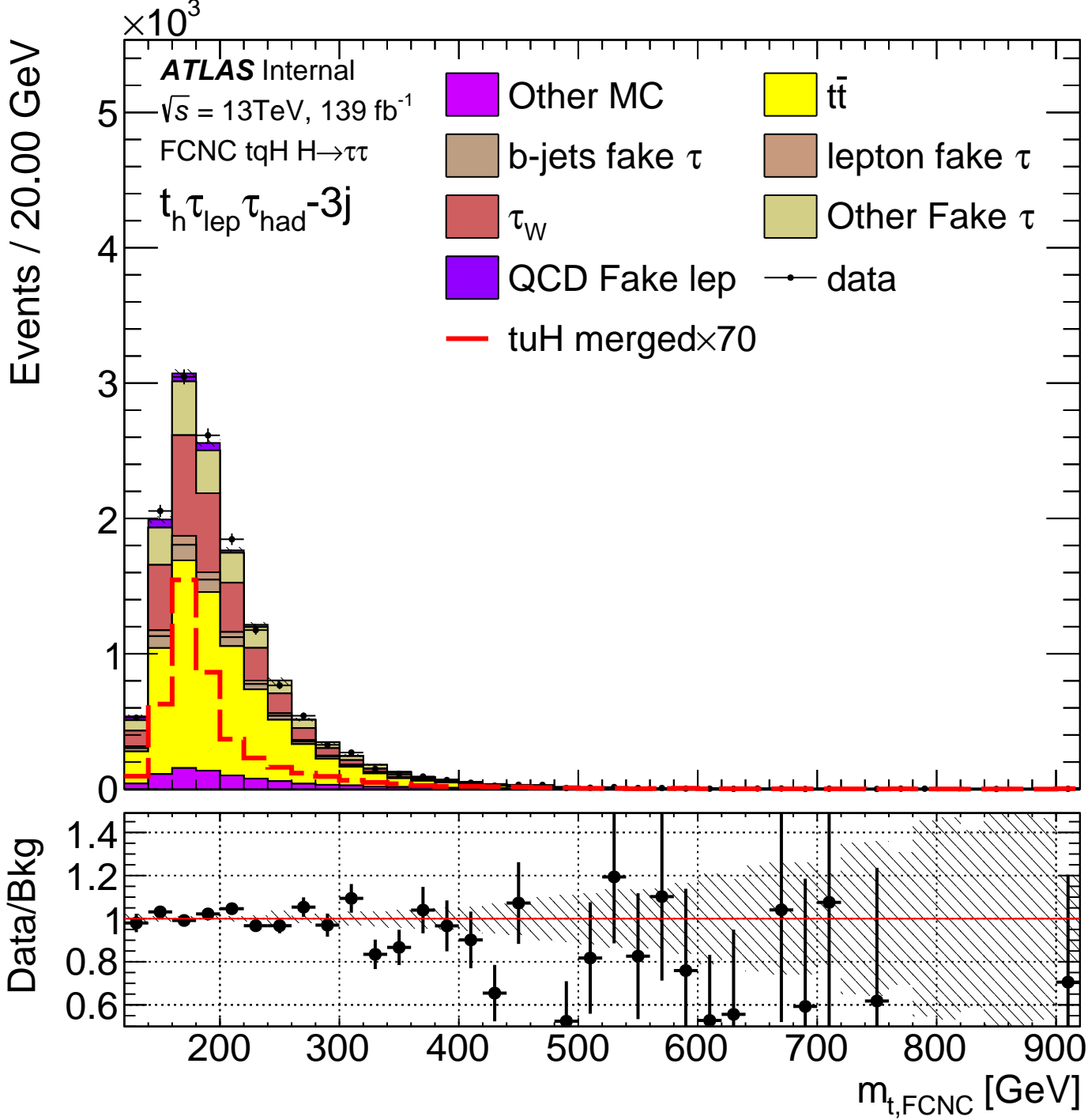














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 $\times 10^3$ **ATLAS** Internal $\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$ FCNC tqH  $H \rightarrow \tau\tau$  $t_h \tau_{\text{lep}} \tau_{\text{had}} - 3j$ 

Other MC

b-jets fake  $\tau$  $\tau_W$ 

QCD Fake lep

 $\bar{t}t \rightarrow bWcH \times 80$  $ug \rightarrow tH \times 1000$  $tuH WWZZ \times 300$  $t\bar{t}$ lepton fake  $\tau$ Other Fake  $\tau$ 

—•— data

 $cg \rightarrow tH \times 4000$  $\bar{t}t \rightarrow bWuH \times 70$  $tcH WWZZ \times 400$ 

Data/Bkg

