

Events / 0.20

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

SM Higgs

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

data

Diboson

Rare

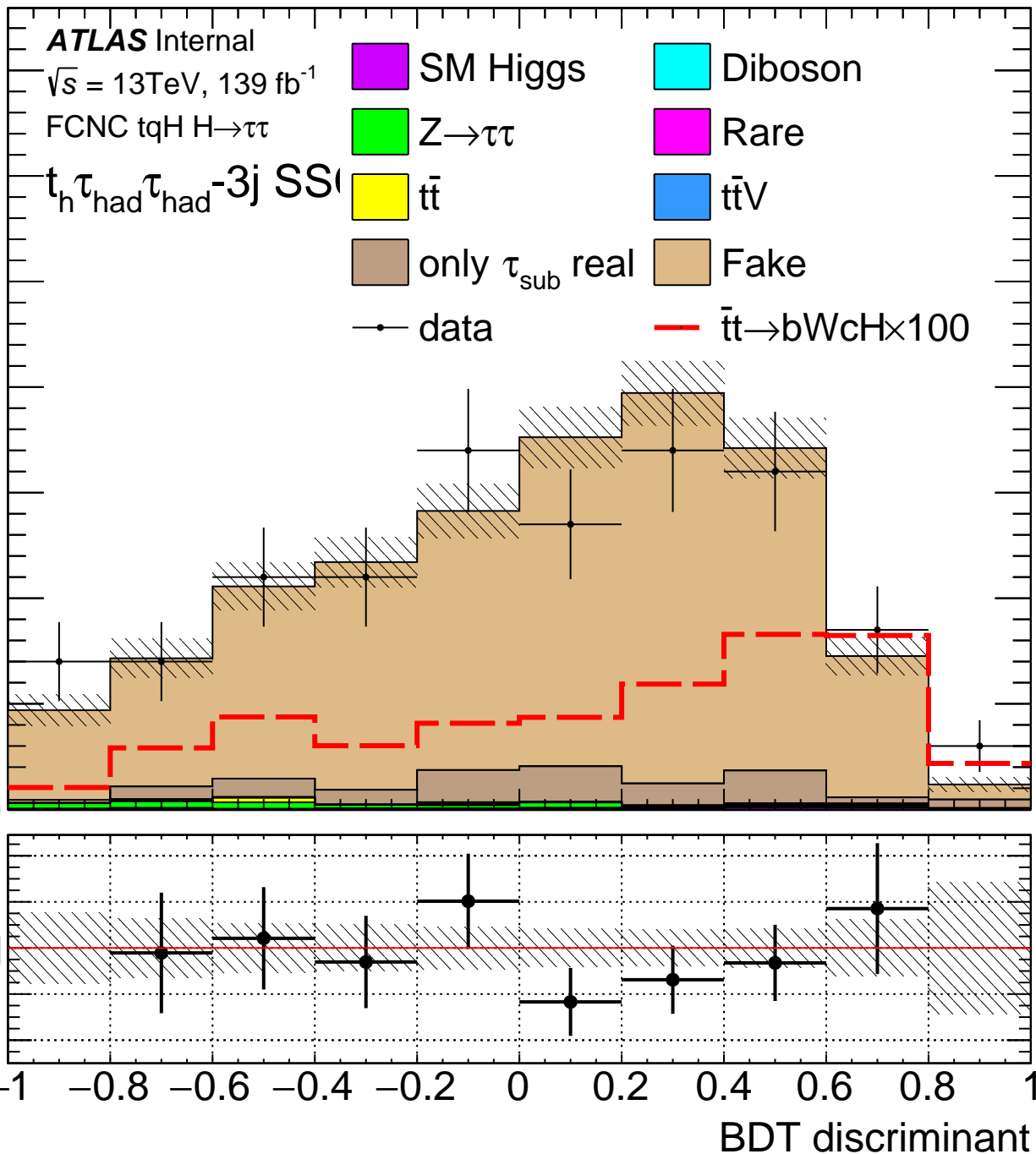
 $t\bar{t}V$ 

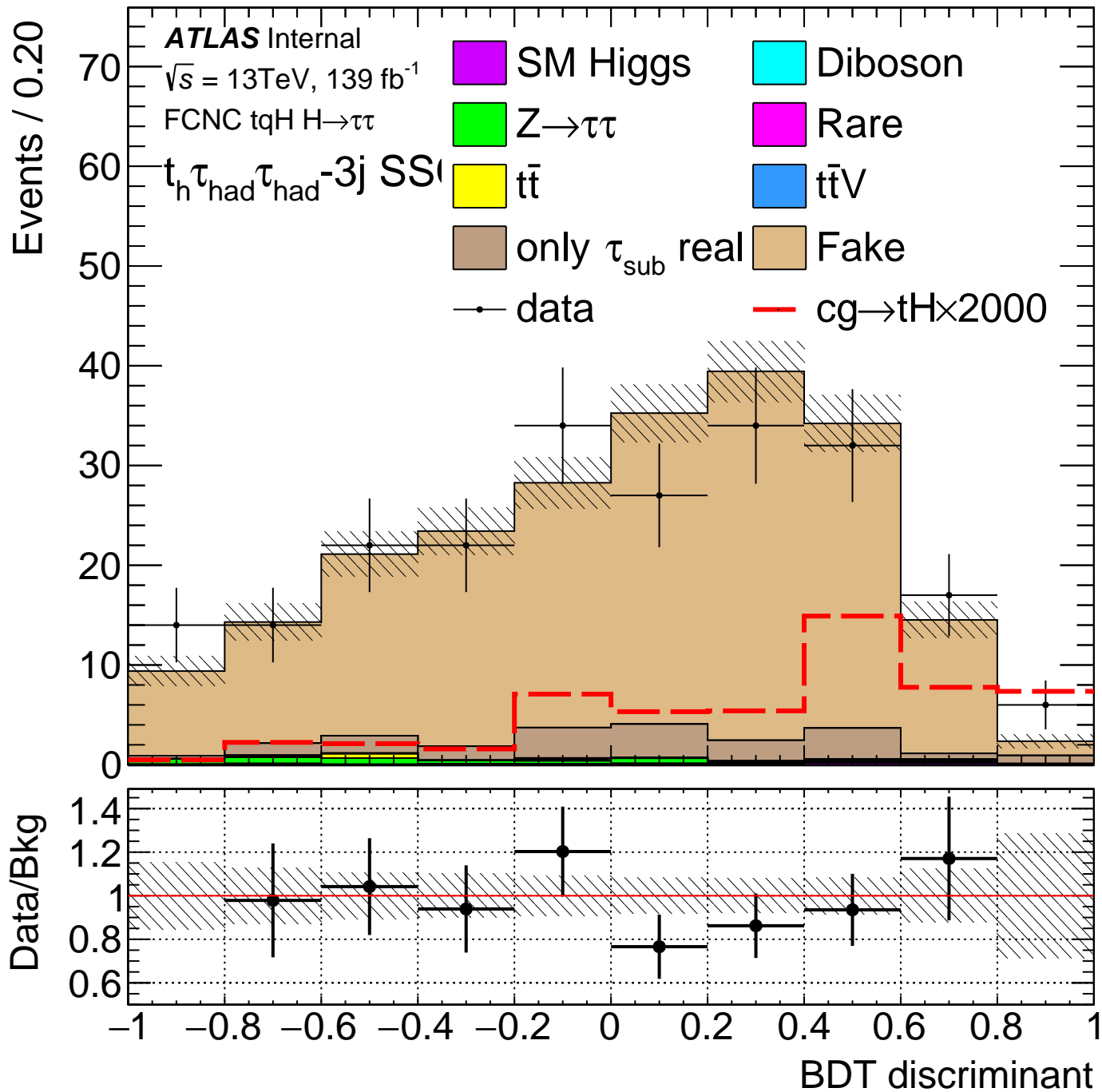
Fake

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

Data/Bkg

BDT discriminant





Events / 0.20

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SM Higgs

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

—•— data

Diboson

Rare

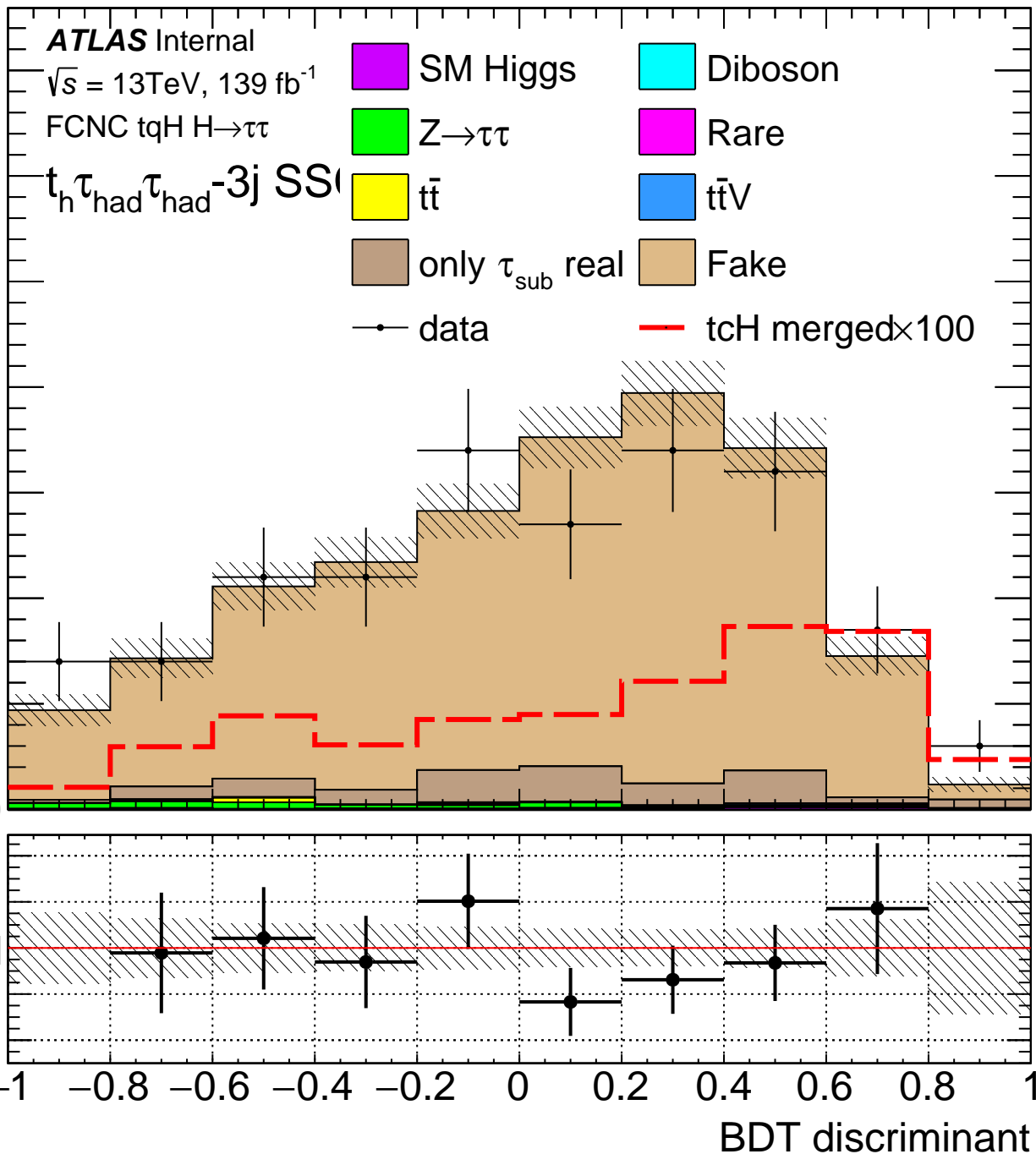
 $t\bar{t}V$ 

Fake

— tcH merged  $\times 100$ 

Data/Bkg

BDT discriminant



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SM Higgs

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

data

Diboson

Rare

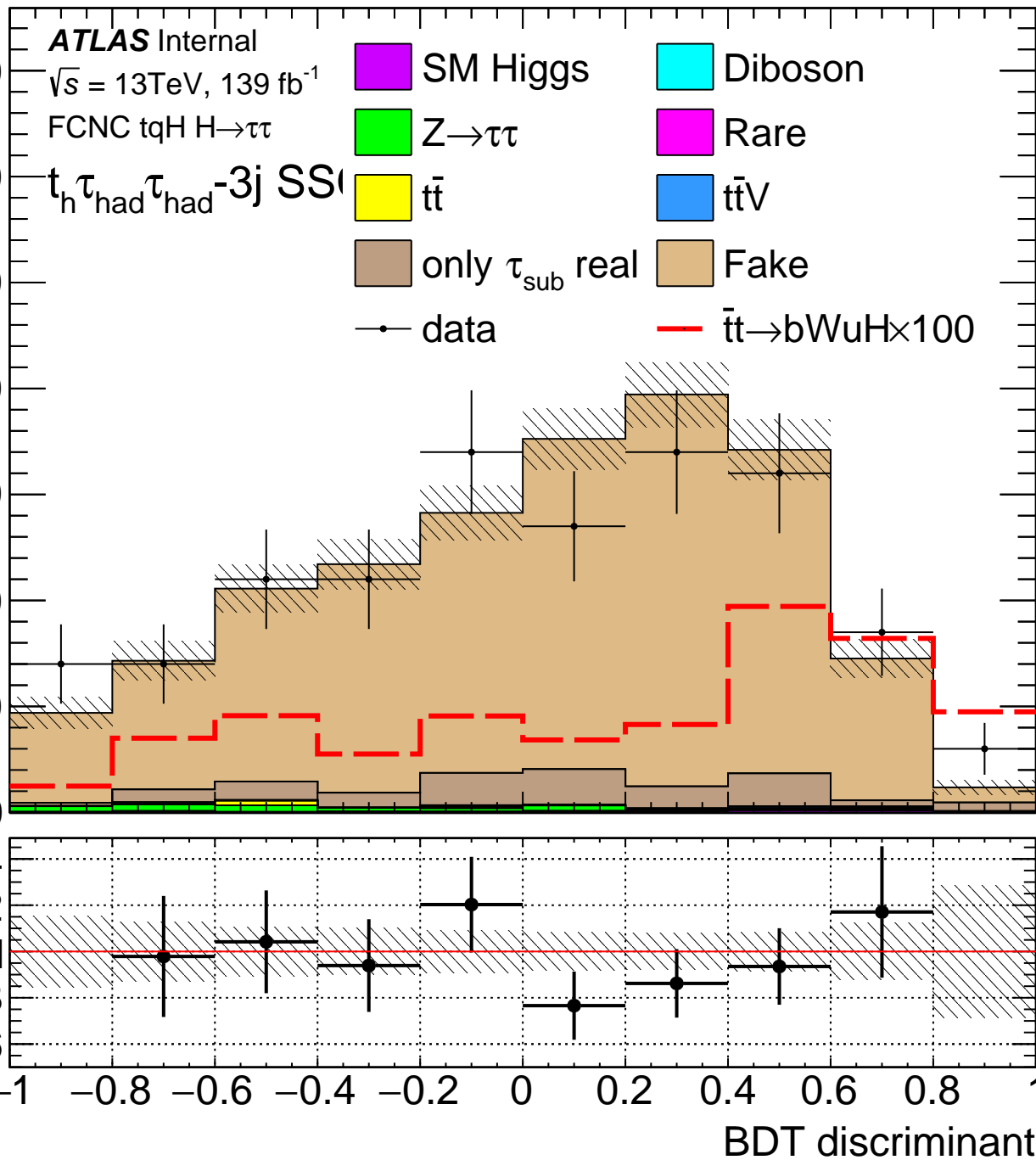
 $t\bar{t}V$ 

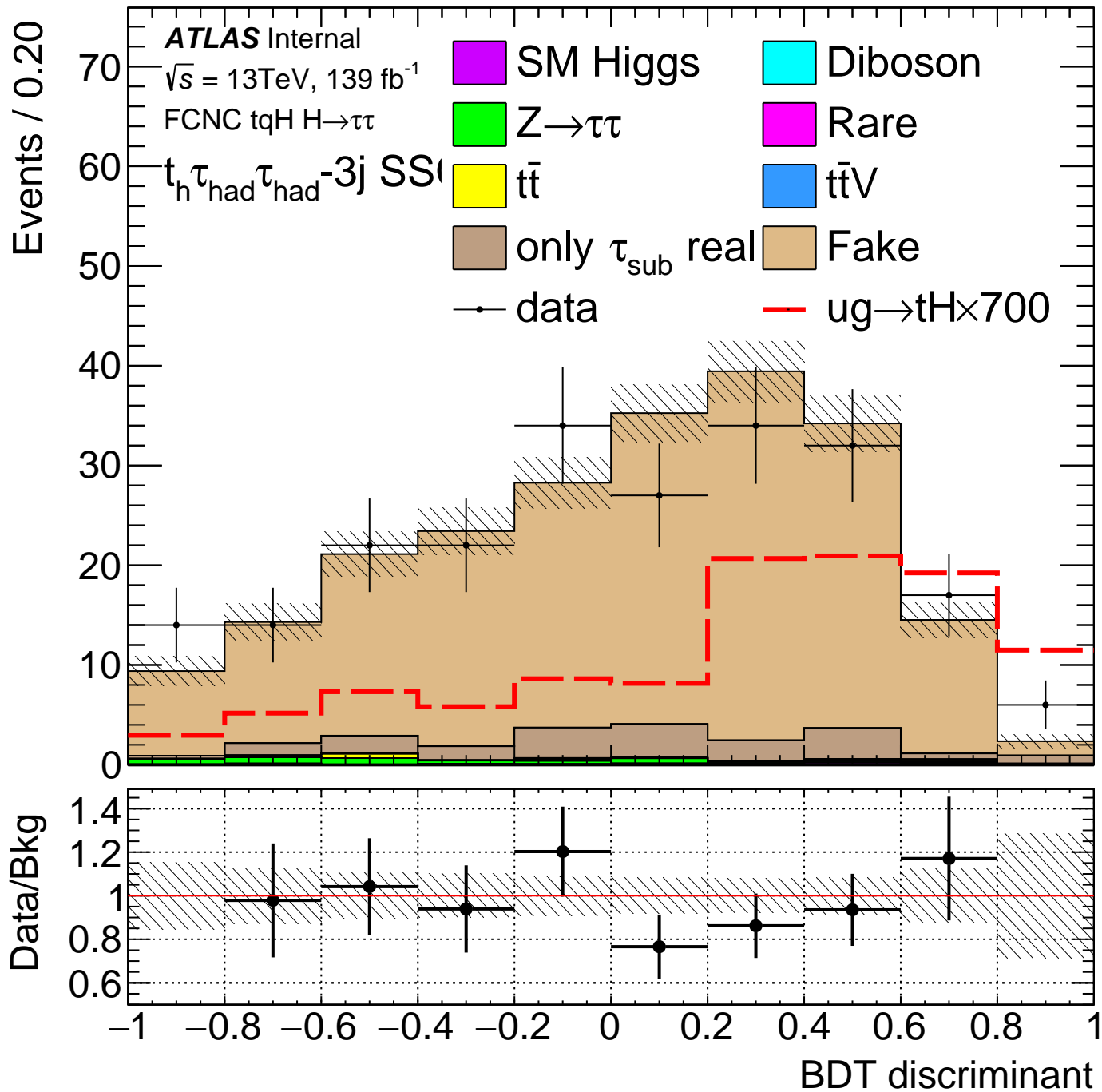
Fake

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

Data/Bkg

BDT discriminant





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SM Higgs

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

data

Diboson

Rare

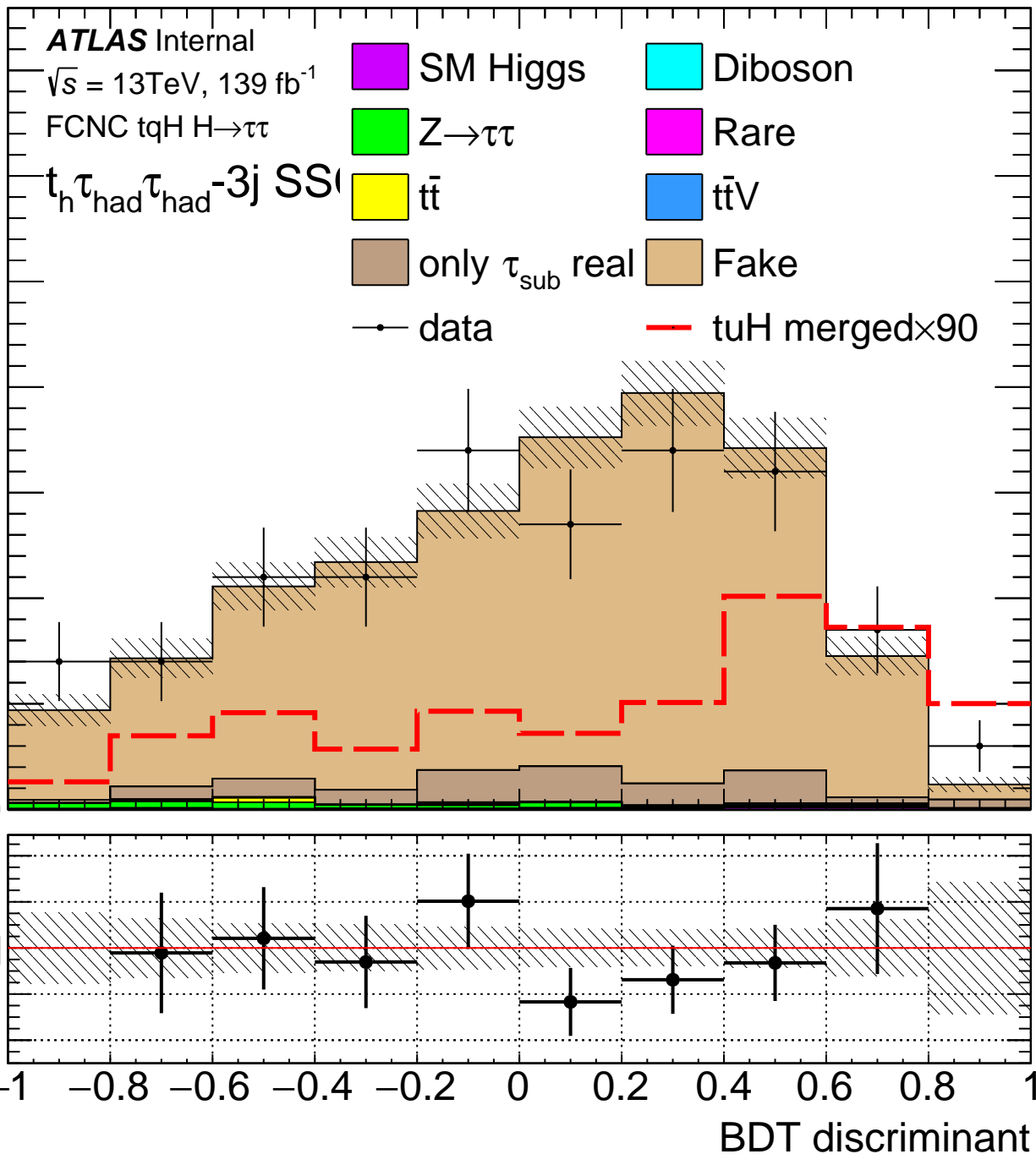
 $t\bar{t}V$ 

Fake

tuH merged $\times 90$ 

Data/Bkg

BDT discriminant



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SM Higgs

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

data

 $cg \rightarrow tH \times 2000$  $ug \rightarrow tH \times 700$ 

Diboson

Rare

 $t\bar{t}V$ 

Fake

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

Data/Bkg

BDT discriminant

