

Events / 0.20

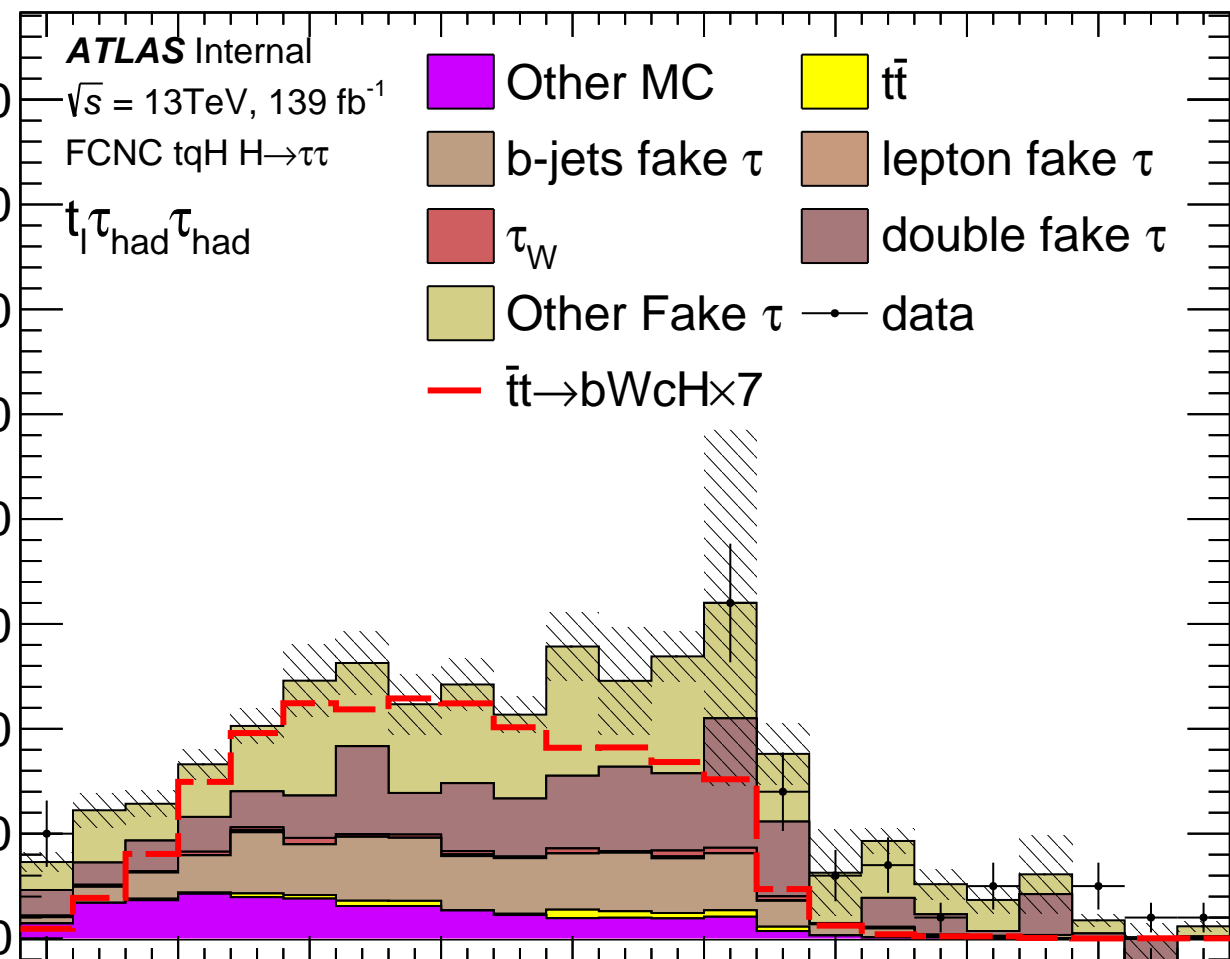
ATLAS Internal $\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$ FCNC tqH $H \rightarrow \tau\tau$ $t_l \tau_{\text{had}} \tau_{\text{had}}$

Other MC

b-jets fake τ τ_W Other Fake τ $\bar{t}t \rightarrow bWcH \times 7$ $\bar{t}t$ lepton fake τ double fake τ

—•— data

Data/Bkg

 $\Delta R(\tau, \tau)$

Events / 0.20

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

Other MC

b-jets fake τ τ_W Other Fake τ cg \rightarrow tH \times 70 $t\bar{t}$ lepton fake τ double fake τ

—•— data

80

70

60

50

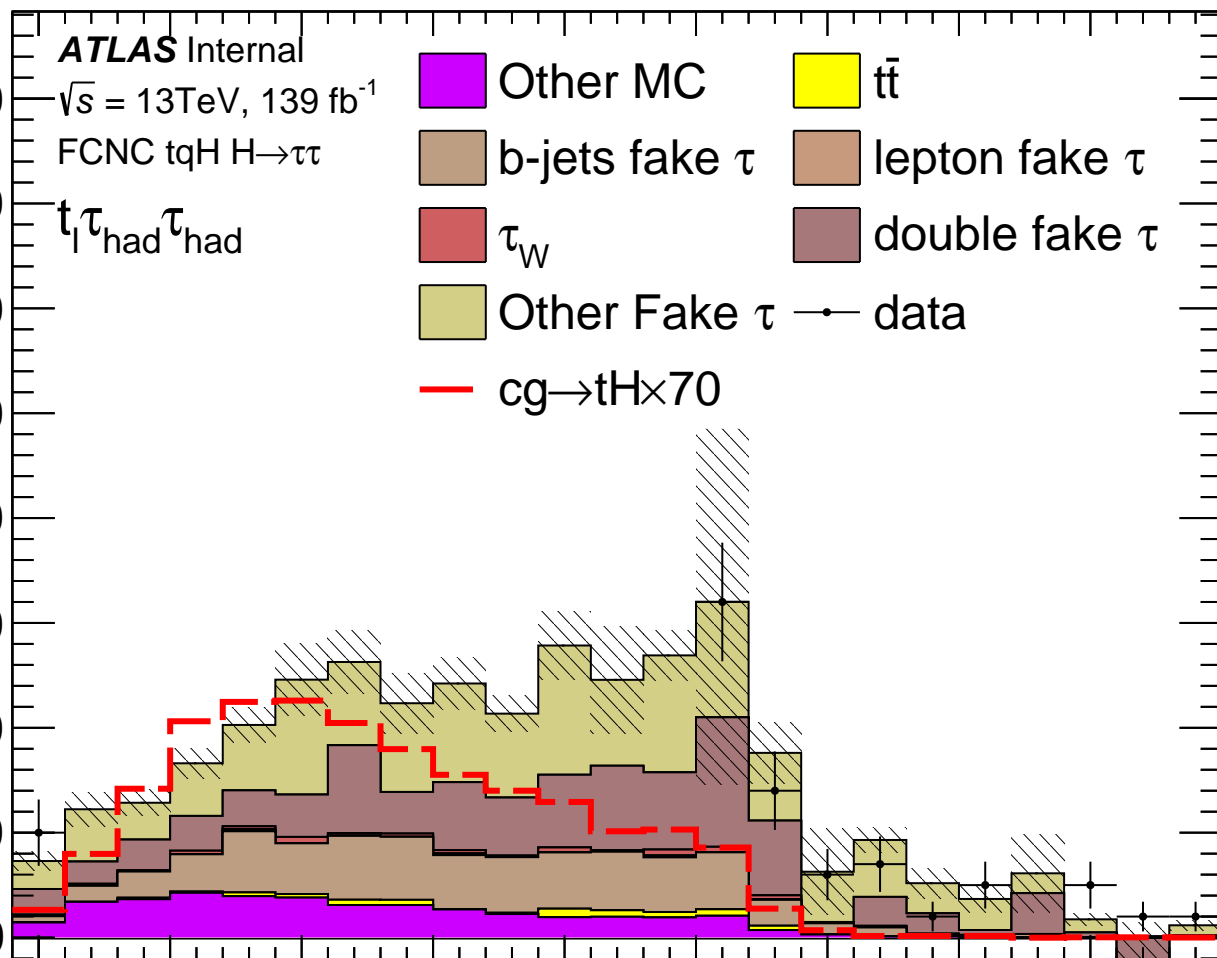
40

30

20

10

0



Data/Bkg

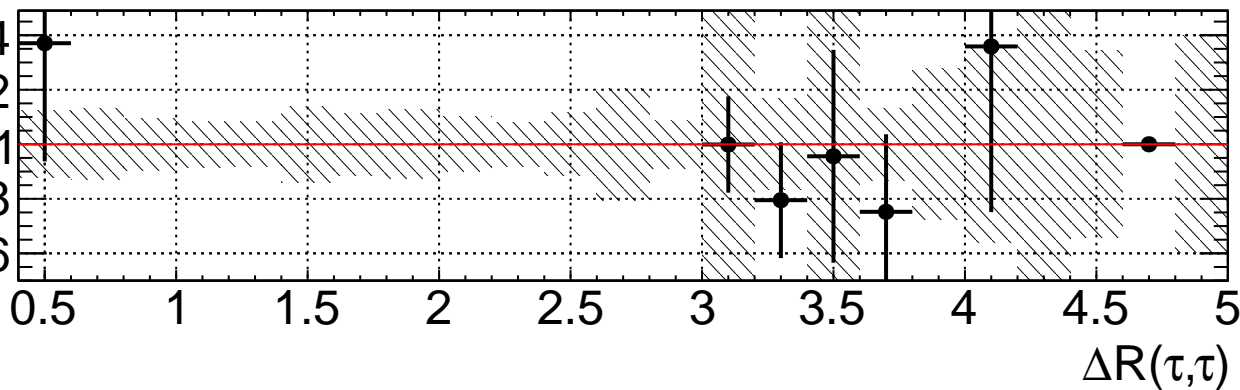
1.4

1.2

1.0

0.8

0.6



Events / 0.20

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

Other MC

b-jets fake τ τ_W Other Fake τ tcH merged $\times 7$ $t\bar{t}$ lepton fake τ double fake τ

—•— data

80

70

60

50

40

30

20

10

0

Data/Bkg

1.4

1.2

1.0

0.8

0.6

0.5

1

1.5

2

2.5

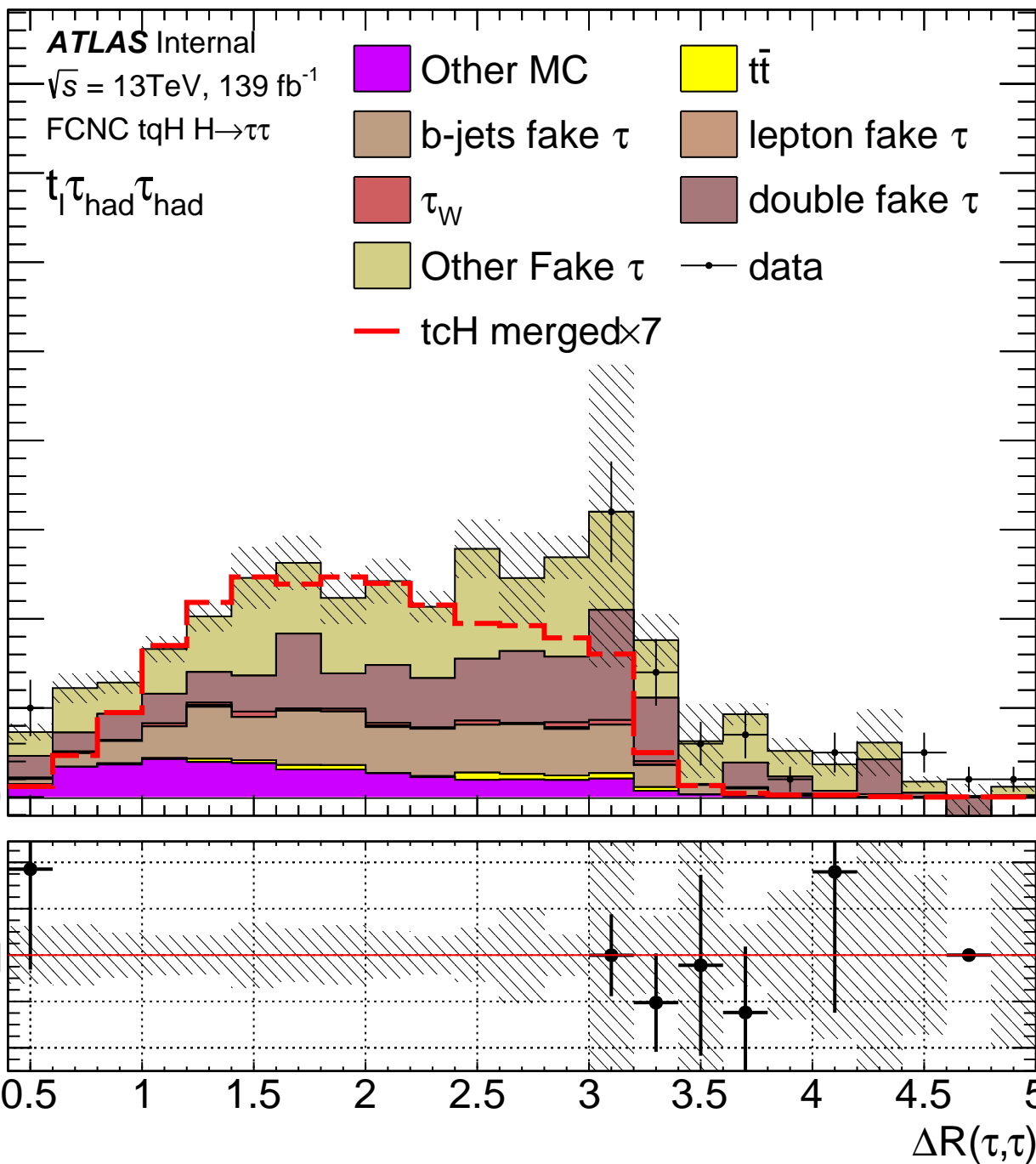
3

3.5

4

4.5

5

 $\Delta R(\tau, \tau)$ 

Events / 0.20

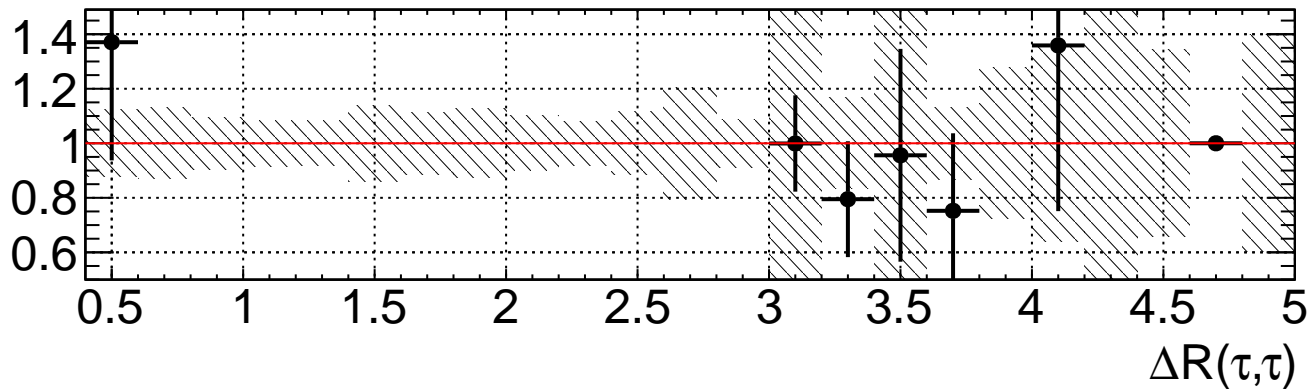
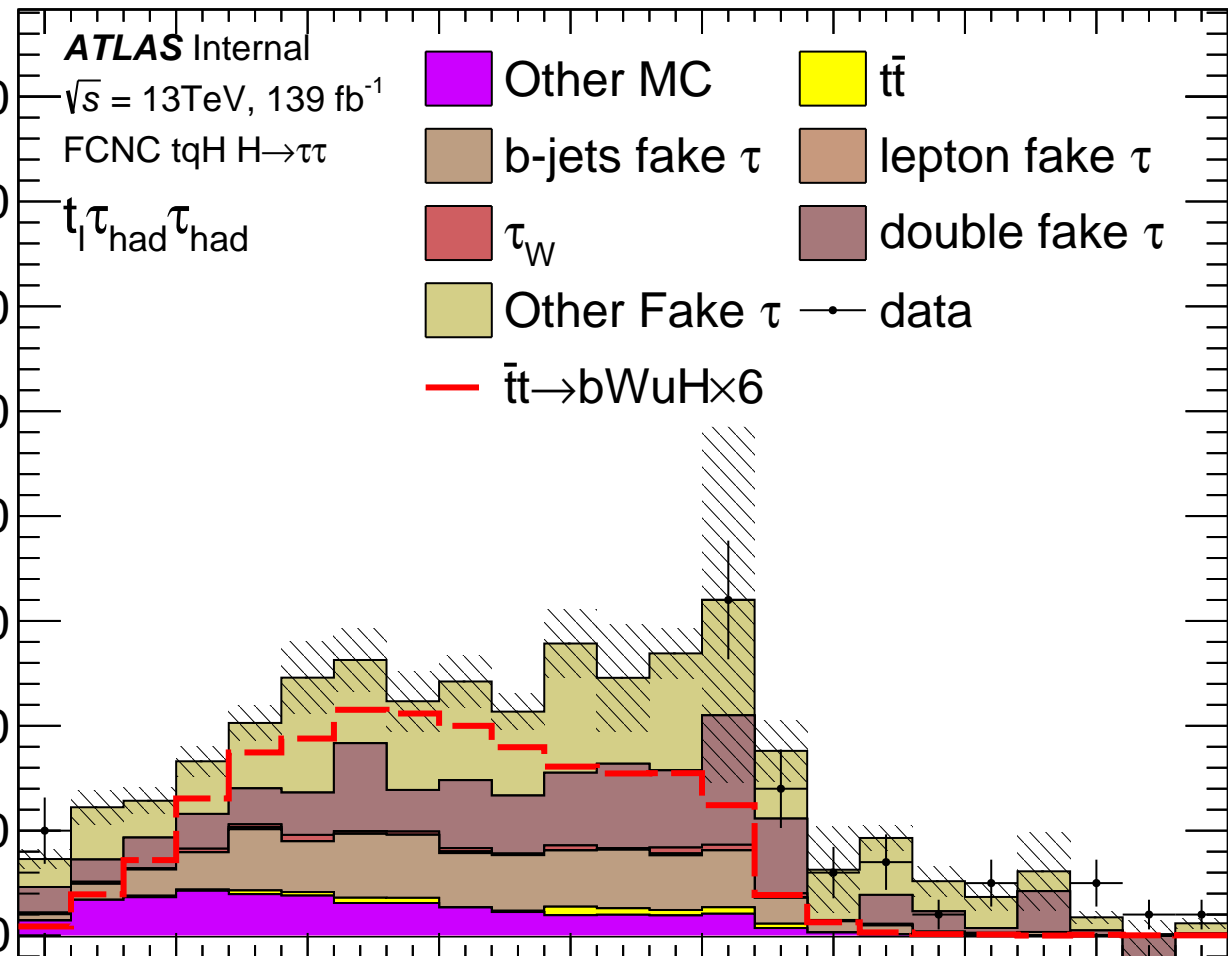
ATLAS Internal $\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$ FCNC tqH $H \rightarrow \tau\tau$ $t_l \tau_{\text{had}} \tau_{\text{had}}$

Other MC

b-jets fake τ τ_W Other Fake τ $\bar{t}t \rightarrow bWuH \times 6$ $\bar{t}t$ lepton fake τ double fake τ

—•— data

Data/Bkg



Events / 0.20

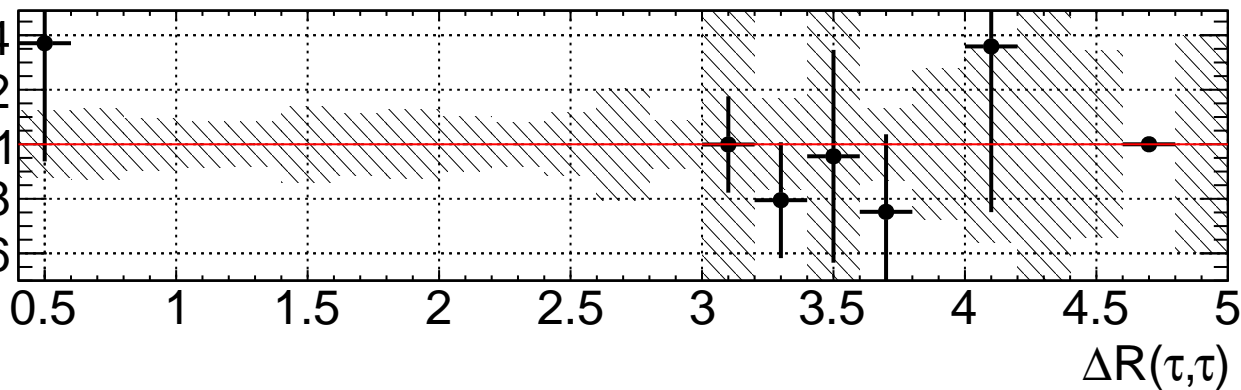
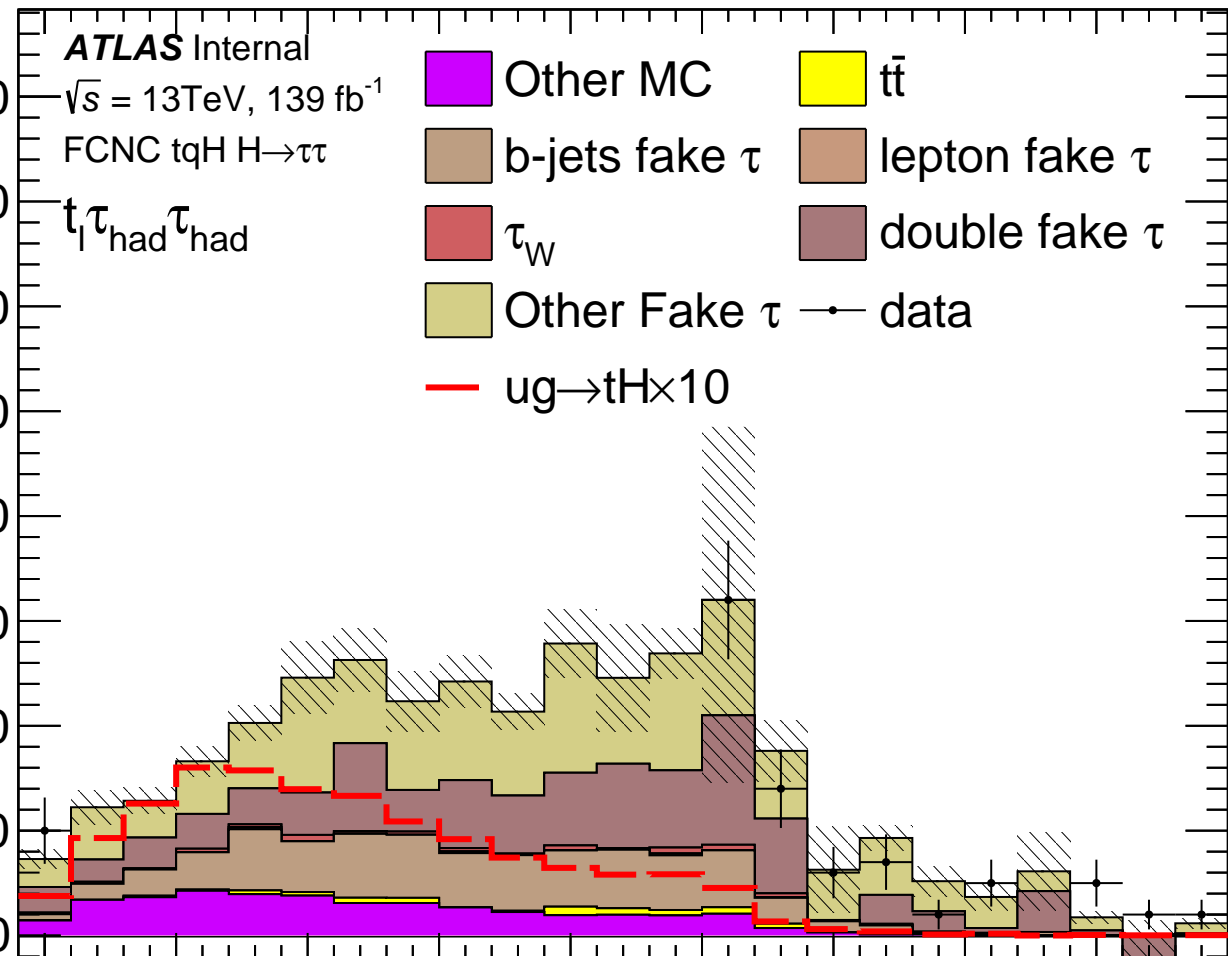
ATLAS Internal $\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$ FCNC tqH $H \rightarrow \tau\tau$ $t_l \tau_{\text{had}} \tau_{\text{had}}$

Other MC

b-jets fake τ τ_W Other Fake τ — $ug \rightarrow tH \times 10$ $t\bar{t}$ lepton fake τ double fake τ

—•— data

Data/Bkg



Events / 0.20

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

Other MC

b-jets fake τ τ_W Other Fake τ — $t_u H$ merged $\times 5$ $t\bar{t}$ lepton fake τ double fake τ

—•— data

80

70

60

50

40

30

20

10

0

Data/Bkg

1.4

1.2

1.0

0.8

0.6

0.5

1

1.5

2

2.5

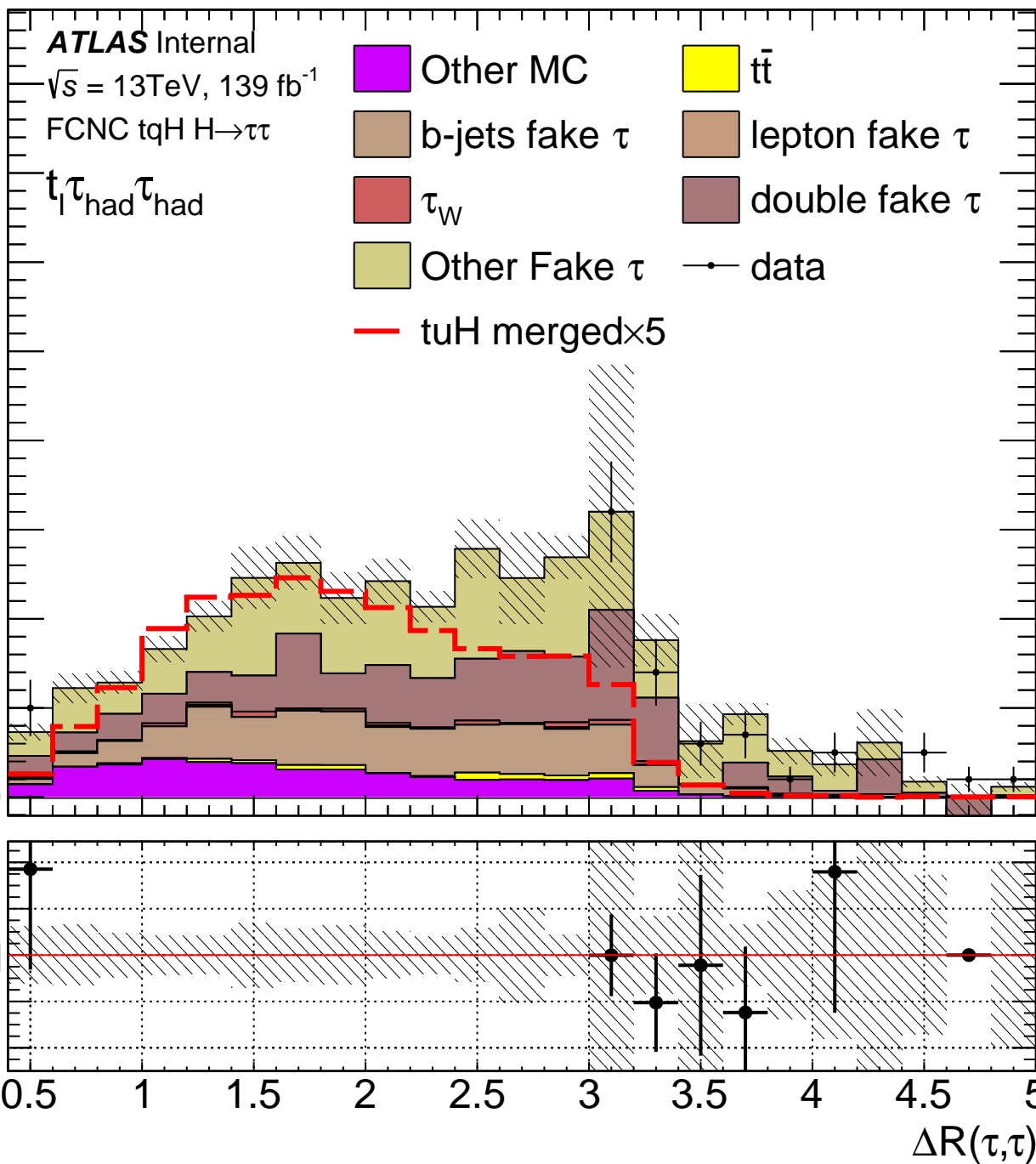
3

3.5

4

4.5

5

 $\Delta R(\tau, \tau)$ 

Events / 0.20

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

Other MC

b-jets fake τ τ_W Other Fake τ $\bar{t}t \rightarrow bWcH \times 7$ $\bar{t}t \rightarrow bWuH \times 6$ $\bar{t}t$ lepton fake τ double fake τ

data

 $cg \rightarrow tH \times 70$ $ug \rightarrow tH \times 10$

Data/Bkg

