

Events / 0.20

ATLAS Internal $\sqrt{s} = 13\text{TeV}, 140\text{ fb}^{-1}$ 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

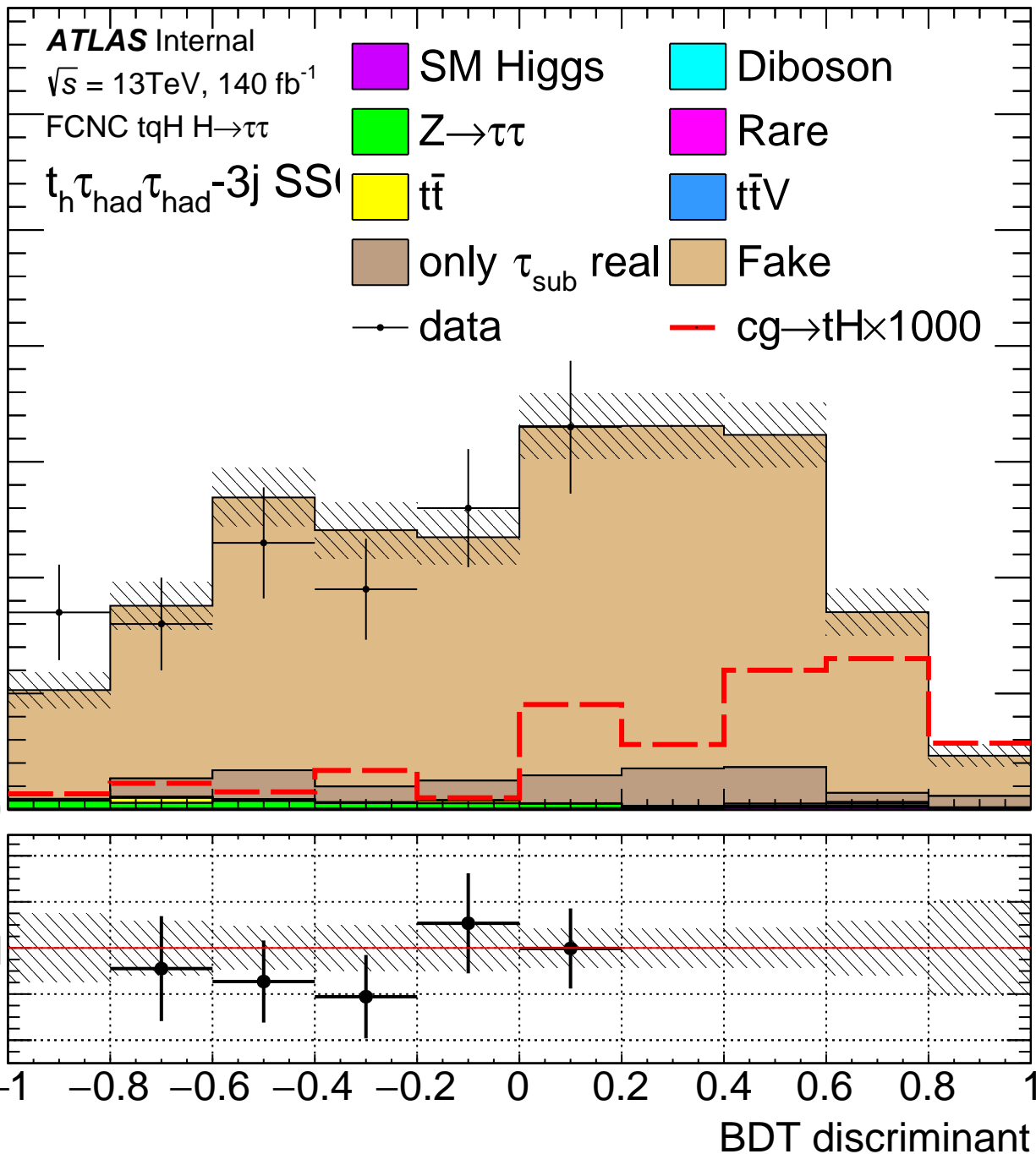
 $t\bar{t}V$

Fake

 $cg \rightarrow tH \times 1000$

Data/Bkg

BDT discriminant



Events / 0.20

ATLAS Internal $\sqrt{s} = 13\text{TeV}, 140\text{ fb}^{-1}$ 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

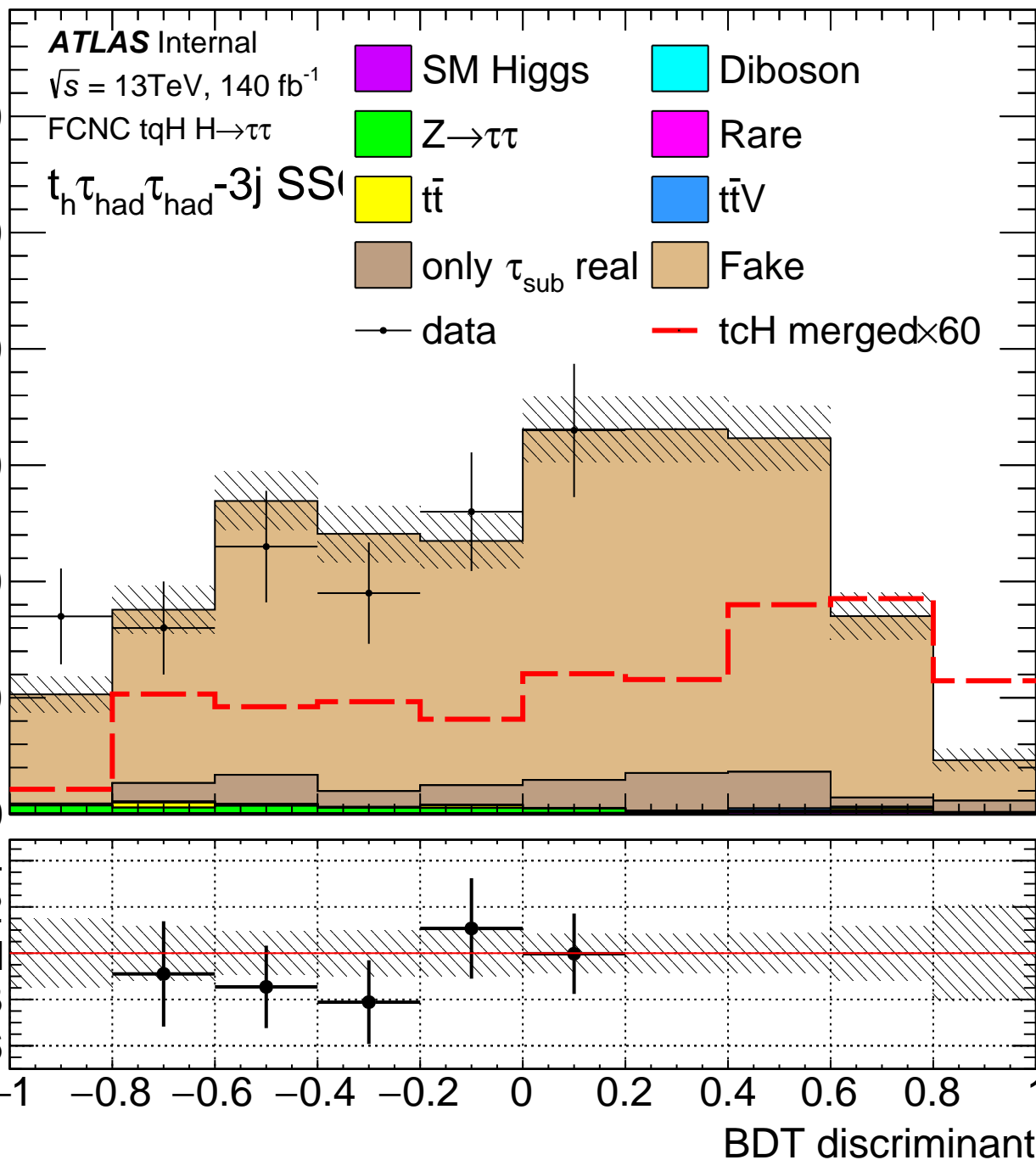
 $t\bar{t}V$

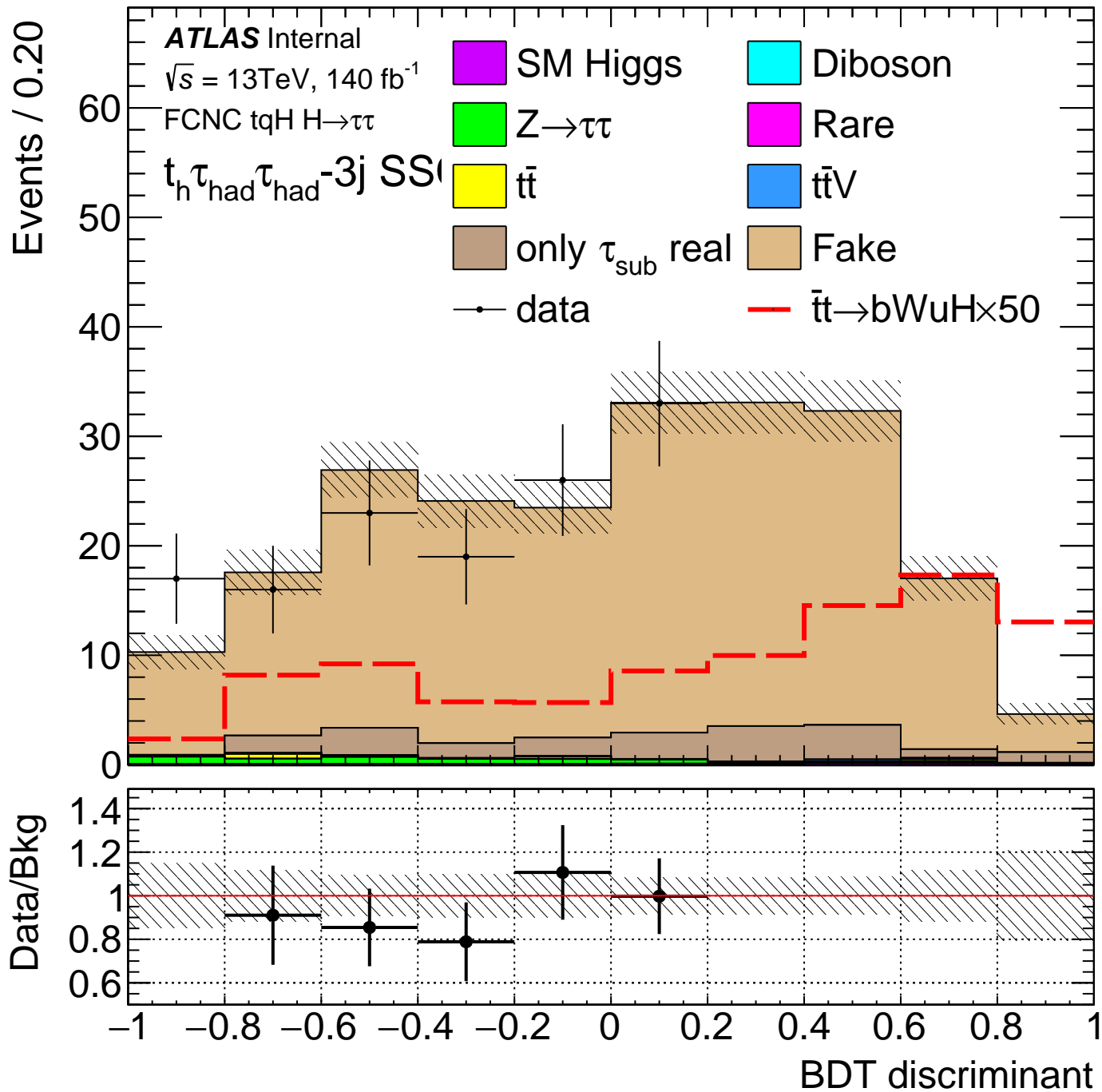
Fake

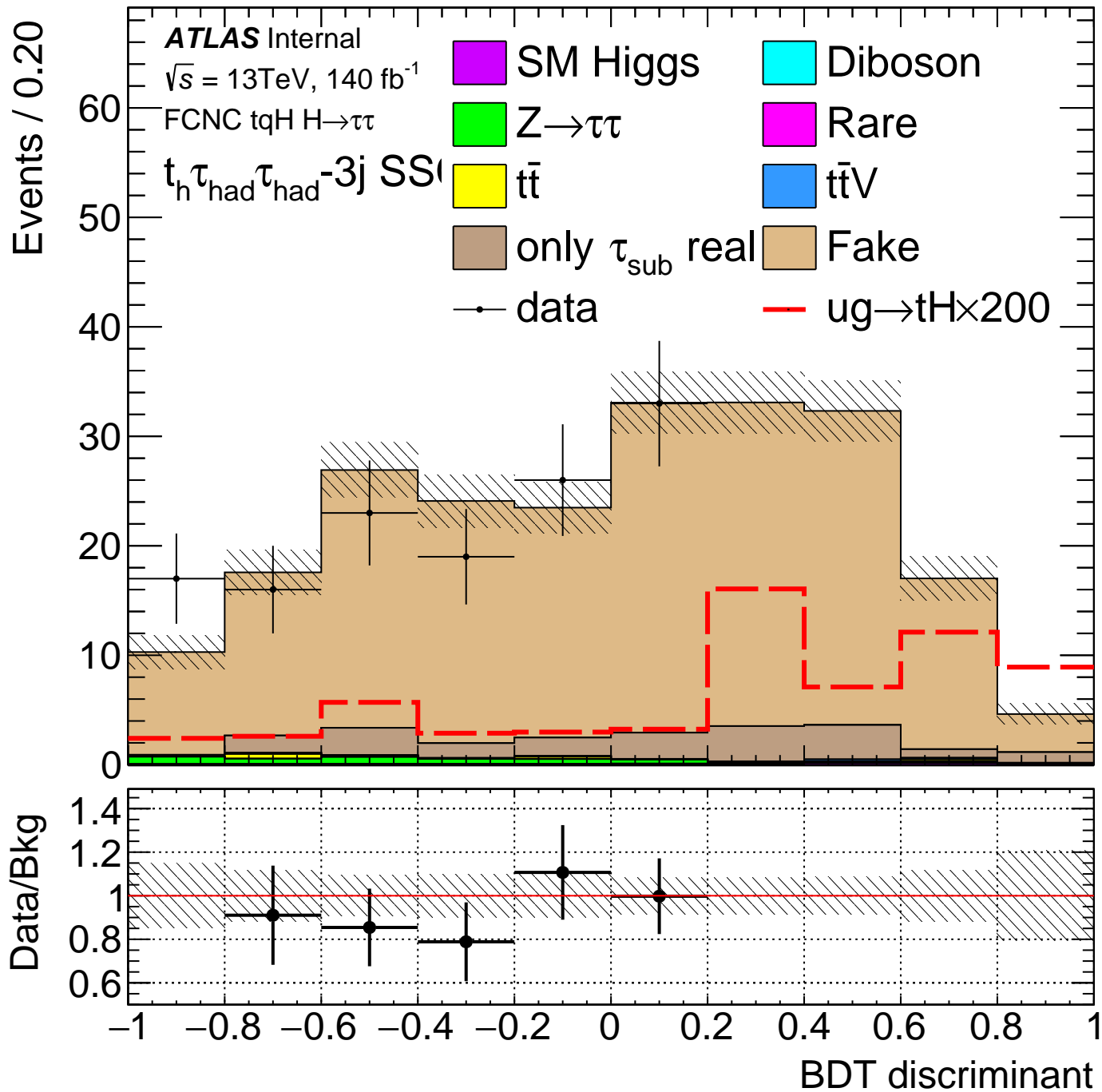
tcH merged $\times 60$

Data/Bkg

BDT discriminant







Events / 0.20

ATLAS Internal $\sqrt{s} = 13\text{TeV}, 140\text{ fb}^{-1}$ 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

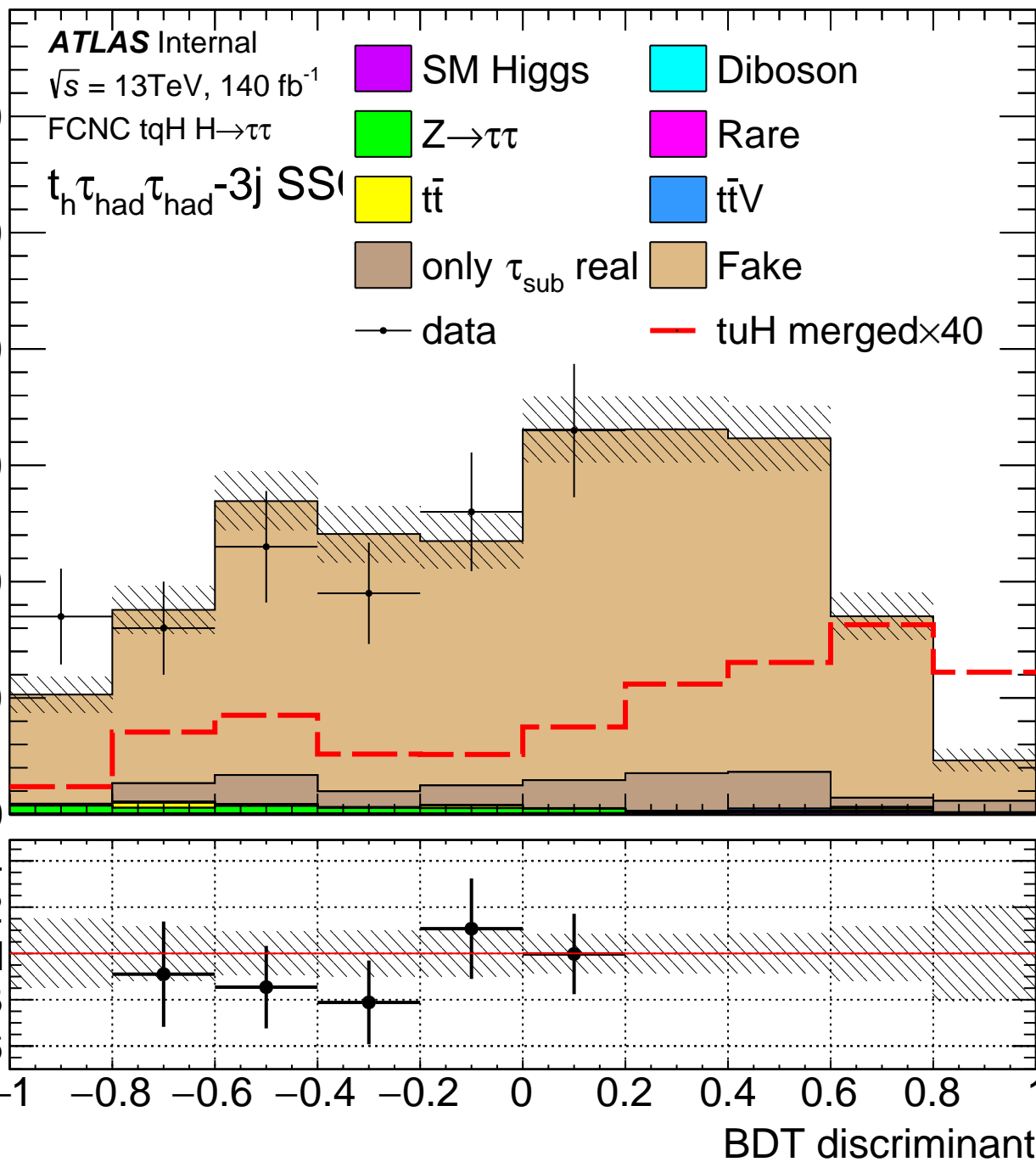
 $t\bar{t}V$

Fake

tuH merged $\times 40$

Data/Bkg

BDT discriminant



Events / 0.20

ATLAS Internal $\sqrt{s} = 13\text{TeV}, 140\text{fb}^{-1}$ 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

 $cg \rightarrow tH \times 1000$ $ug \rightarrow tH \times 200$

Diboson

Rare

 $t\bar{t}V$

Fake

 $t\bar{t} \rightarrow bWcH \times 60$ $t\bar{t} \rightarrow bWuH \times 50$

60

50

40

30

20

10

0

Data/Bkg

1.4

1.2

1.0

0.8

0.6

-1

-0.8

-0.6

-0.4

-0.2

0

0.2

0.4

0.6

0.8

-1

-0.8

-0.6

-0.4

-0.2

0

0.2

0.4

0.6

0.8

-1

-0.8

-0.6

-0.4

-0.2

0

0.2

0.4

0.6

0.8

BDT discriminant