

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  $\tau_{\text{sub}}$  real

data

Diboson

Rare

 $t\bar{t}V$ 

Fake

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

50

40

30

20

10

0

Data/Bkg

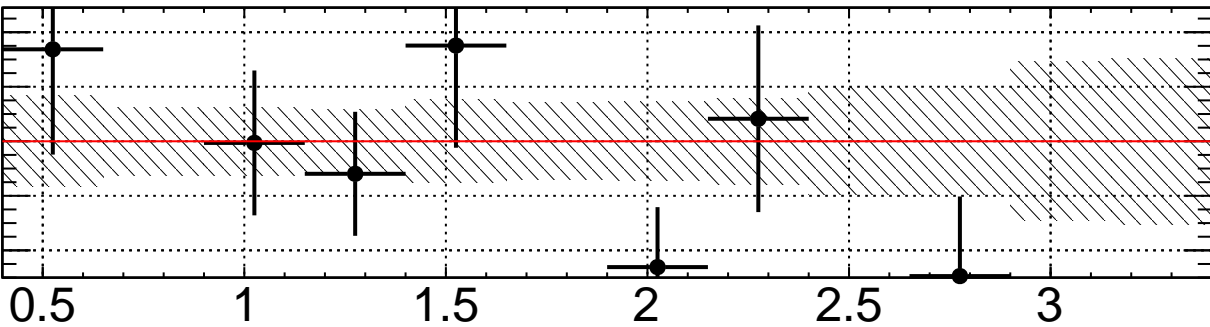
1.4

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  $H \rightarrow \tau\tau$  $t_h \tau_{\text{had}} \tau_{\text{had}}^{-3j} SS(\ell)$ 

SM Higgs

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

data

Diboson

Rare

 $t\bar{t}V$ 

Fake

 $cg \rightarrow tH \times 5000$ 

50

40

30

20

10

0

Data/Bkg

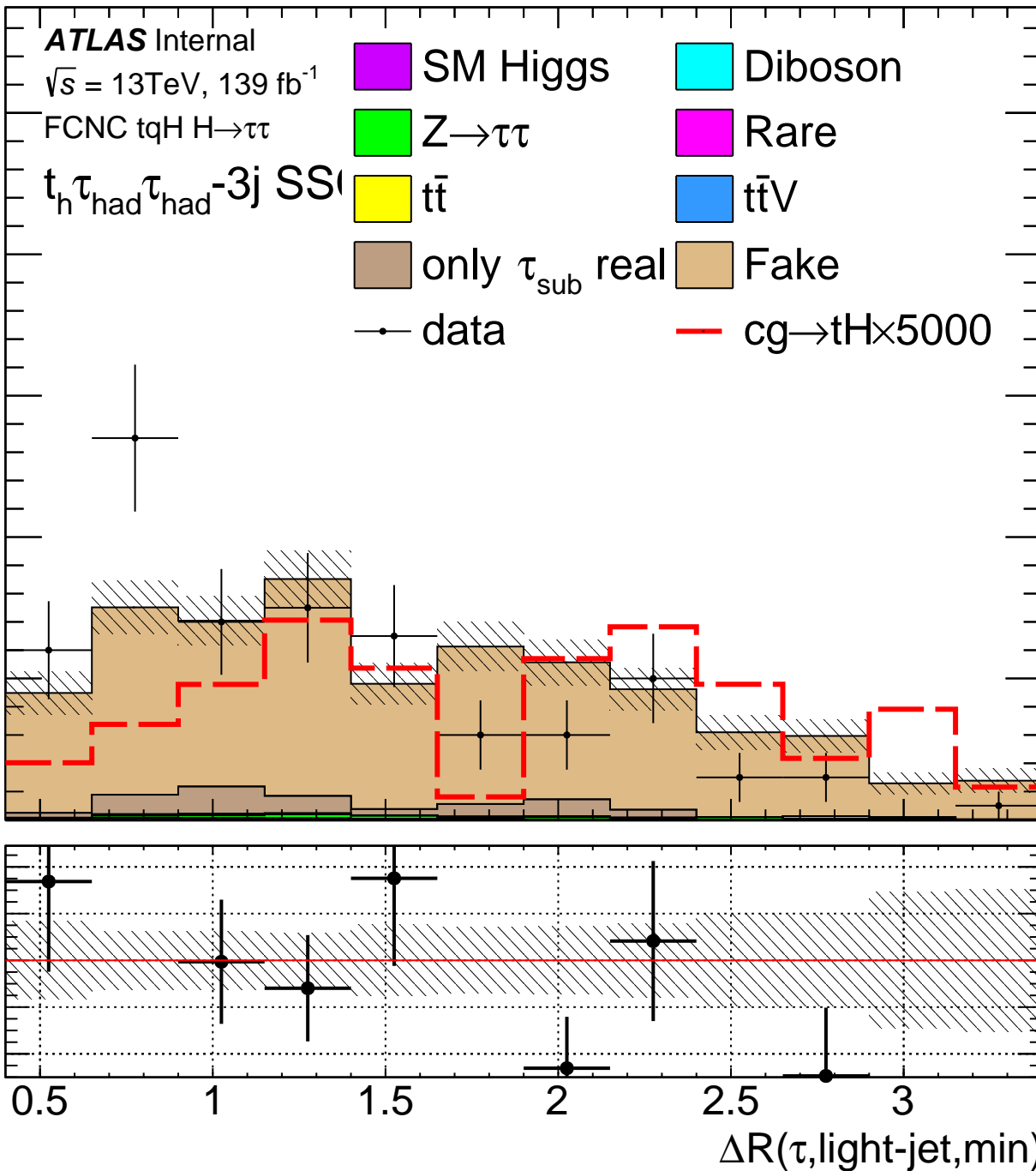
1.4

1.2

1.0

0.8

0.6

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

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**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  $\tau_{\text{sub}}$  real

data

Diboson

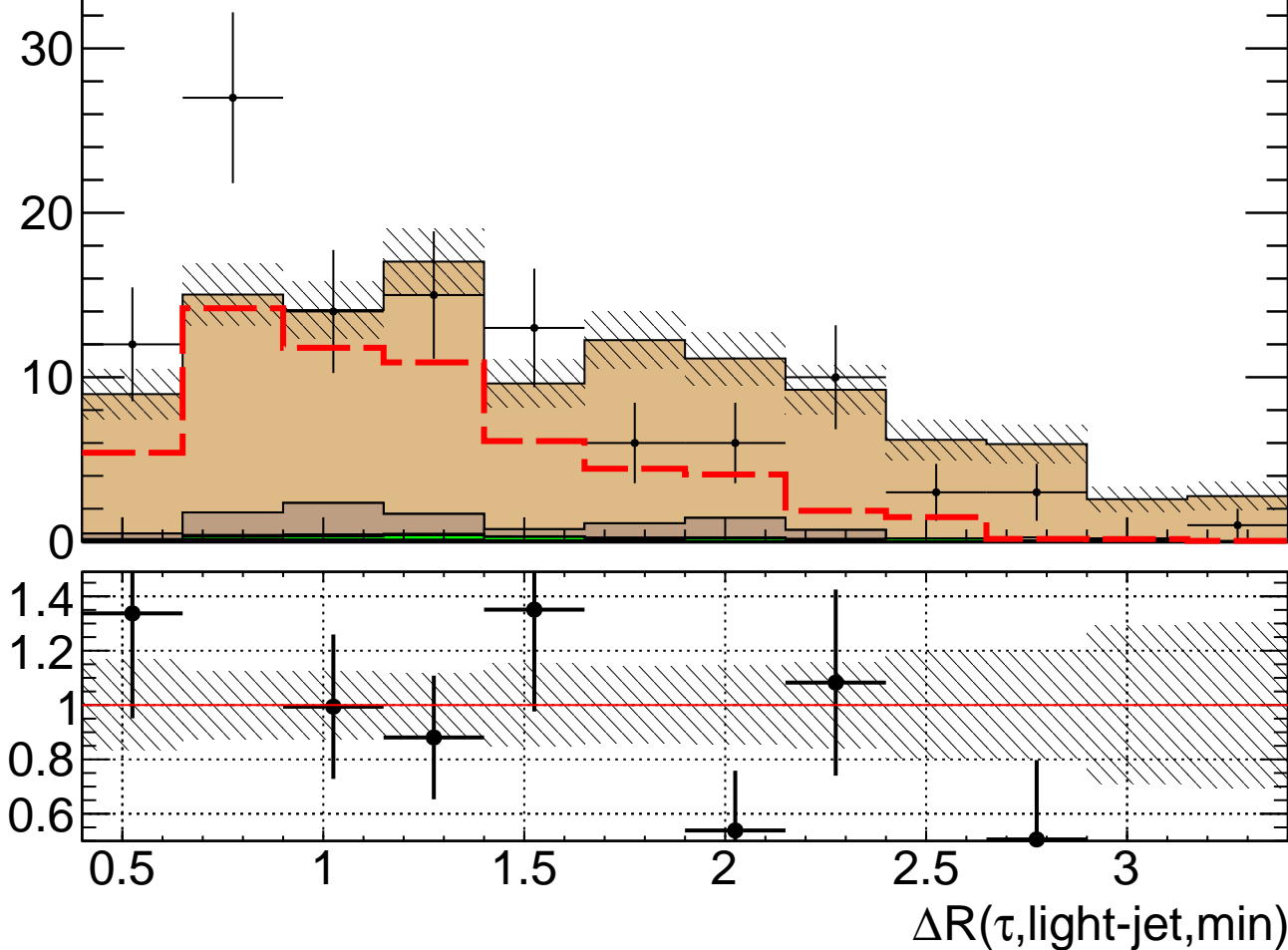
Rare

 $t\bar{t}V$ 

Fake

tcH merged  $\times 100$ 

Data/Bkg



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  $\tau_{\text{sub}}$  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  $\tau_{\text{sub}}$  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

0.5

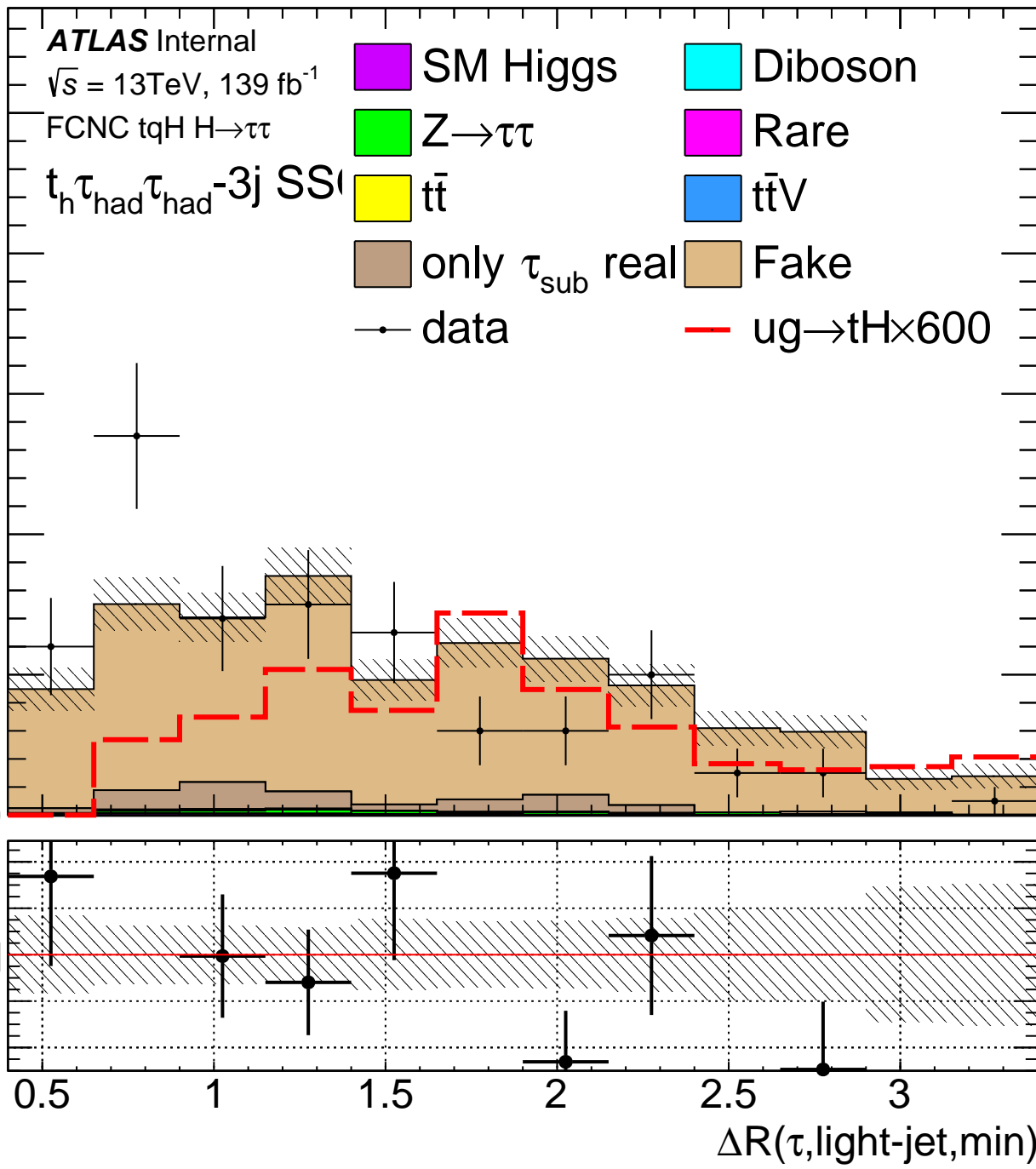
1

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  $\tau_{\text{sub}}$  real

data

Diboson

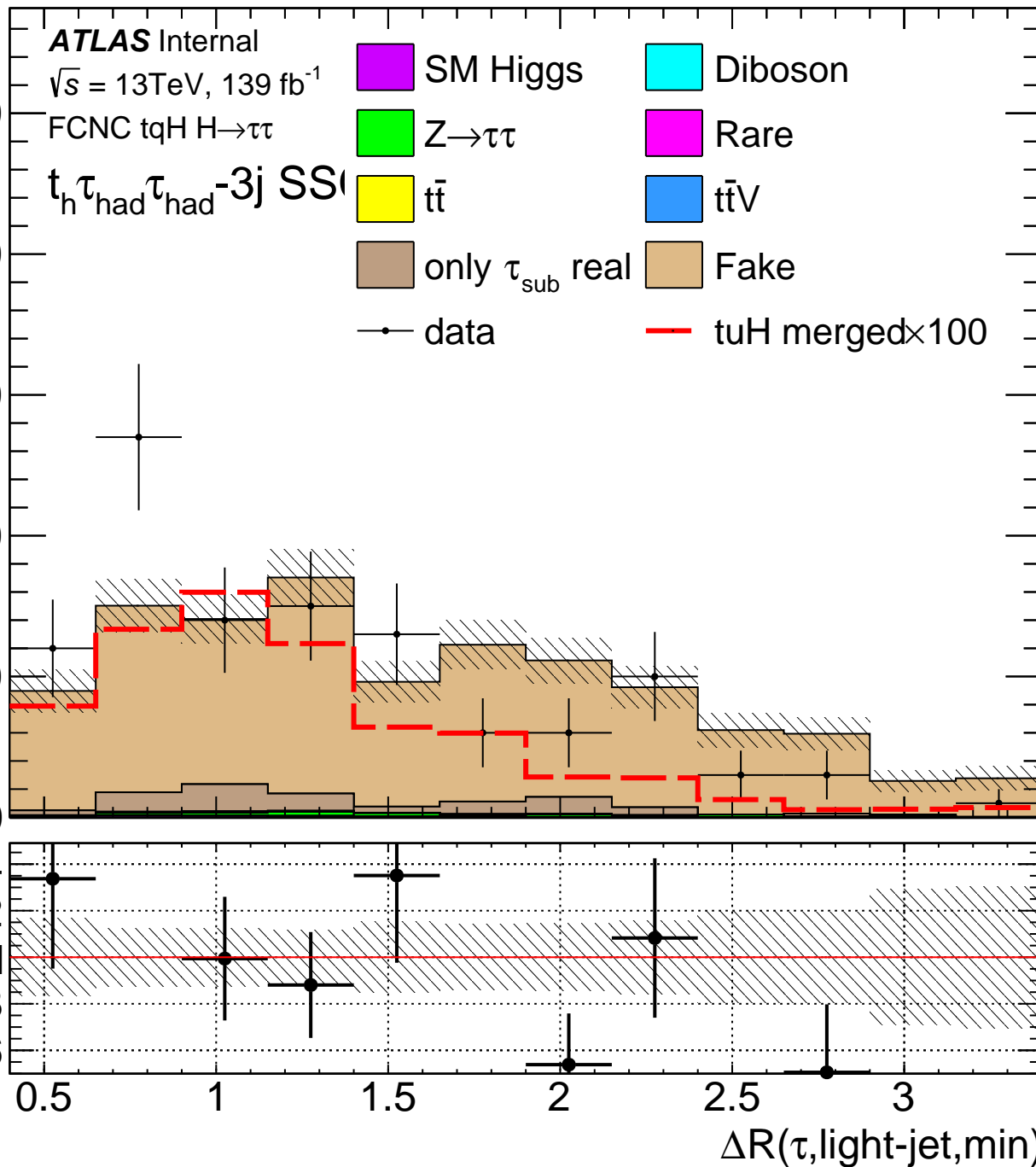
Rare

 $t\bar{t}V$ 

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  $\tau_{\text{sub}}$  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

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