

Events / 0.25

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

SM Higgs

 $Z \rightarrow \tau\tau$ $t\bar{t}$ only τ_{sub} real

data

Diboson

Rare

 $t\bar{t}V$

Fake

 $t\bar{t} \rightarrow bWcH \times 100$

50

40

30

20

10

0

Data/Bkg

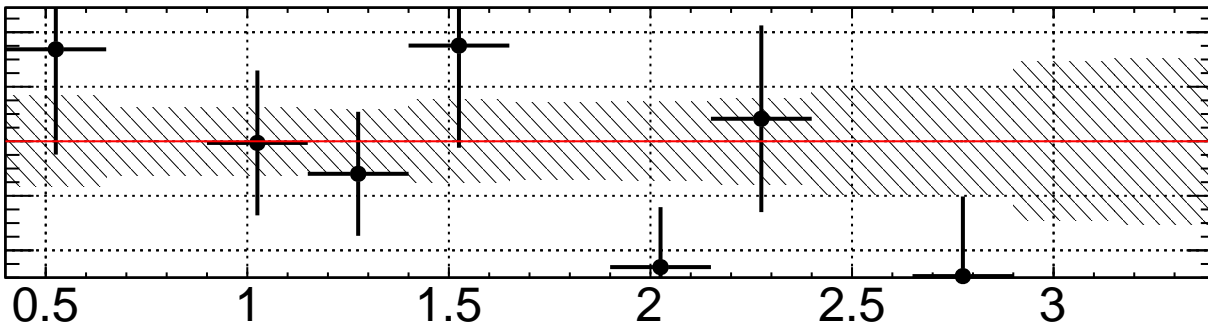
1.4

1.2

1.0

0.8

0.6

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

Events / 0.25

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

SM Higgs

 $Z \rightarrow \tau\tau$ $t\bar{t}$ only τ_{sub} real

data

Diboson

Rare

 $t\bar{t}V$

Fake

 $cg \rightarrow tH \times 5000$

50

40

30

20

10

0

Data/Bkg

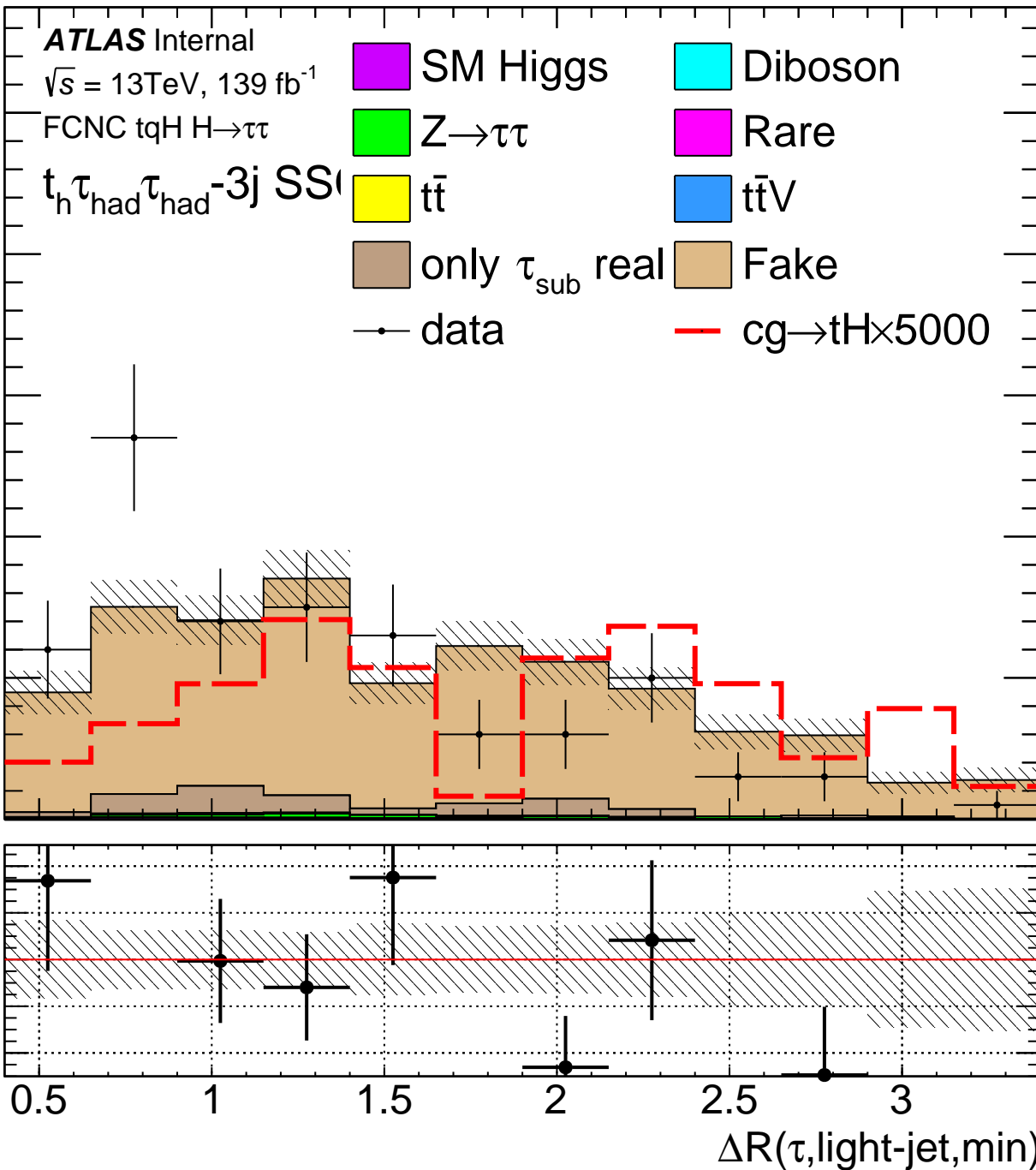
1.4

1.2

1.0

0.8

0.6

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

Events / 0.25

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

SM Higgs

 $Z \rightarrow \tau\tau$ $t\bar{t}$ only τ_{sub} real

data

Diboson

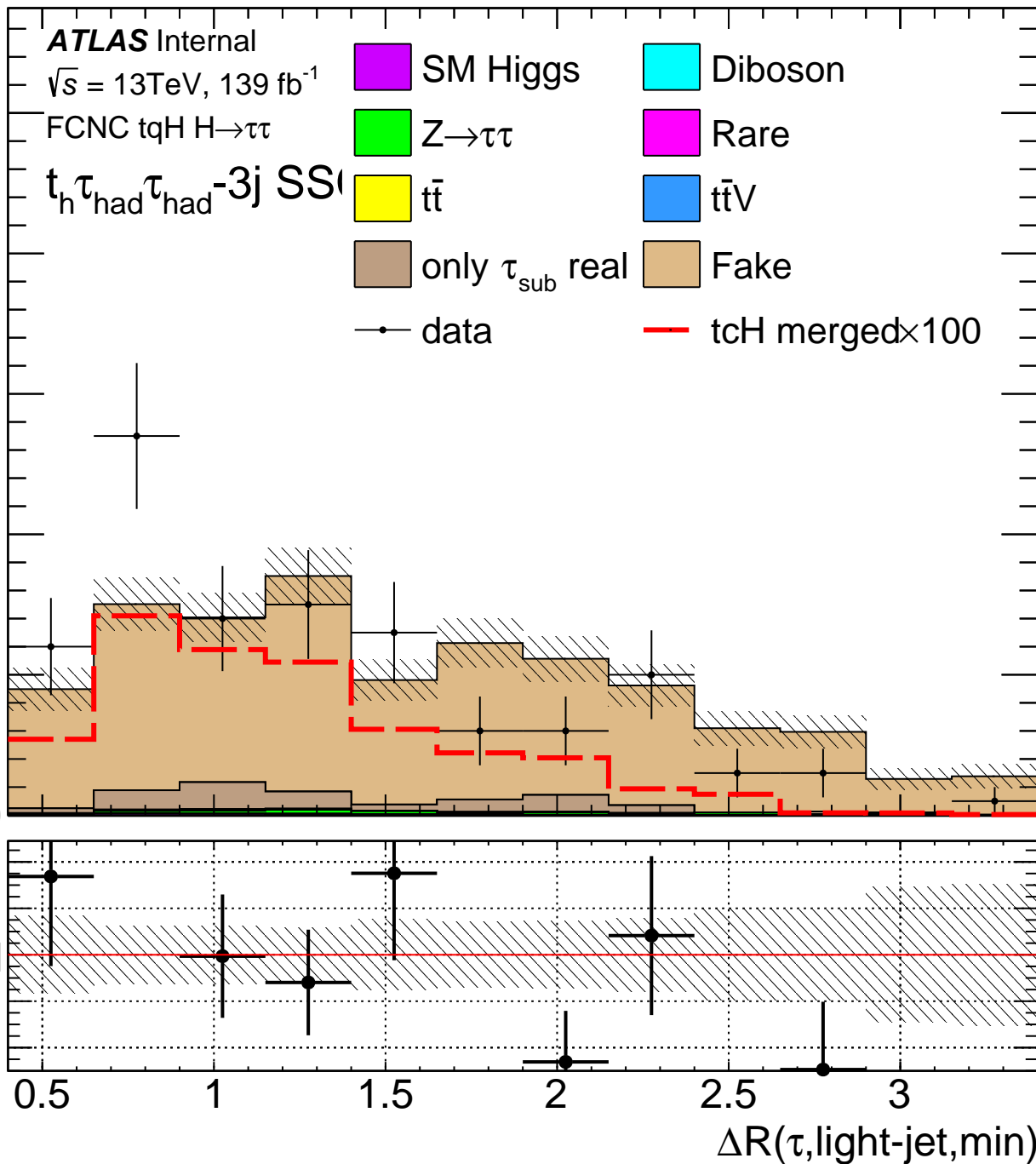
Rare

 $t\bar{t}V$

Fake

tcH merged $\times 100$

Data/Bkg

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

Events / 0.25

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

SM Higgs

 $Z \rightarrow \tau\tau$ $t\bar{t}$ only τ_{sub} real

data

Diboson

Rare

 $t\bar{t}V$

Fake

 $t\bar{t} \rightarrow bWuH \times 100$

50

40

30

20

10

0

Data/Bkg

1.4

1.2

1.0

0.8

0.6

0.5

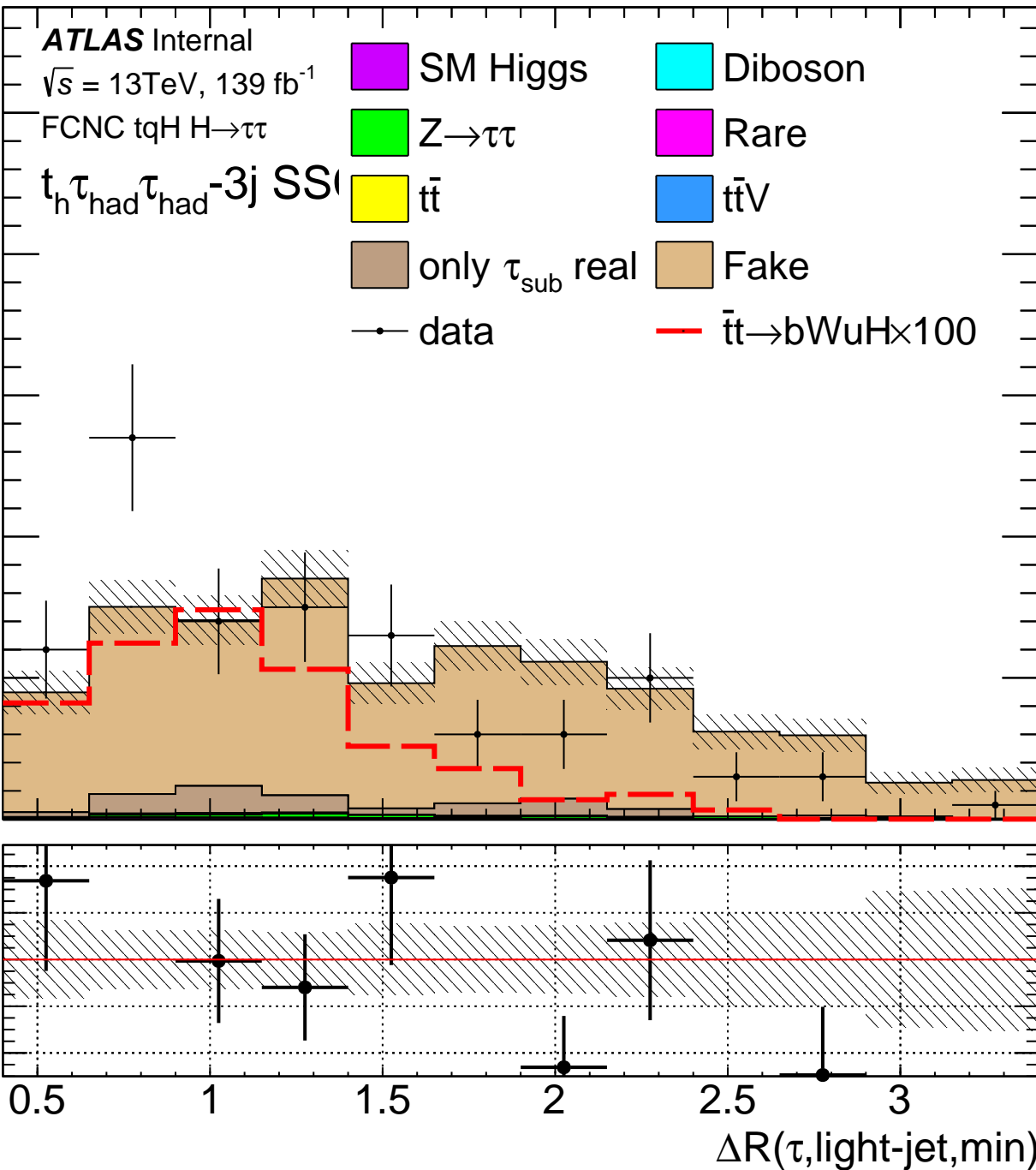
1

1.5

2

2.5

3

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

Events / 0.25

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

SM Higgs

 $Z \rightarrow \tau\tau$ $t\bar{t}$ only τ_{sub} real

data

Diboson

Rare

 $t\bar{t}V$

Fake

 $ug \rightarrow tH \times 600$

50

40

30

20

10

0

Data/Bkg

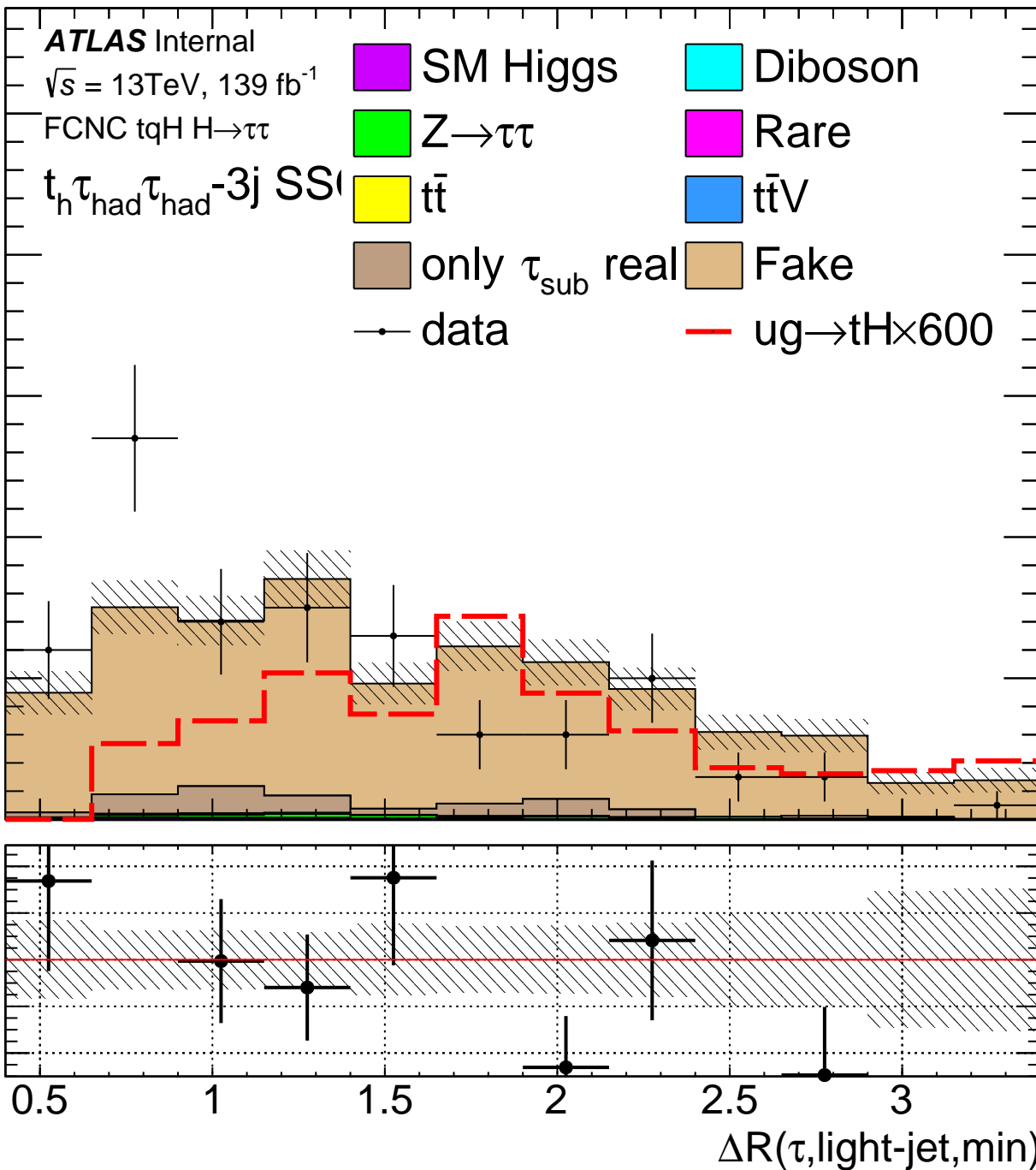
1.4

1.2

1.0

0.8

0.6

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

Events / 0.25

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

SM Higgs

 $Z \rightarrow \tau\tau$ $t\bar{t}$ only τ_{sub} real

data

Diboson

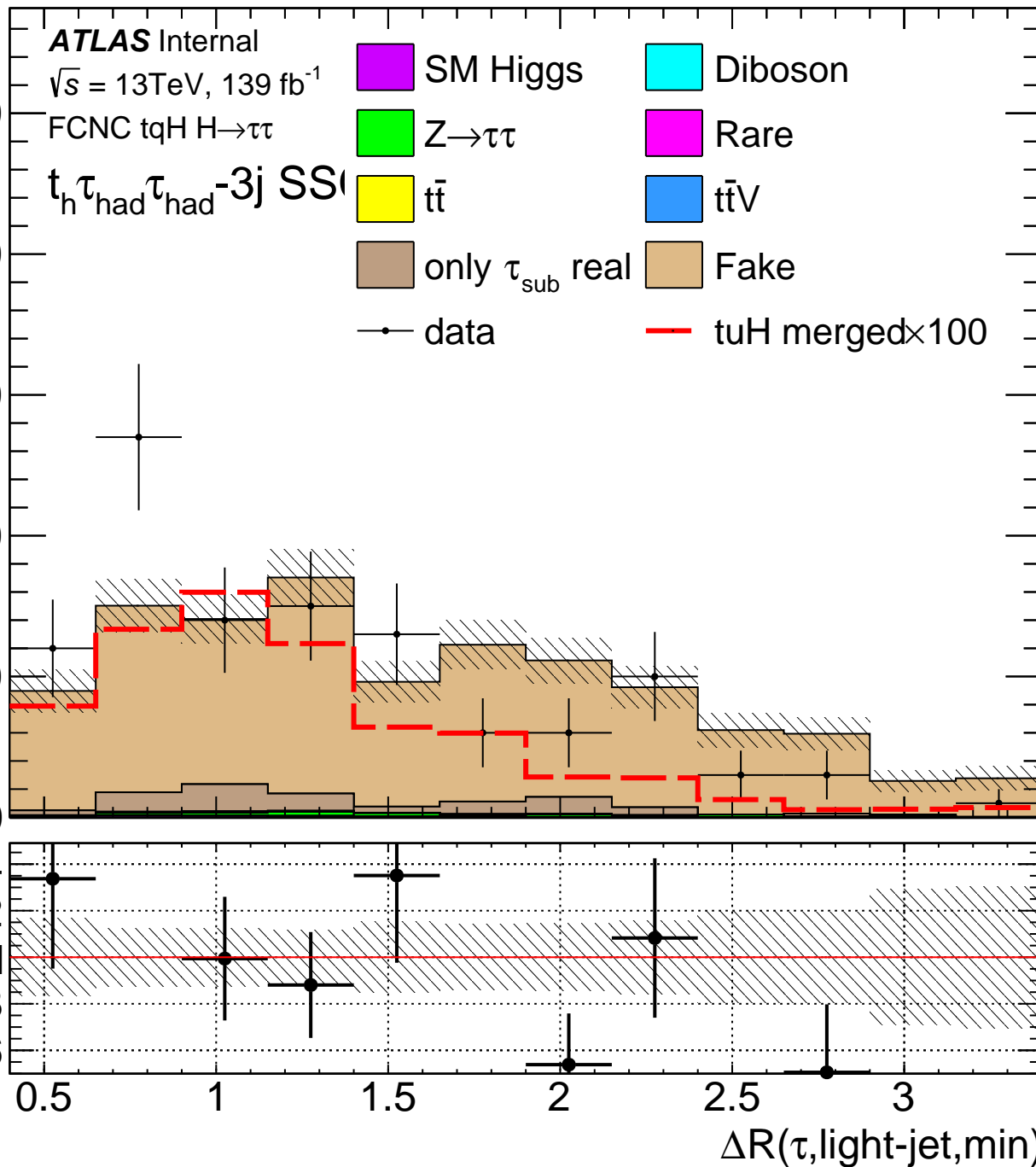
Rare

 $t\bar{t}V$

Fake

tuH merged $\times 100$

Data/Bkg

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

Events / 0.25

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

SM Higgs

 $Z \rightarrow \tau\tau$ $t\bar{t}$ only τ_{sub} real

data

 $cg \rightarrow tH \times 5000$ $ug \rightarrow tH \times 600$

Diboson

Rare

 $t\bar{t}V$

Fake

 $t\bar{t} \rightarrow bWcH \times 100$ $t\bar{t} \rightarrow bWuH \times 100$

Data/Bkg

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