

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

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

80

70

60

50

40

30

20

10

0

Data/Bkg

1.4

1.2

1.0

0.8

0.6

0

0.5

1

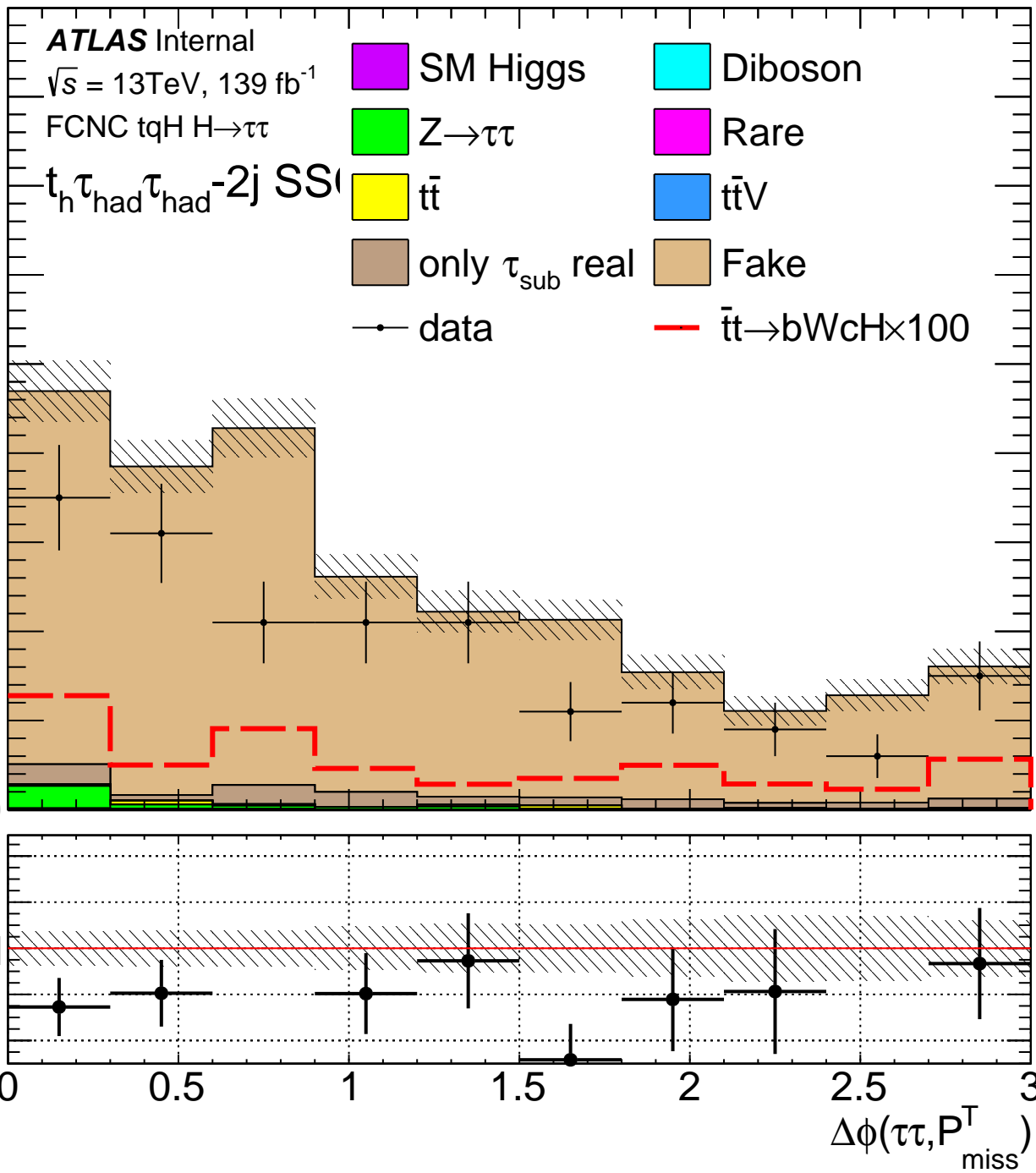
1.5

2

2.5

3

$\Delta\phi(\tau\tau, P_{\text{miss}}^T)$



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

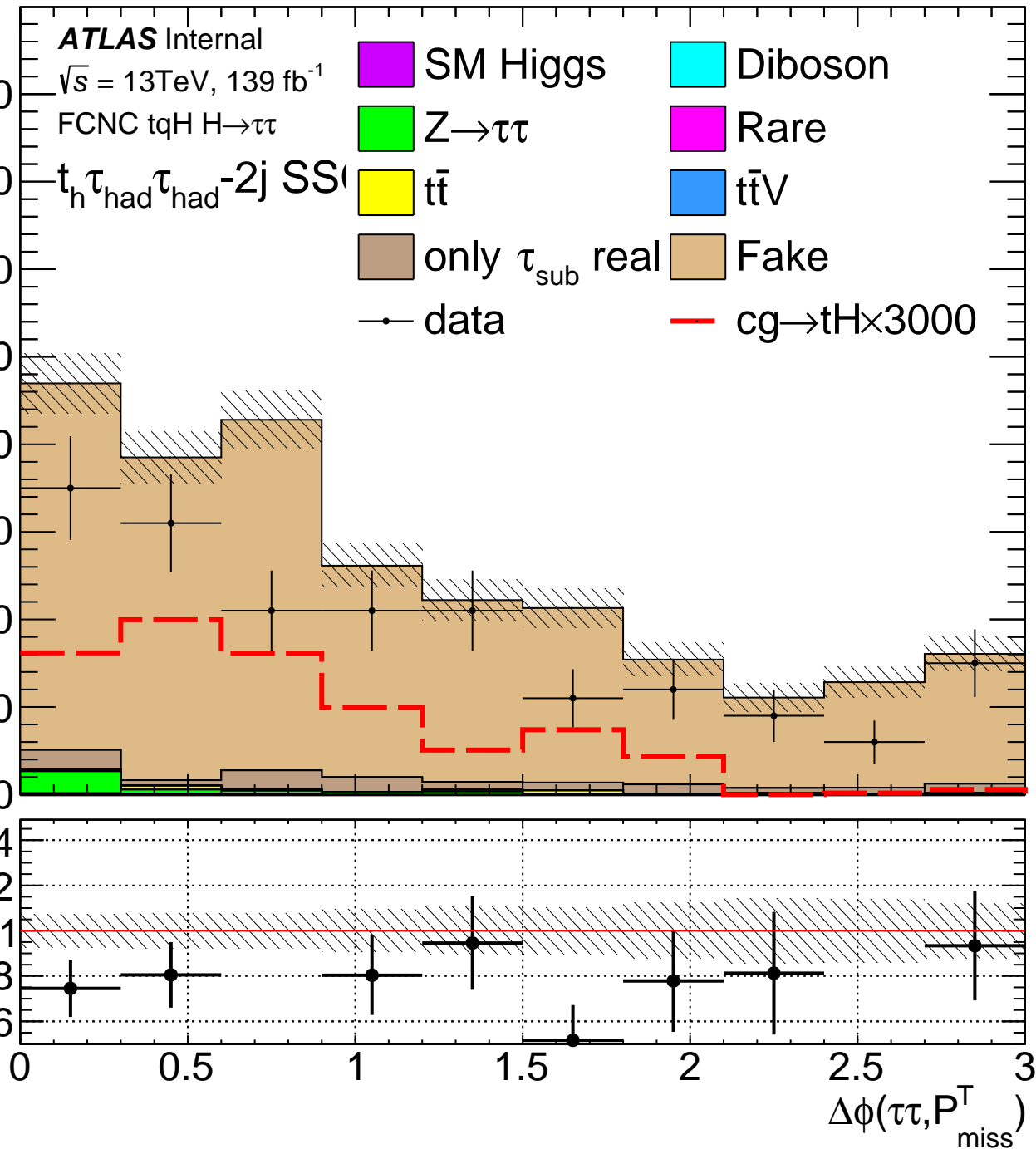
Rare

 $t\bar{t}V$

Fake

 $cg \rightarrow tH \times 3000$

Data/Bkg



Events / 0.30

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SM Higgs

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

data

Diboson

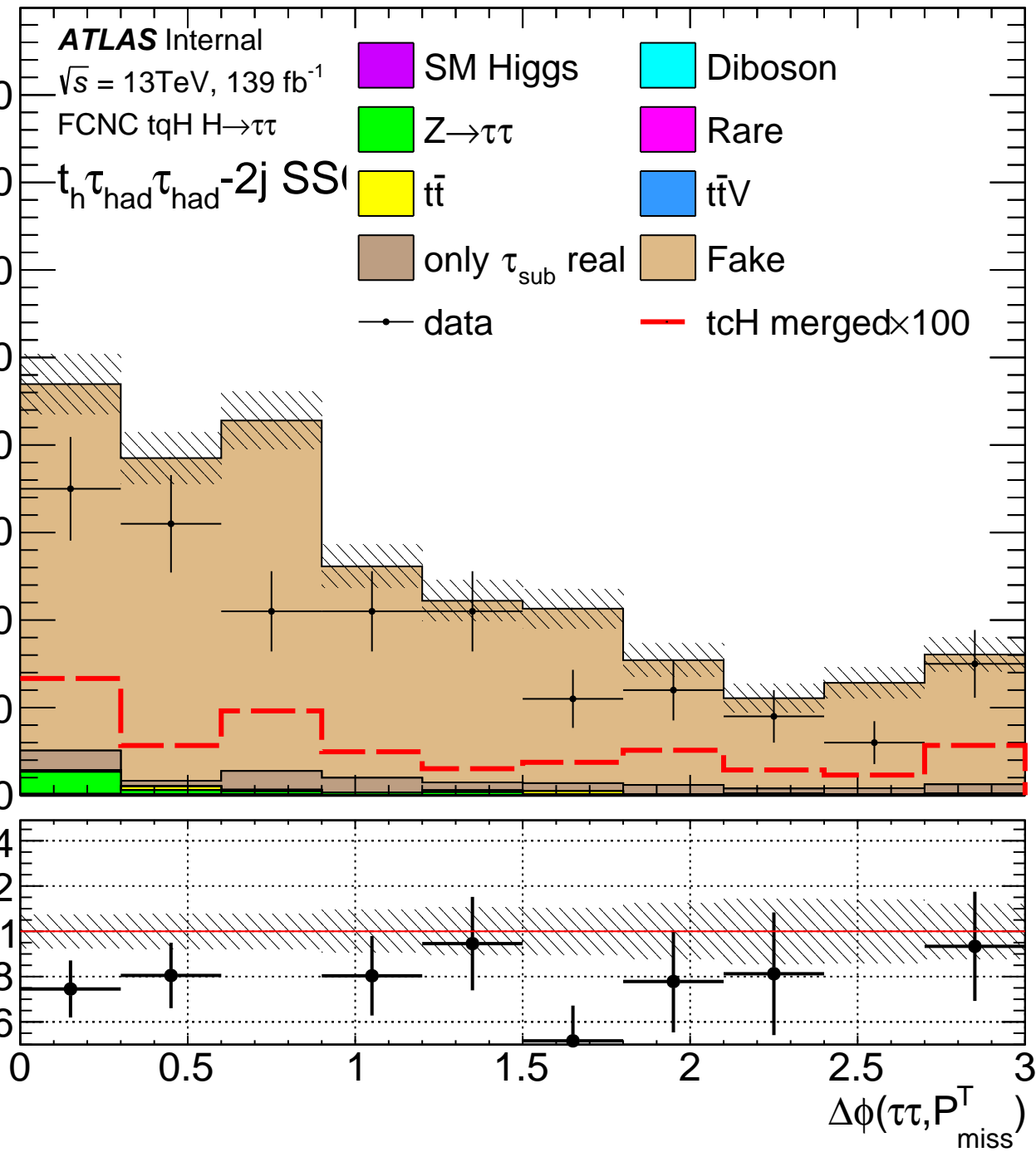
Rare

 $t\bar{t}V$

Fake

tcH merged $\times 100$

Data/Bkg



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

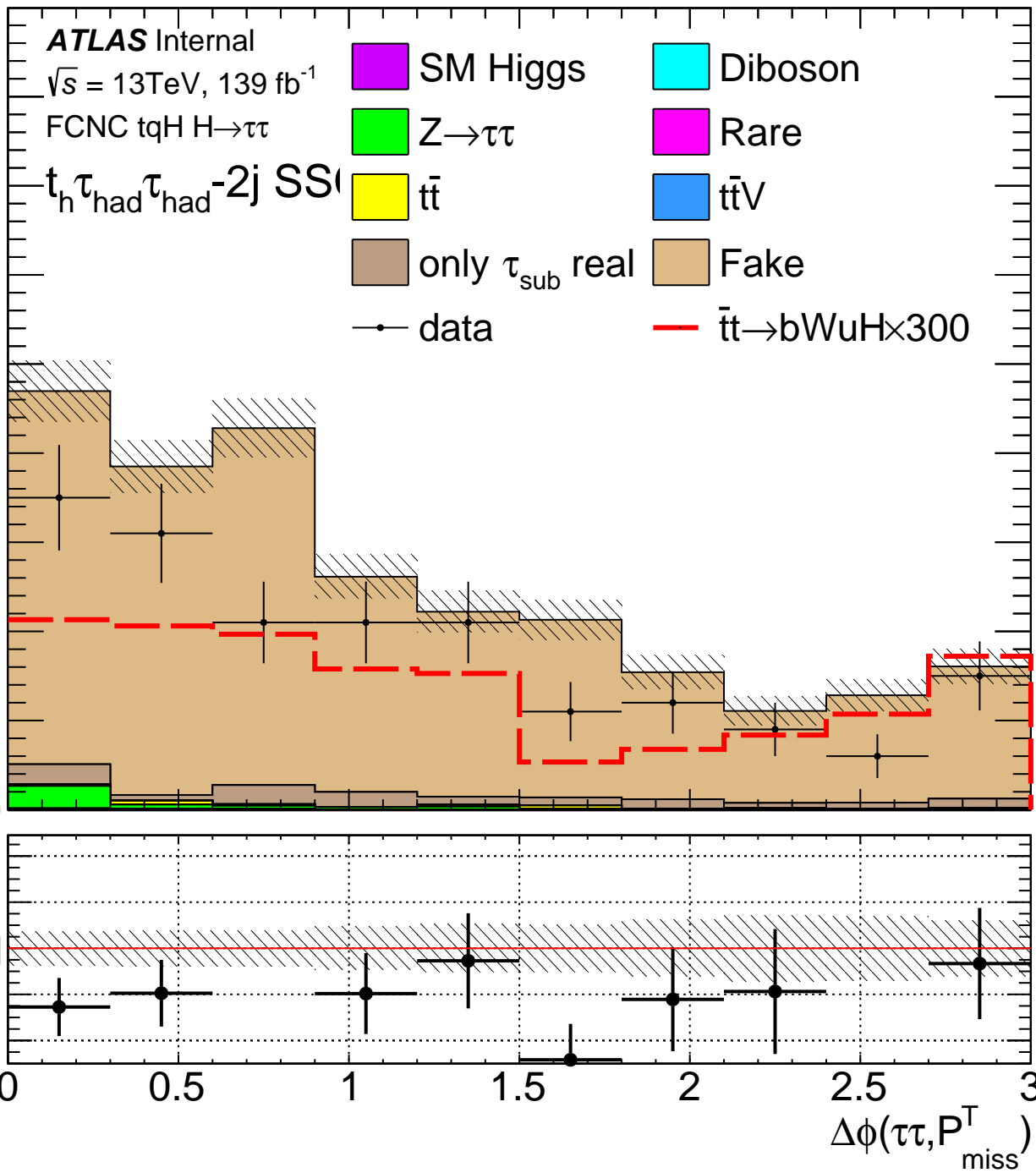
Rare

 $t\bar{t}V$

Fake

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

Data/Bkg

 $\Delta\phi(\tau\tau, P_{\text{miss}}^T)$ 

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

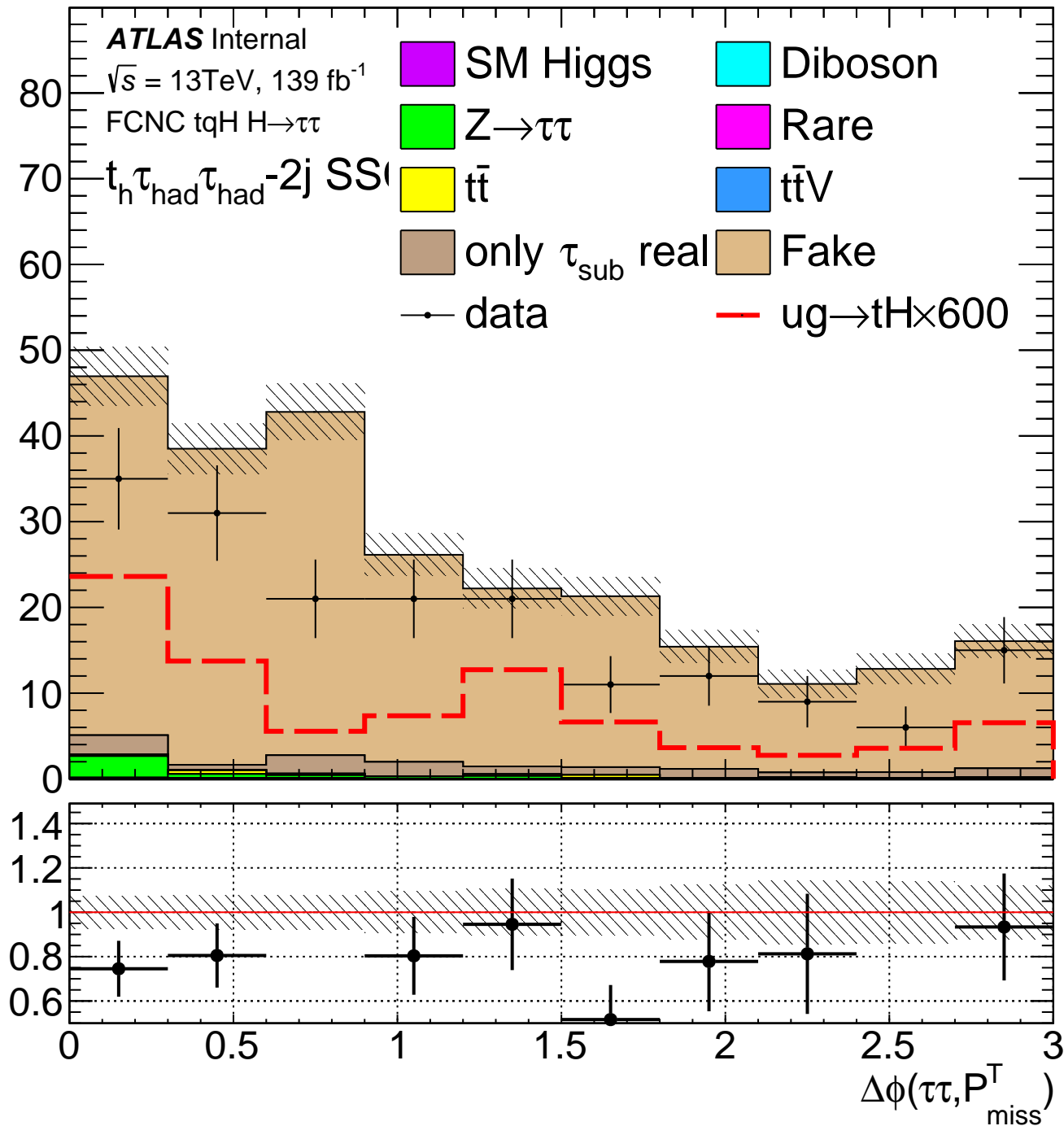
Rare

 $t\bar{t}V$

Fake

 $ug \rightarrow tH \times 600$

Data/Bkg



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 $\times 200$

Data/Bkg

