

Events / 0.25

Data/Bkg

ATLAS Internal
 $\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$
FCNC $t\bar{q}H \rightarrow \tau\tau$
 $t_h \tau_{\text{lep}} \tau_{\text{had}} - 2j$

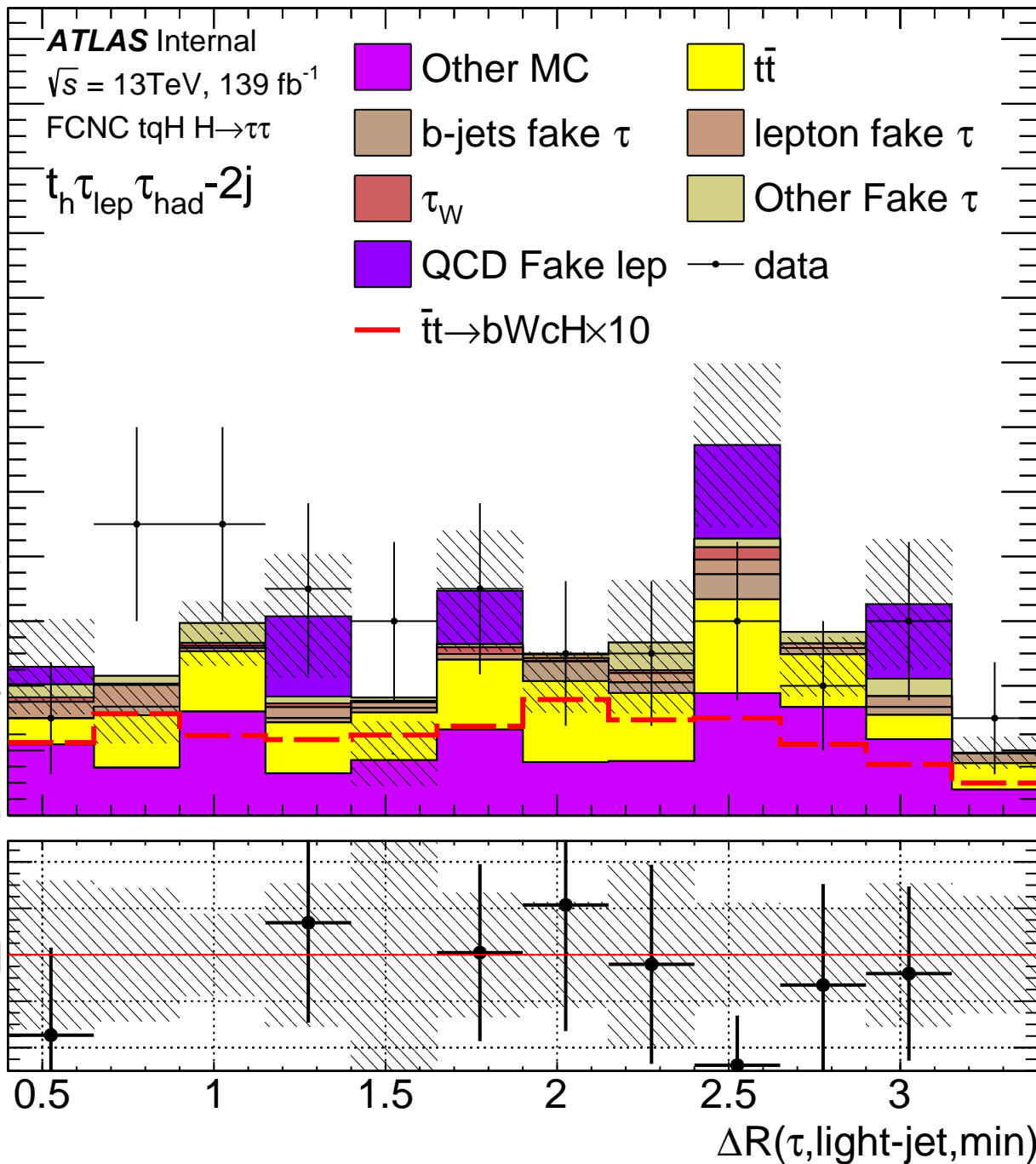
Other MC

b-jets fake τ τ_W

QCD Fake lep

 $\bar{t}\bar{t} \rightarrow bWcH \times 10$ $t\bar{t}$ lepton fake τ Other Fake τ

data

 $\Delta R(\tau, \text{light-jet}, \text{min})$

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Data/Bkg

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

$t_h \tau_{\text{lep}} \tau_{\text{had}} - 2j$

Other MC

b-jets fake τ

τ_W

QCD Fake lep

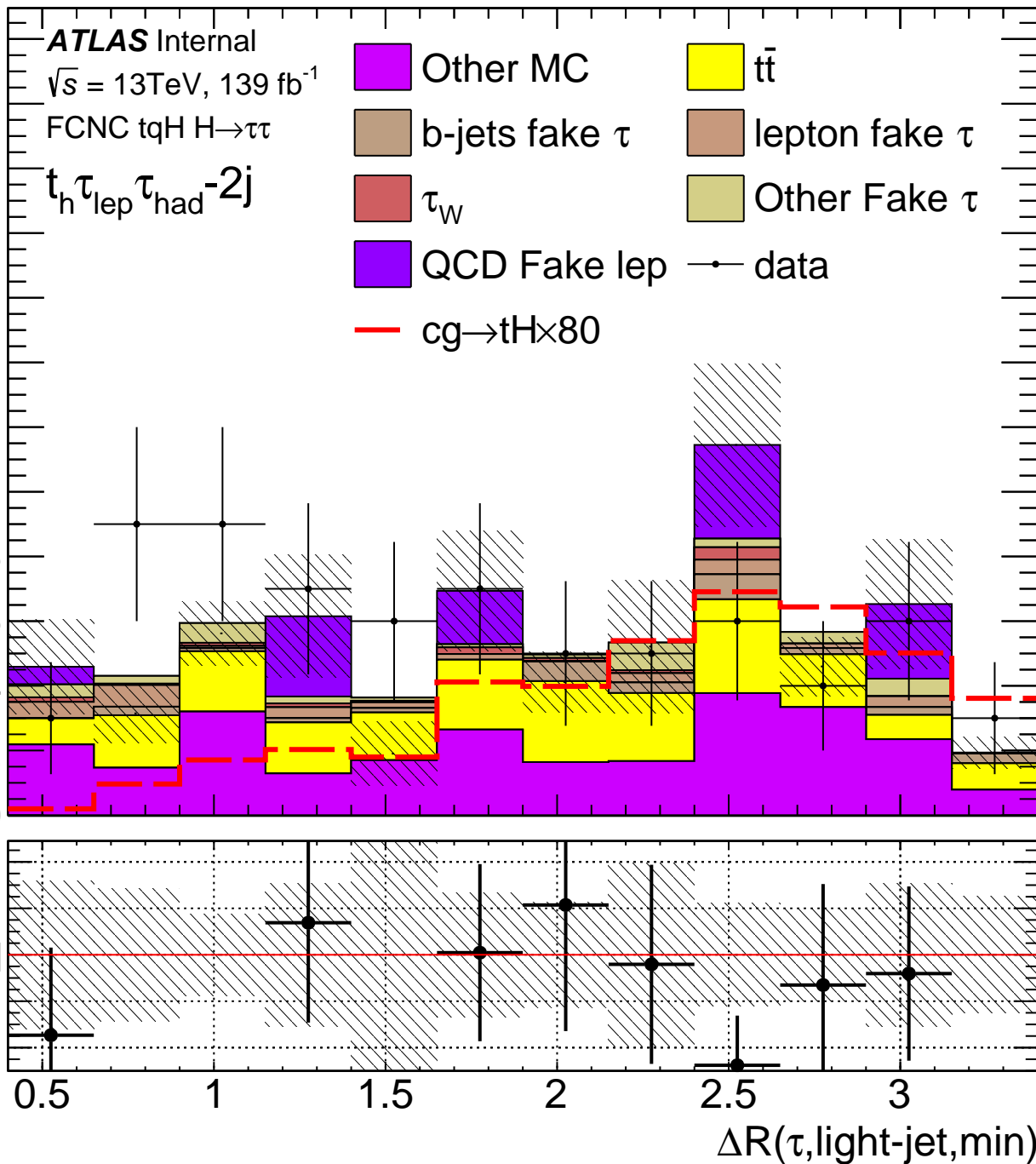
$cg \rightarrow tH \times 80$

$t\bar{t}$

lepton fake τ

Other Fake τ

data



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

$t_h \tau_{\text{lep}} \tau_{\text{had}} - 2j$

Other MC

b-jets fake τ

τ_W

QCD Fake lep

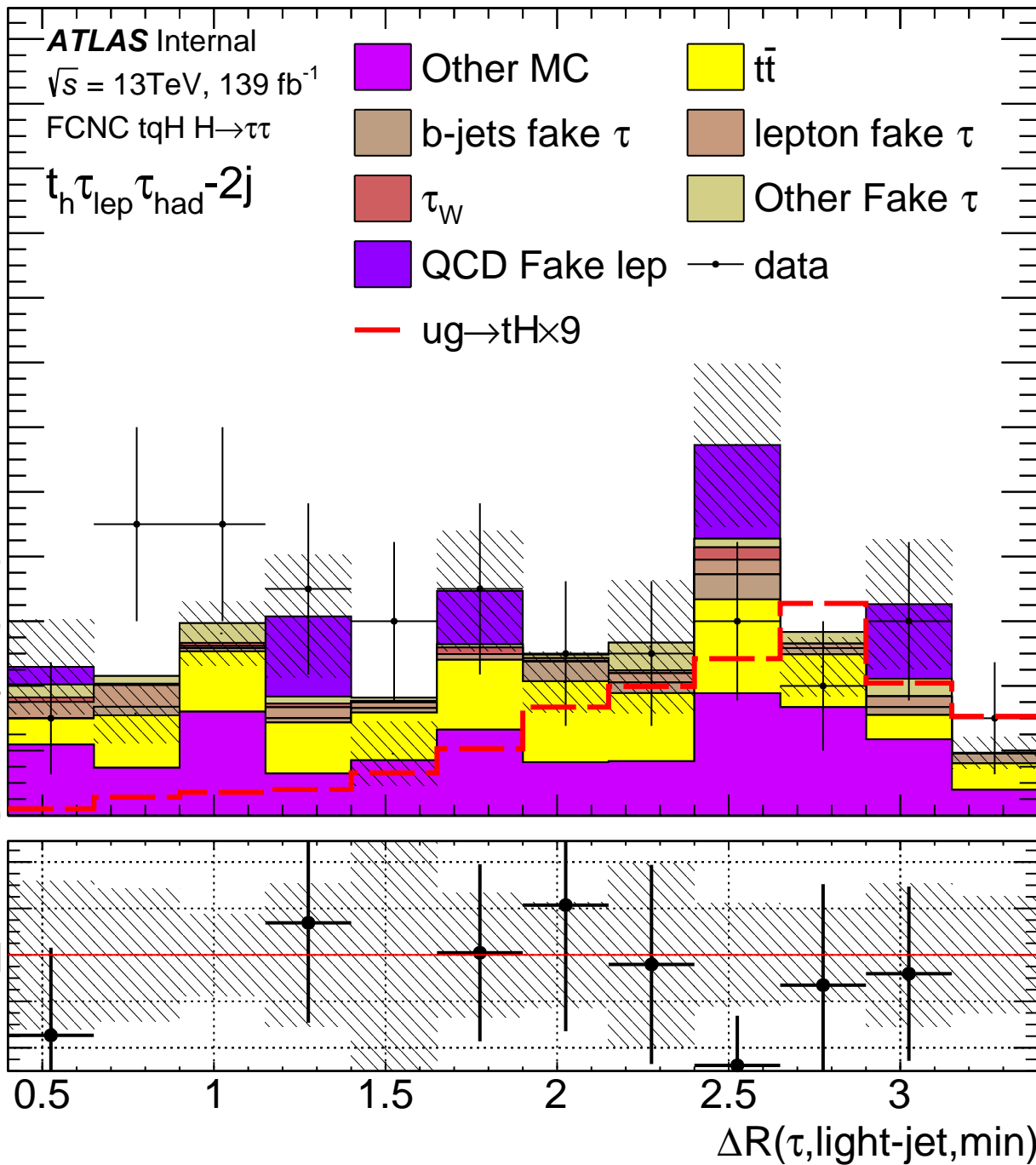
$u\bar{g} \rightarrow t\bar{t}H \times 9$

$t\bar{t}$

lepton fake τ

Other Fake τ

data



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Other MC

b-jets fake τ

τ_W

QCD Fake lep

tcH merged $\times 10$

$t\bar{t}$

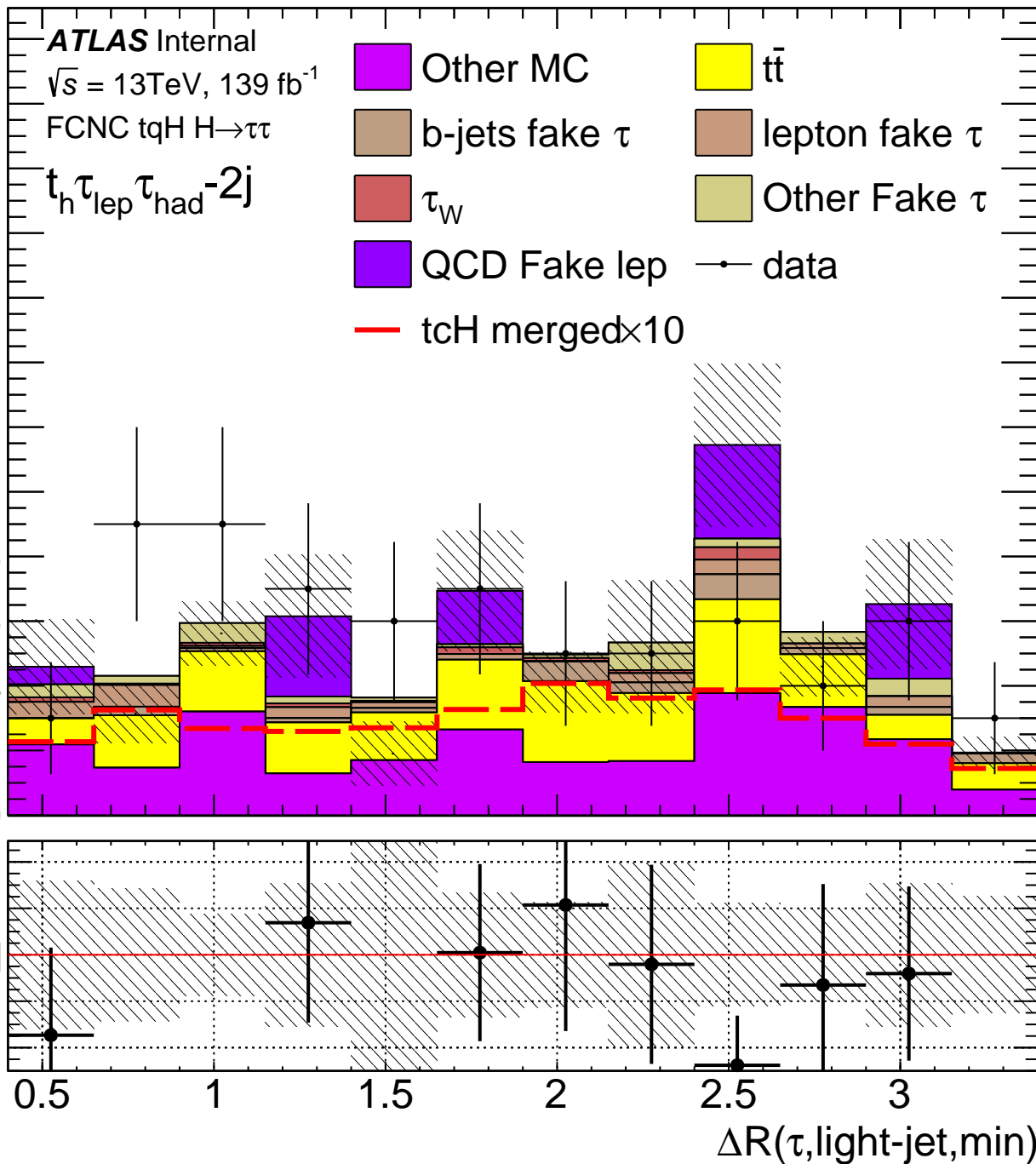
lepton fake τ

Other Fake τ

data

Data/Bkg

$\Delta R(\tau, \text{light-jet}, \text{min})$



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 $t_h \tau_{\text{lep}} \tau_{\text{had}} - 2j$

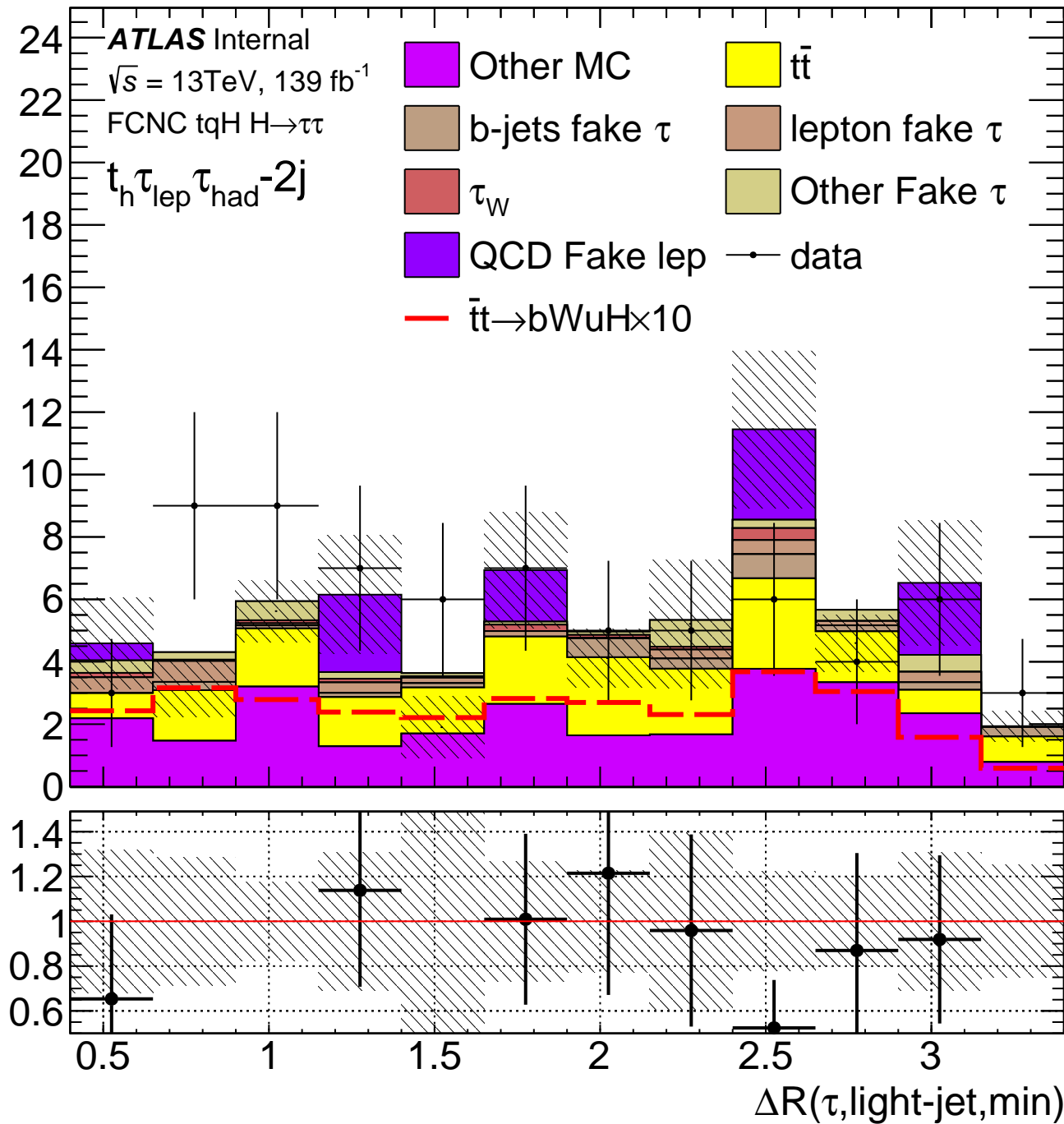
Other MC

b-jets fake τ τ_W

QCD Fake lep

 $\bar{t}\bar{t} \rightarrow bWuH \times 10$ $t\bar{t}$ lepton fake τ Other Fake τ

data



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ATLAS Internal $\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$ FCNC $t\bar{q}H \rightarrow \tau\tau$ $t_h \tau_{\text{lep}} \tau_{\text{had}}^{-2} j$

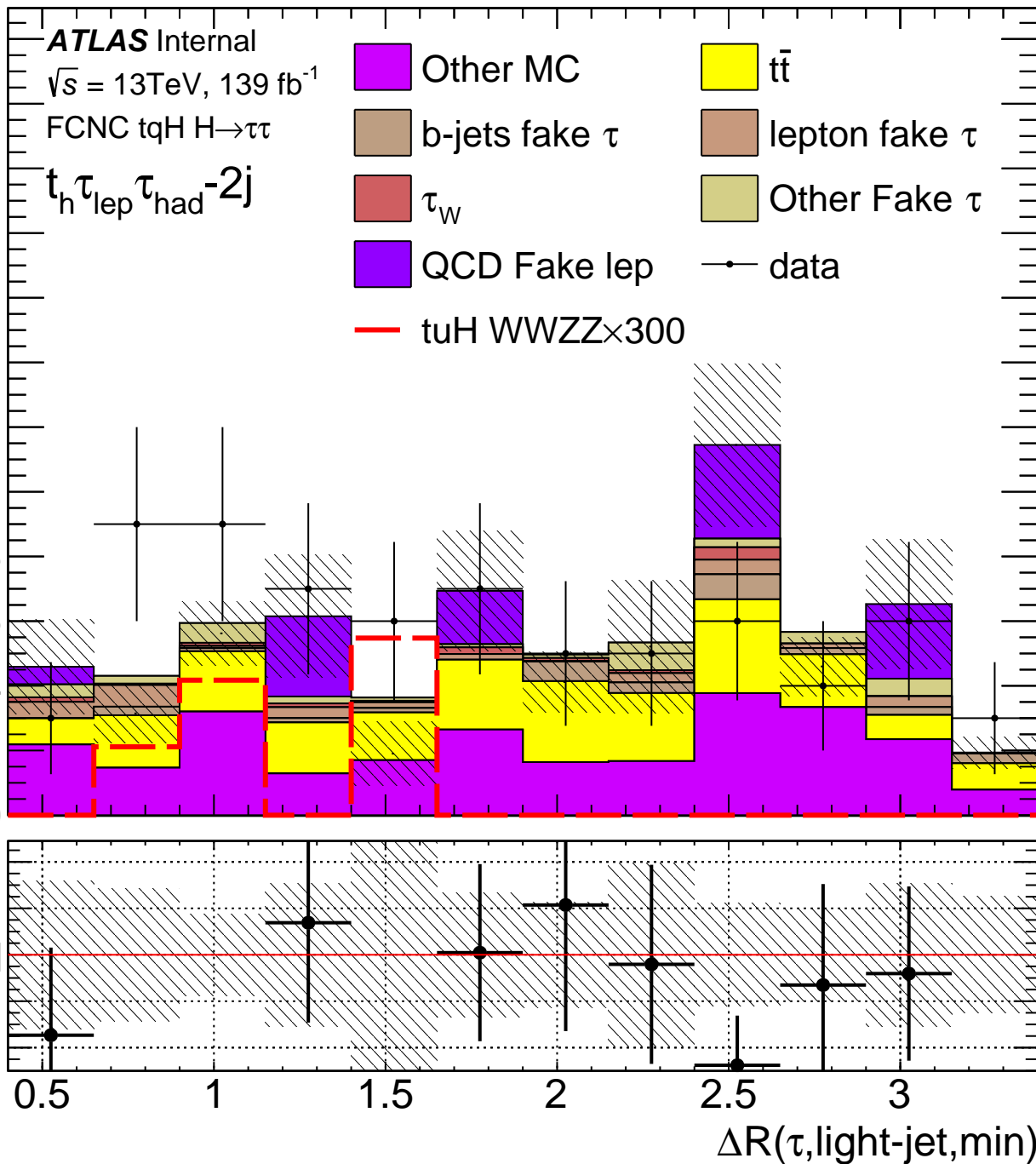
Other MC

b-jets fake τ τ_W

QCD Fake lep

— $t\bar{u}H \text{ WWZZ} \times 300$ $t\bar{t}$ lepton fake τ Other Fake τ

—•— data



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Data/Bkg

ATLAS Internal $\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$ FCNC tqH $H \rightarrow \tau\tau$ $t_h \tau_{\text{lep}} \tau_{\text{had}}^{-2} j$

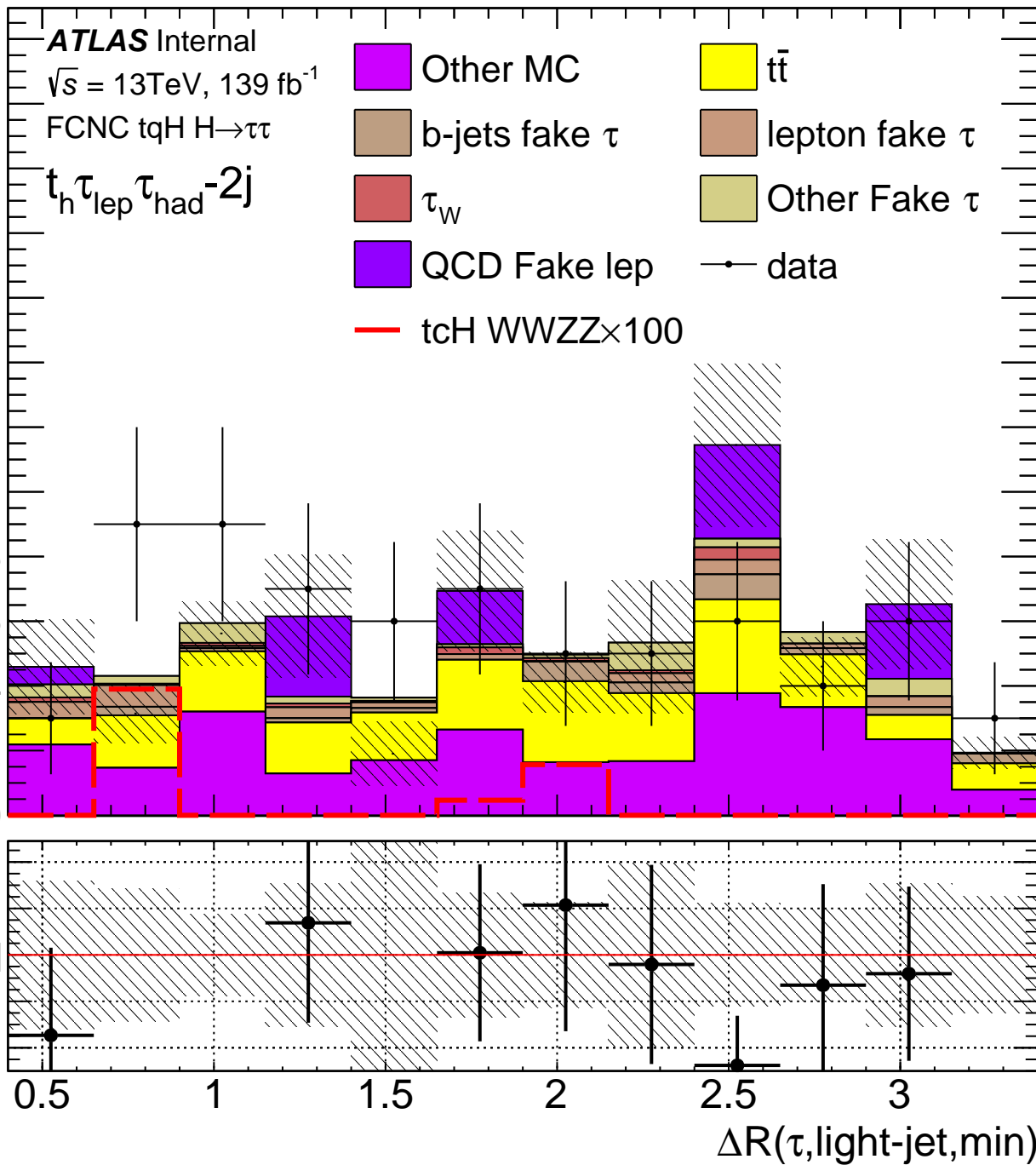
Other MC

b-jets fake τ τ_W

QCD Fake lep

tcH WWZZ $\times 100$ $t\bar{t}$ lepton fake τ Other Fake τ

—•— data

 $\Delta R(\tau, \text{light-jet}, \text{min})$

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Other MC

b-jets fake τ

τ_W

QCD Fake lep

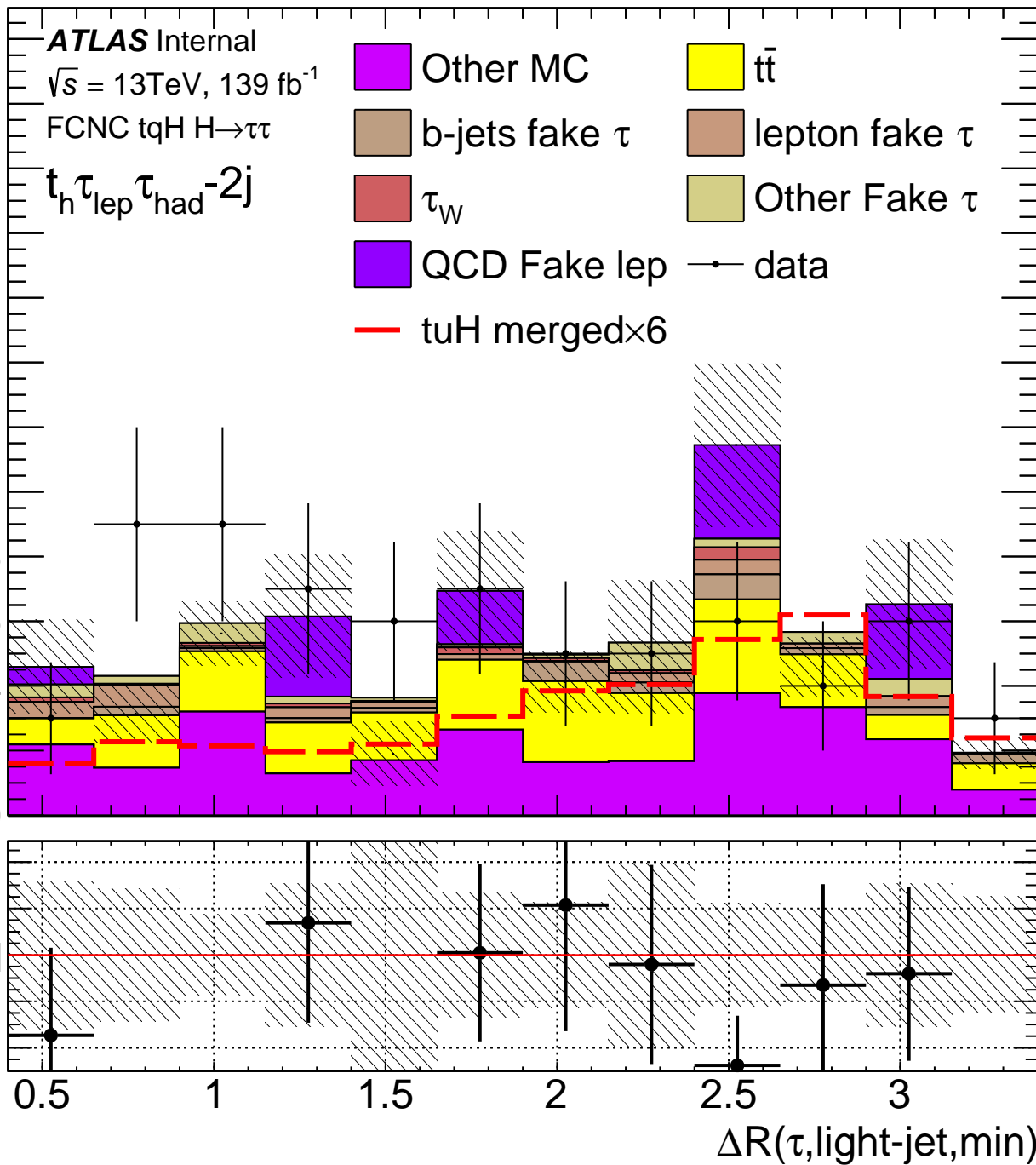
tuH merged $\times 6$

$t\bar{t}$

lepton fake τ

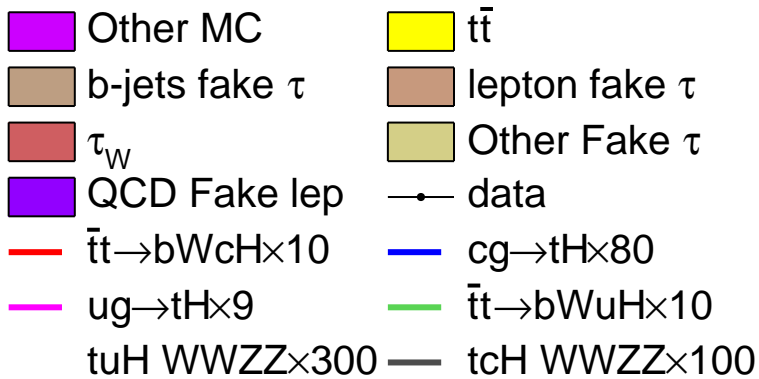
Other Fake τ

data



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 $t_h \tau_{\text{lep}} \tau_{\text{had}} - 2j$



Data/Bkg

