

Events / 0.25

Data/Bkg

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

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

$t_l\tau_{\text{had}}^{-2j}$

Other MC

b-jets fake τ

τ_W

QCD Fake lep

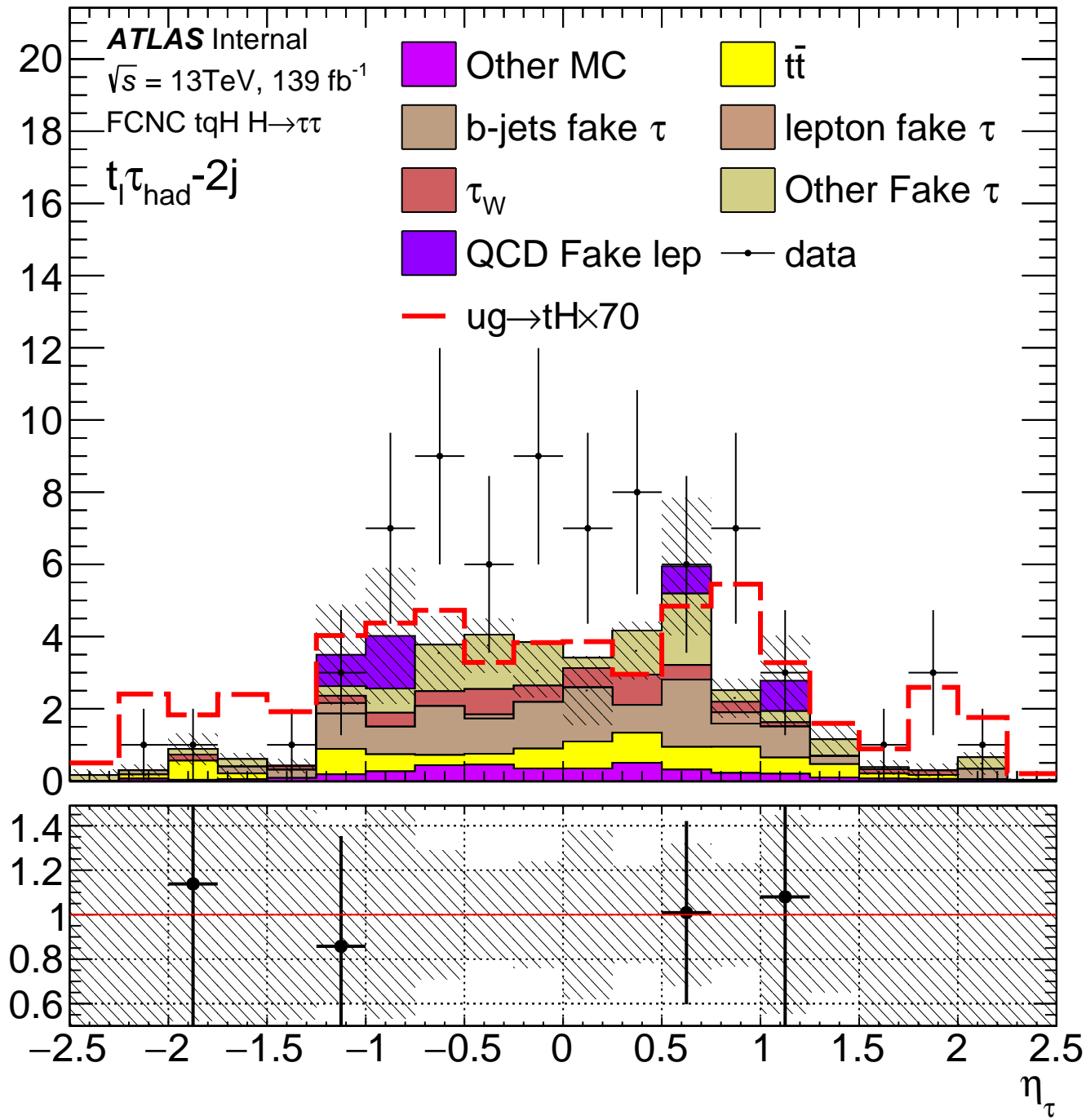
$u\bar{g} \rightarrow t\bar{H} \times 70$

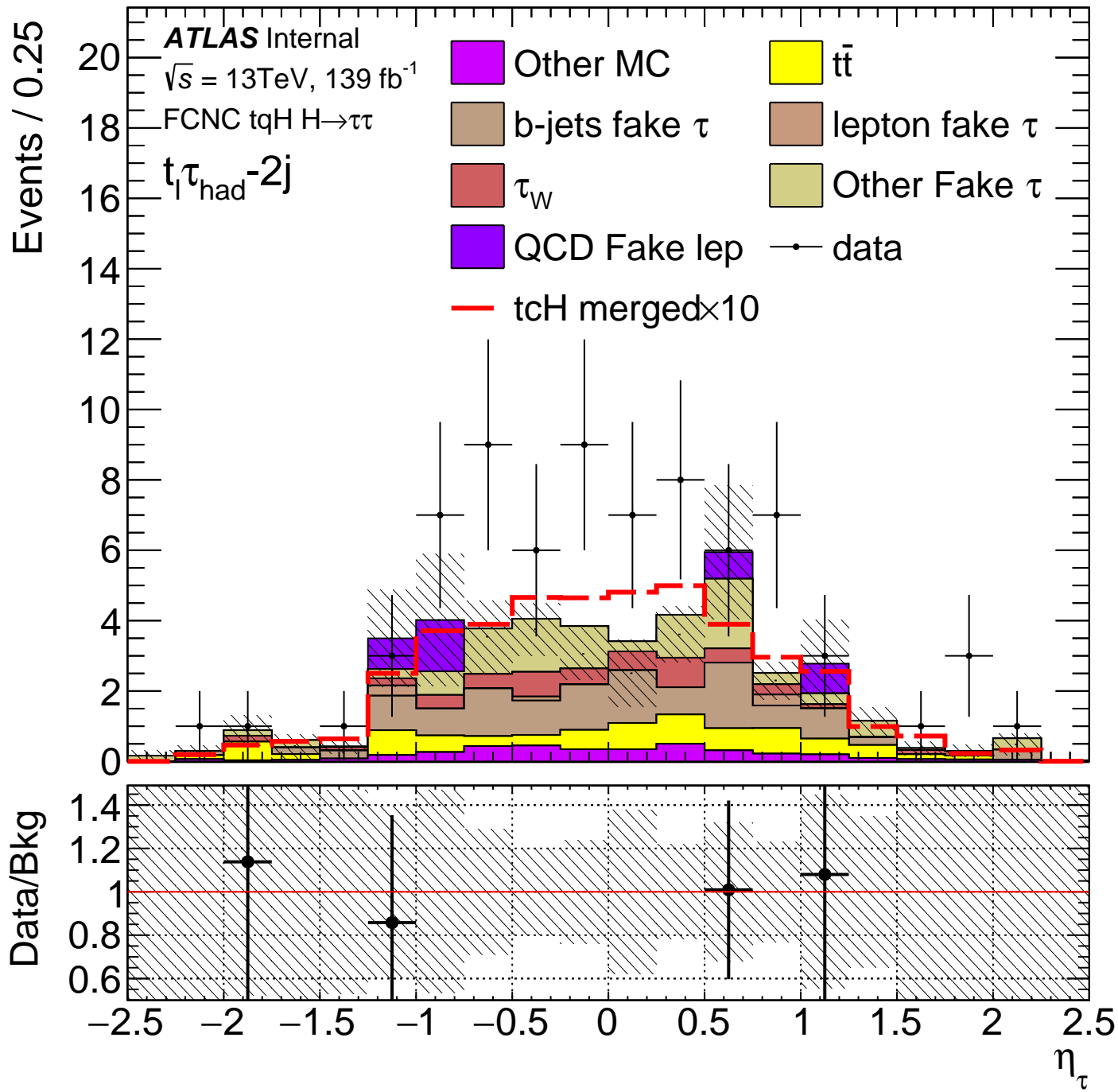
$t\bar{t}$

lepton fake τ

Other Fake τ

data





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

$t_l\tau_{\text{had}}^{-2j}$

Other MC

b-jets fake τ

τ_W

QCD Fake lep

$\bar{t}t \rightarrow bWuH \times 10$

$t\bar{t}$

lepton fake τ

Other Fake τ

data

20

18

16

14

12

10

8

6

4

2

0

1.4

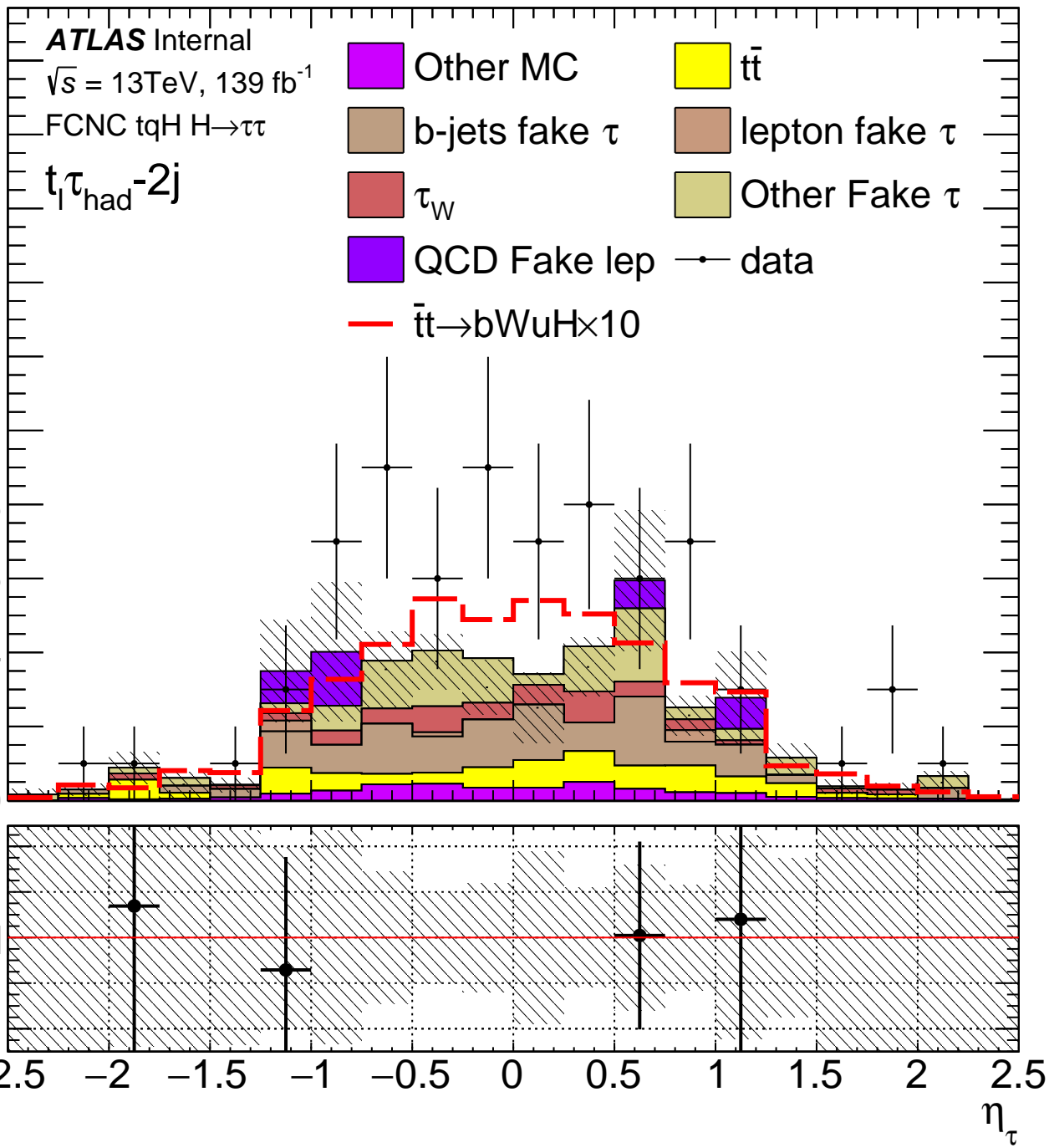
1.2

1.0

0.8

0.6

η_τ



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ATLAS Internal
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FCNC tqH $H \rightarrow \tau\tau$ $t_l \tau_{\text{had}}^{-2} j$

Other MC

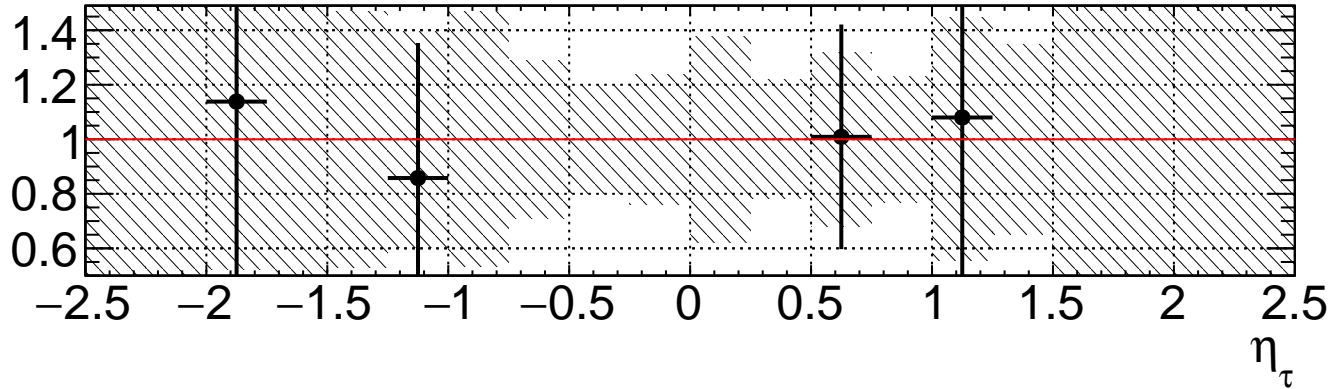
b-jets fake τ τ_W

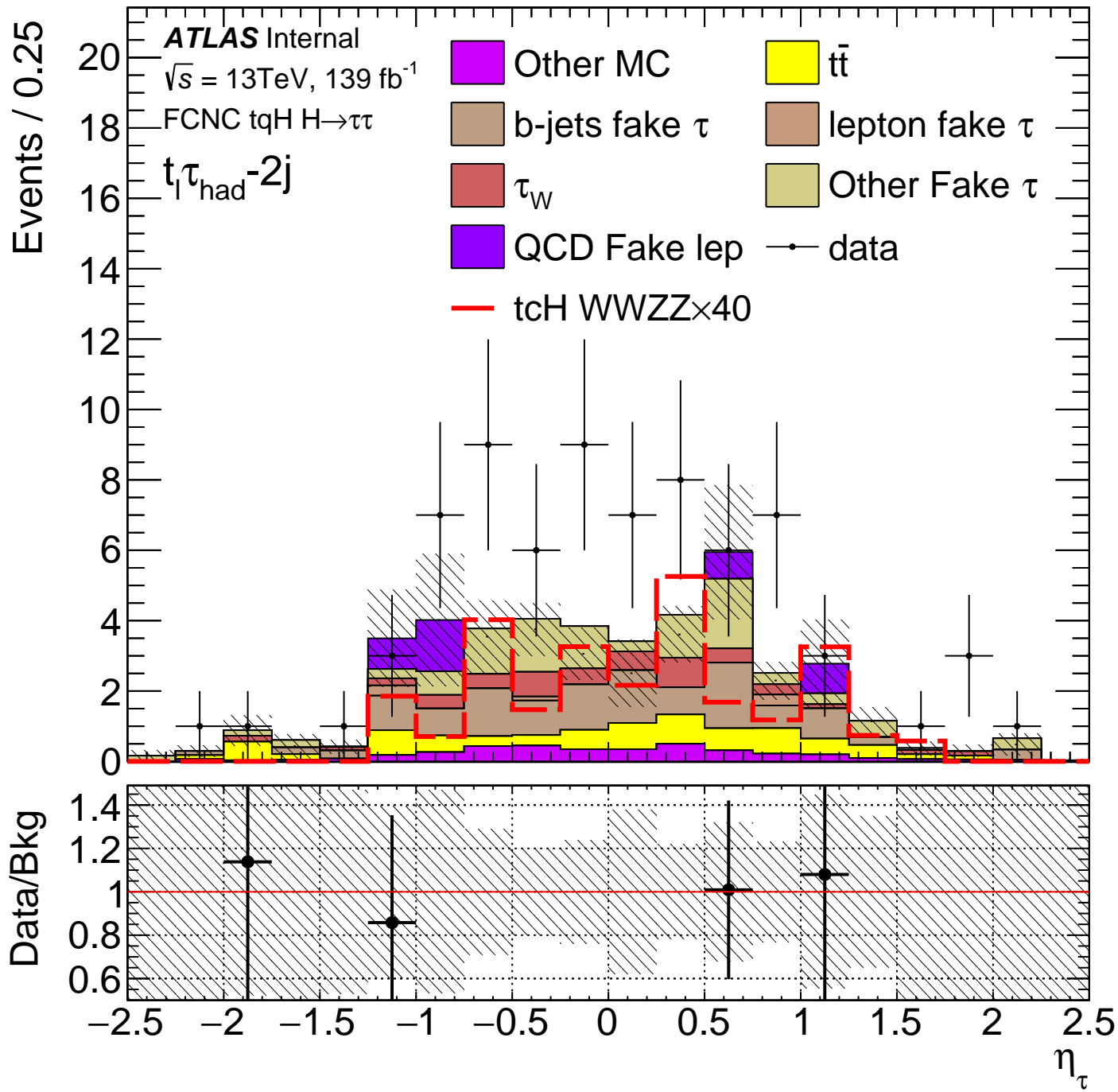
QCD Fake lep

— $tuH\text{ WWZZ} \times 70$ $t\bar{t}$ lepton fake τ Other Fake τ

—•— data

Data/Bkg





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

FCNC $t\bar{q}H \rightarrow \tau\tau$ $t_l \tau_{\text{had}}^{-2} j$

Other MC

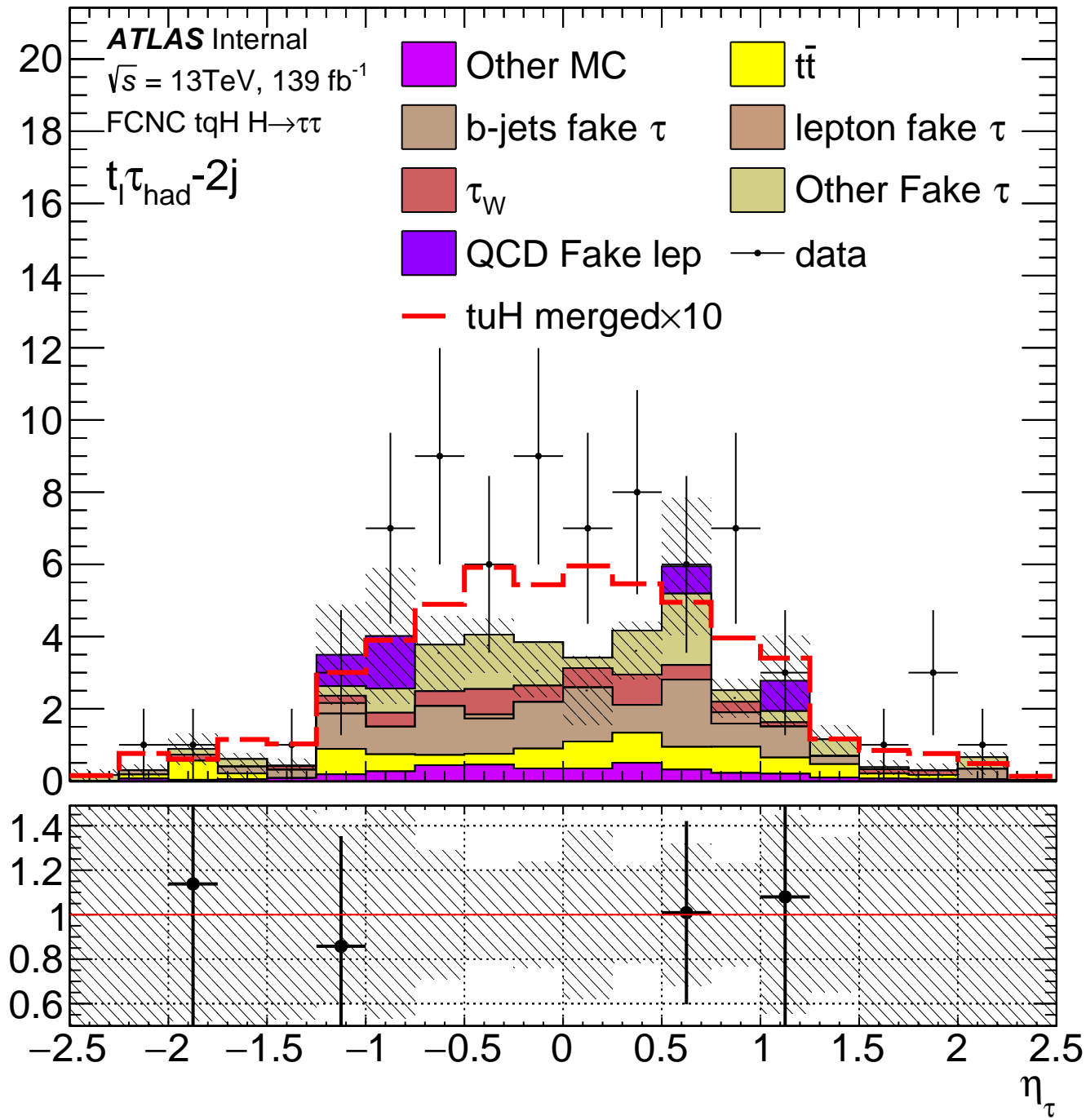
b-jets fake τ τ_W

QCD Fake lep

— $t\bar{u}H$ merged $\times 10$ $t\bar{t}$ lepton fake τ Other Fake τ

—•— data

Data/Bkg

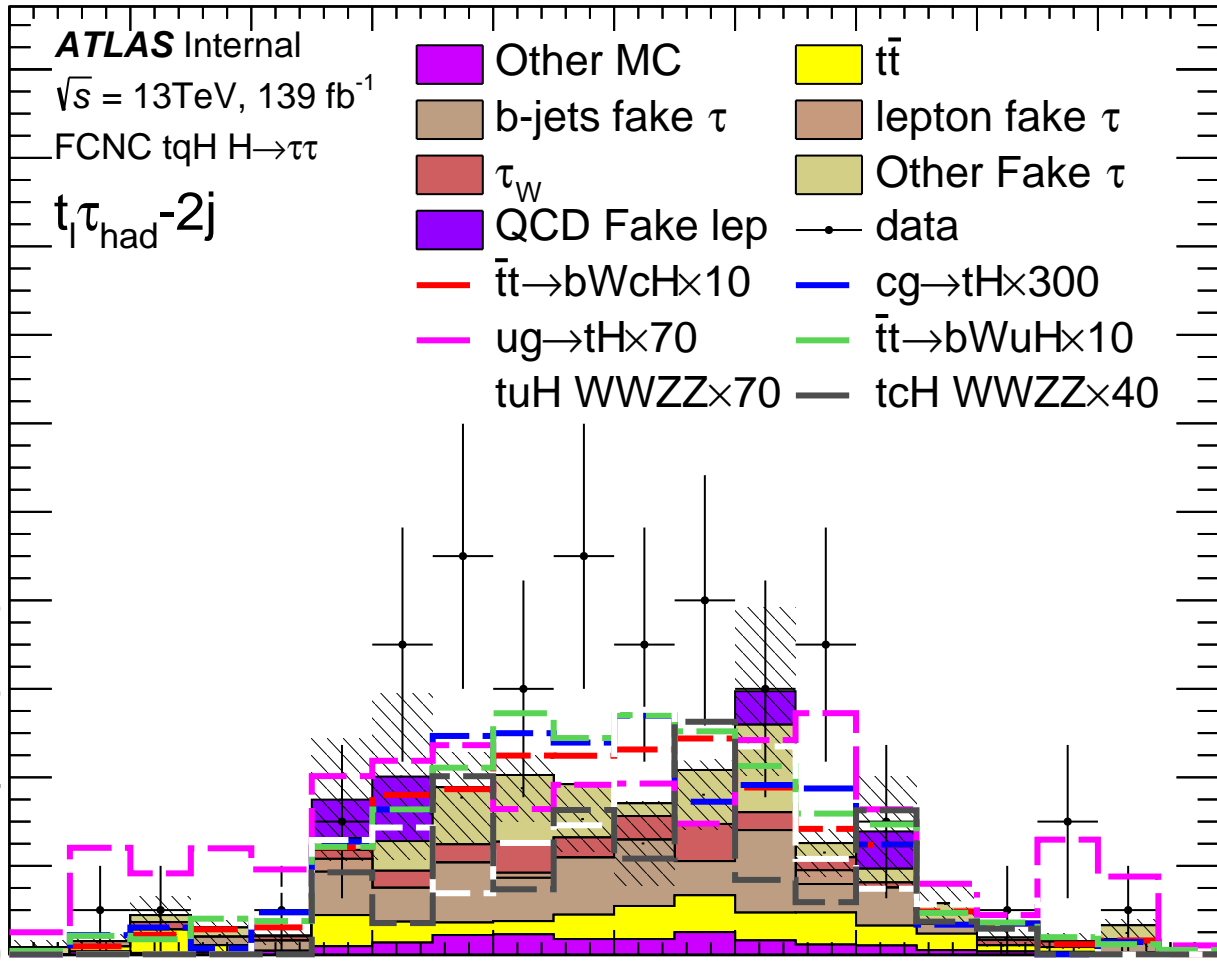


Events / 0.25

ATLAS Internal
 $\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$
FCNC $t\bar{q}H \rightarrow \tau\tau$

$t_l\tau_{\text{had}}^{-2j}$

- | | |
|---------------------------------------|---------------------------------------|
| Other MC | $t\bar{t}$ |
| b-jets fake τ | lepton fake τ |
| τ_W | Other Fake τ |
| QCD Fake lep | data |
| $t\bar{t} \rightarrow bWcH \times 10$ | $cg \rightarrow tH \times 300$ |
| $ug \rightarrow tH \times 70$ | $t\bar{t} \rightarrow bWuH \times 10$ |
| $tuH \text{ WWZZ} \times 70$ | $tcH \text{ WWZZ} \times 40$ |



Data/Bkg

