

Events / 0.30

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

$t_h \tau_{\text{had}} \tau_{\text{had}} - 2j \text{ SS}($

SM Higgs

$Z \rightarrow \tau\tau$

$t\bar{t}$

only τ_{sub} real

data

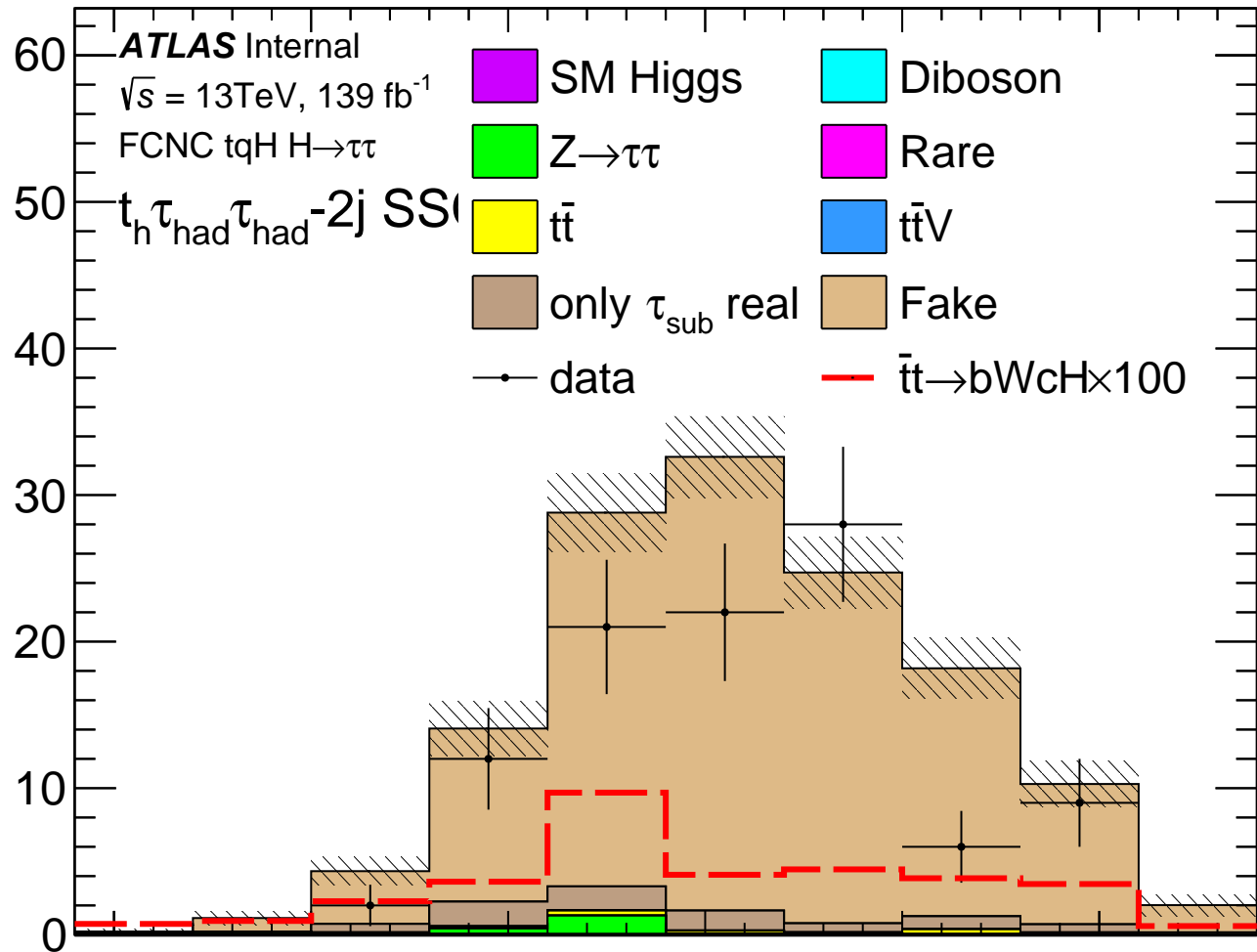
Diboson

Rare

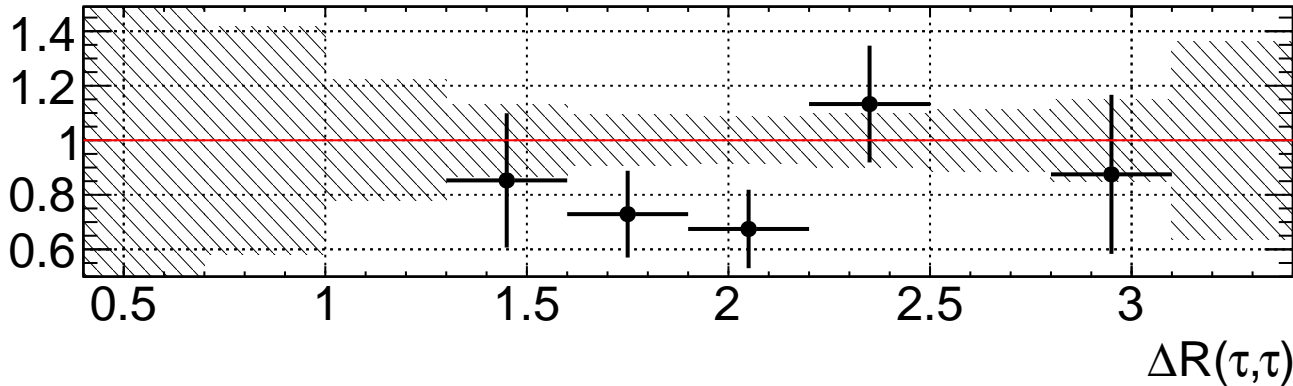
$t\bar{t}V$

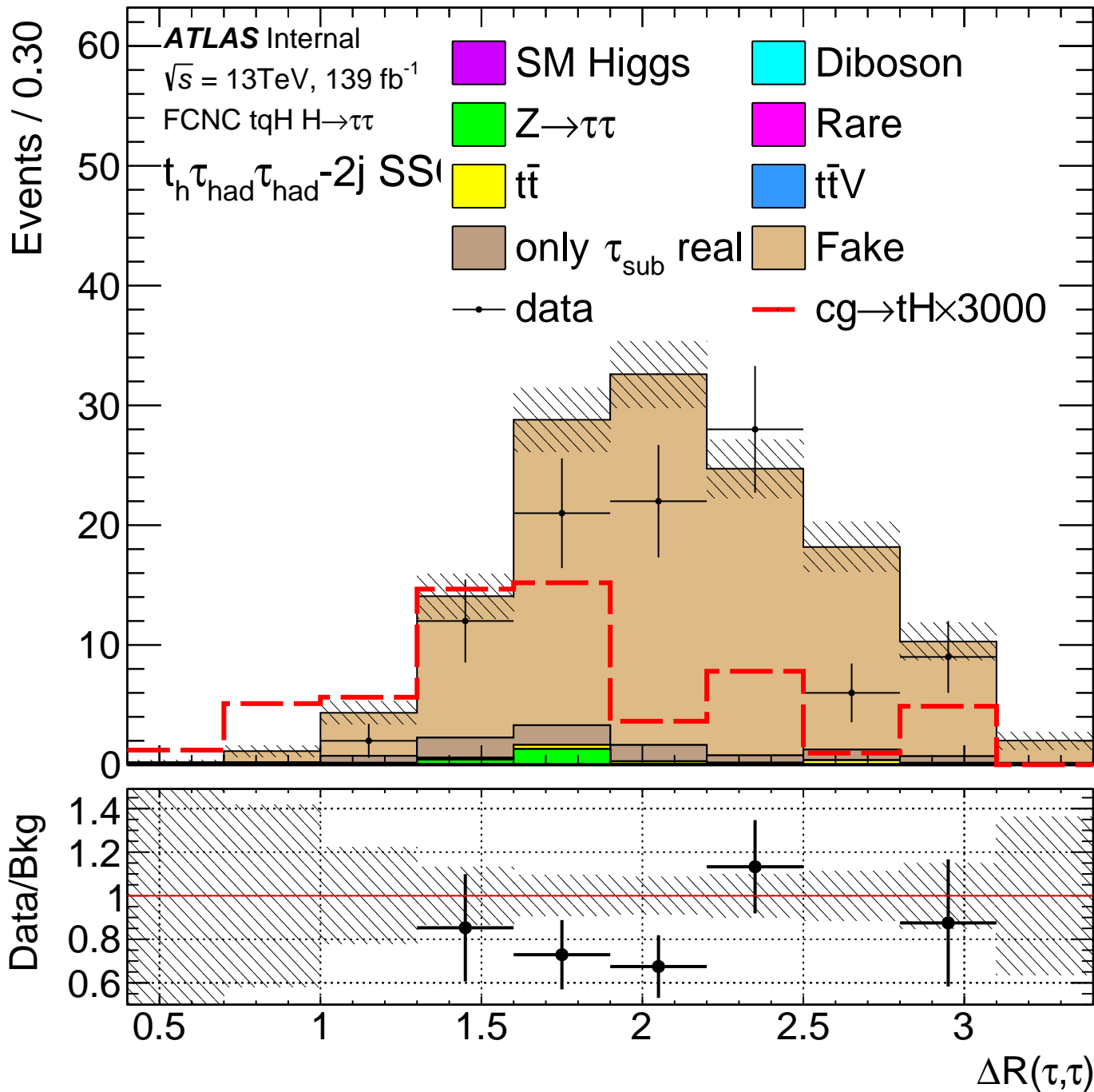
Fake

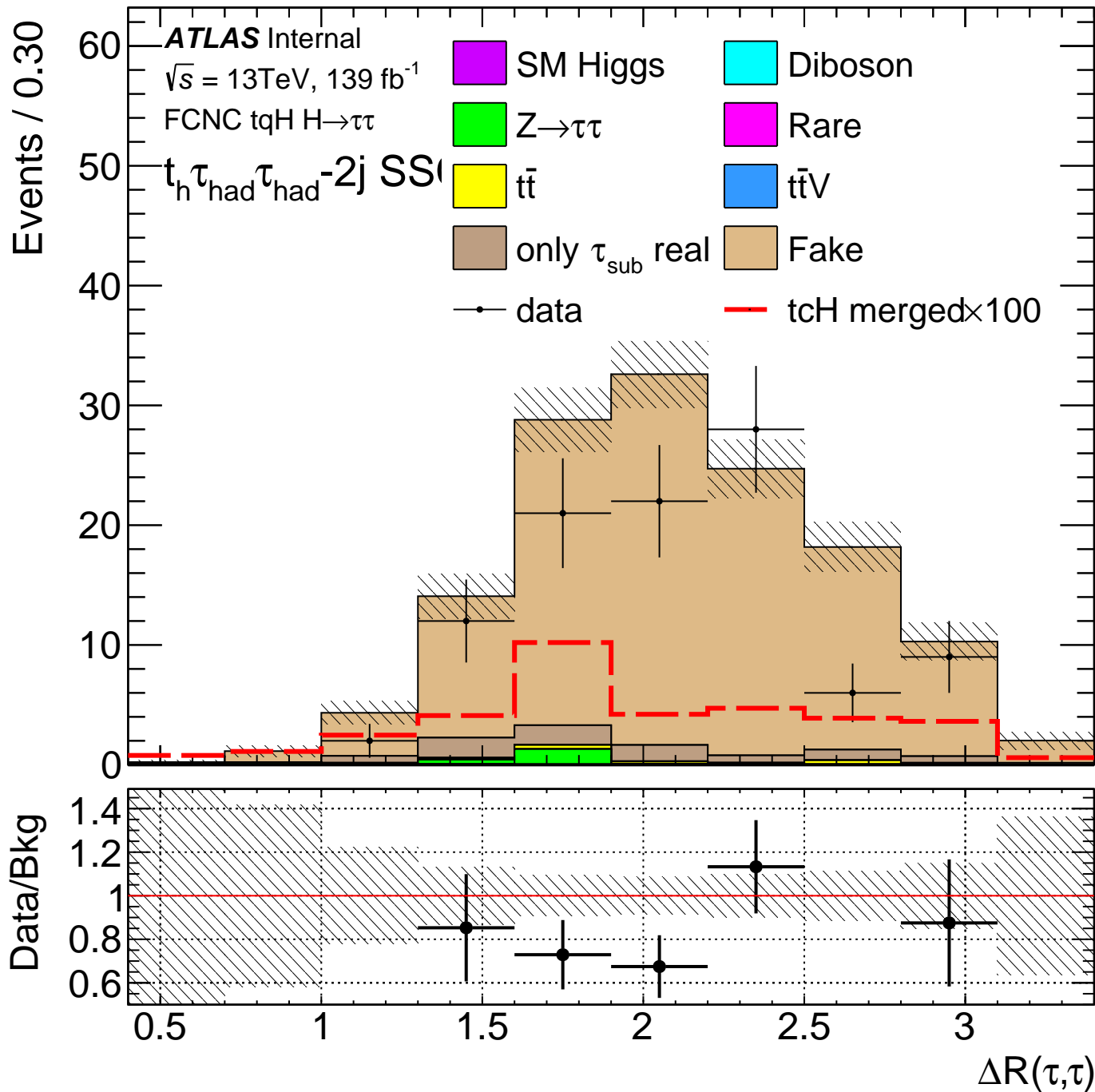
$t\bar{t} \rightarrow bWcH \times 100$



Data/Bkg







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SM Higgs

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

data

Diboson

Rare

 $t\bar{t}V$

Fake

 $t\bar{t} \rightarrow bWuH \times 300$

60

50

40

30

20

10

0

Data/Bkg

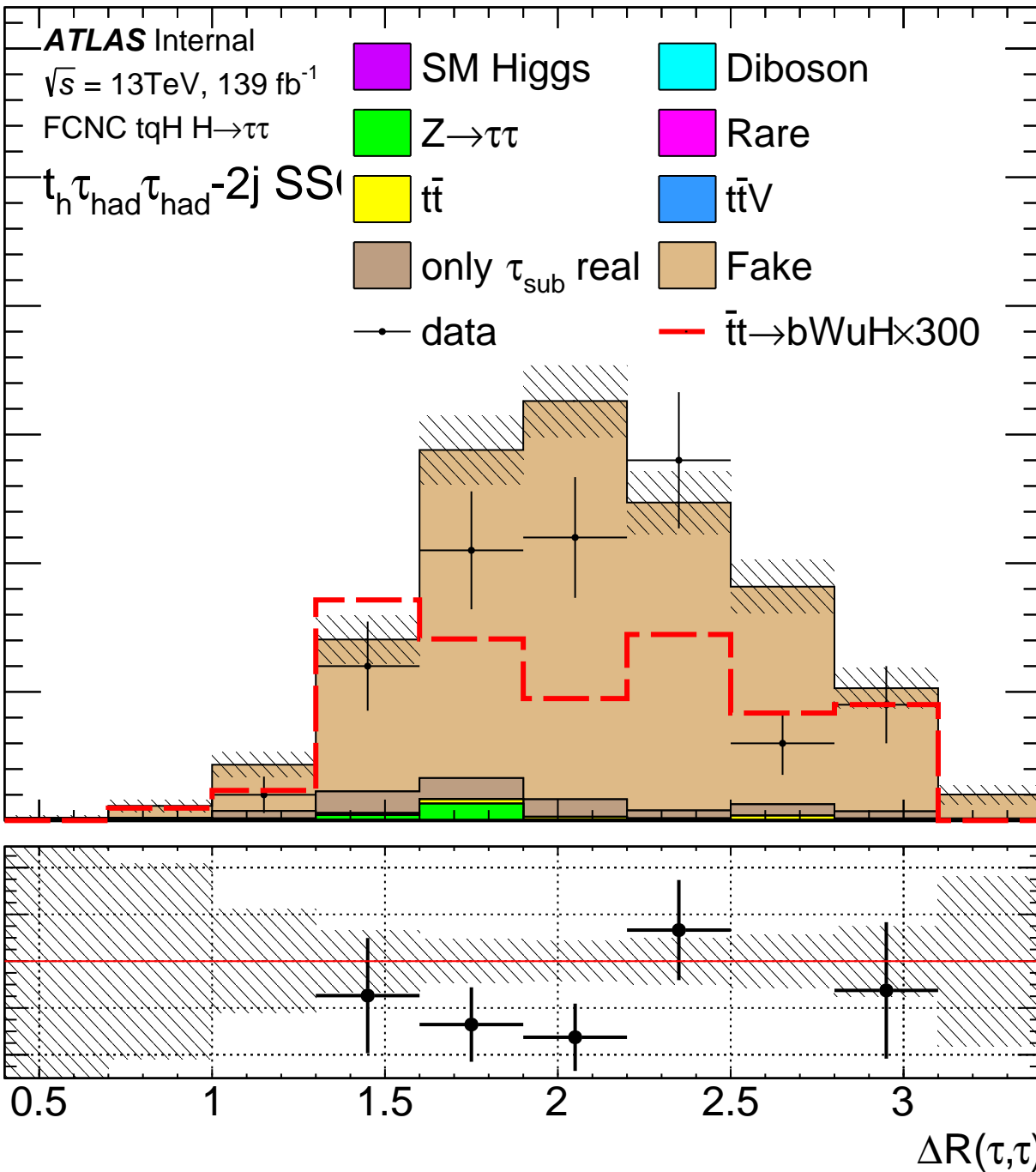
1.4

1.2

1.0

0.8

0.6

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

Events / 0.30

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$t_h \tau_{\text{had}} \tau_{\text{had}} - 2j \text{ SS}($

SM Higgs

$Z \rightarrow \tau\tau$

$t\bar{t}$

only τ_{sub} real

data

Diboson

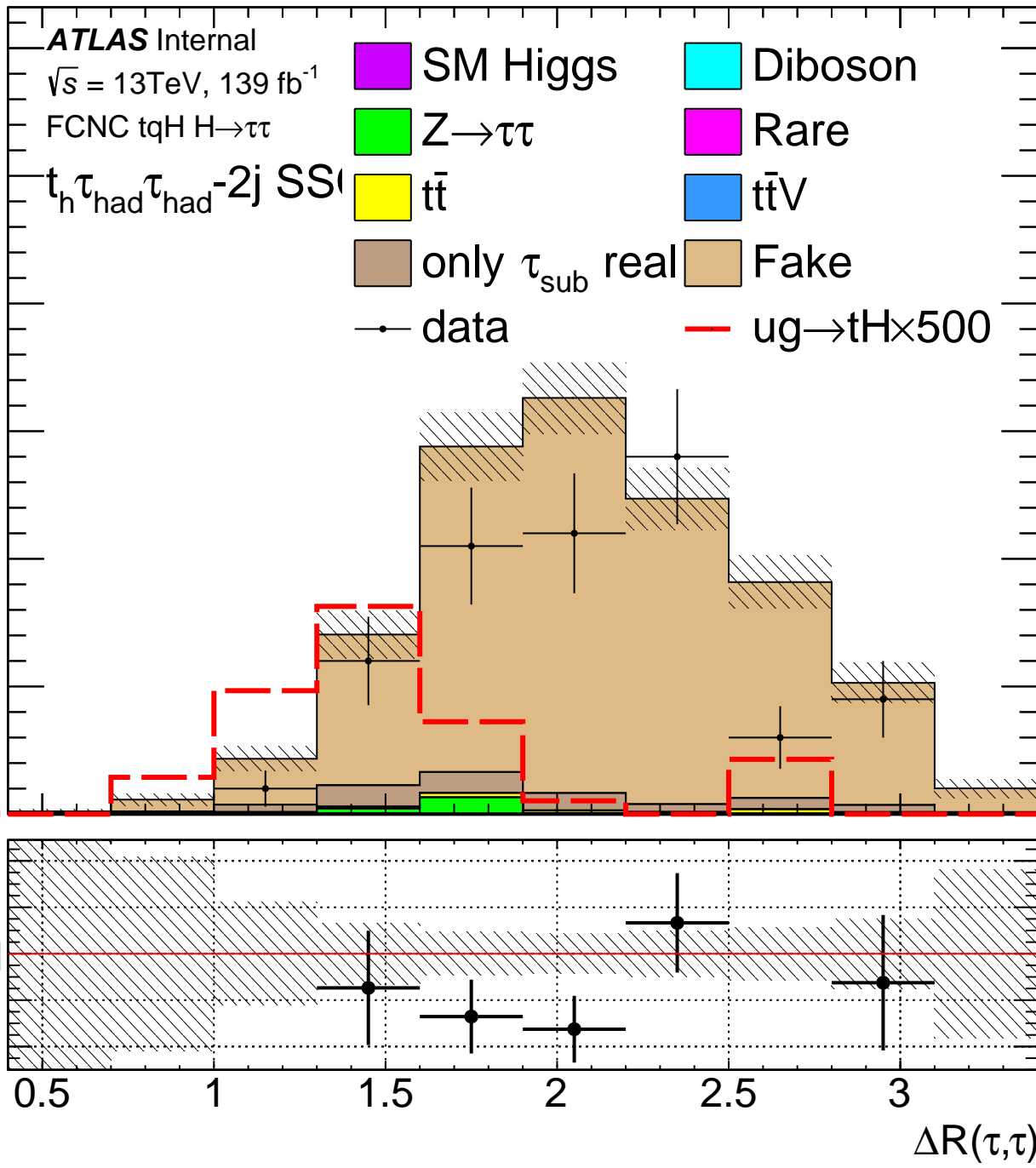
Rare

$t\bar{t}V$

Fake

$ug \rightarrow tH \times 500$

Data/Bkg

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

Events / 0.30

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

SM Higgs

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

data

Diboson

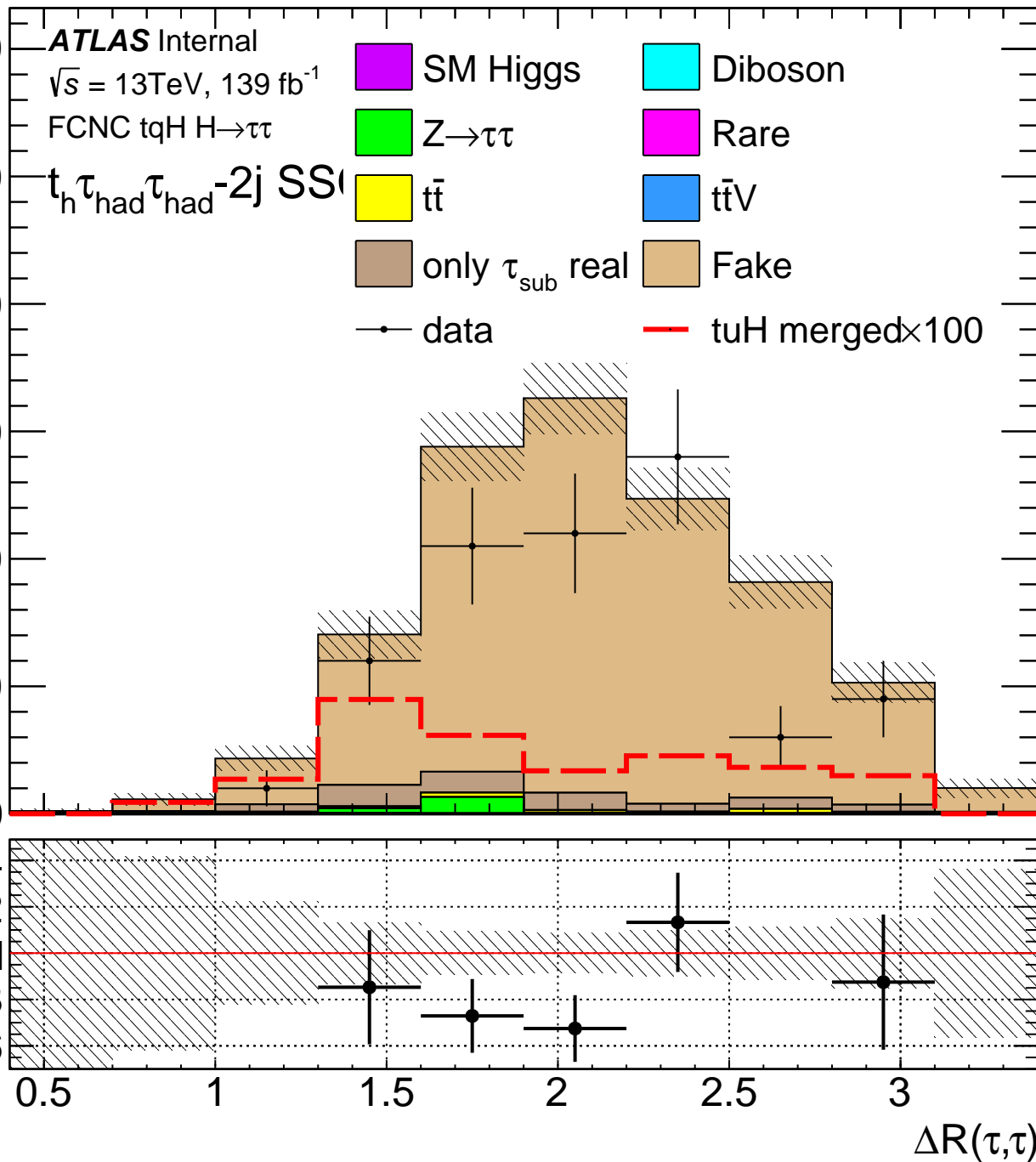
Rare

 $t\bar{t}V$

Fake

tuH merged $\times 100$

Data/Bkg

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

Events / 0.30

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

SM Higgs

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

data

 $cg \rightarrow tH \times 3000$ $ug \rightarrow tH \times 500$

Diboson

Rare

 $t\bar{t}V$

Fake

 $t\bar{t} \rightarrow bWcH \times 100$ $t\bar{t} \rightarrow bWuH \times 300$

Data/Bkg

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