

Events / 6.00 GeV

ATLAS Internal

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

FCNC tqH $H \rightarrow \tau\tau$

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

SM Higgs

$Z \rightarrow \tau\tau$

$t\bar{t}$

only τ_{sub} real

data

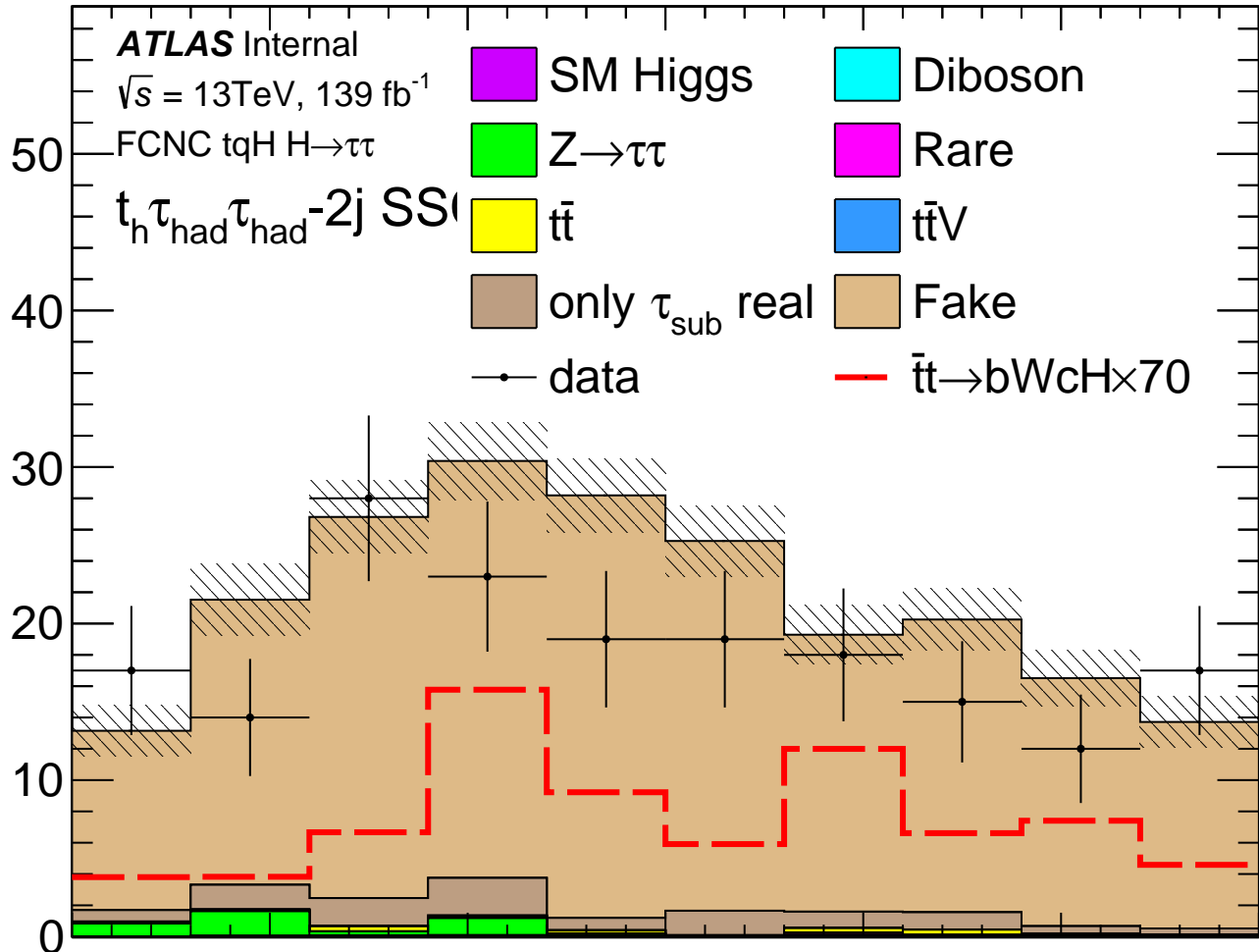
Diboson

Rare

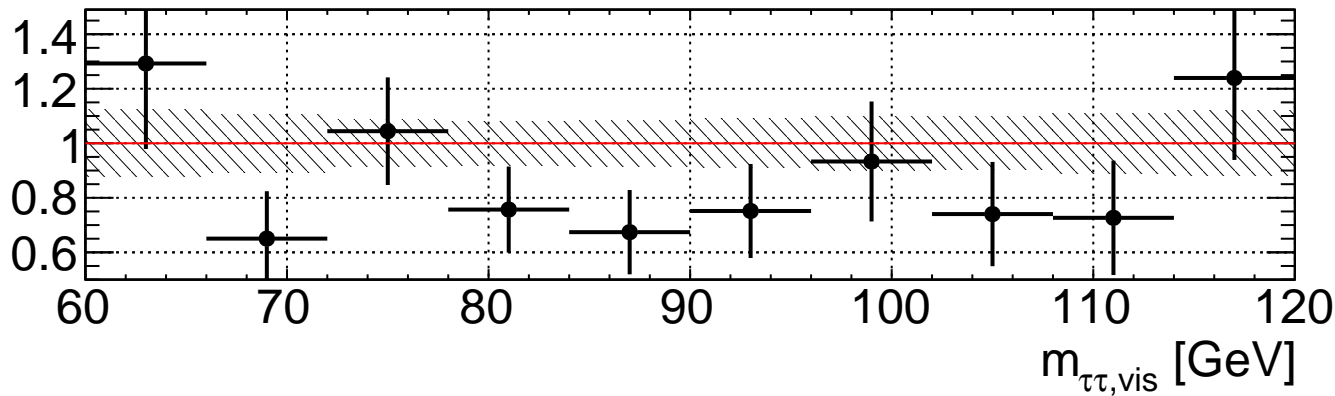
$t\bar{t}V$

Fake

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



Data/Bkg



Events / 6.00 GeV

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

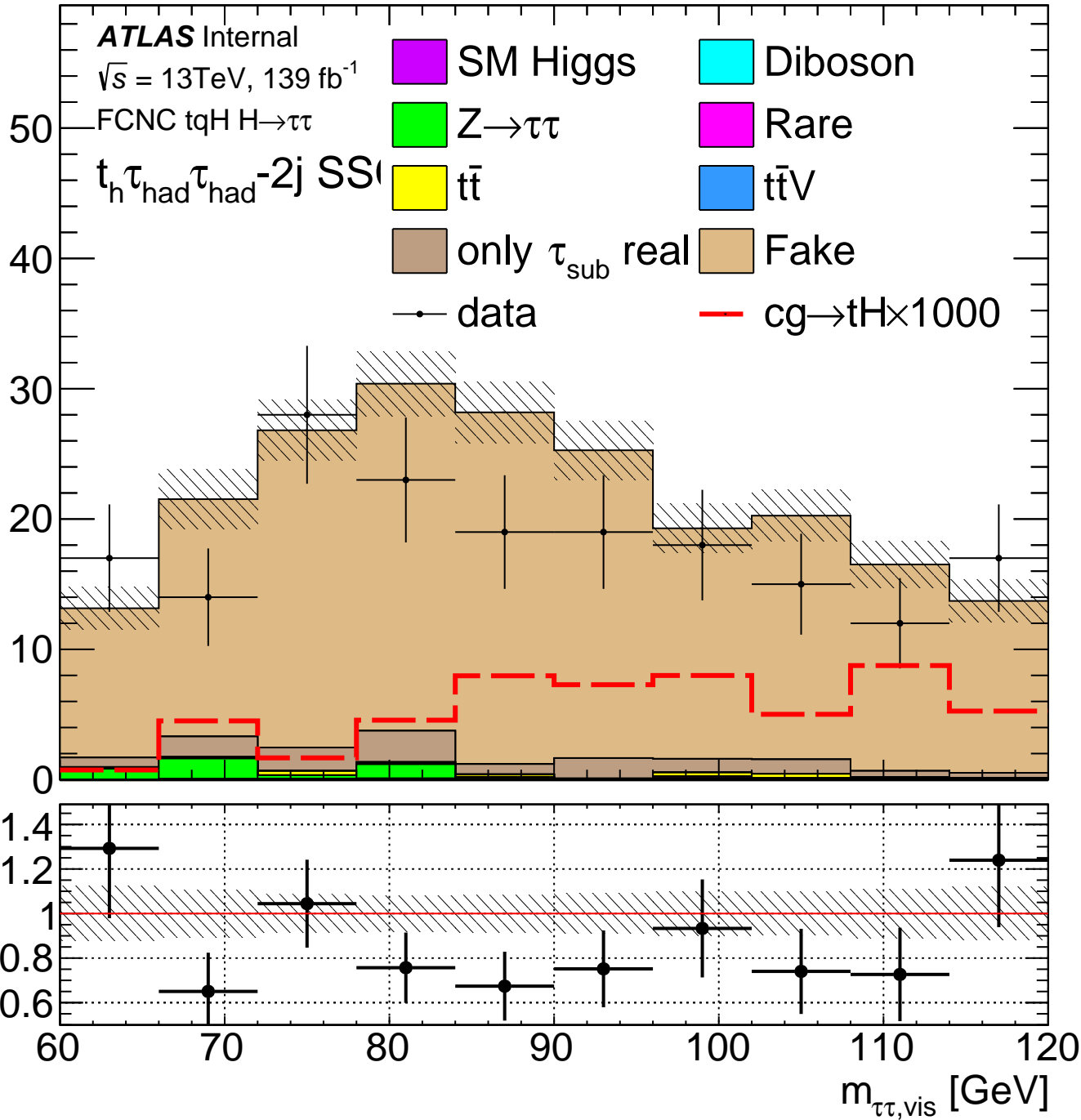
Diboson

Rare

$t\bar{t}V$

Fake

$cg \rightarrow tH \times 1000$



Events / 6.00 GeV

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

tcH merged $\times 70$

50

20

10

0

Data/Bkg

1.4

1.2

1.0

0.8

0.6

60

70

80

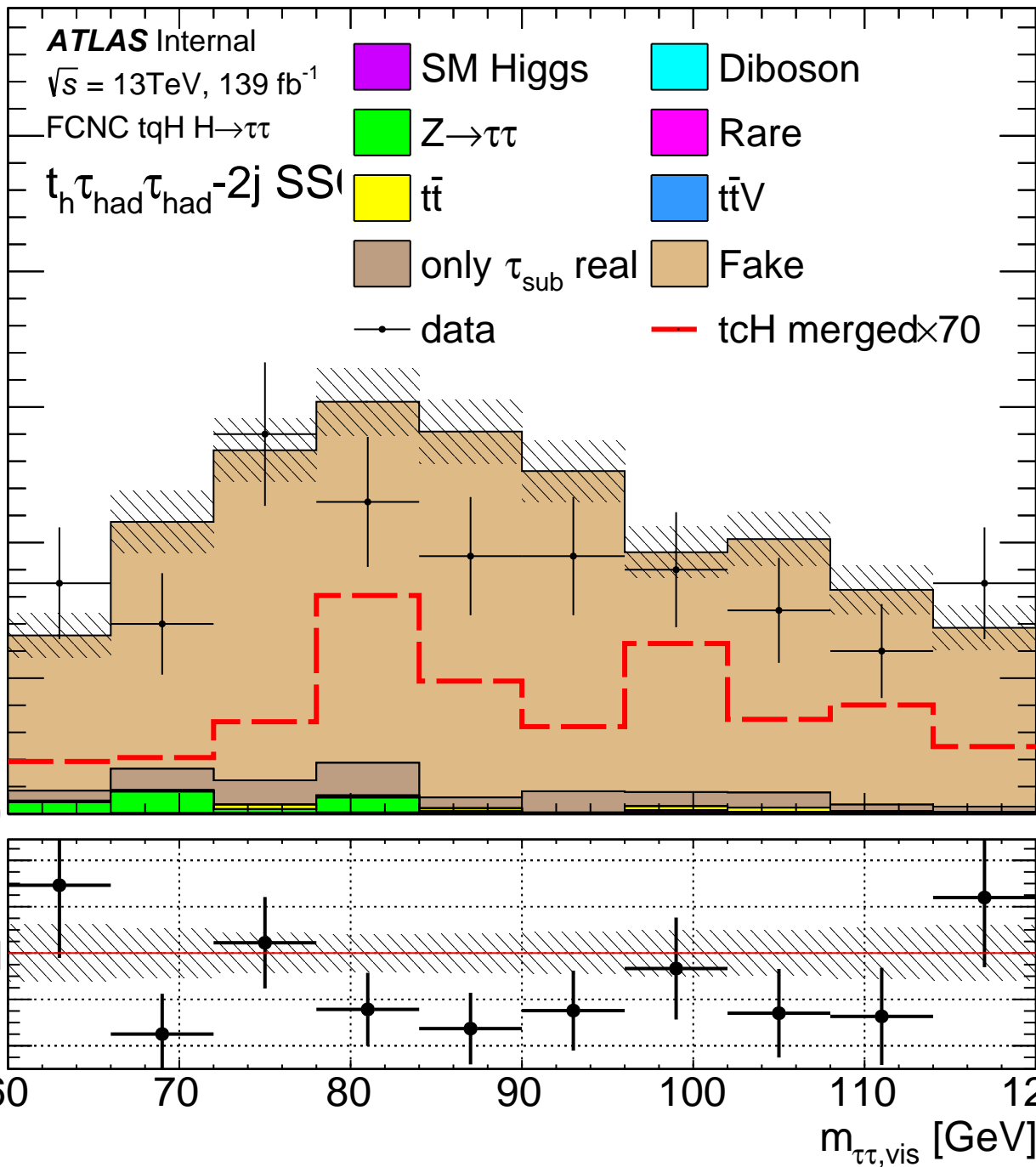
90

100

110

120

$m_{\tau\tau,\text{vis}} [\text{GeV}]$



Events / 6.00 GeV

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

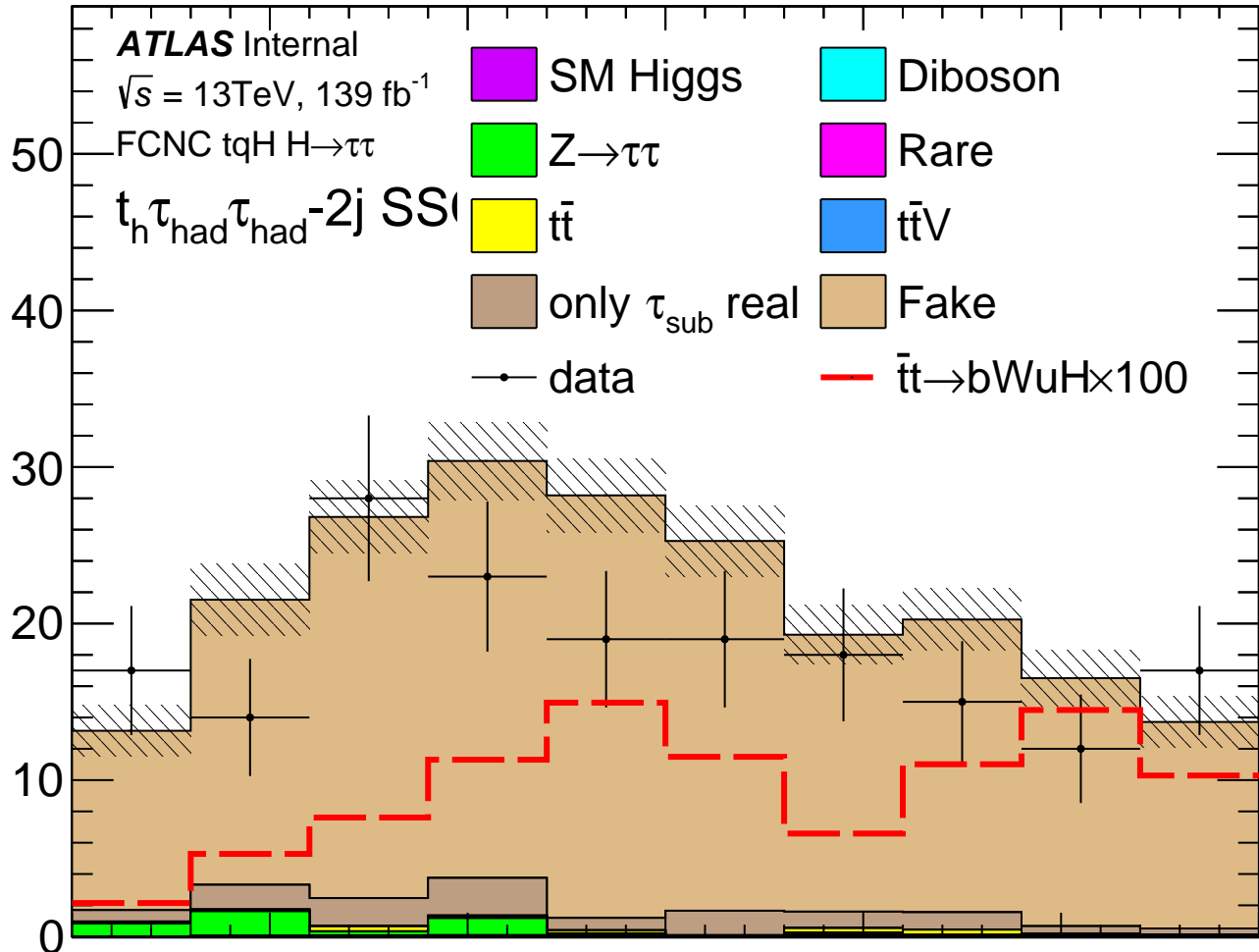
Diboson

Rare

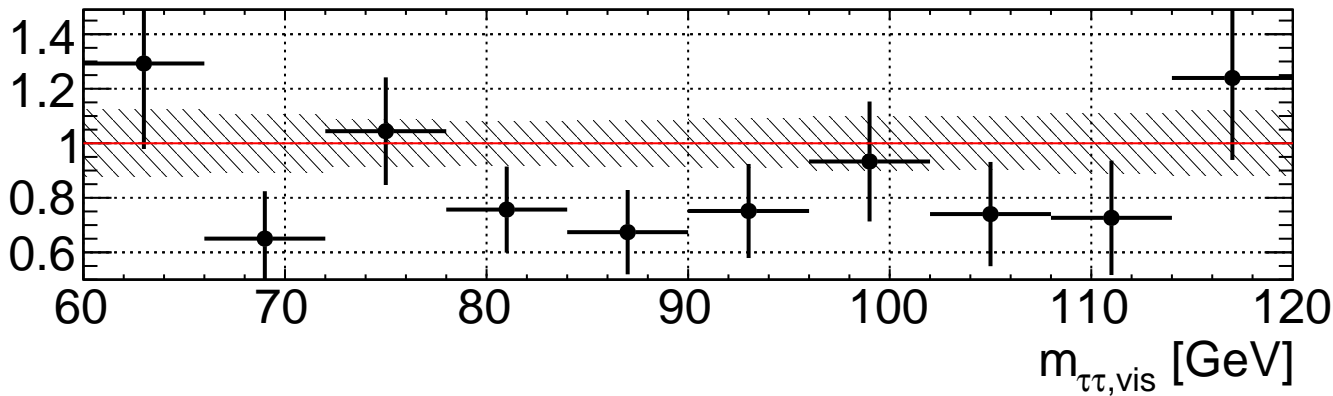
$t\bar{t}V$

Fake

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



Data/Bkg



Events / 6.00 GeV

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

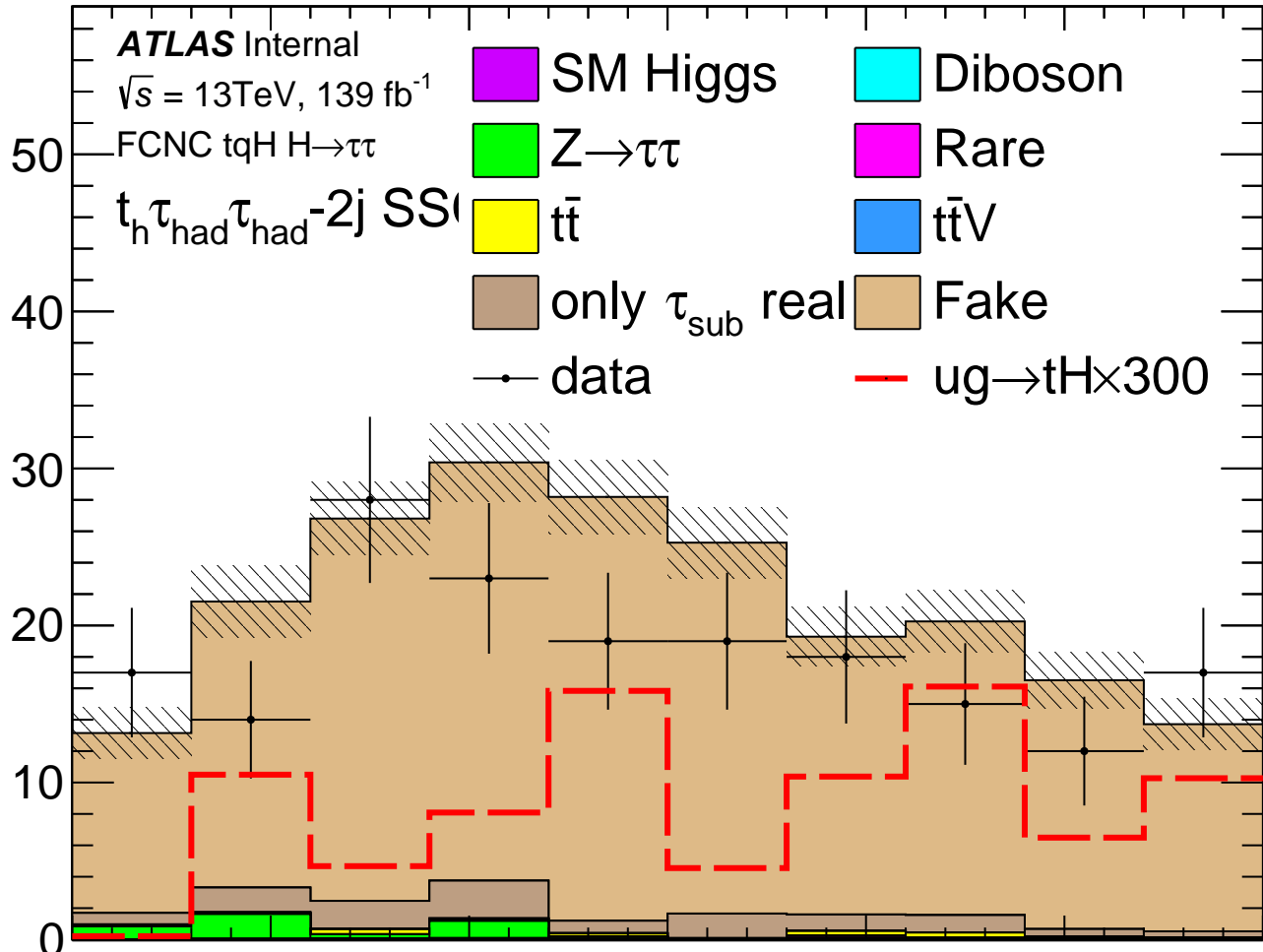
Diboson

Rare

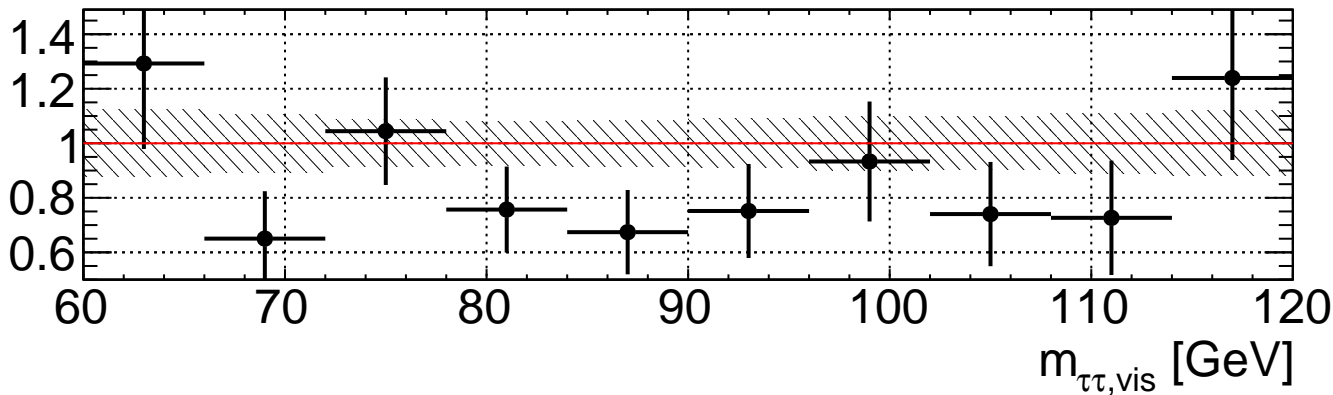
$t\bar{t}V$

Fake

$ug \rightarrow tH \times 300$



Data/Bkg



Events / 6.00 GeV

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

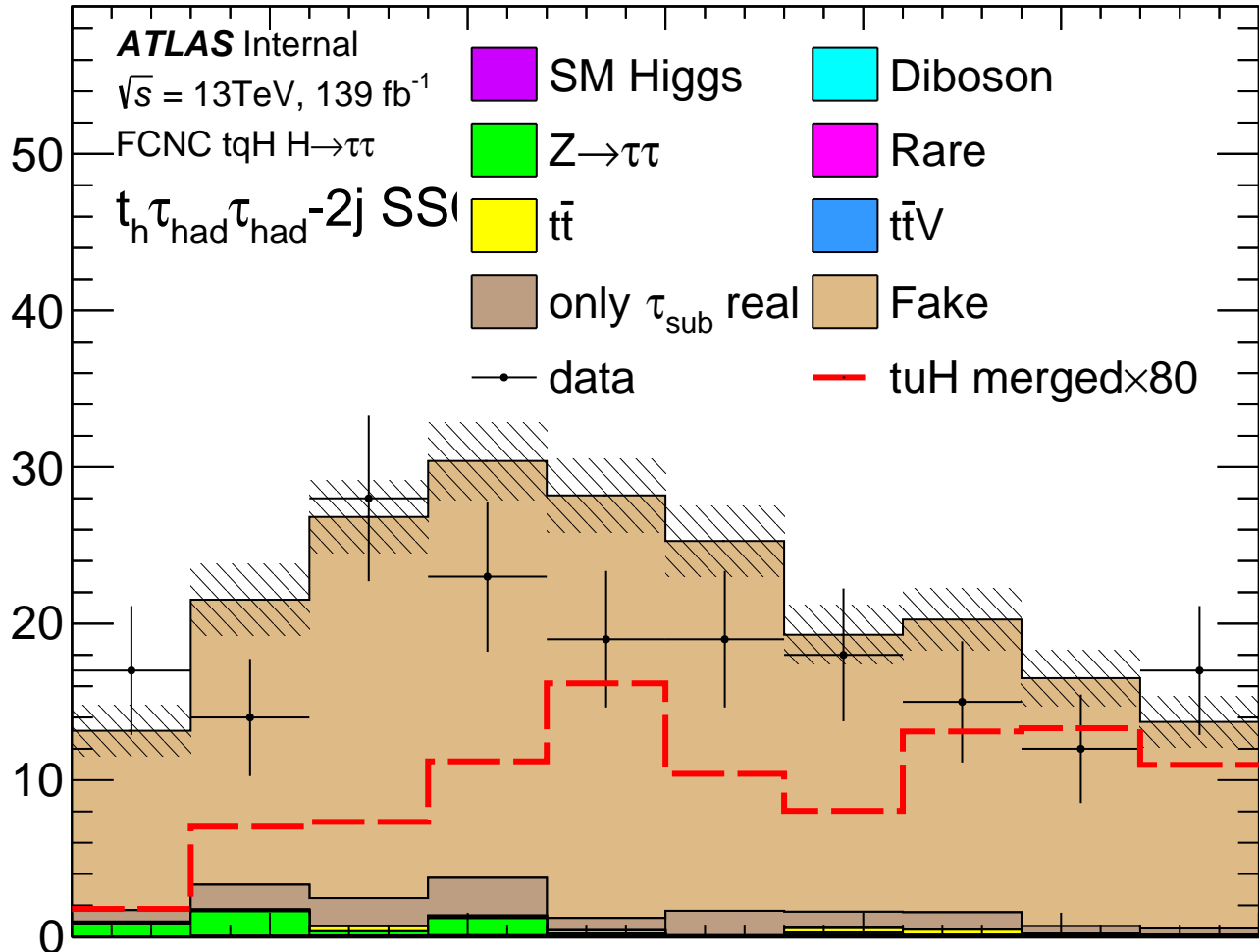
Diboson

Rare

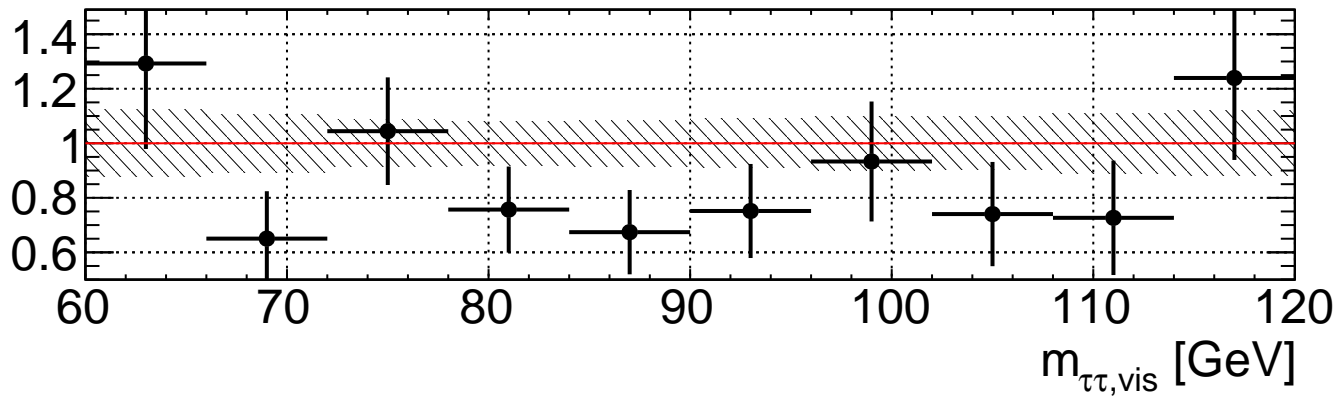
$t\bar{t}V$

Fake

tuH merged $\times 80$



Data/Bkg



Events / 6.00 GeV

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

$cg \rightarrow tH \times 1000$

$ug \rightarrow tH \times 300$

Diboson

Rare

$t\bar{t}V$

Fake

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

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

50

40

30

20

10

0

Data/Bkg

1.4

1.2

1.0

0.8

0.6

60

70

80

90

100

110

120

$m_{\tau\tau, \text{vis}} [\text{GeV}]$

