

Events / 0.30

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

SM Higgs

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

data

Diboson

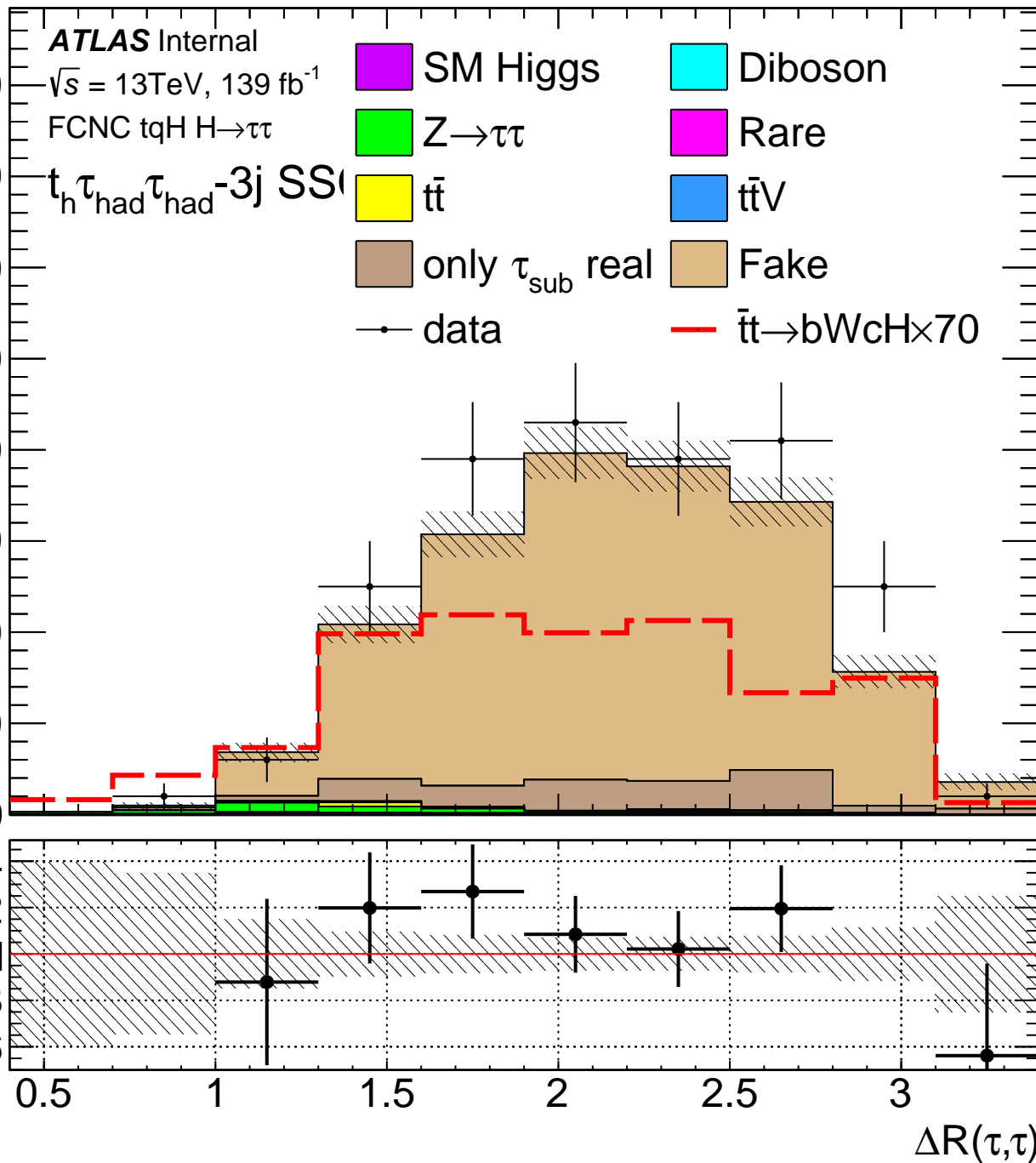
Rare

 $t\bar{t}V$

Fake

 $t\bar{t} \rightarrow bWcH \times 70$

Data/Bkg

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

Events / 0.30

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

SM Higgs

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

data

Diboson

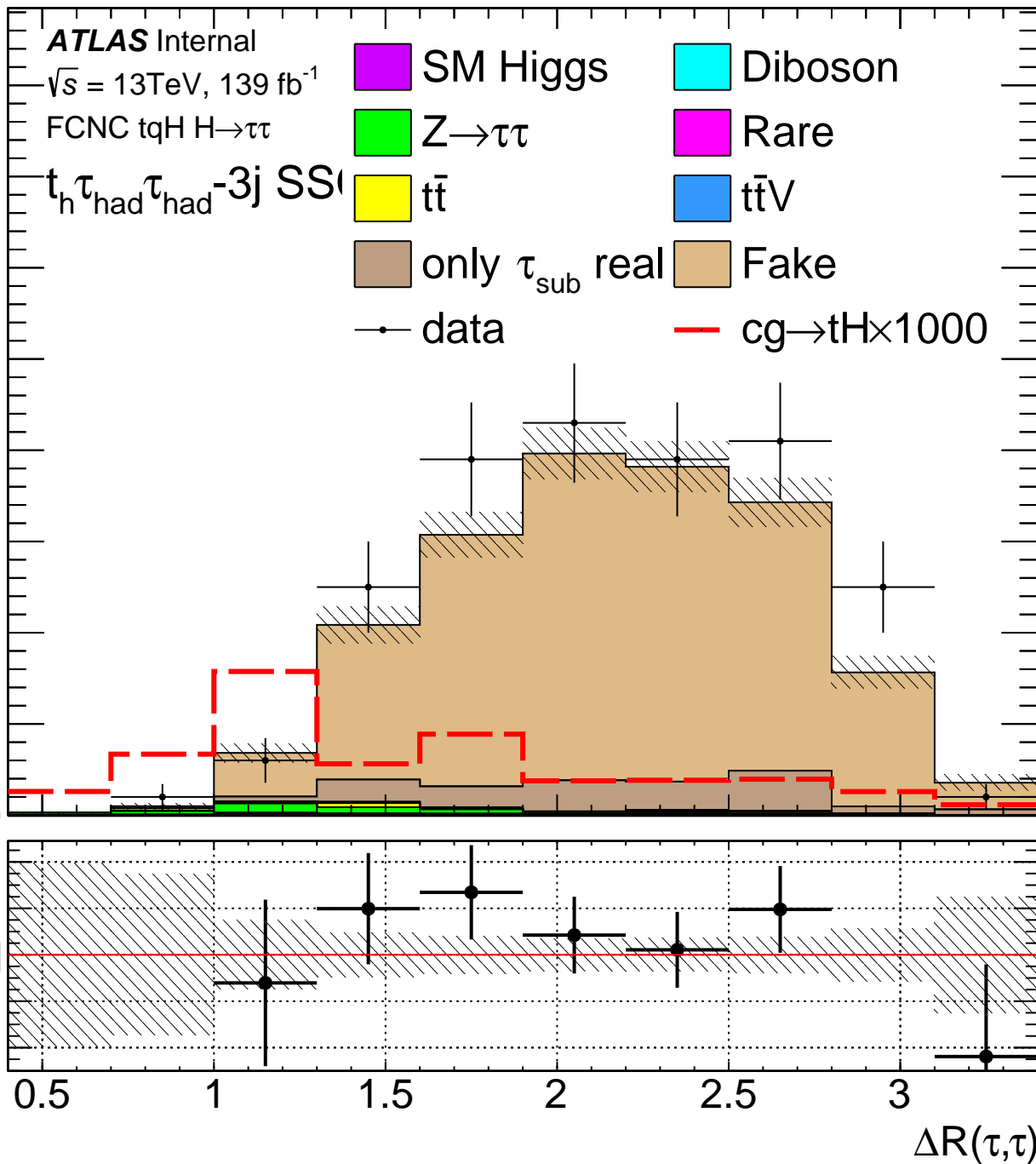
Rare

 $t\bar{t}V$

Fake

 $cg \rightarrow tH \times 1000$

Data/Bkg

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

Events / 0.30

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

SM Higgs

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

data

Diboson

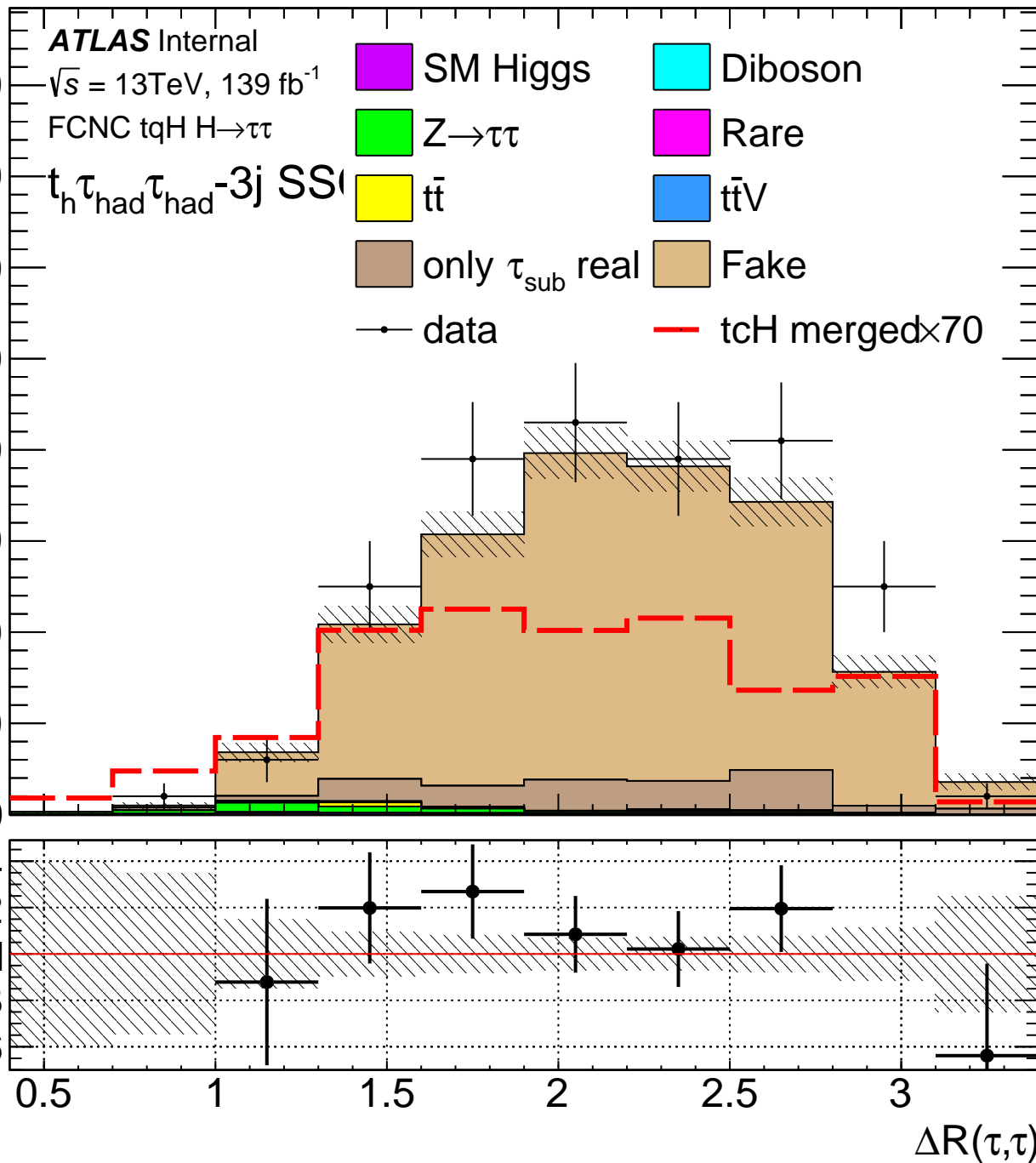
Rare

 $t\bar{t}V$

Fake

tcH merged $\times 70$

Data/Bkg

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

Events / 0.30

ATLAS Internal

$\sqrt{s} = 13\text{TeV}, 139\text{ fb}^{-1}$

FCNC tqH $H \rightarrow \tau\tau$

$t_h \tau_{\text{had}} \tau_{\text{had}} - 3j \text{ SS}($

SM Higgs

$Z \rightarrow \tau\tau$

$t\bar{t}$

only τ_{sub} real

data

Diboson

Rare

$t\bar{t}V$

Fake

$t\bar{t} \rightarrow bWuH \times 60$

80

70

60

50

40

30

20

10

0

Data/Bkg

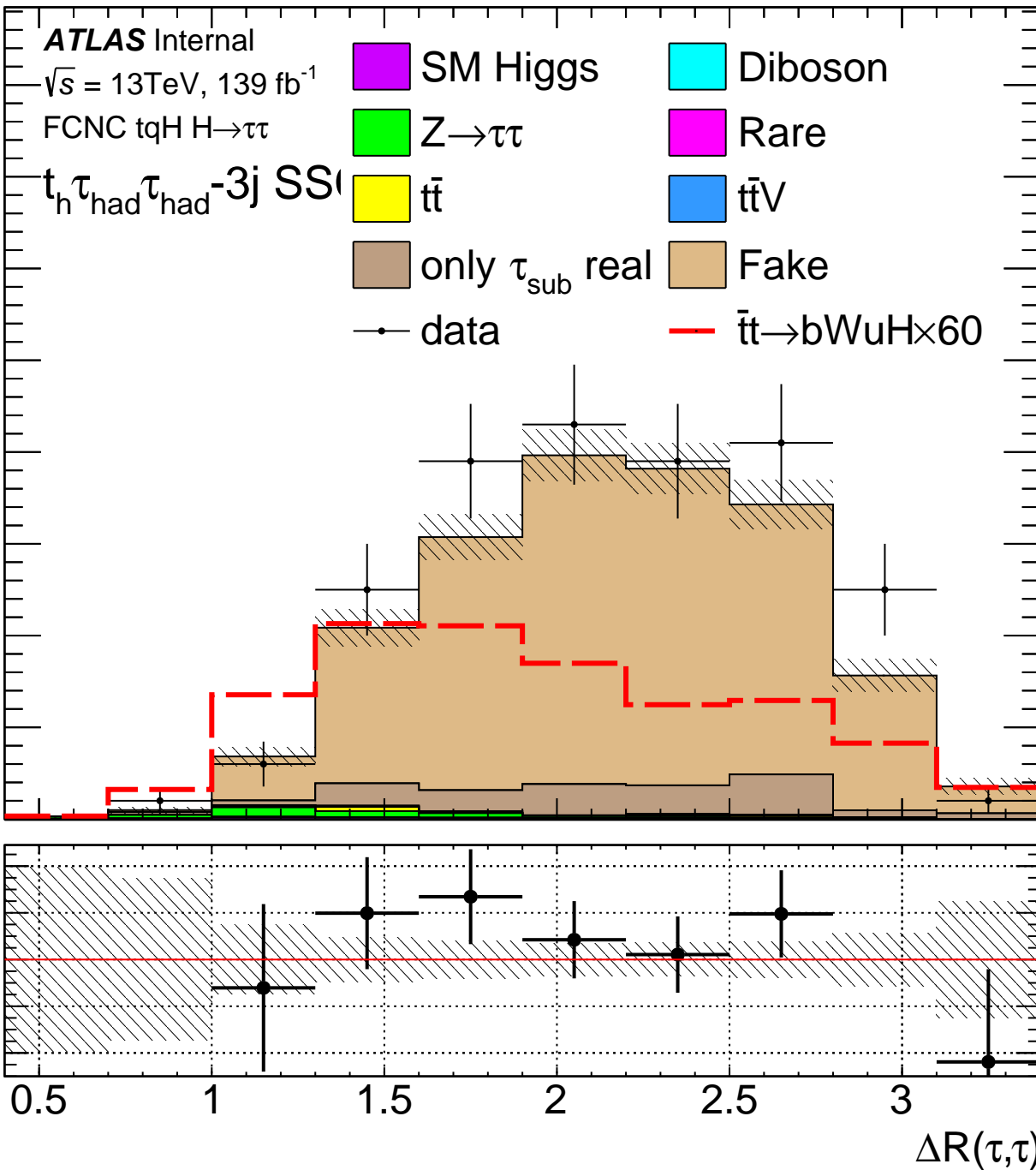
1.4

1.2

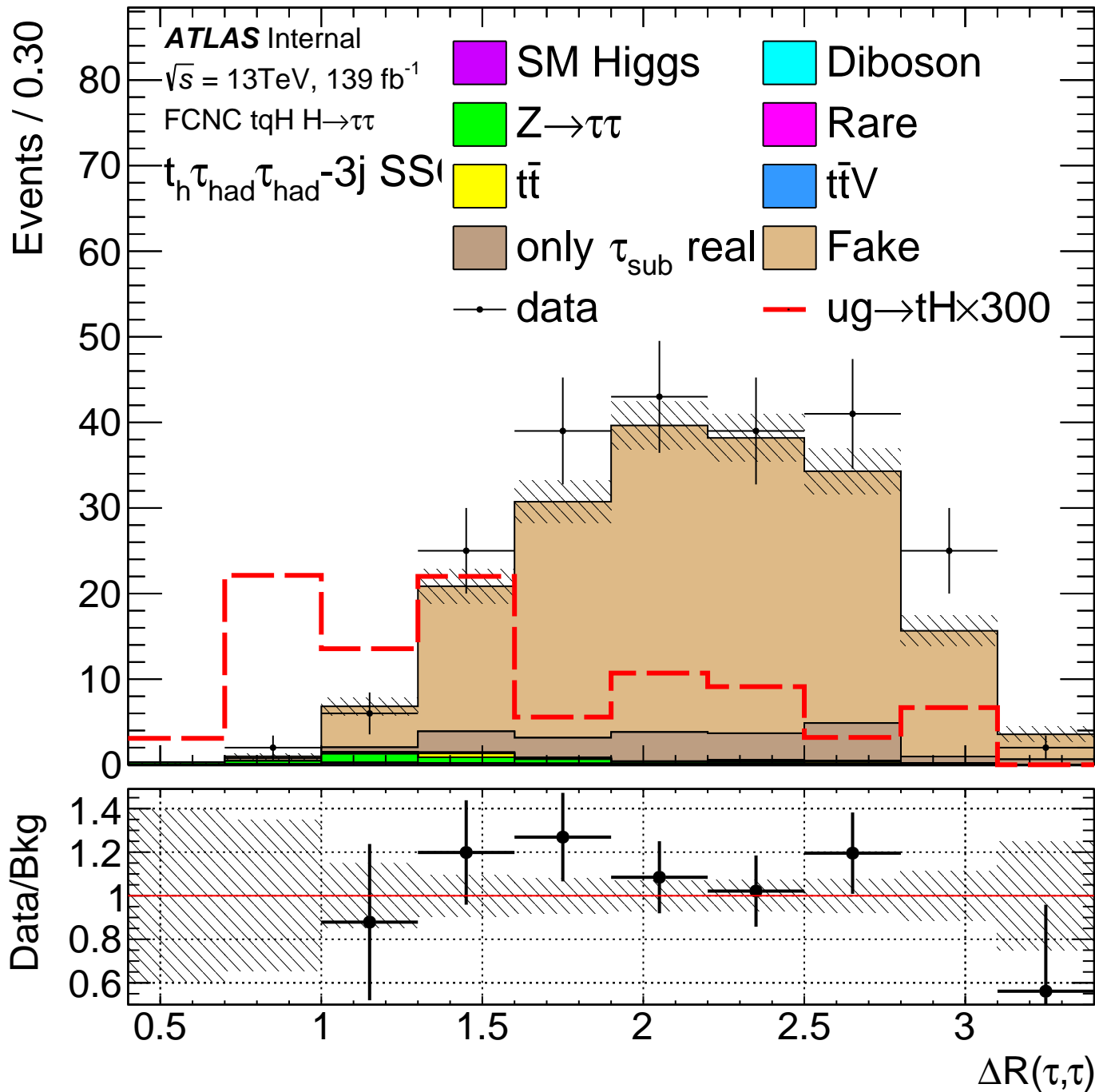
1.0

0.8

0.6



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



Events / 0.30

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

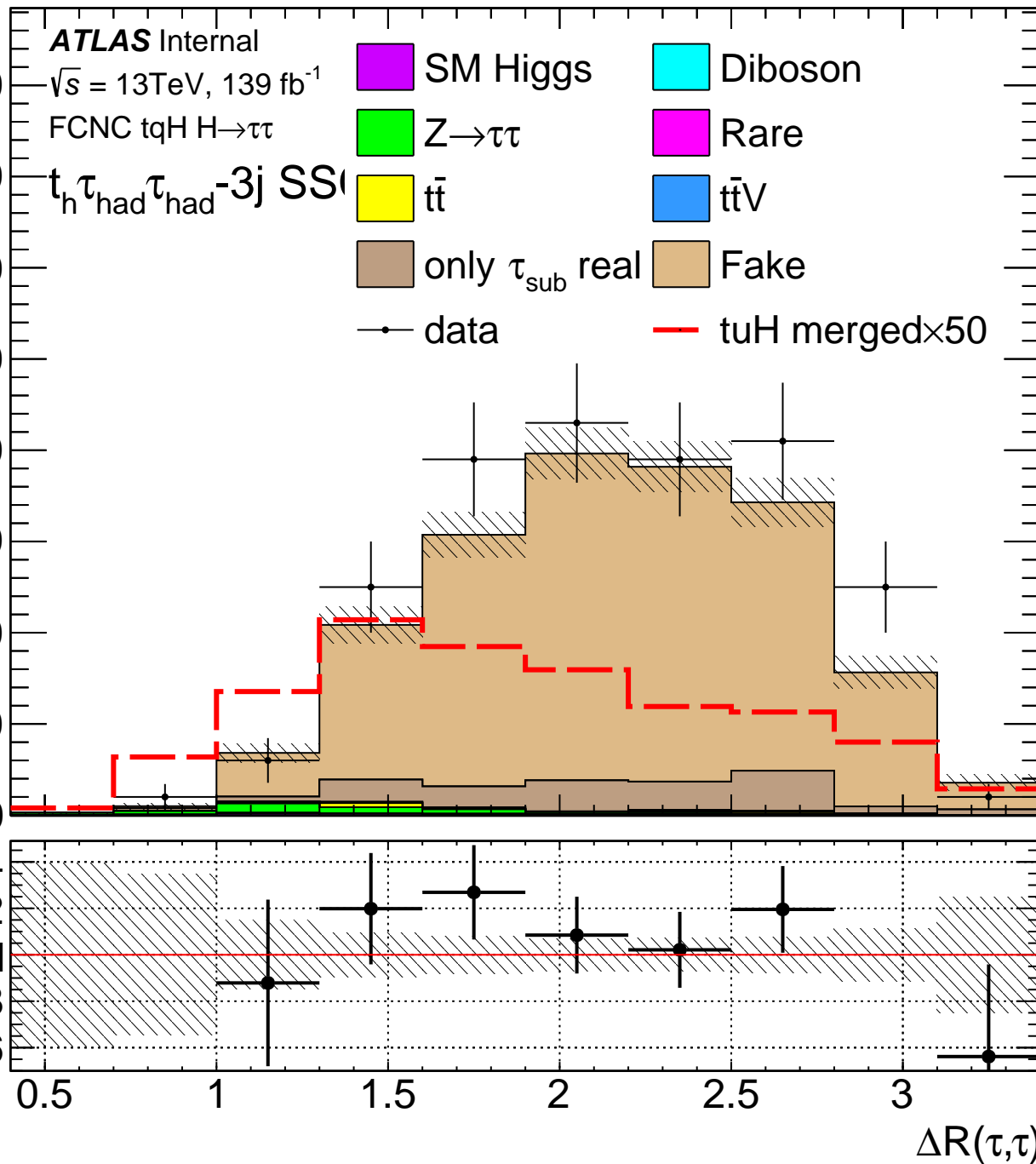
$t\bar{t}V$

Fake

tuH merged $\times 50$

Data/Bkg

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



Events / 0.30

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

SM Higgs

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

data

 $cg \rightarrow tH \times 1000$ $ug \rightarrow tH \times 300$

Diboson

Rare

 $t\bar{t}V$

Fake

 $t\bar{t} \rightarrow bWcH \times 70$ $t\bar{t} \rightarrow bWuH \times 60$

Data/Bkg

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