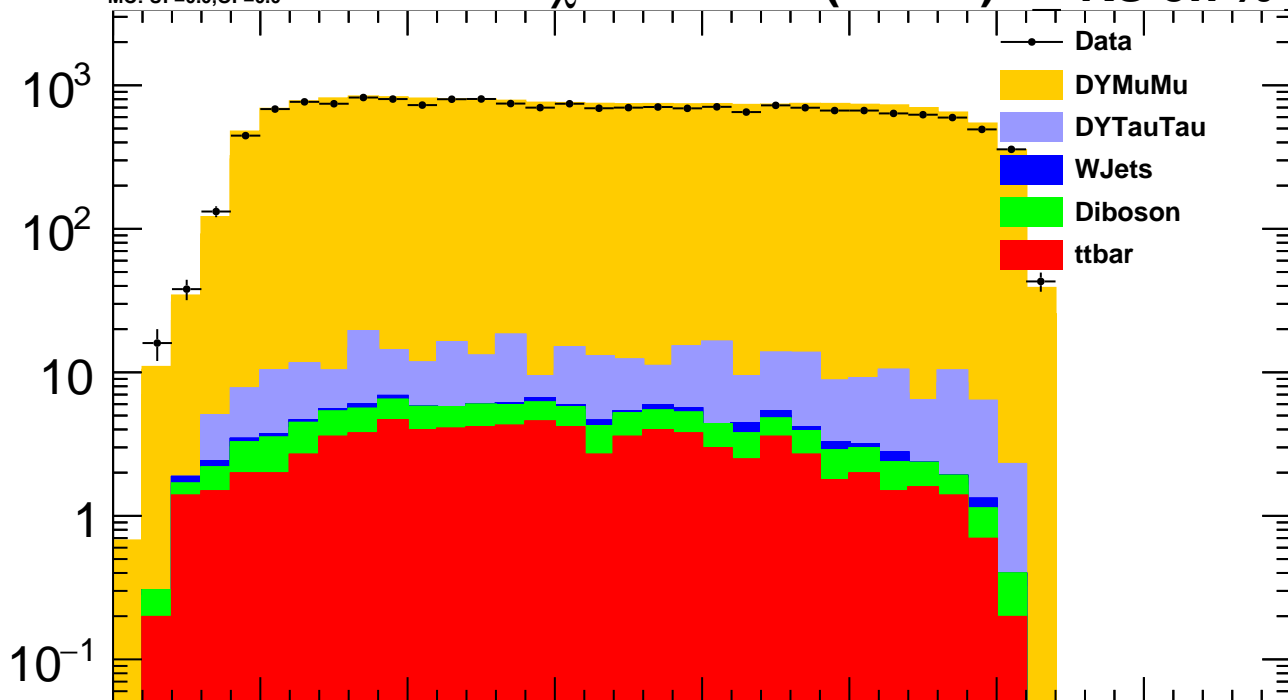


Entry

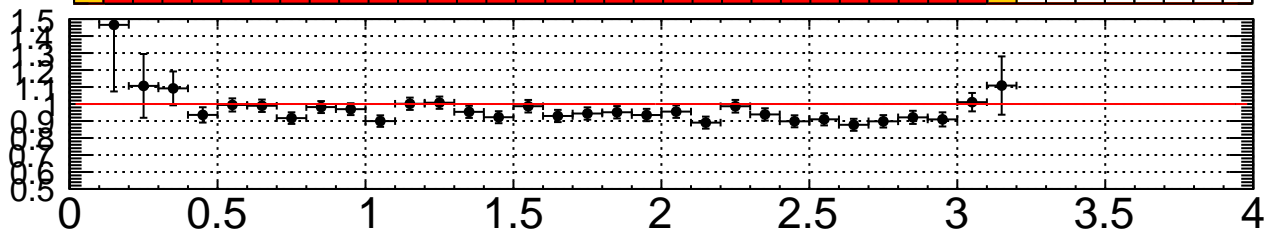
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.19$ (21.7%)

KS 5.7%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



data/Pred.



Angle between two muons

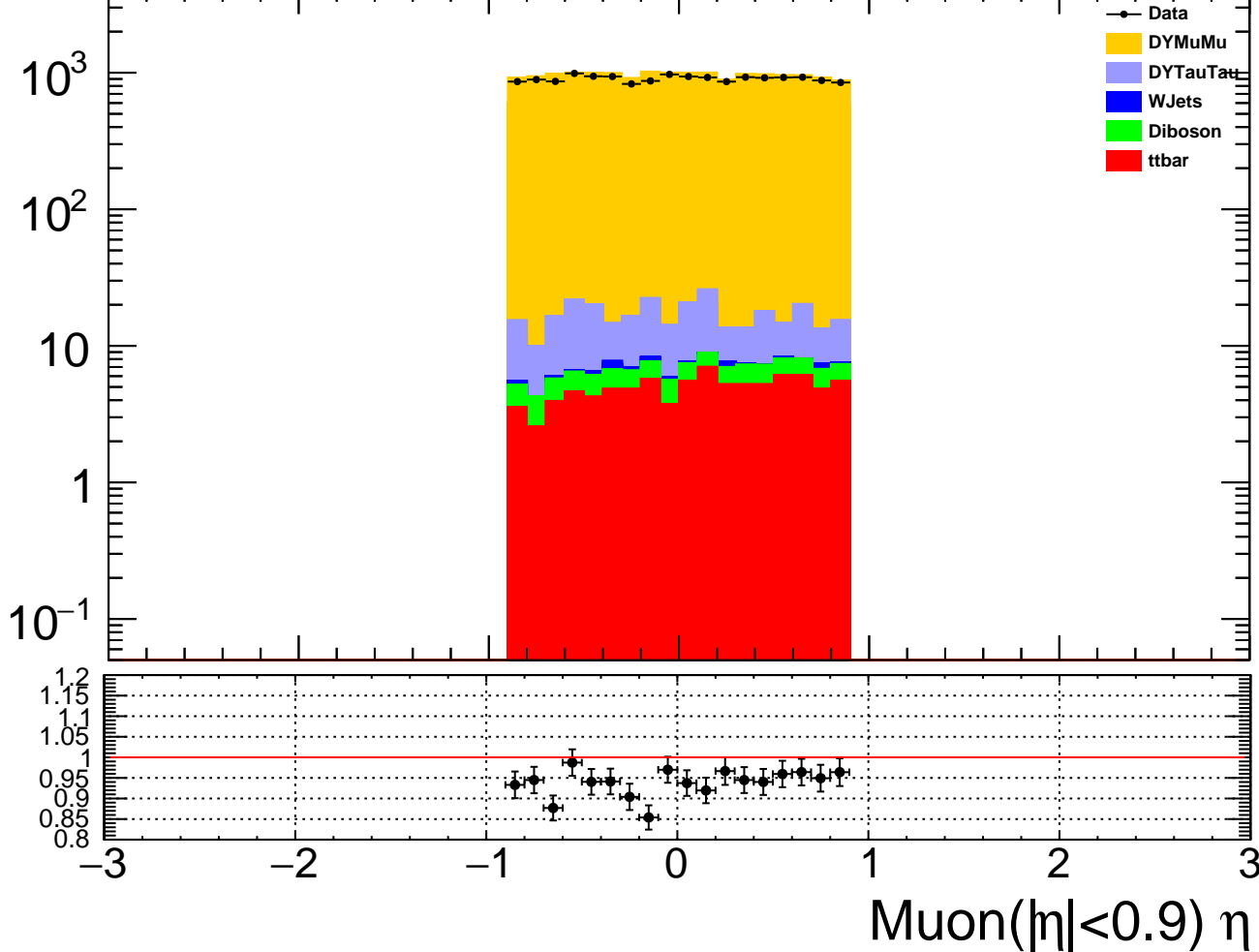
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.11$ (33.5%) KS 33.4%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar

 10^3
 10^2
10
1
 10^{-1}

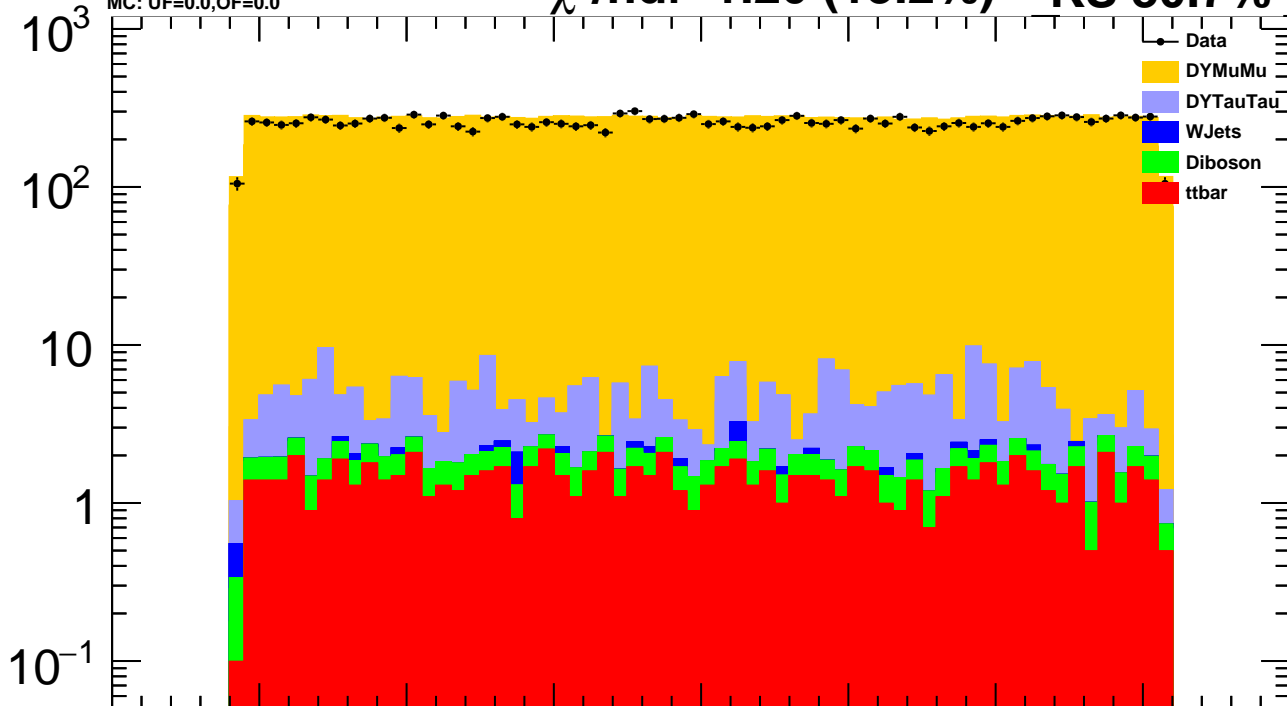
data/Pred.

1.2
1.15
1.1
1.05
1.0
0.95
0.9
0.85
0.8Muon($|\eta|<0.9$) η 

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.20$ (13.2%) KS 30.7%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/pred.

Muon($|\eta| < 0.9$) ϕ

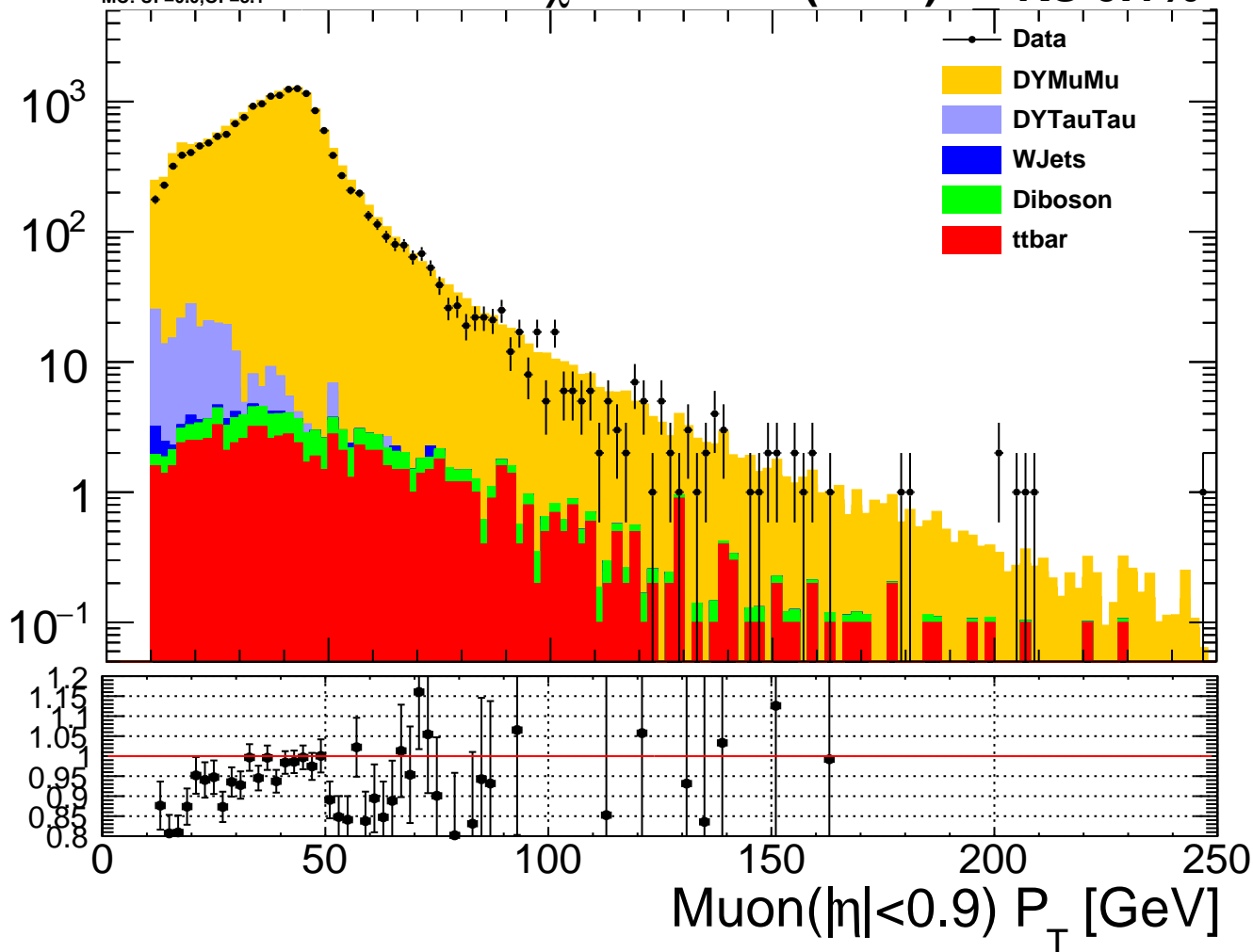
Entry

Data: UF=0,OF=3
MC: UF=0.0,OF=3.1 $\chi^2/\text{ndf}=1.31$ (1.4%)

KS 0.1%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

data/Pred.



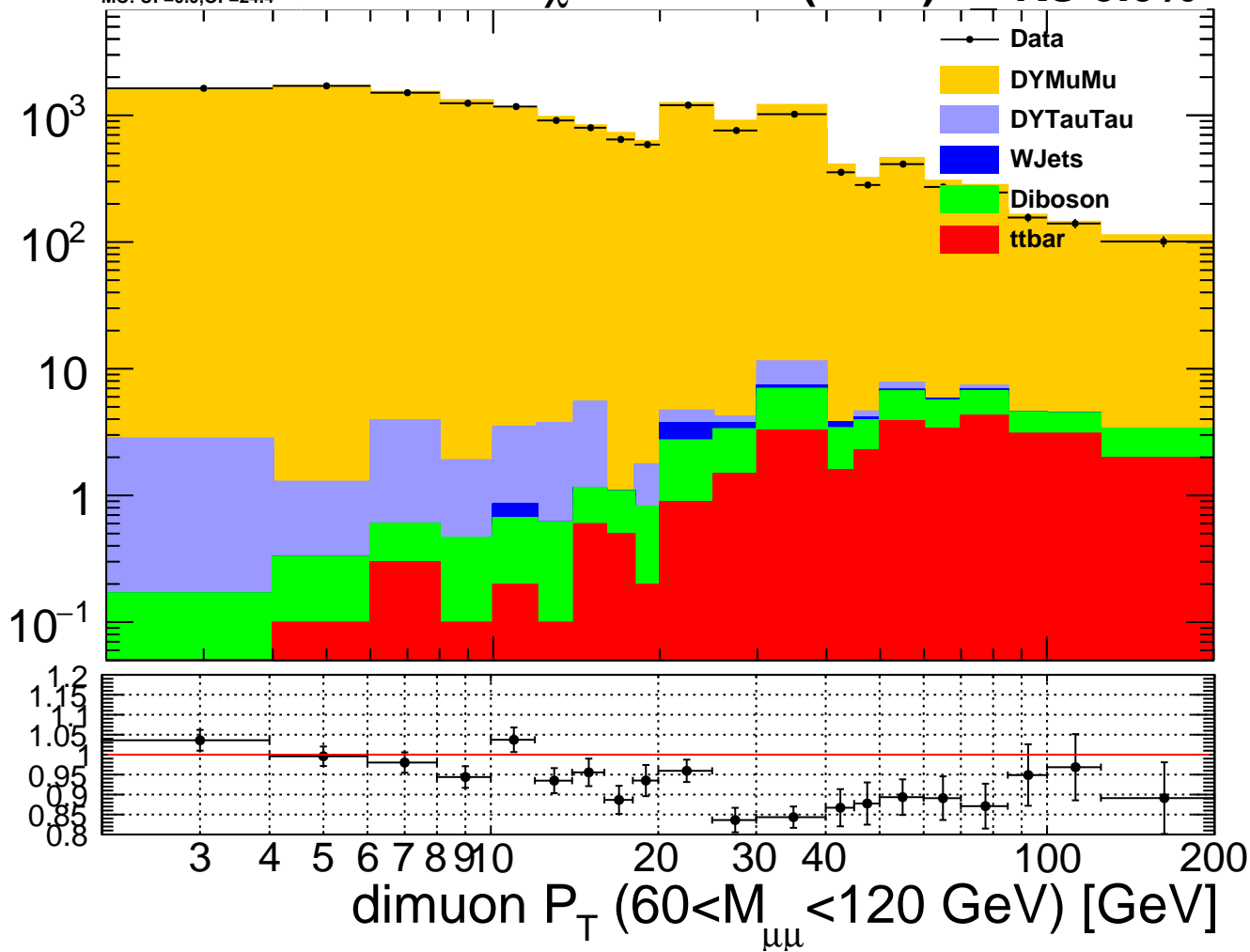
Entry

Data: UF=0,OF=19
MC: UF=0.0,OF=24.4 $\chi^2/\text{ndf}=5.07$ (0.0%)

KS 0.0%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar

data/Pred.

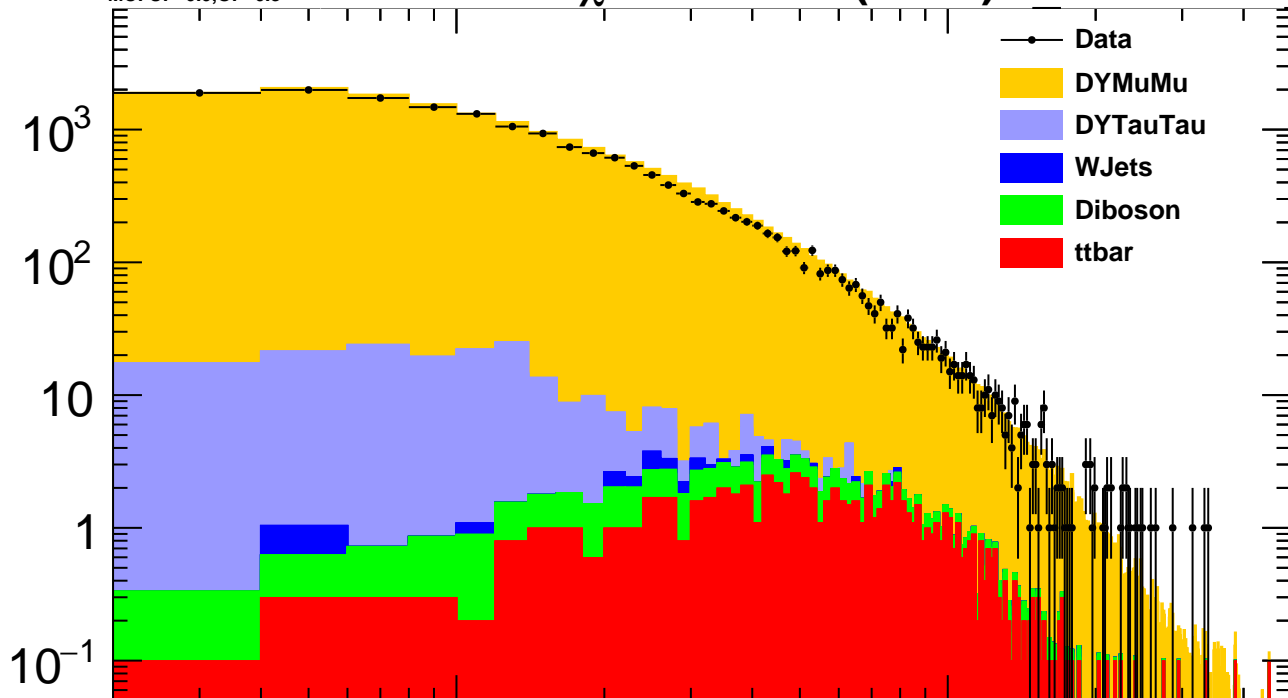


Entry

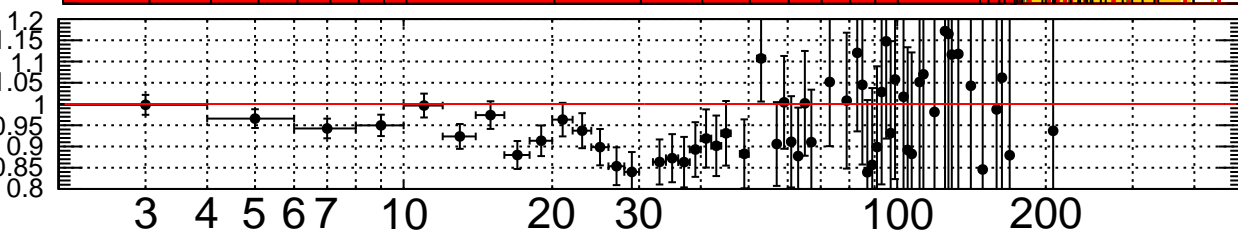
Data: UF=0,OF=0
MC: UF=0.0,OF=0.3 $\chi^2/\text{ndf}=2.50$ (0.0%)

KS 0.0%

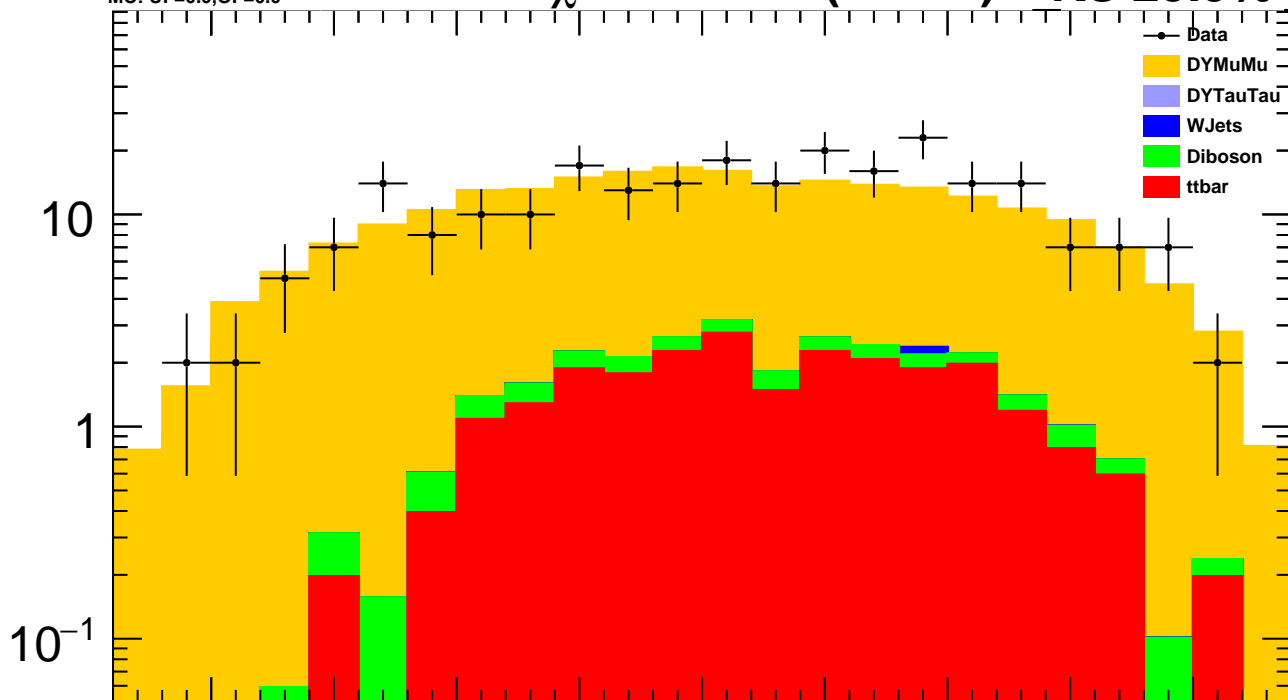
- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



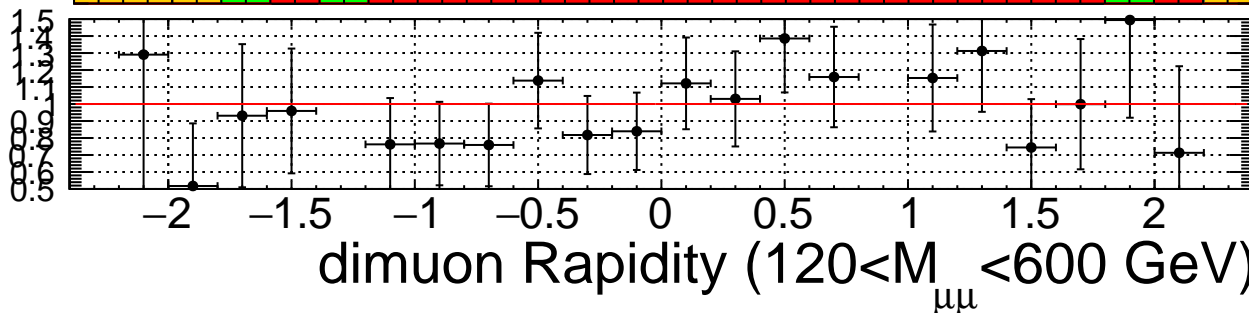
data/Pred.

dimuon P_T [GeV]

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=0.83$ (69.2%) KS 23.5%

data/Pred.

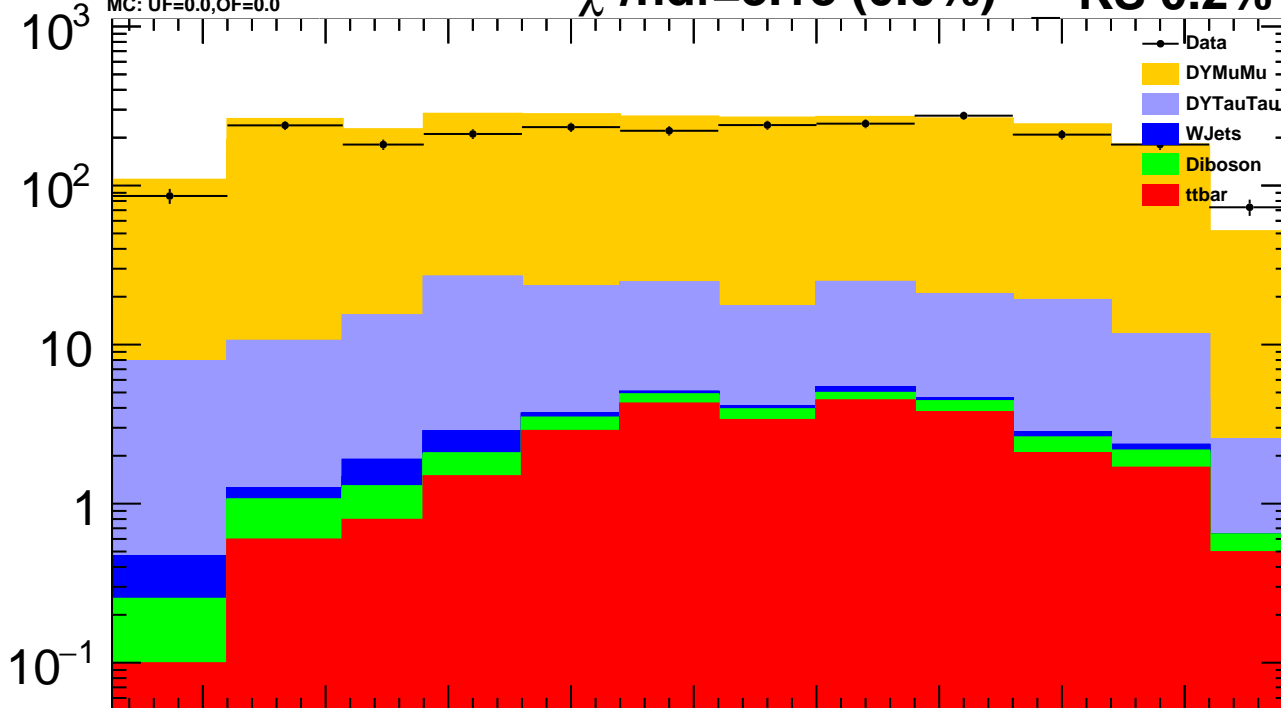


Entry

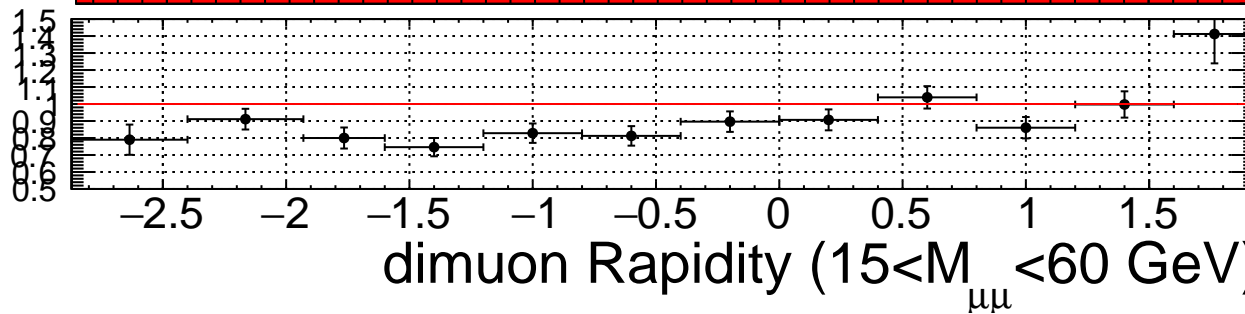
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=3.18$ (0.0%)

KS 0.2%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



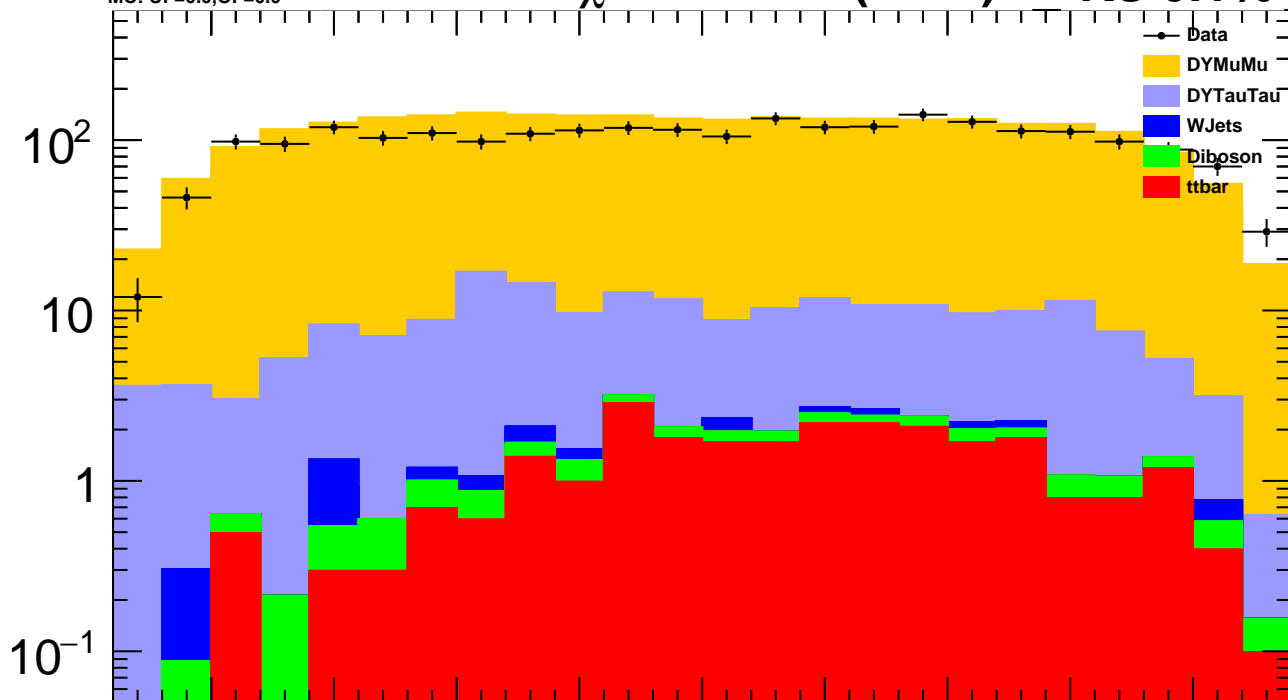
data/Pred.



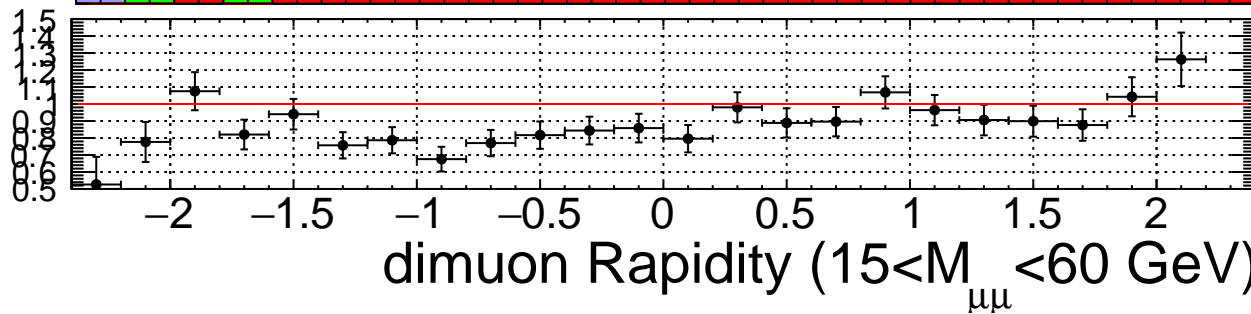
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=2.09$ (0.2%)

KS 0.1%



data/Pred.

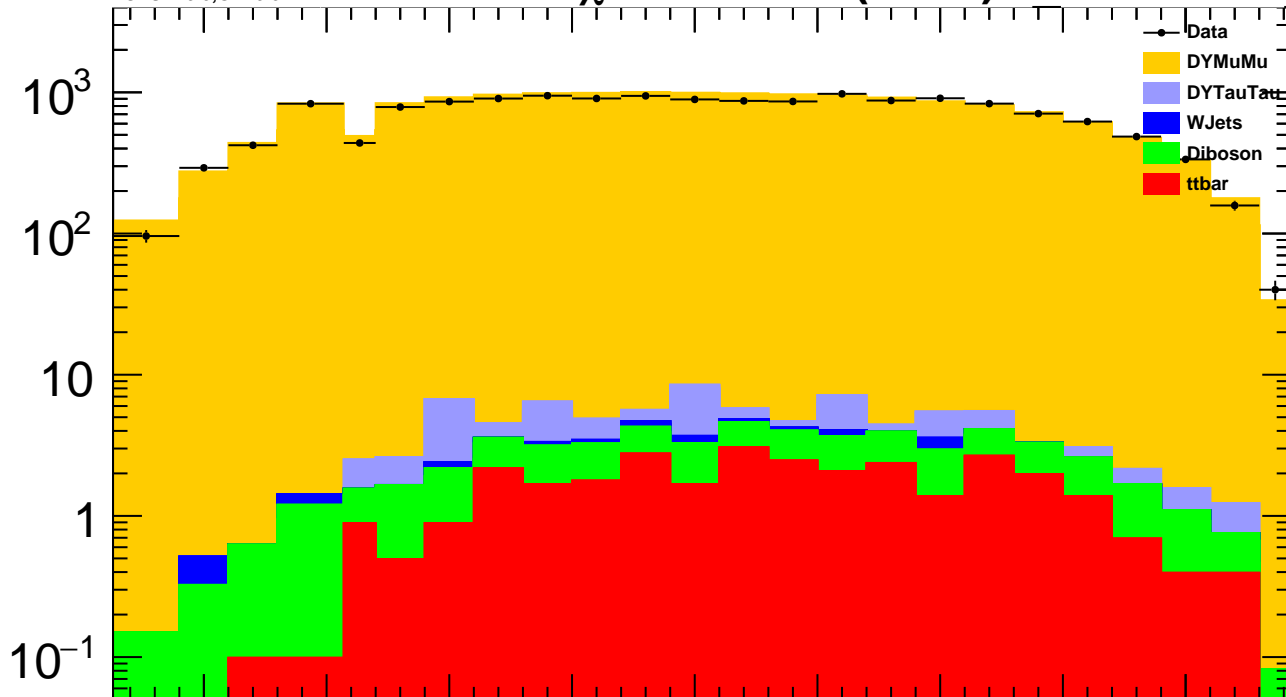


Entry

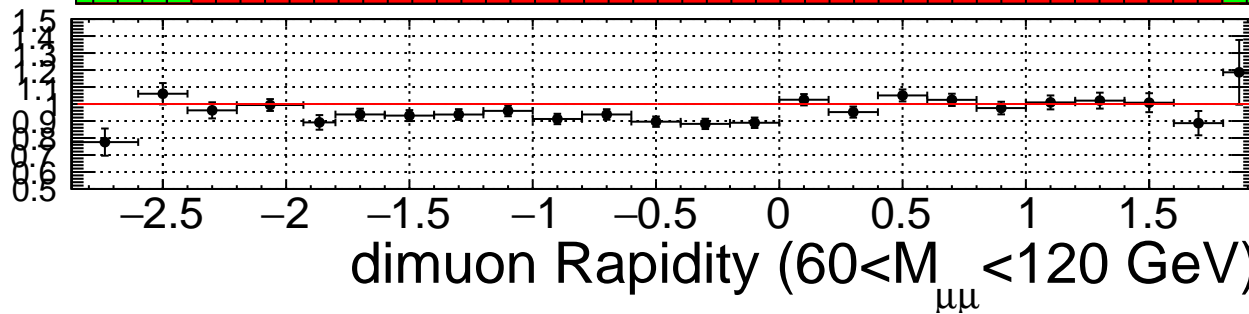
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=2.23$ (0.1%)

KS 0.0%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



data/Pred.

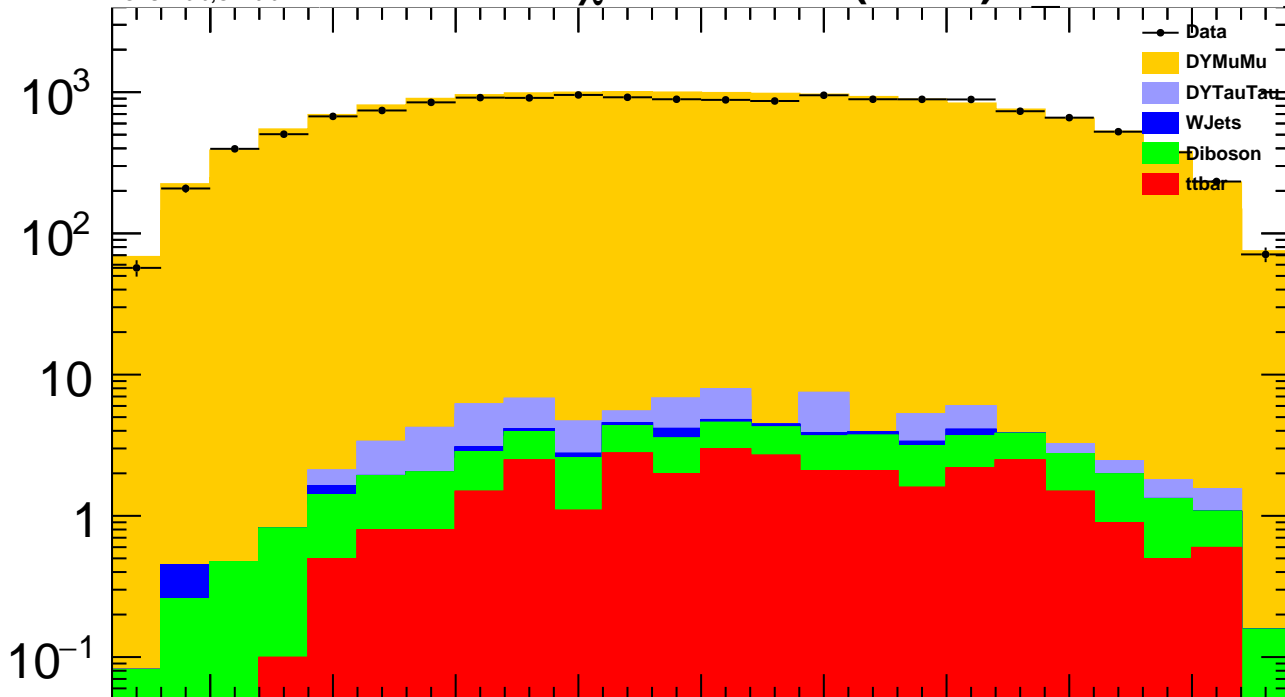


Entry

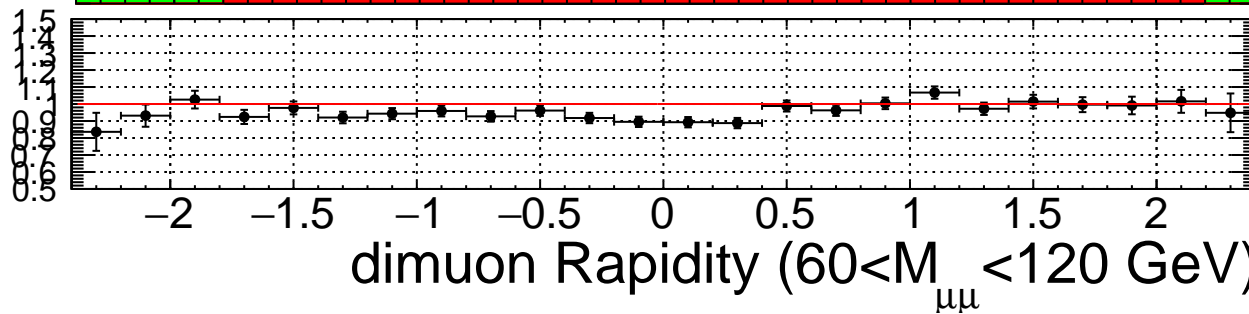
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.66$ (2.4%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.

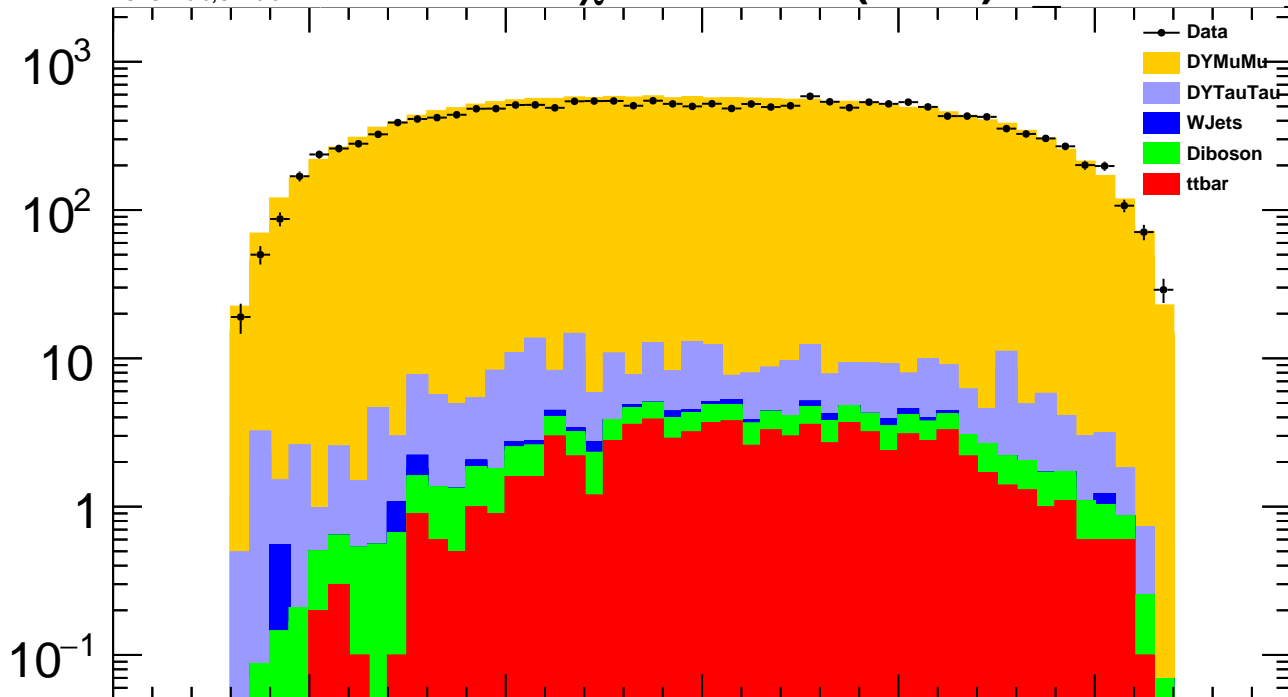


Entry

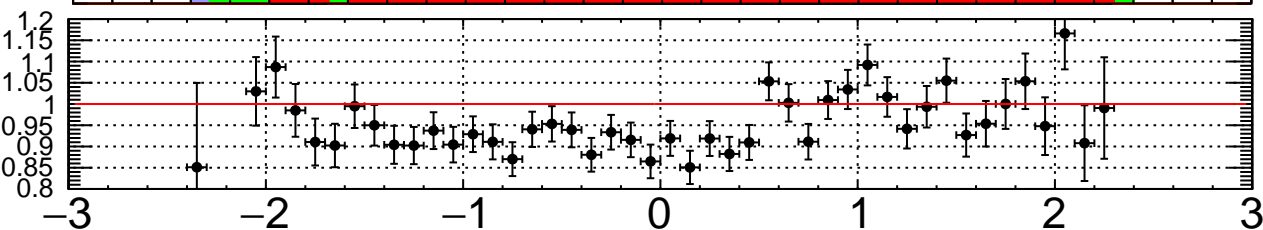
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.92$ (0.0%)

KS 0.0%

— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



data/Pred.



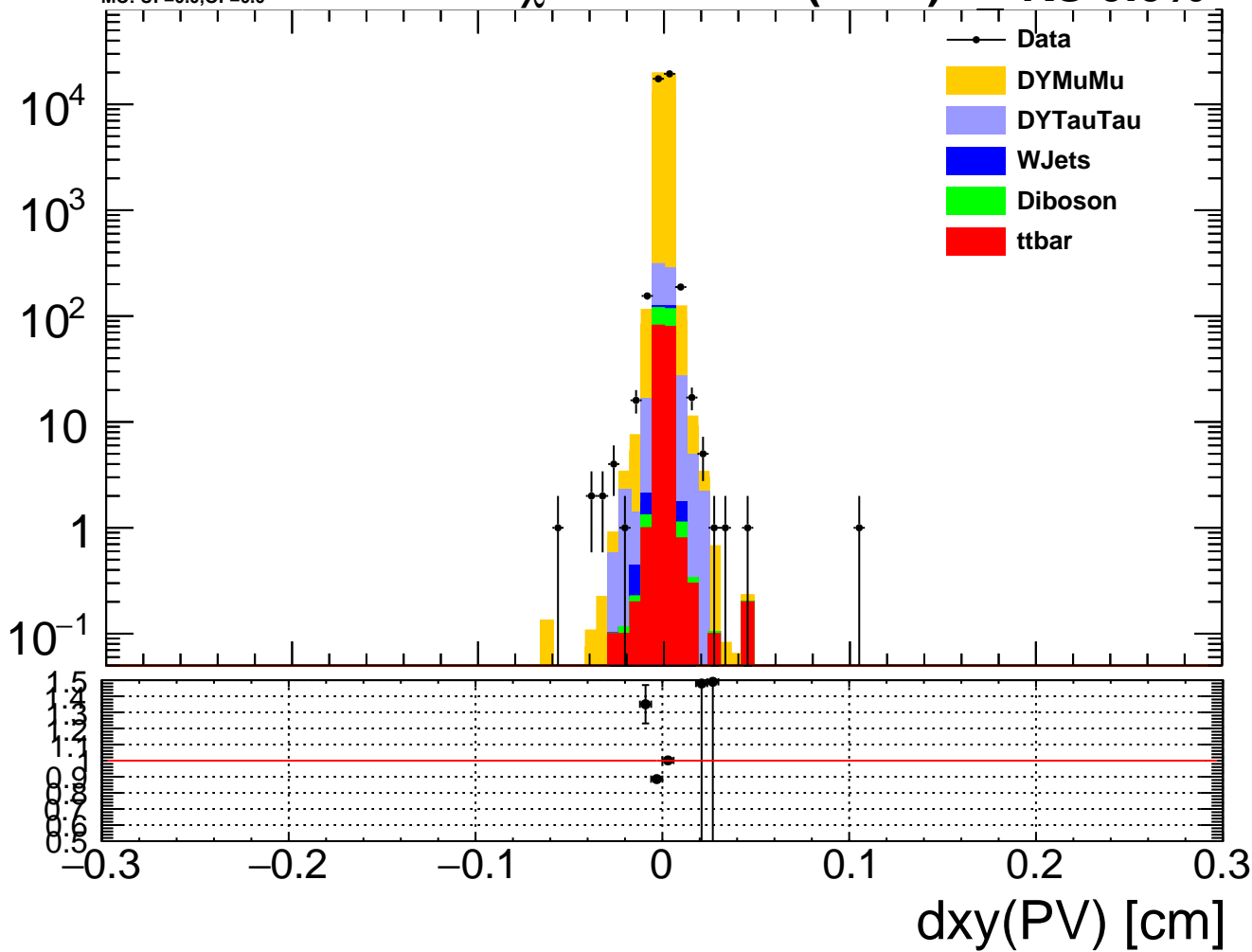
dimuon Rapidity

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=10.93$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



Entry

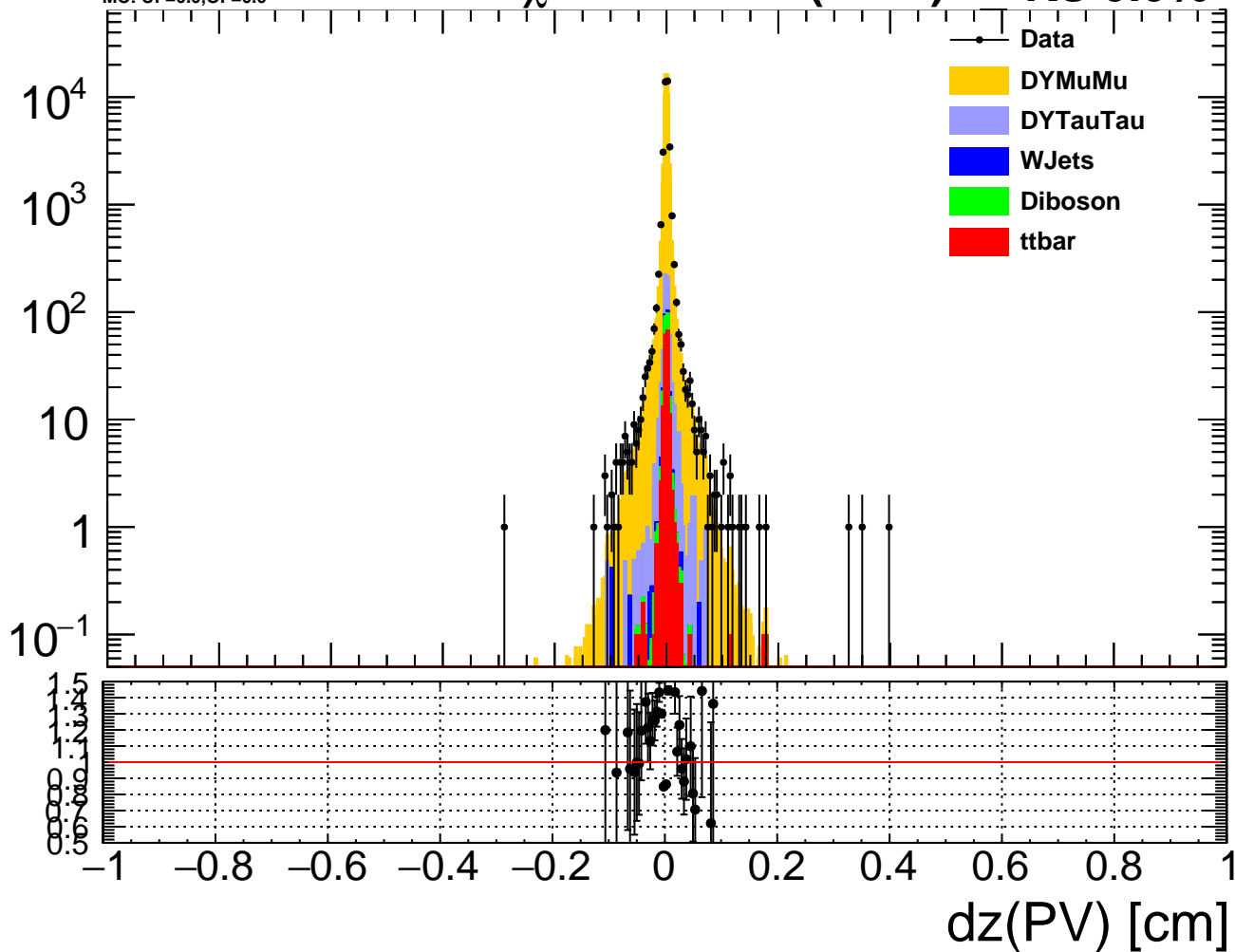
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=13.66$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

10⁴
10³
10²
10
1
10⁻¹

data/Pred.

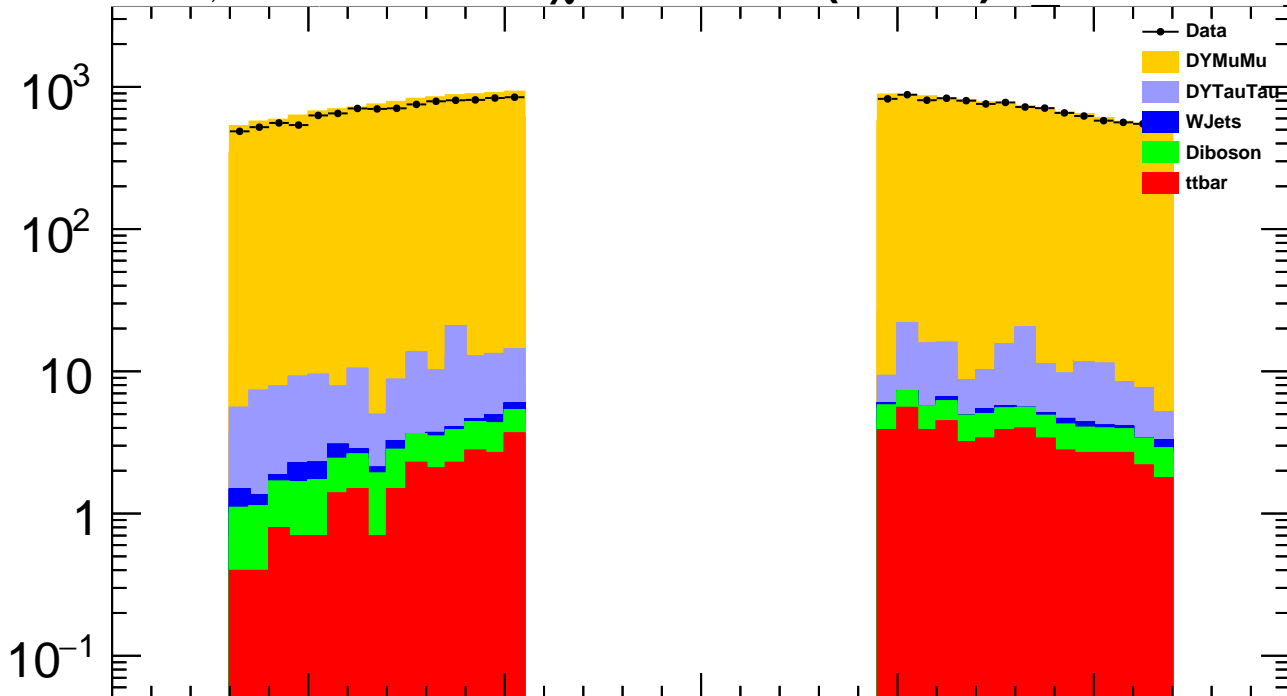
10
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
0.0000001
0.00000001
0.000000001
0.0000000001-1 -0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 1
dz(PV) [cm]

Entry

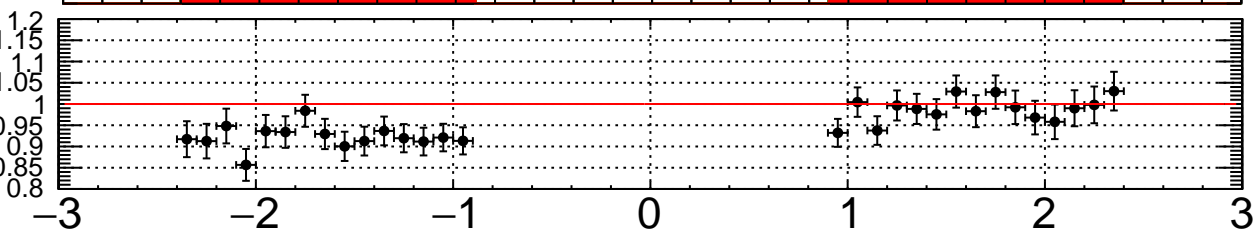
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.35$ (10.0%)

KS 0.0%

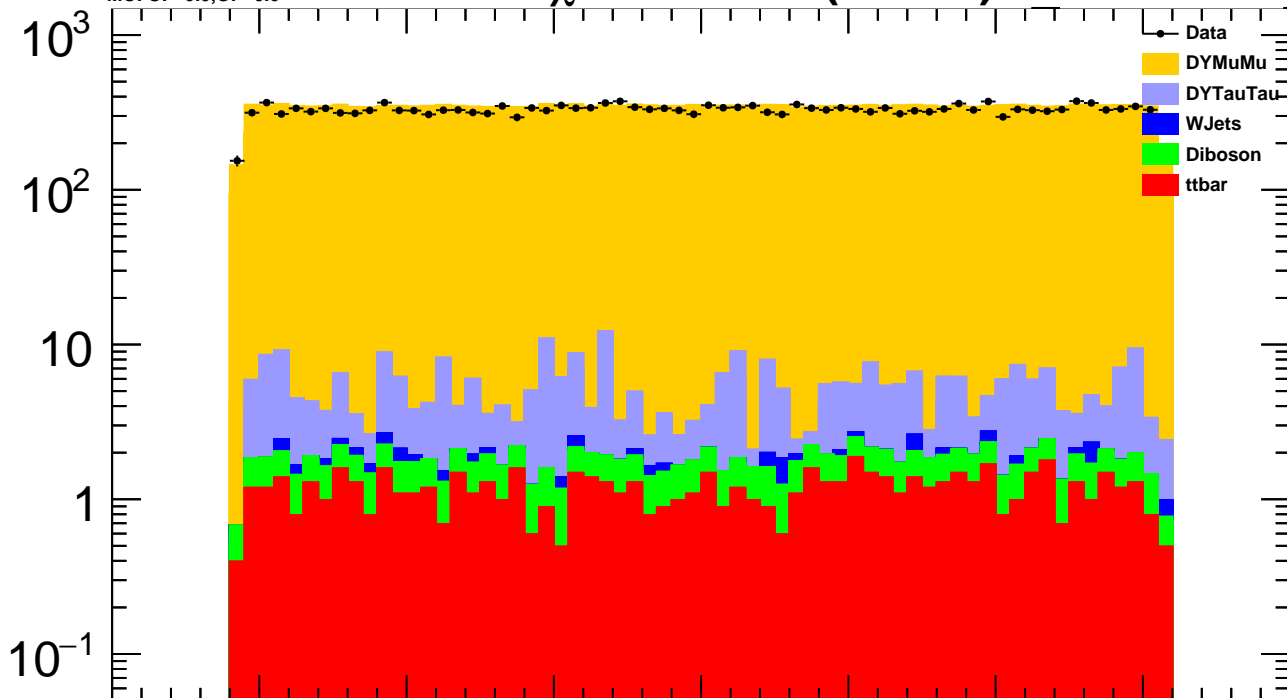
— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



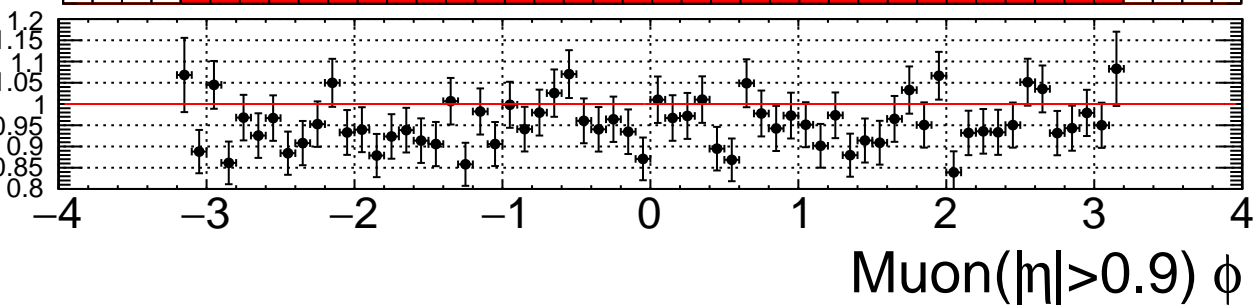
data/Pred.

Muon($|\eta| > 0.9$) η

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.11$ (25.7%) KS 54.0%

data/Pred.



Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=2.4 $\chi^2/\text{ndf}=1.23$ (4.6%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

10³
10²
10
1
10⁻¹

data/Pred.

1.2
1.1
1.05
1.0
0.95
0.9
0.85
0.8

0

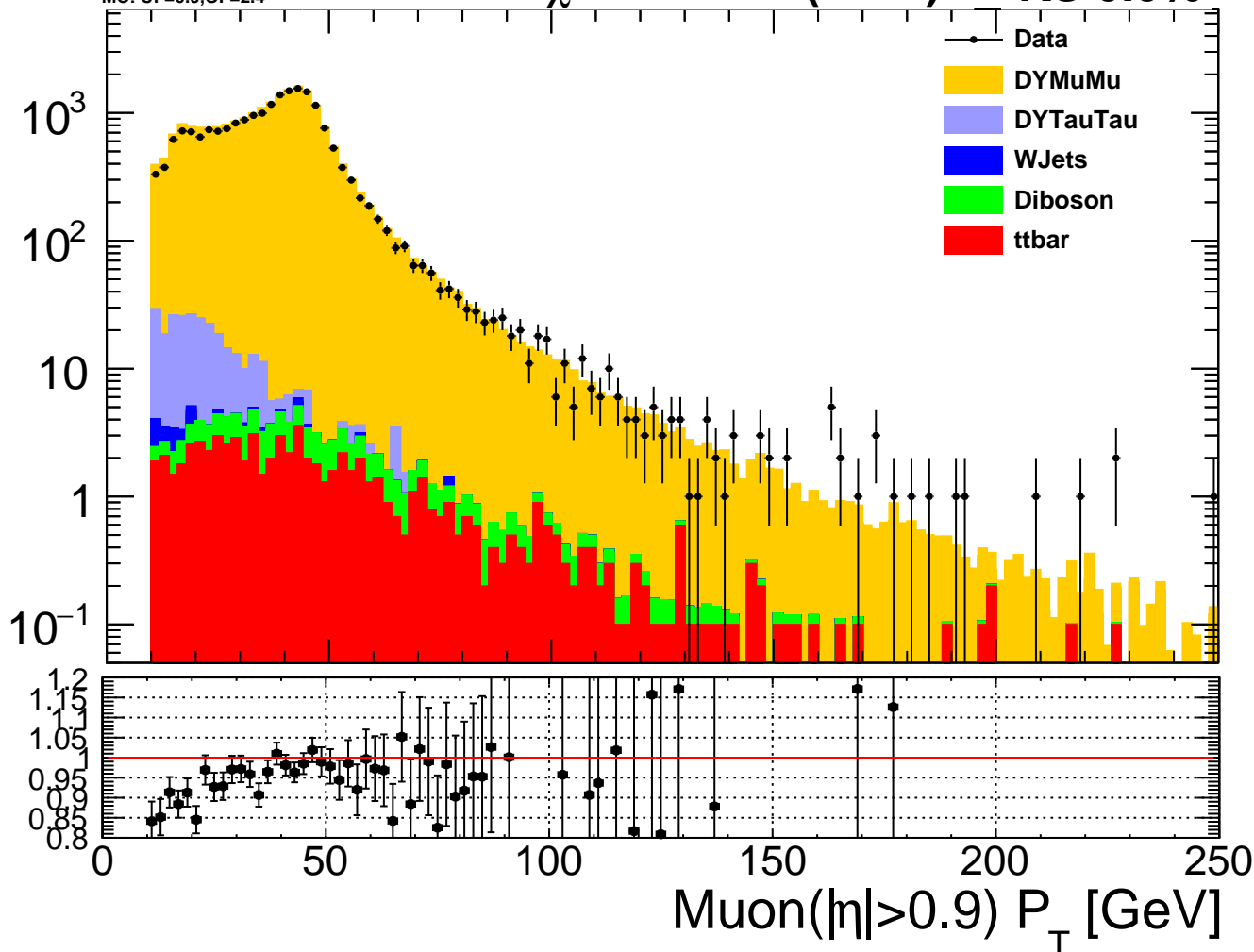
50

100

150

200

250

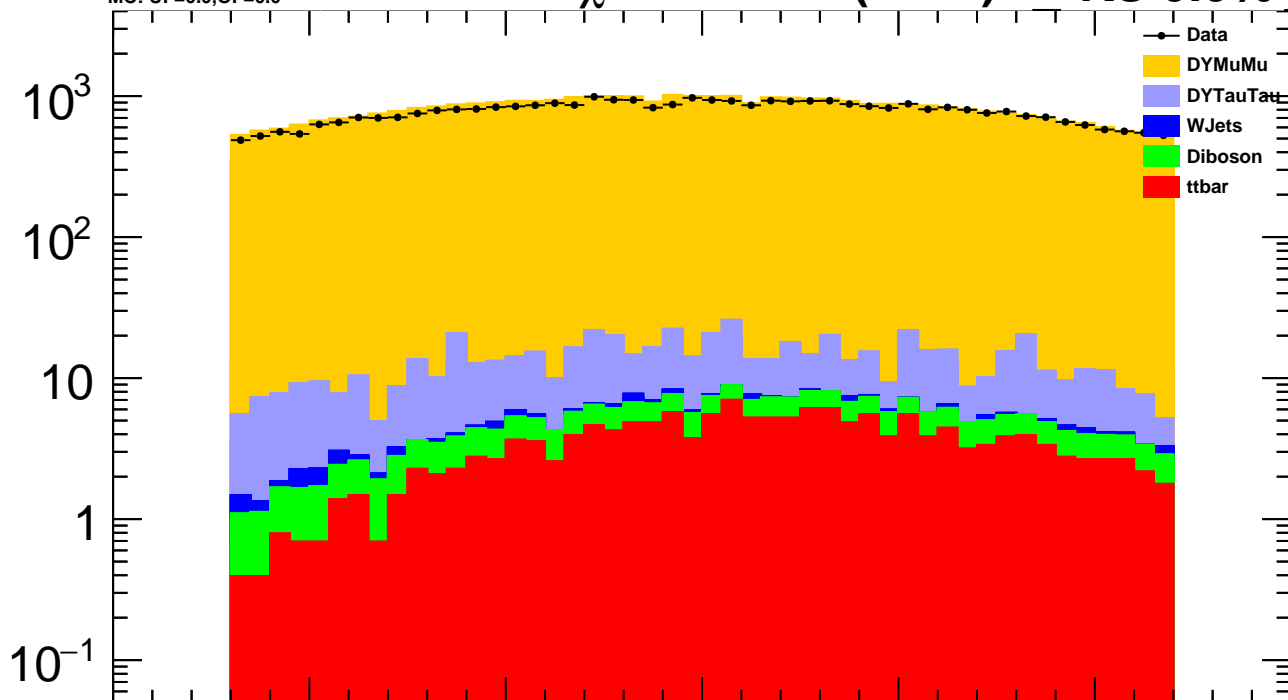
Muon($|\eta|>0.9$) P_T [GeV]

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0

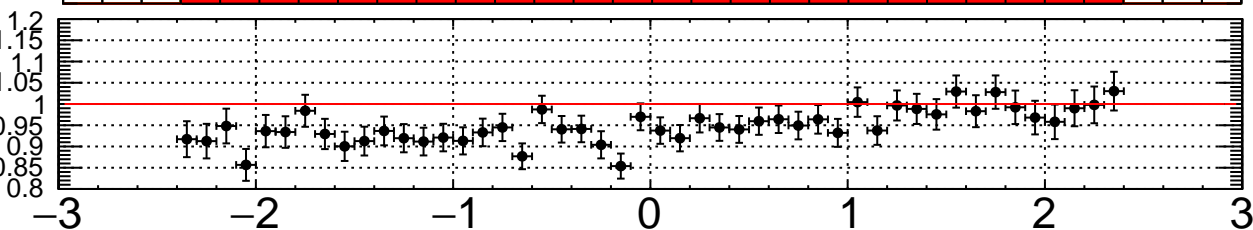
$\chi^2/\text{ndf}=1.28$ (9.3%)

KS 0.0%

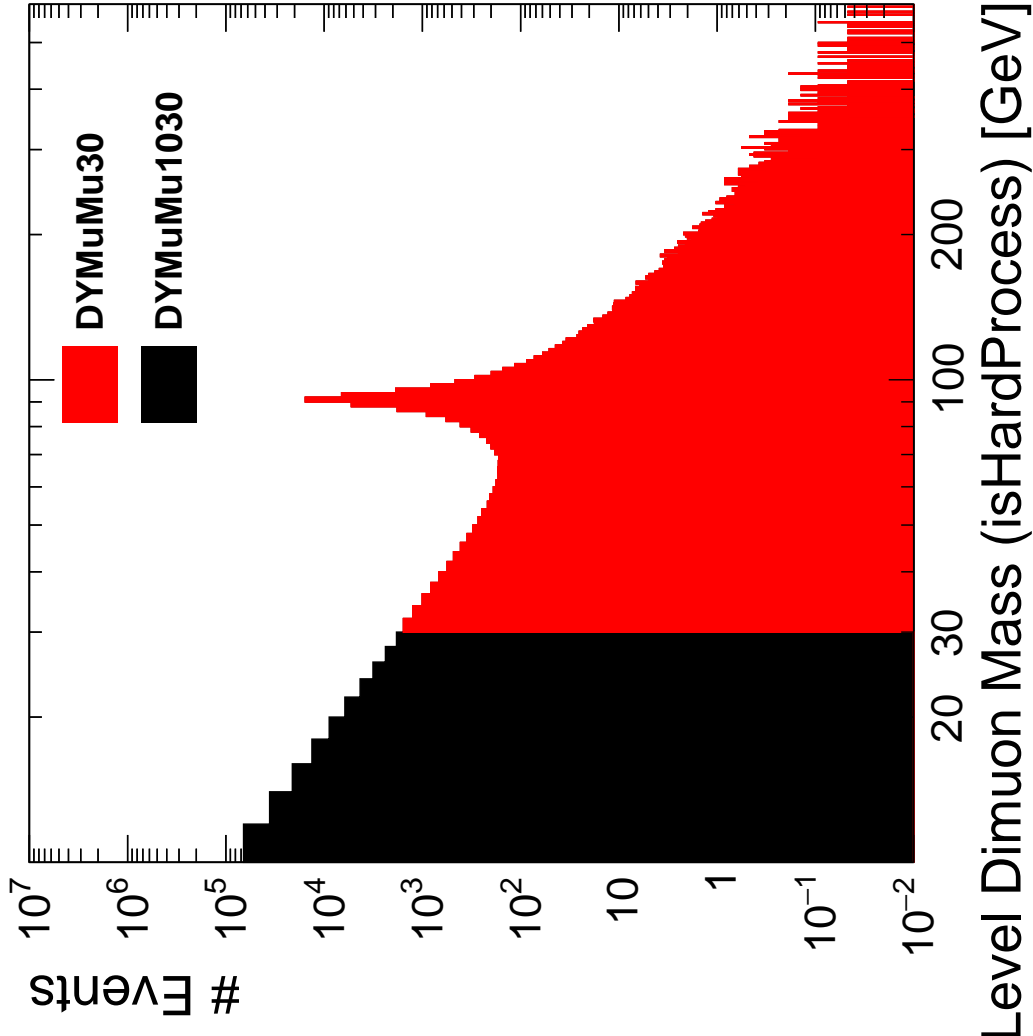
Entry



data/Pred.



Muon η

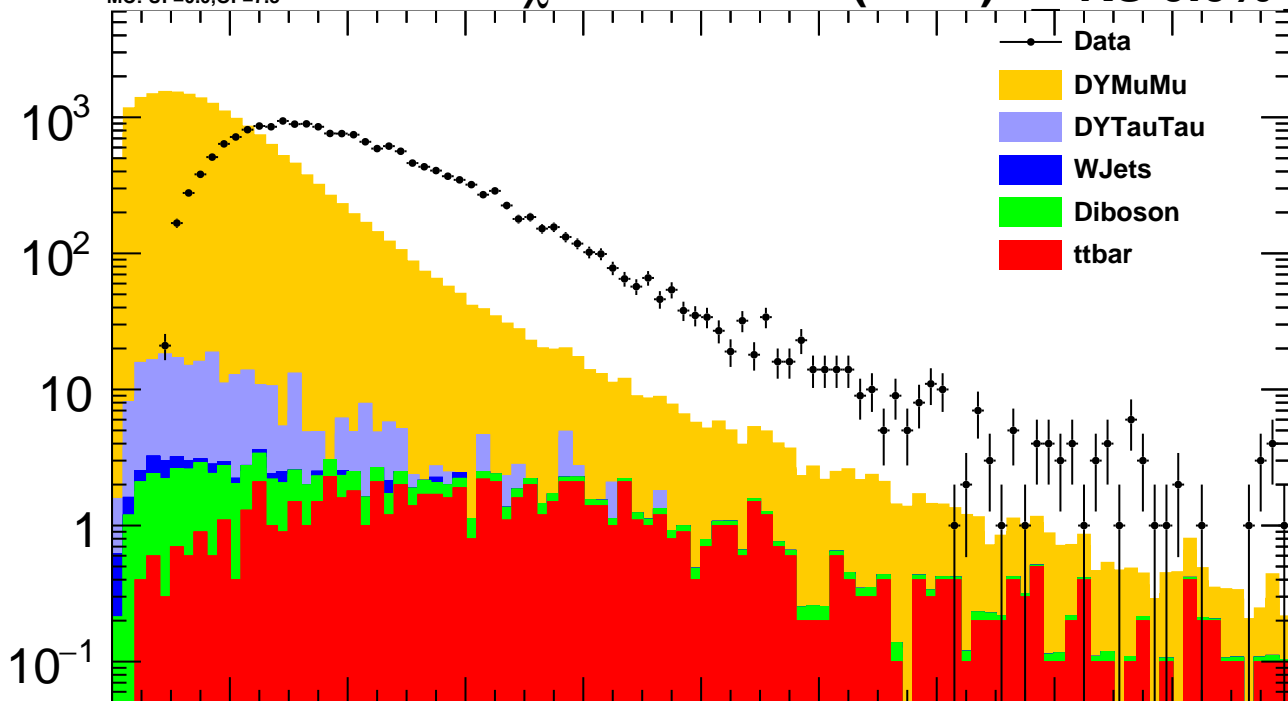


Entry

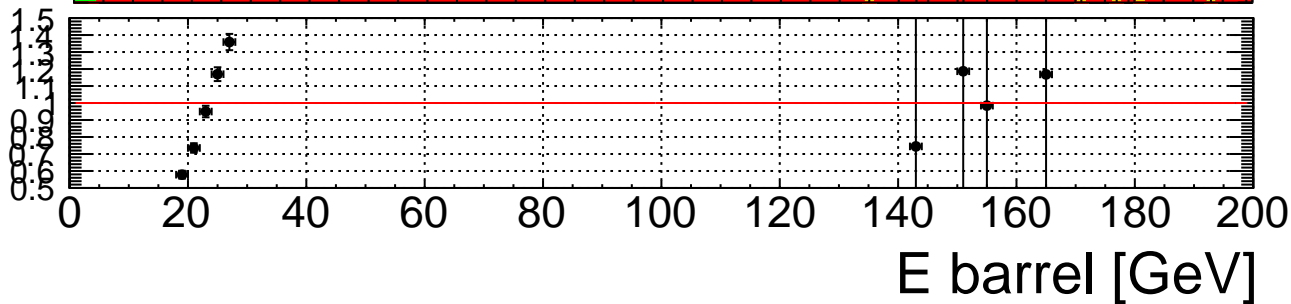
Data: UF=0,OF=27
MC: UF=0.0,OF=7.3 $\chi^2/\text{ndf}=430.84$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.

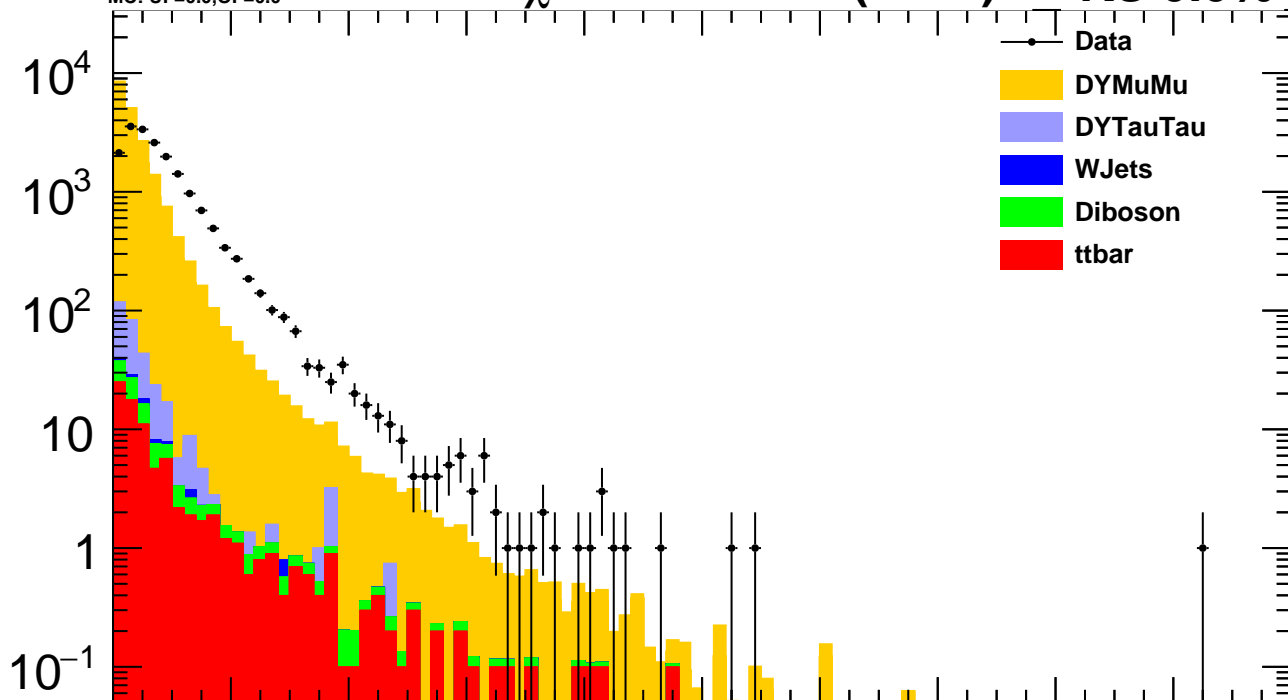


Entry

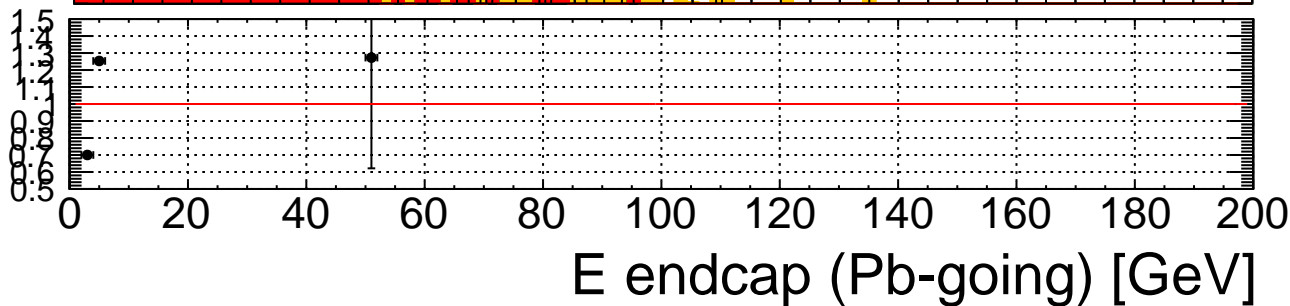
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=223.07$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



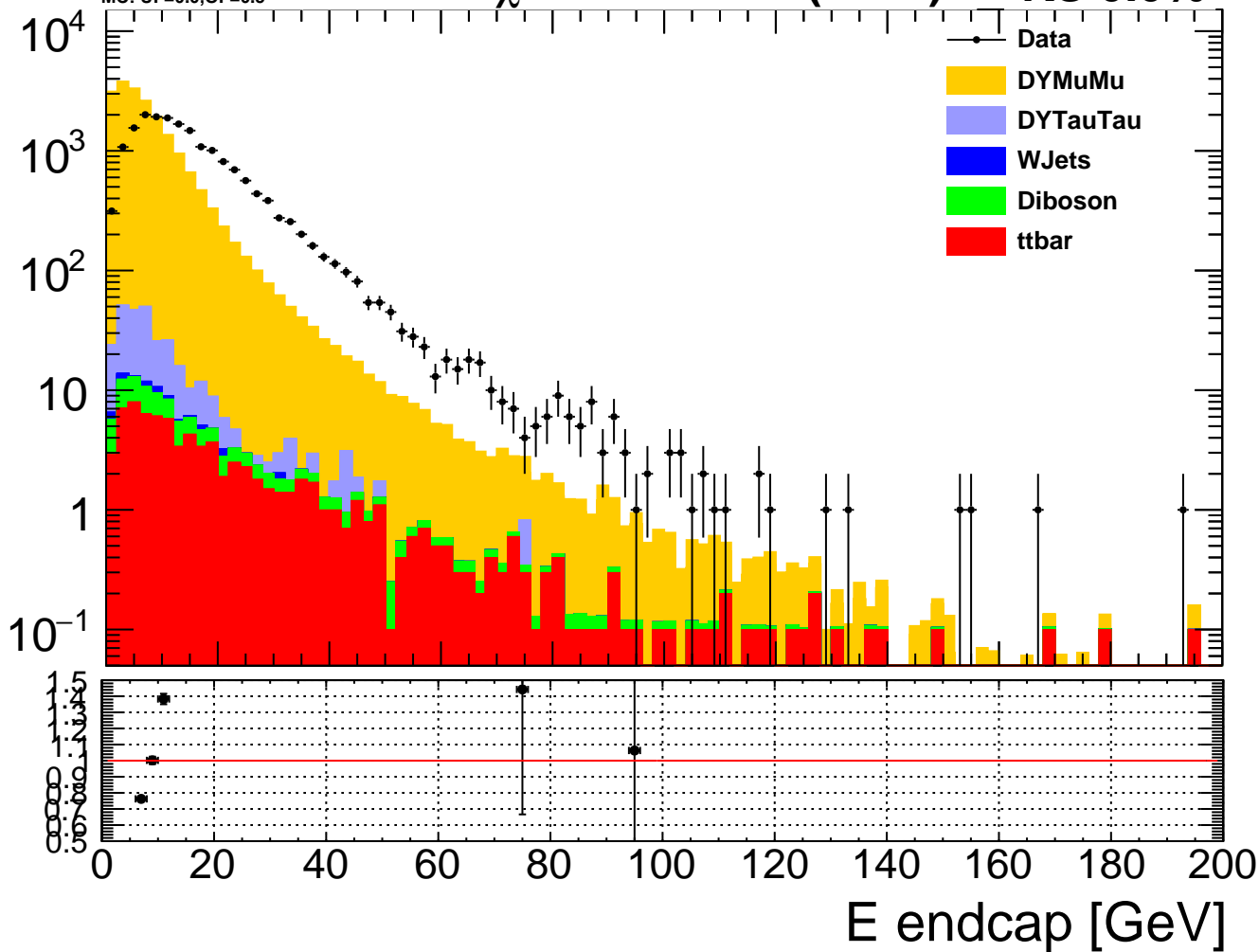
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.5 $\chi^2/\text{ndf}=218.32$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

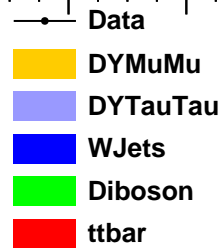
data/Pred.



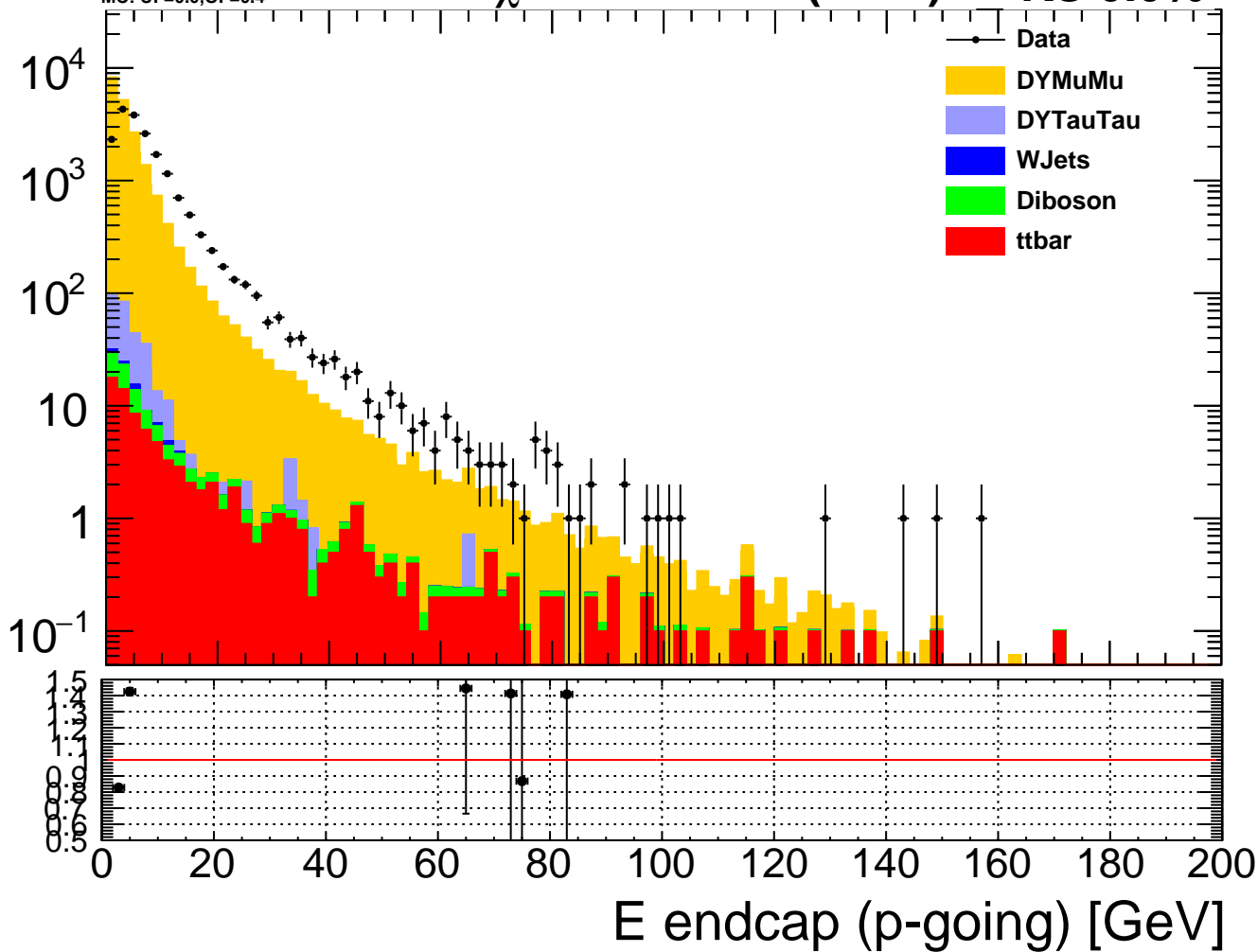
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.4 $\chi^2/\text{ndf}=122.04$ (0.0%)

KS 0.0%



data/Pred.



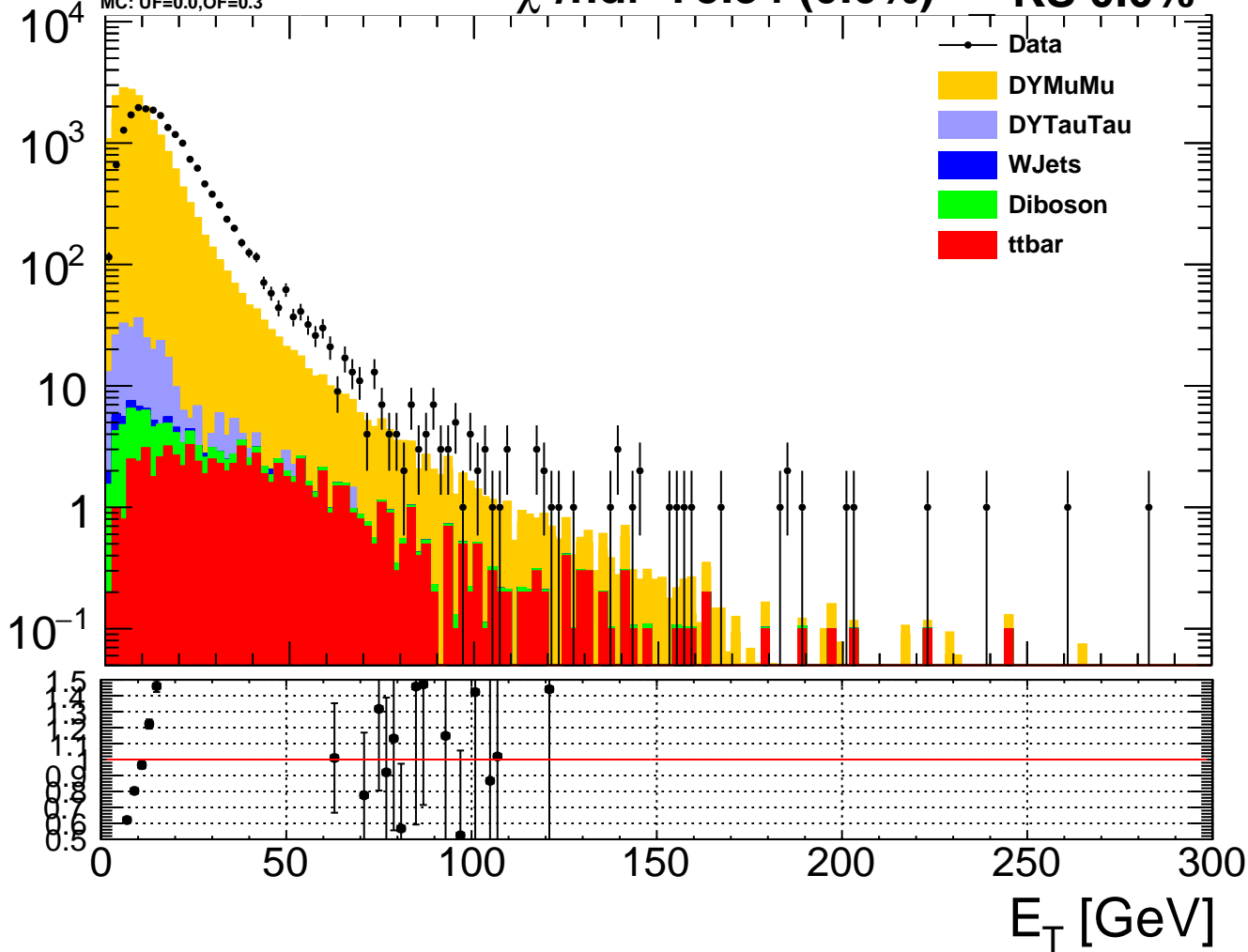
Entry

Data: UF=0,OF=1
MC: UF=0.0,OF=0.3 $\chi^2/\text{ndf}=75.34$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

data/Pred.

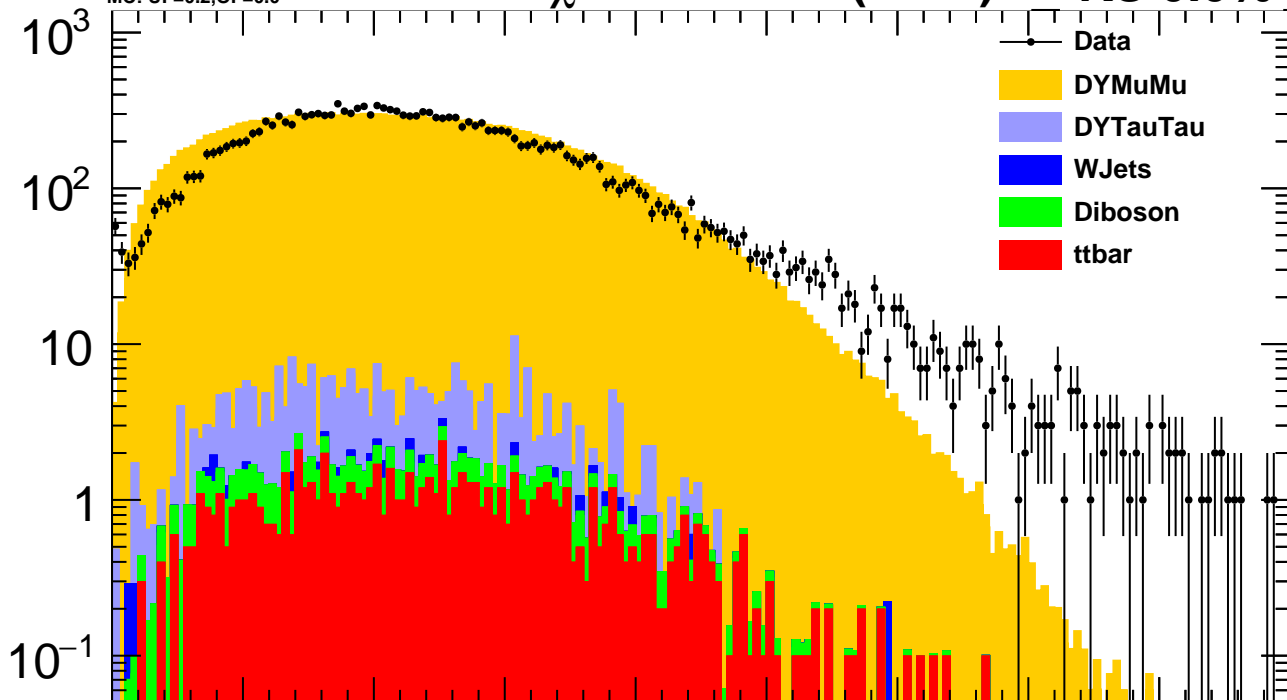


Entry

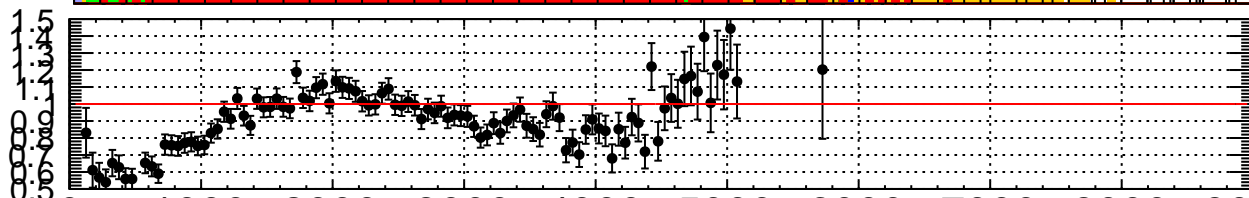
Data: UF=39,OF=6
MC: UF=0.2,OF=0.0 $\chi^2/\text{ndf}=20.72$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



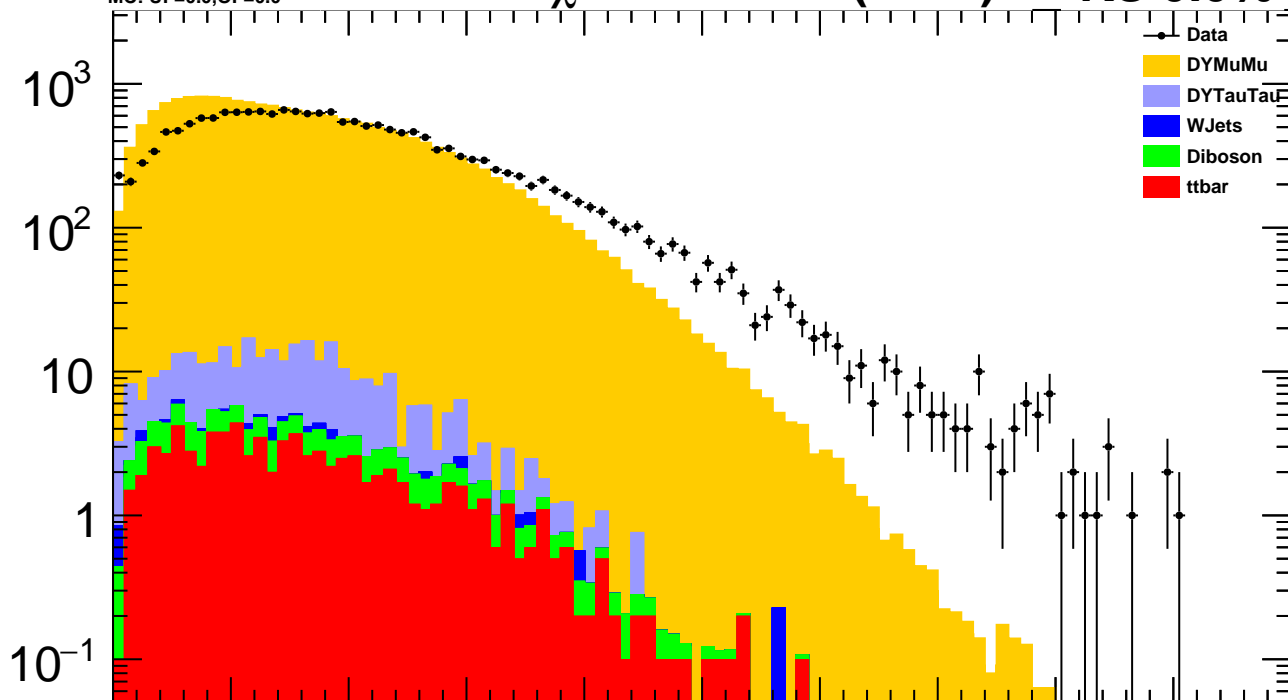
HF hits

Entry

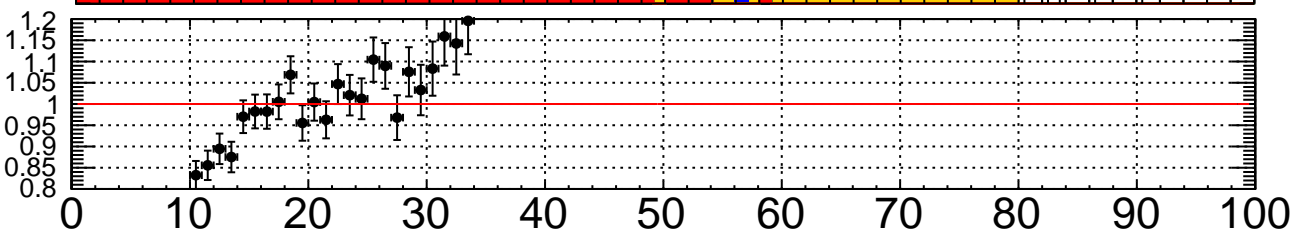
Data: UF=0,OF=2
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=59.53$ (0.0%)

KS 0.0%

● Data
■ DYMuMu
■ DYTauTau
■ WJets
■ Diboson
■ ttbar



data/Pred.

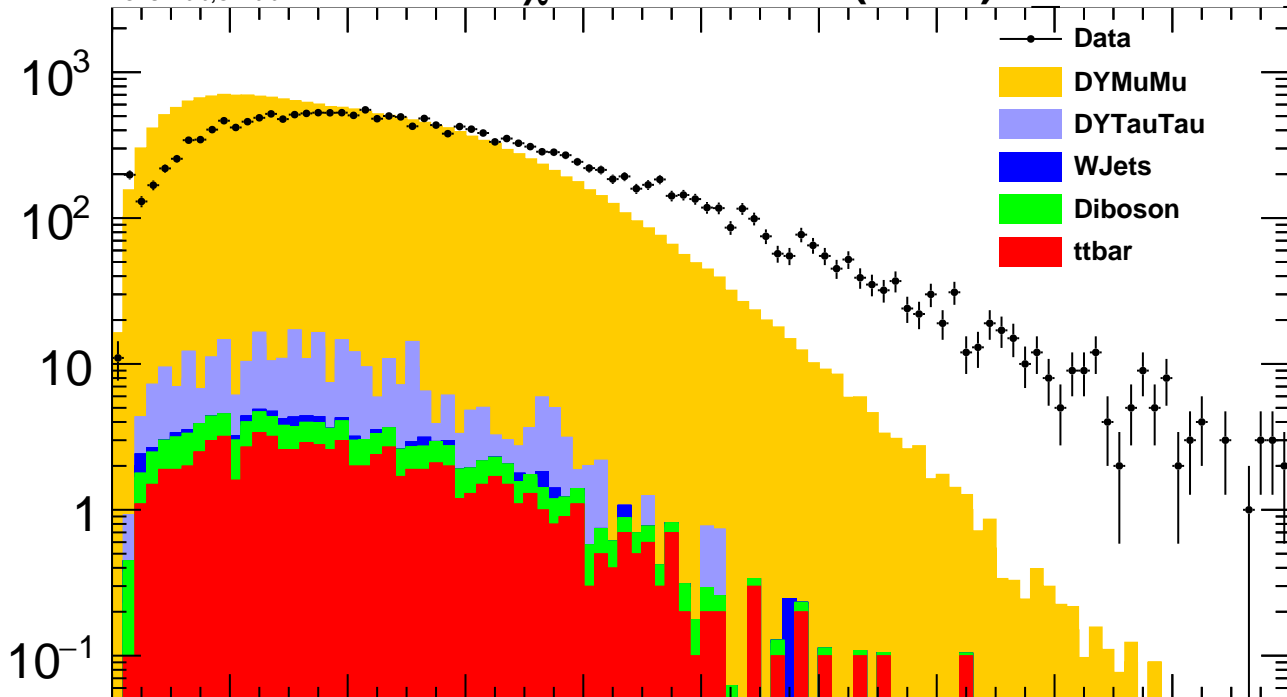
HF (Pb-going, $|\eta|>4$) energy [GeV]

Entry

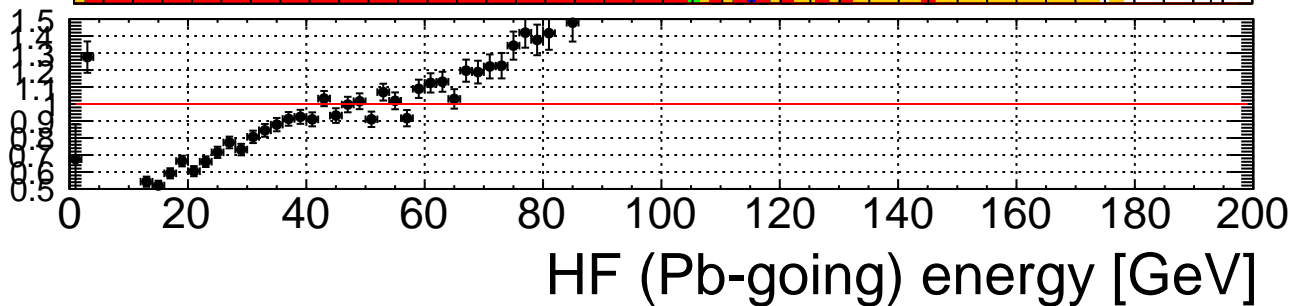
Data: UF=0,OF=19
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=137.37$ (0.0%)

KS 0.0%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



data/Pred.

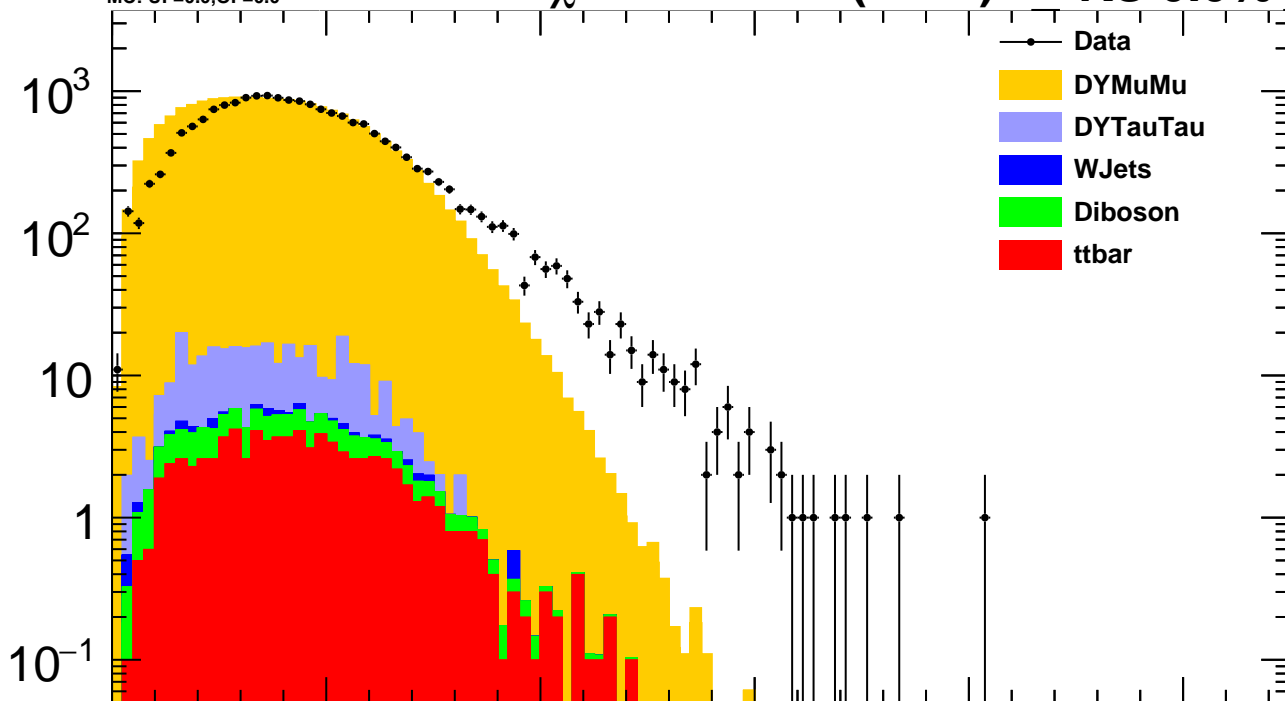


Entry

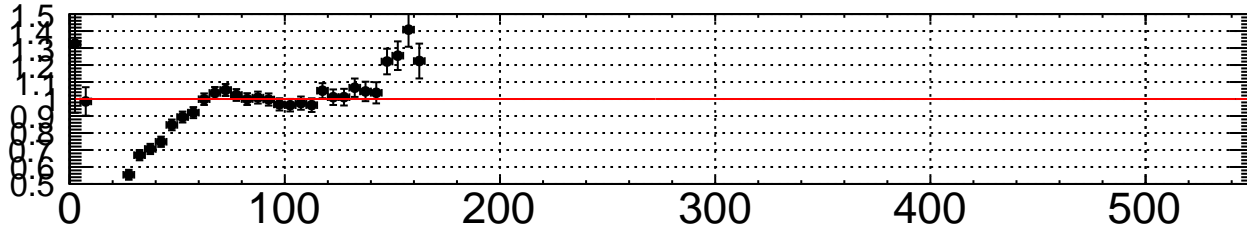
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=83.74$ (0.0%)

KS 0.0%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



data/Pred.



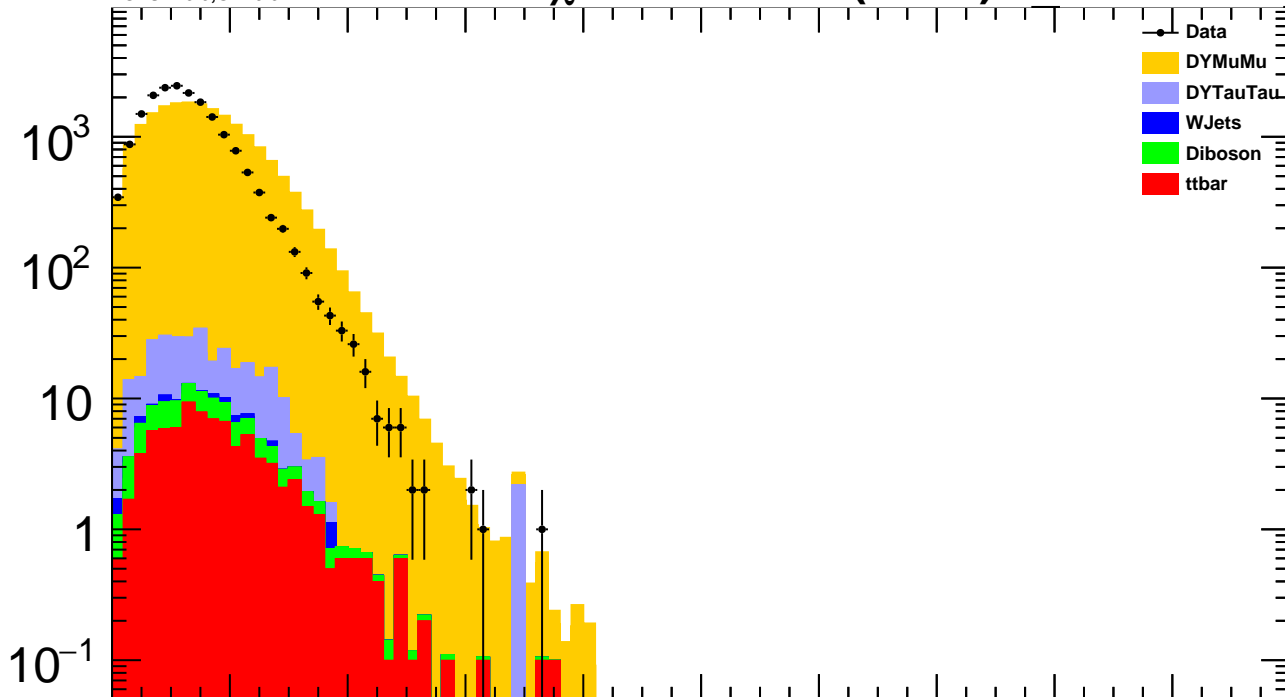
HF energy [GeV]

Entry

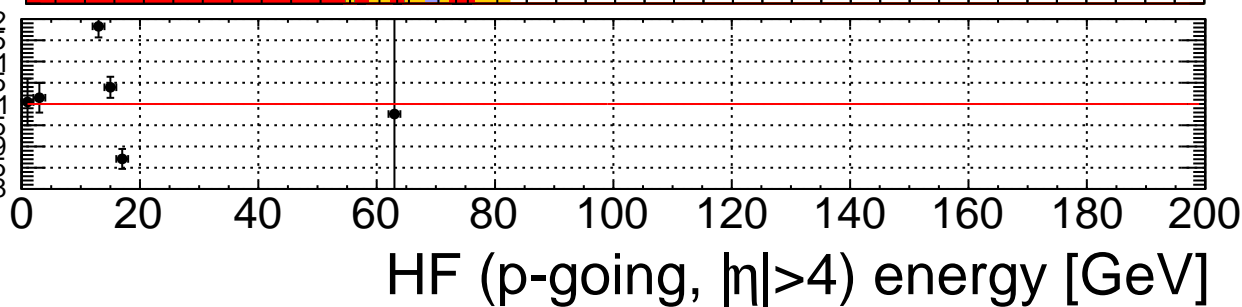
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=52.79$ (0.0%)

KS 0.0%

—●— Data
■ DYMuMu
■ DYTauTau
■ WJets
■ Diboson
■ ttbar



data/Pred.

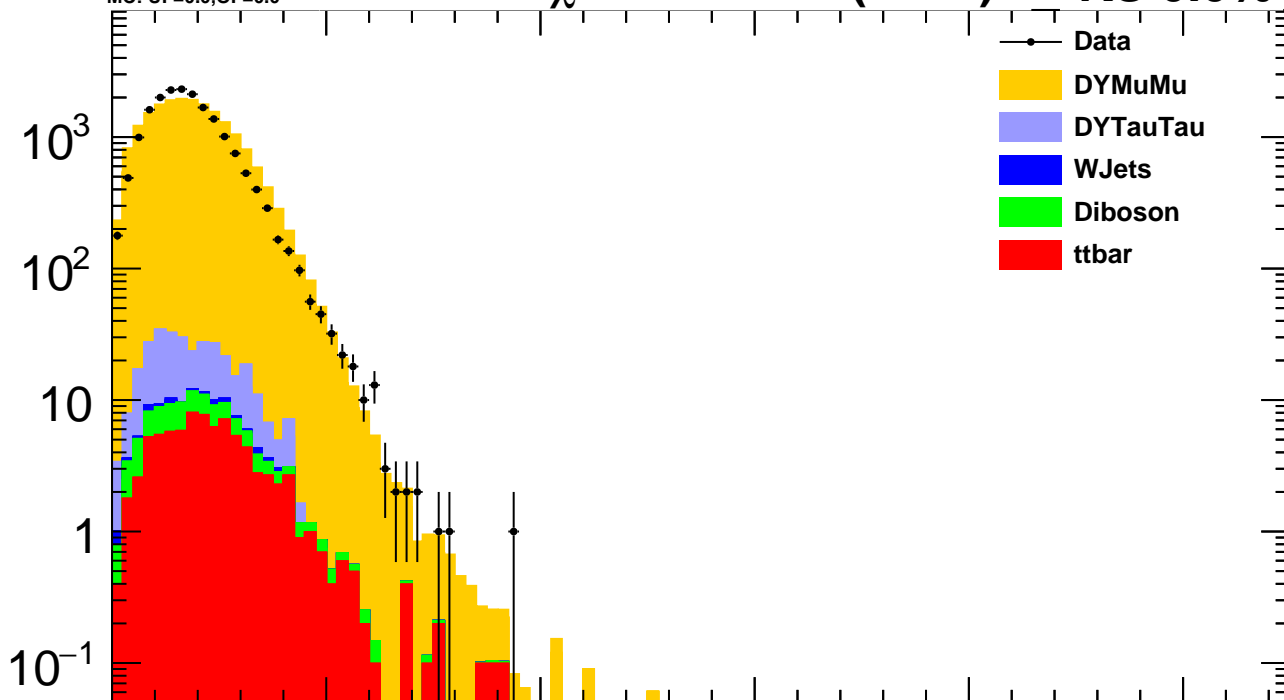


Entry

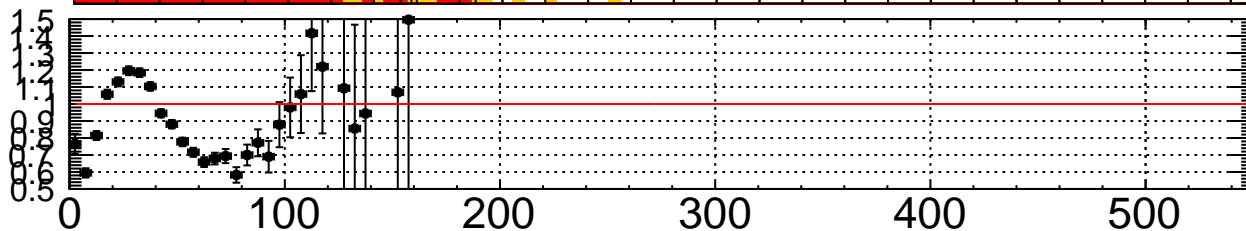
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=16.49$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



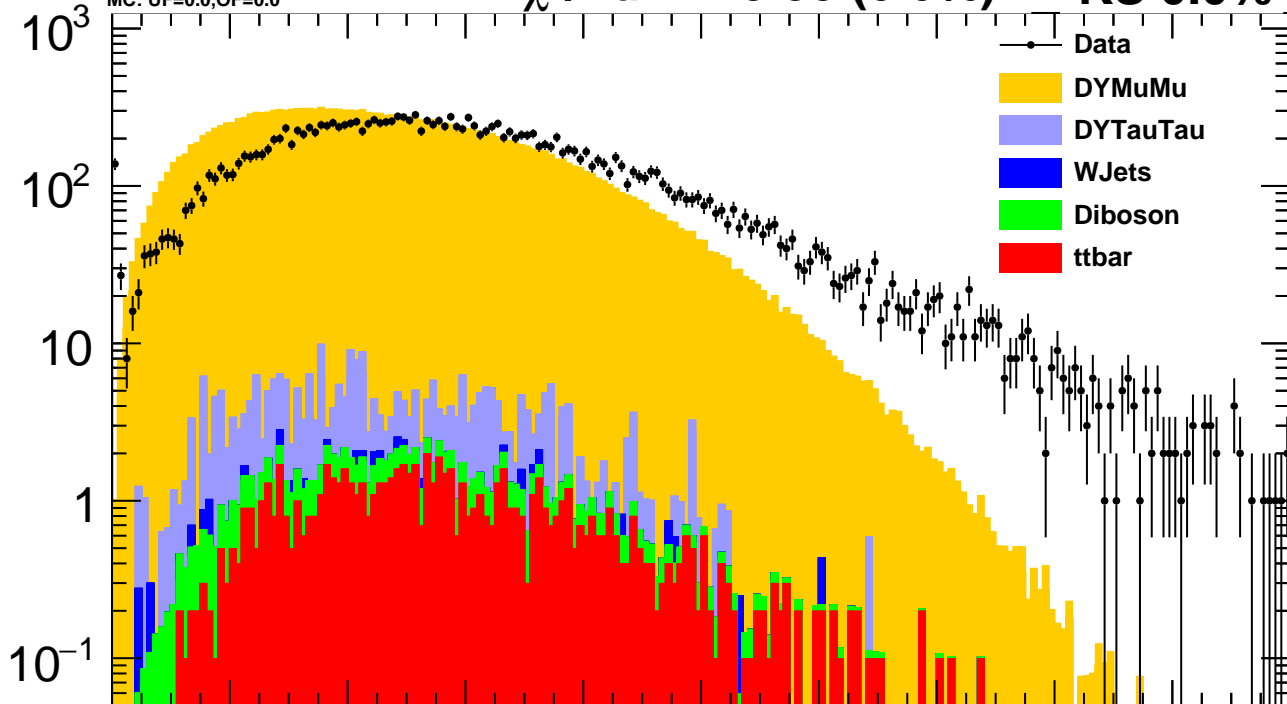
HF (p-going) energy [GeV]

Entry

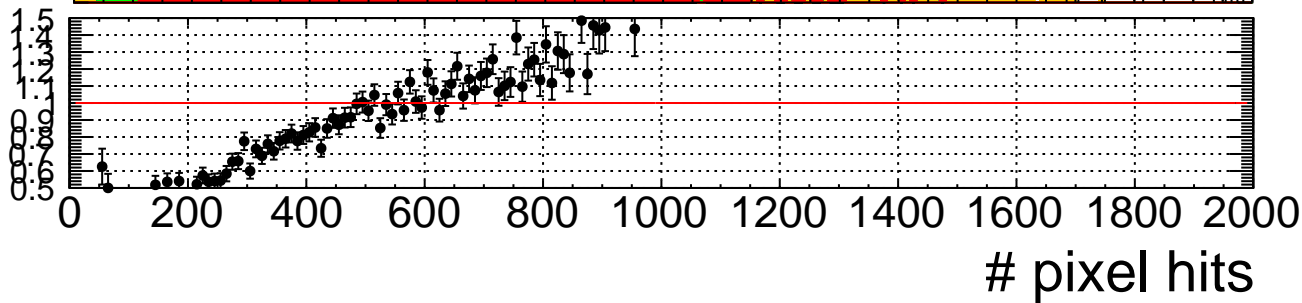
Data: UF=0,OF=28
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=119.35$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.

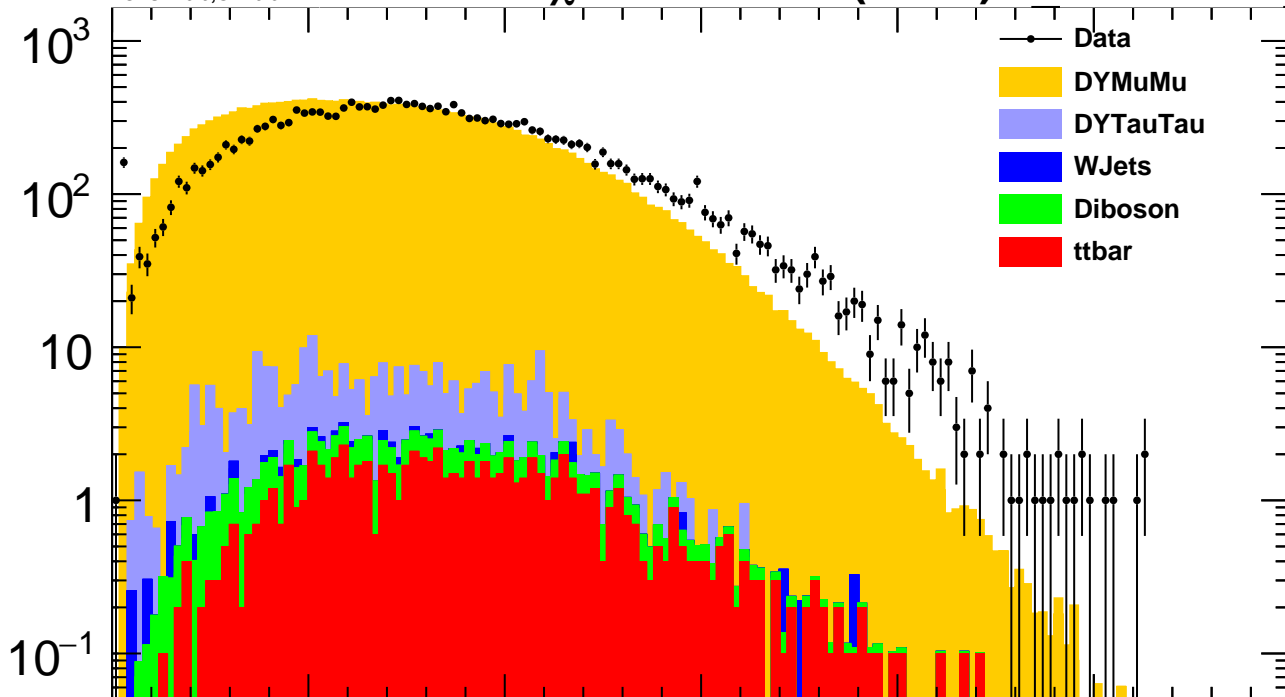


Entry

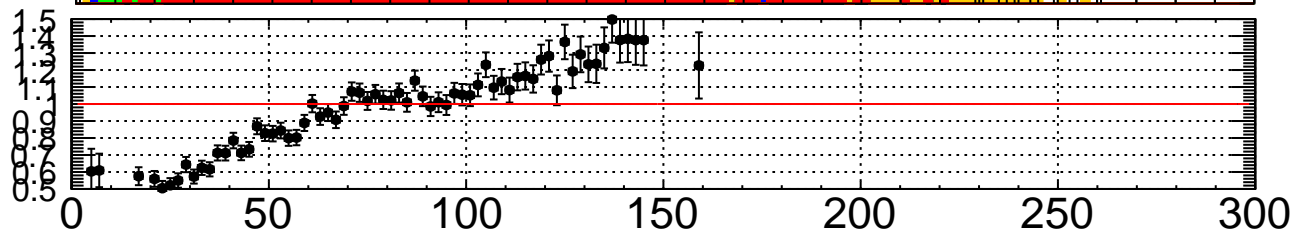
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=31.45$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



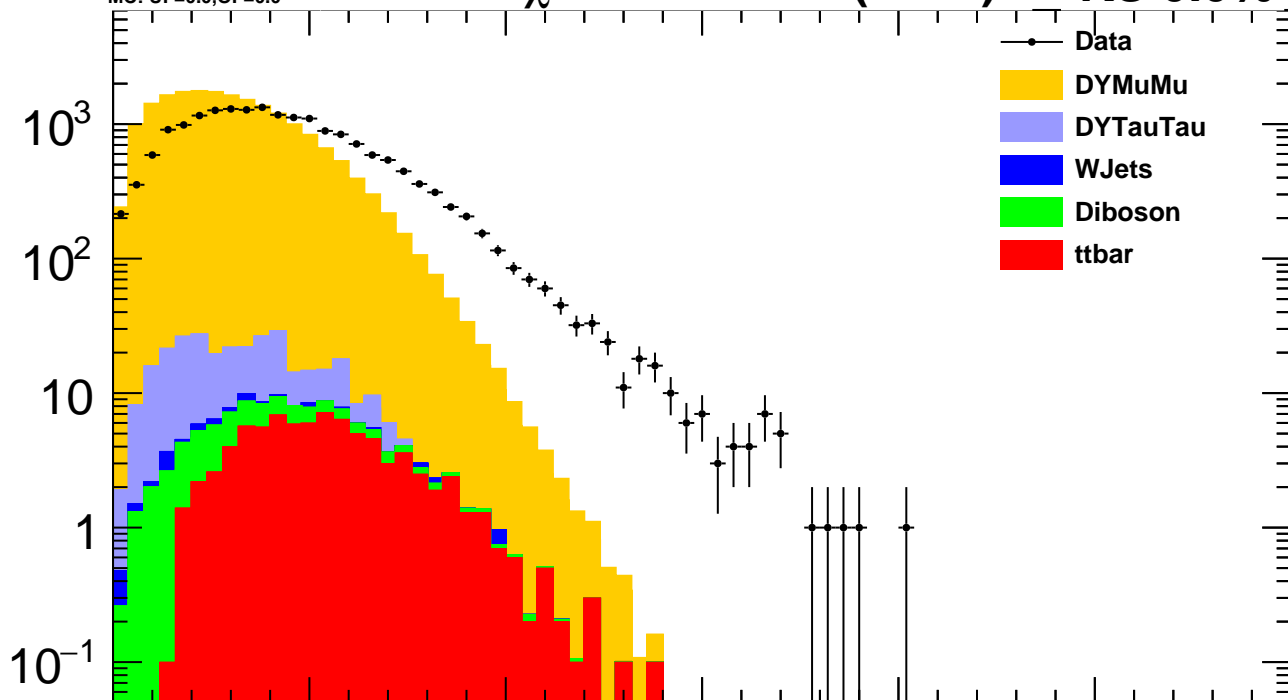
tracks

Entry

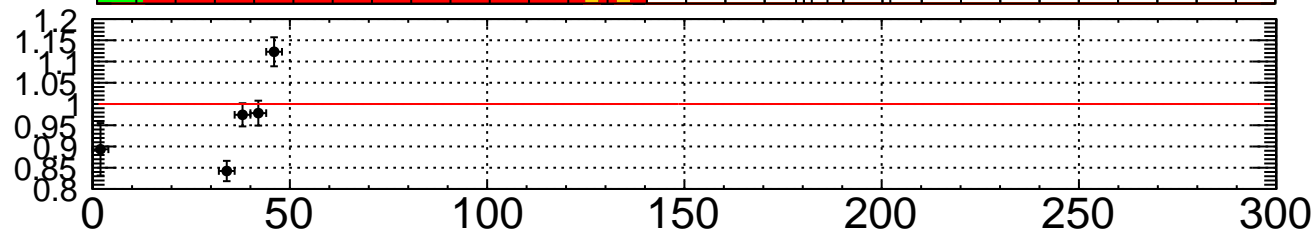
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=669.02$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.

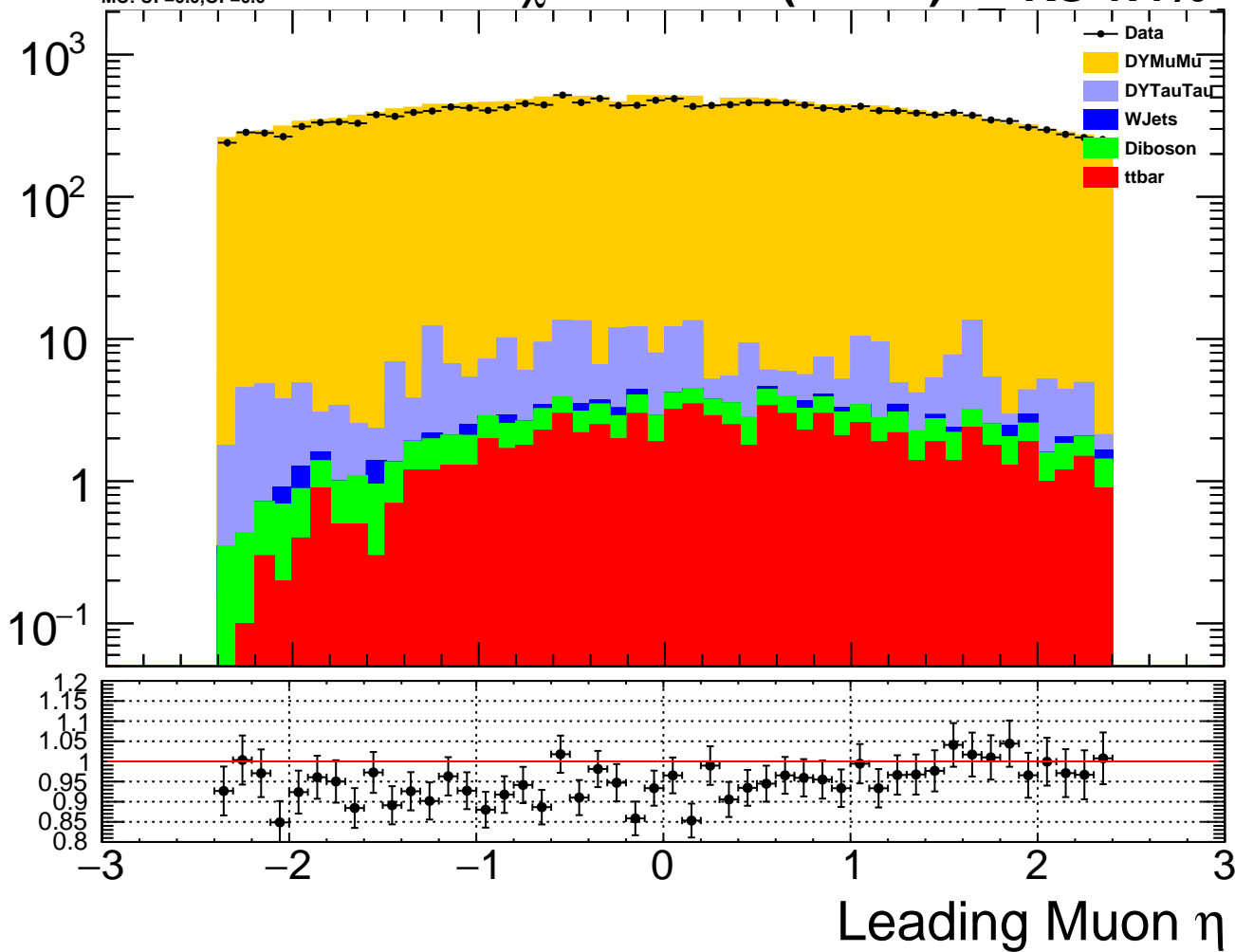
# tracks with p_T cut

Entry

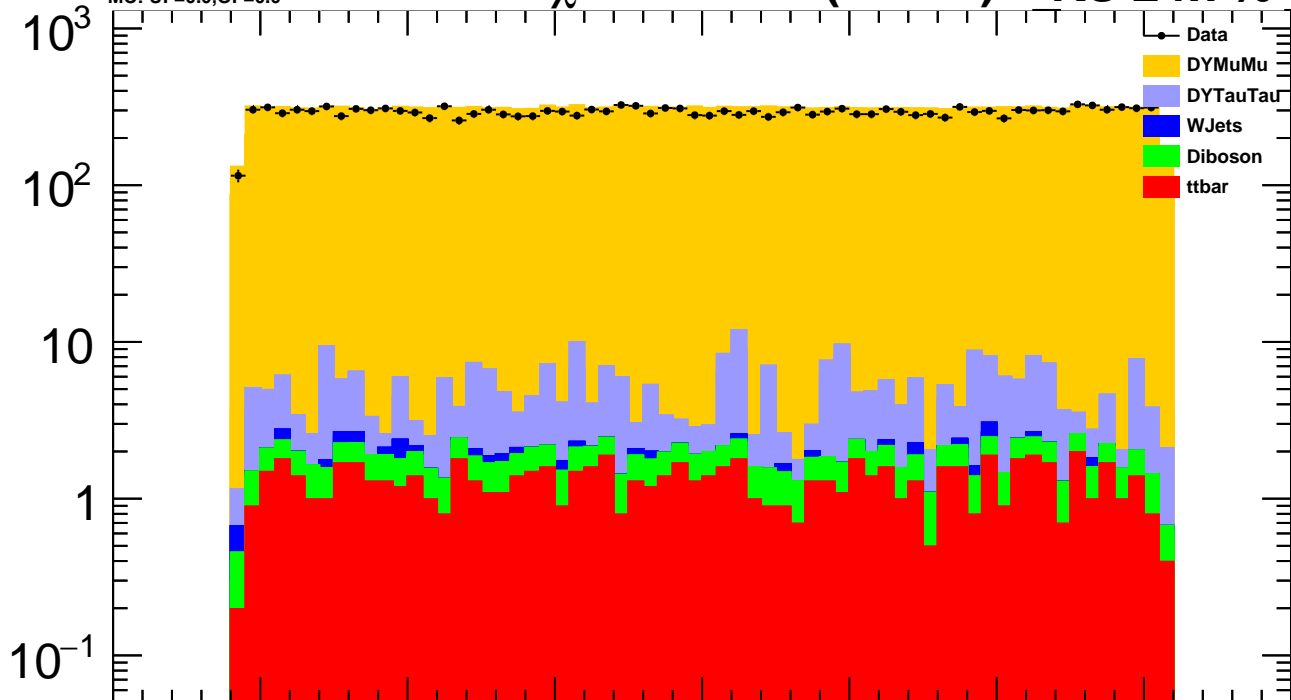
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=0.89$ (69.1%)

KS 1.4%

data/Pred.



Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=0.88$ (73.7%) KS 24.7%

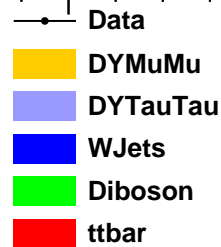
data/Pred.

Leading Muon ϕ

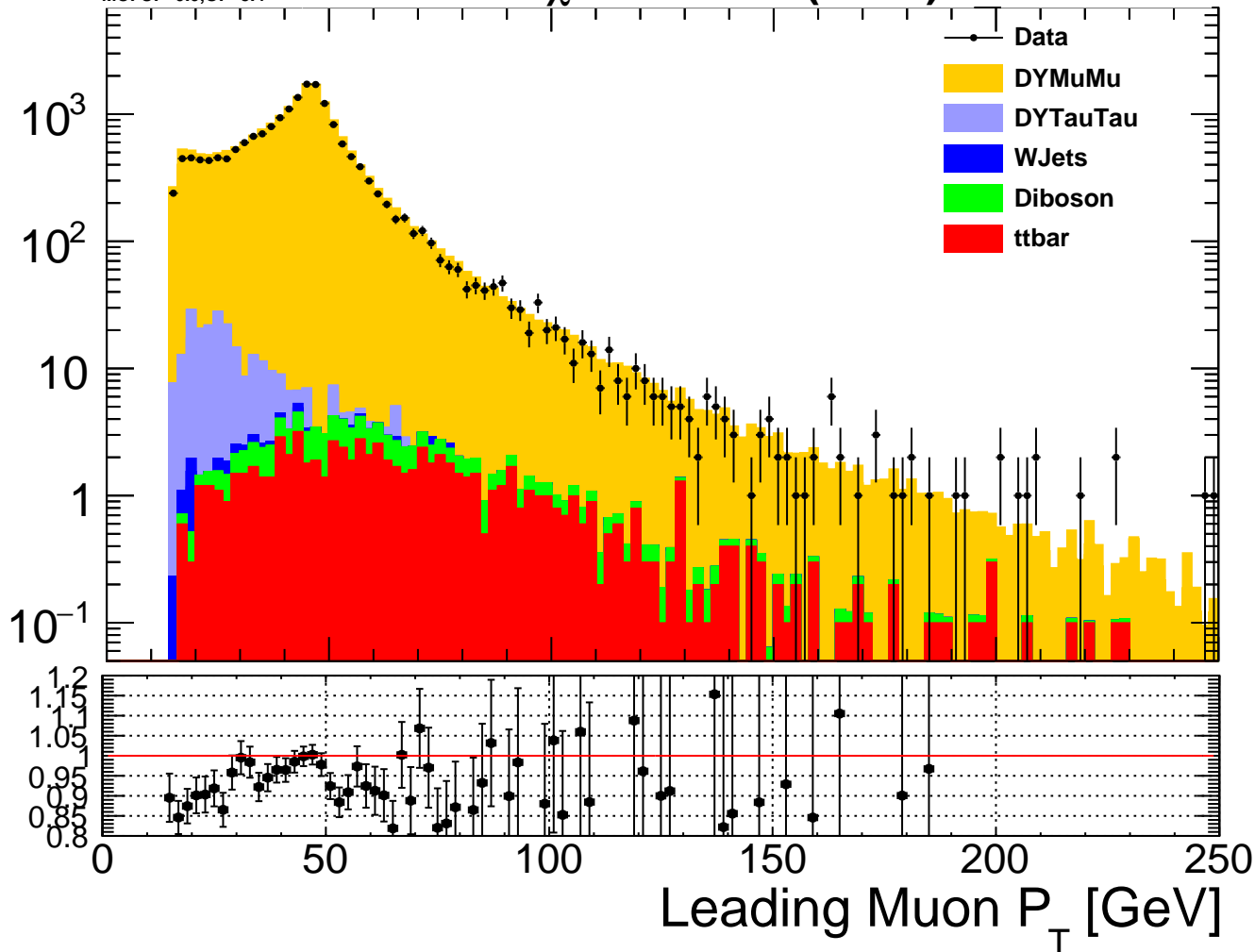
Entry

Data: UF=0,OF=3
MC: UF=0.0,OF=5.4 $\chi^2/\text{ndf}=1.19$ (7.7%)

KS 2.8%



data/Pred.

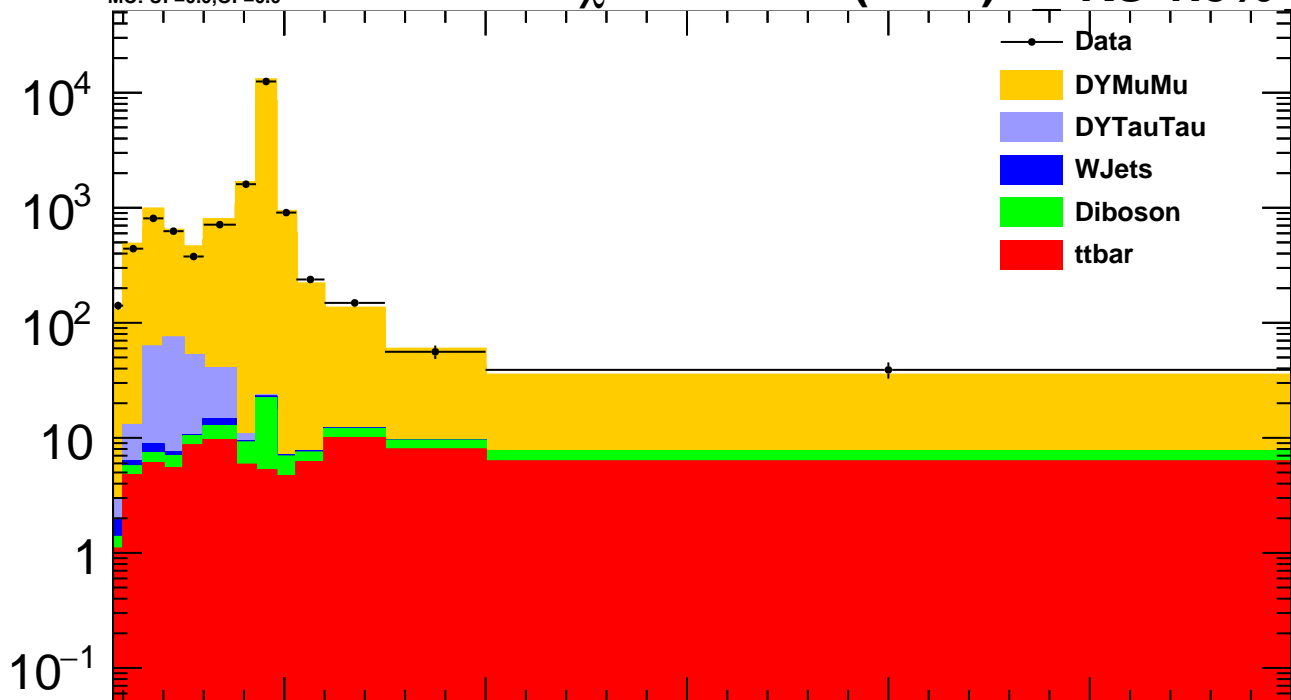


Entry

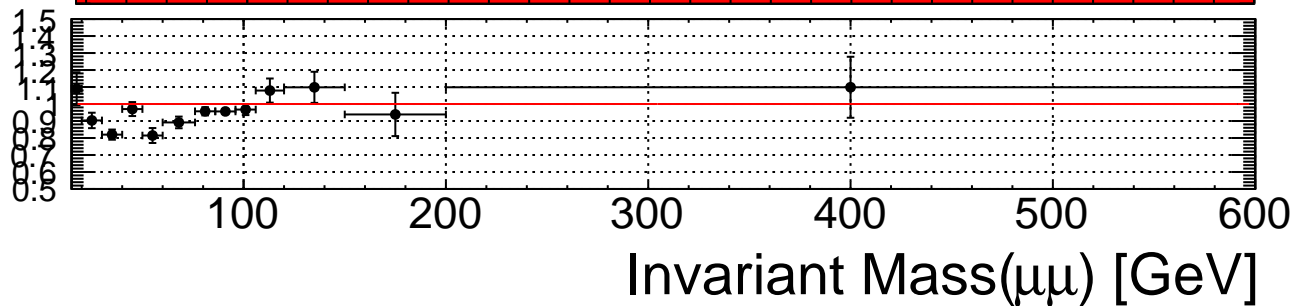
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=3.27$ (0.0%)

KS 1.5%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.

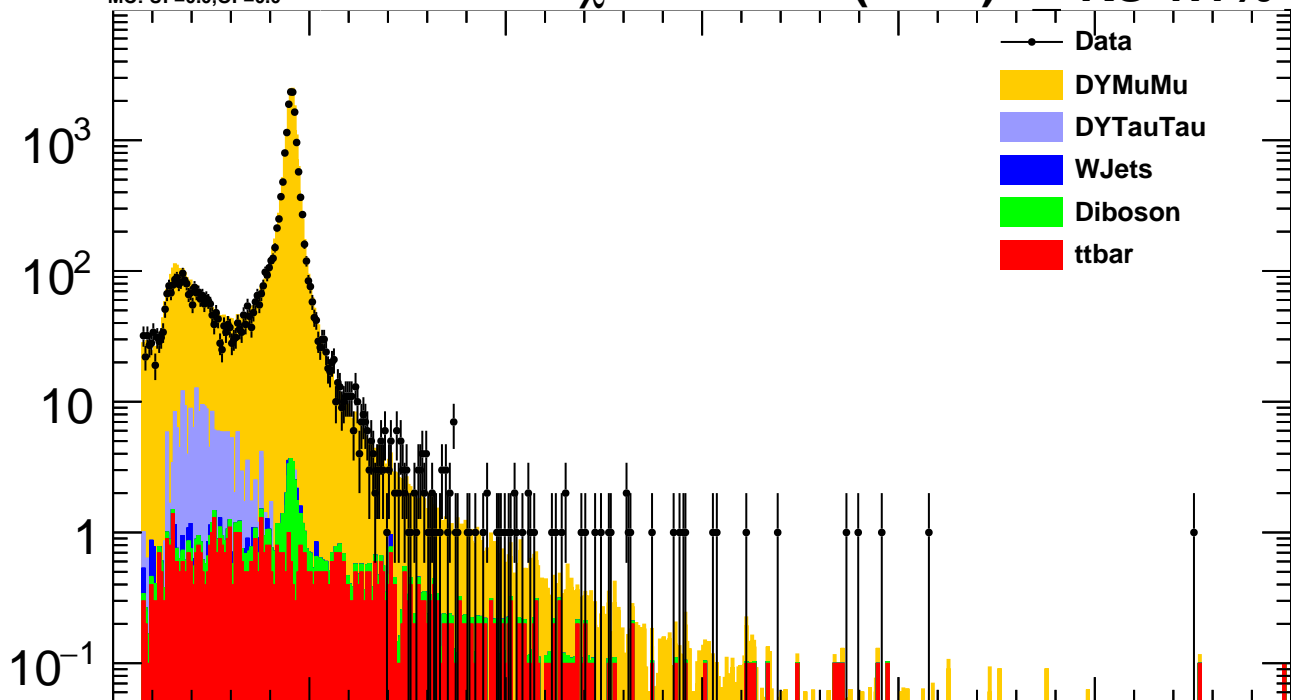


Data: UF=0,OF=0
MC: UF=0.0,OF=0.0

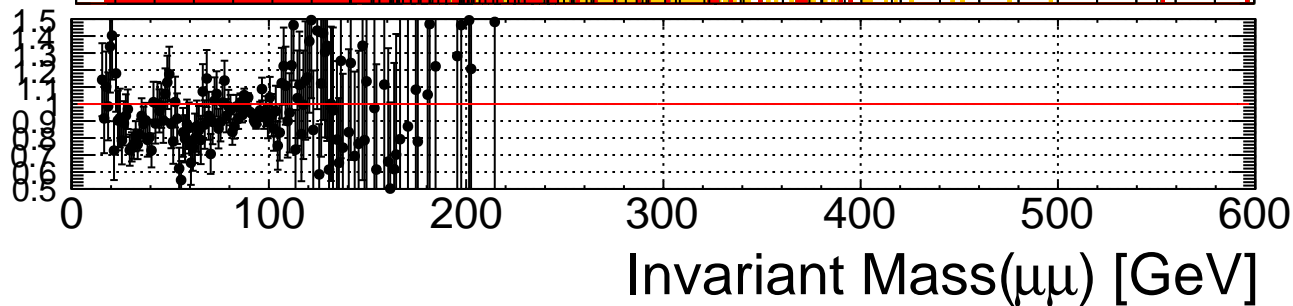
$\chi^2/\text{ndf}=1.64$ (0.0%)

KS 1.1%

Entry



data/Pred.

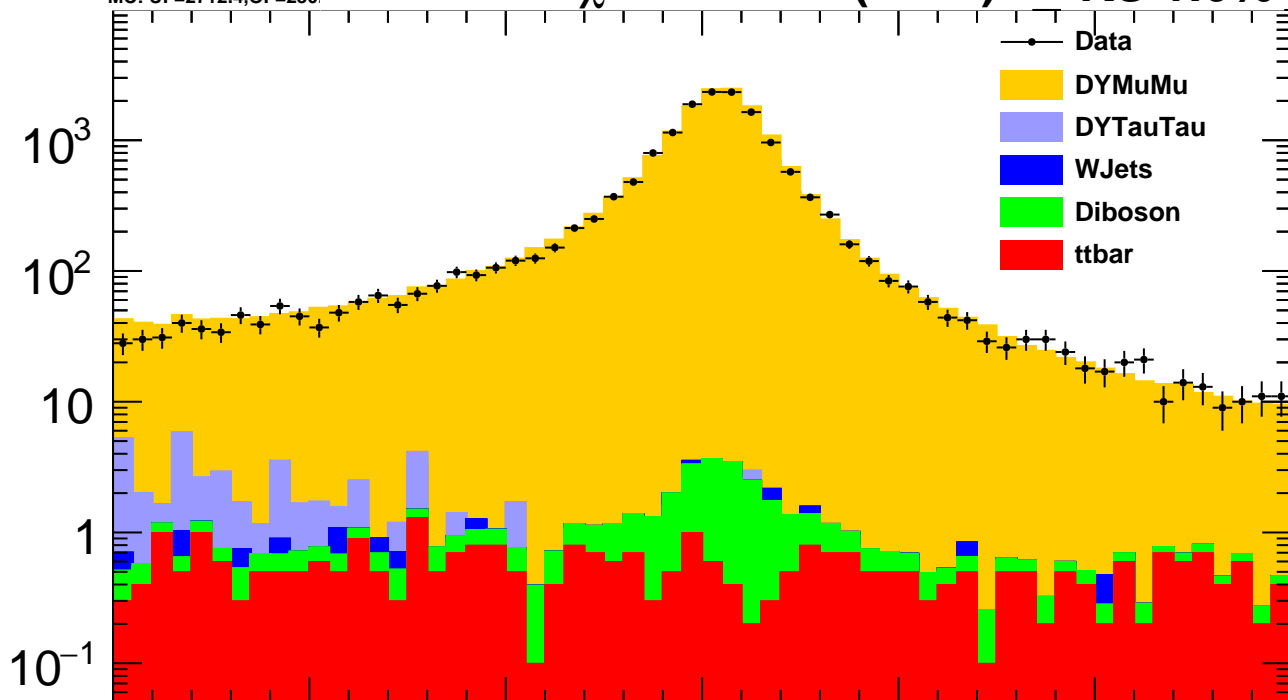


Data: UF=2394,OF=244
MC: UF=2712.4,OF=230.

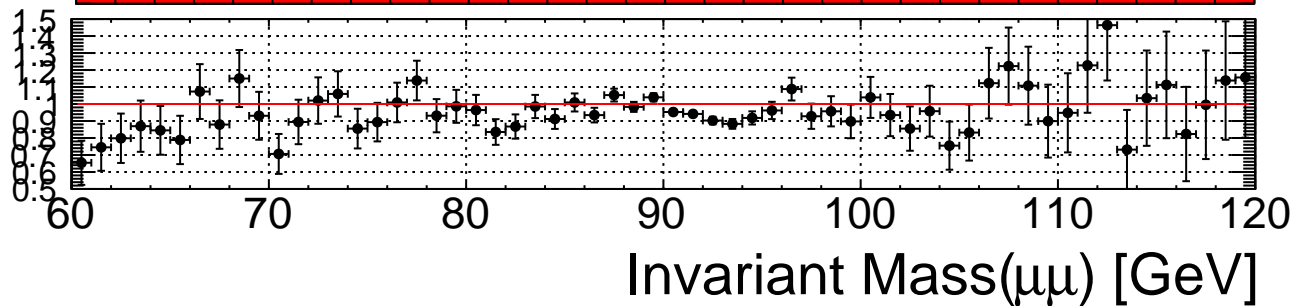
$\chi^2/\text{ndf}=1.31$ (5.8%)

KS 1.6%

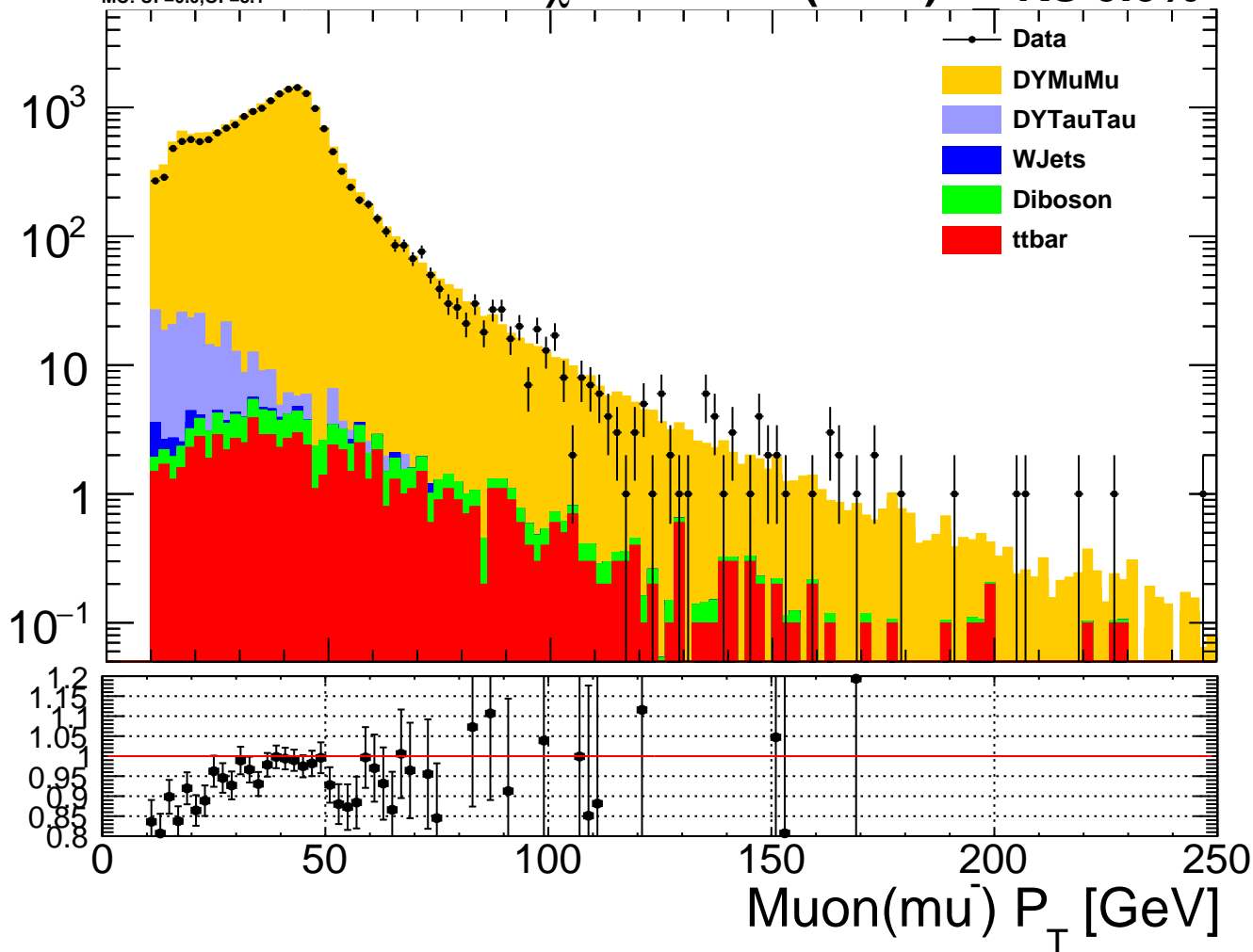
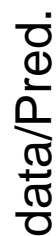
Entry



data/Pred.



KS 0.0%

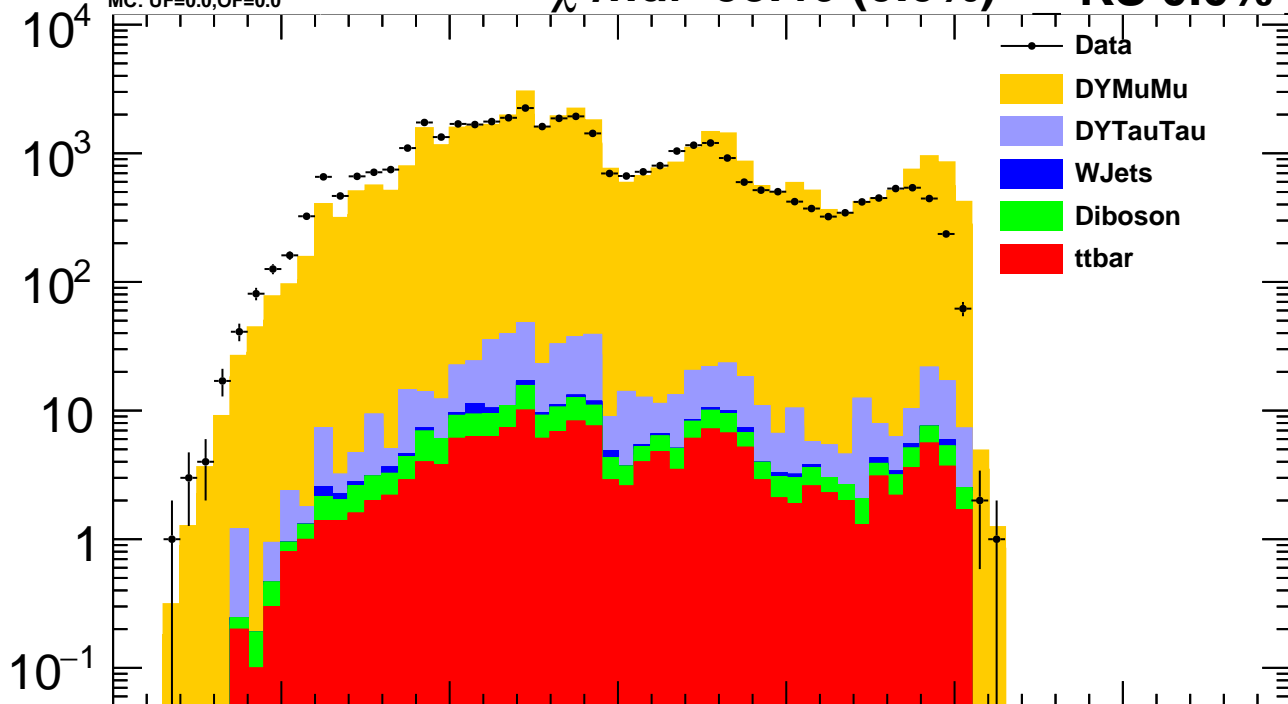


Entry

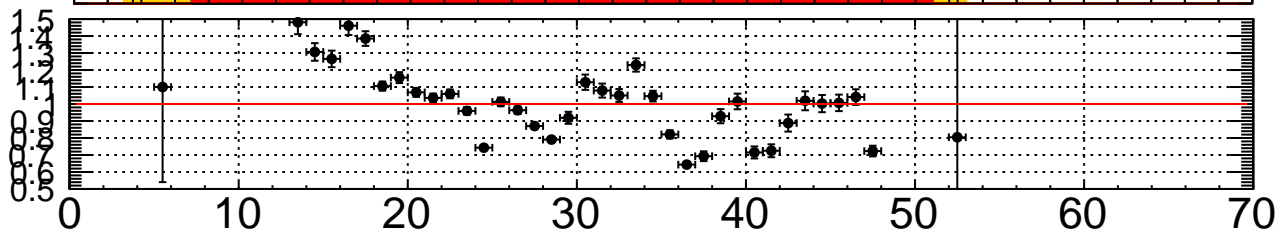
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=53.46$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



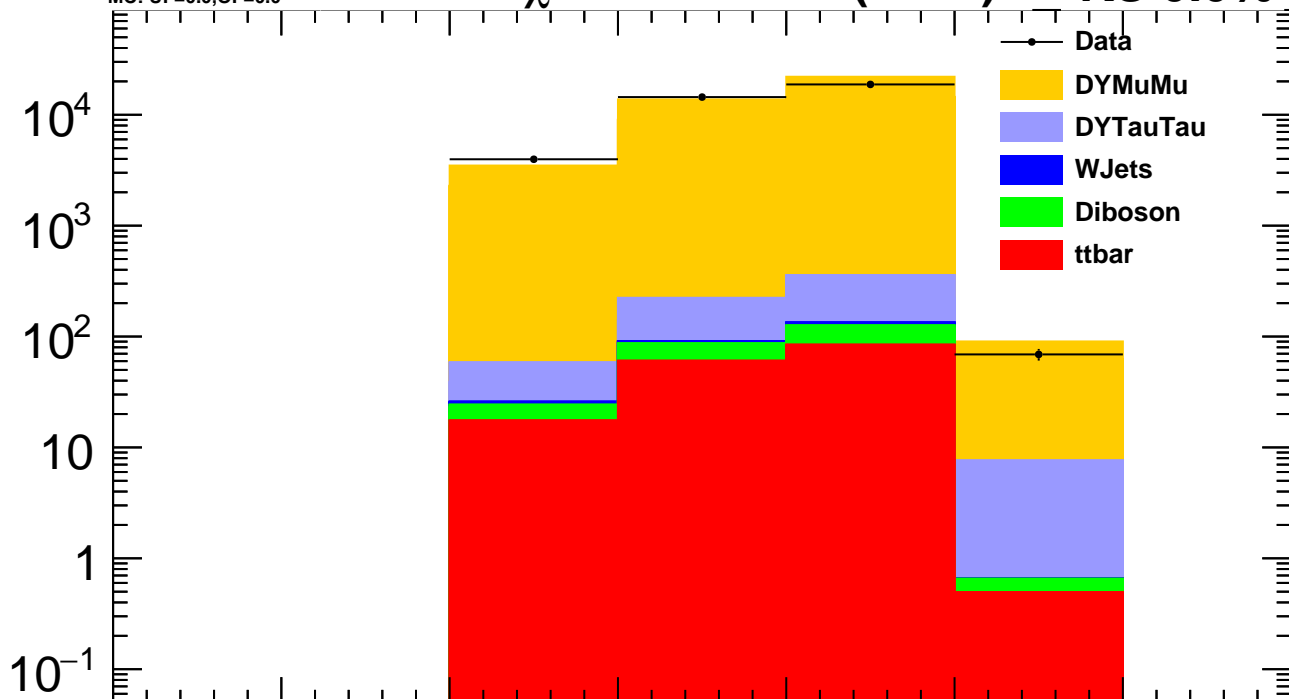
Muon Hits

Entry

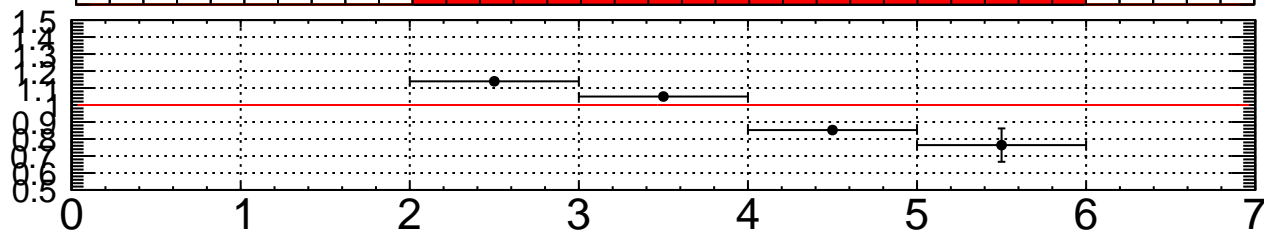
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=160.56$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



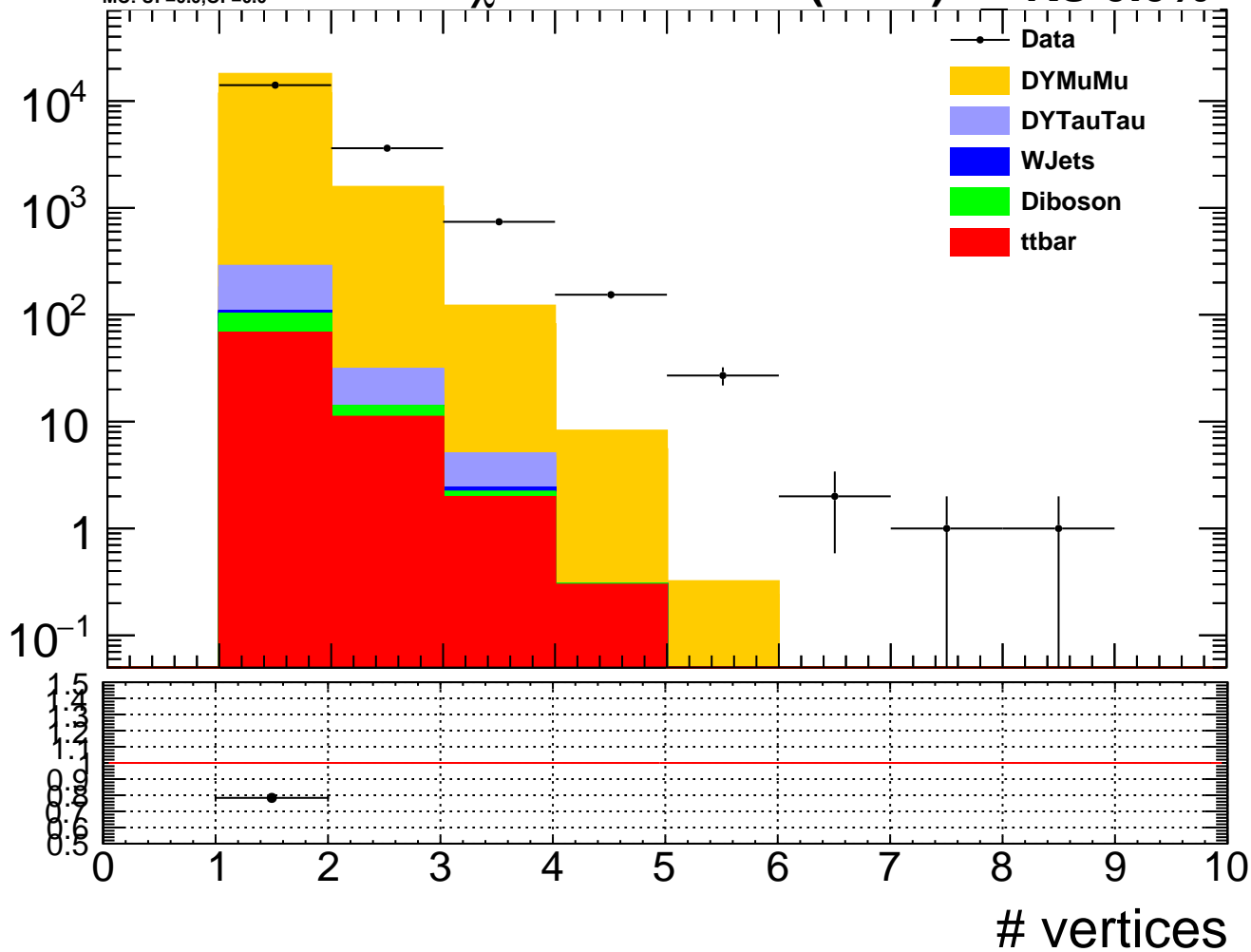
Matched Stations

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1289.96$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/pred.

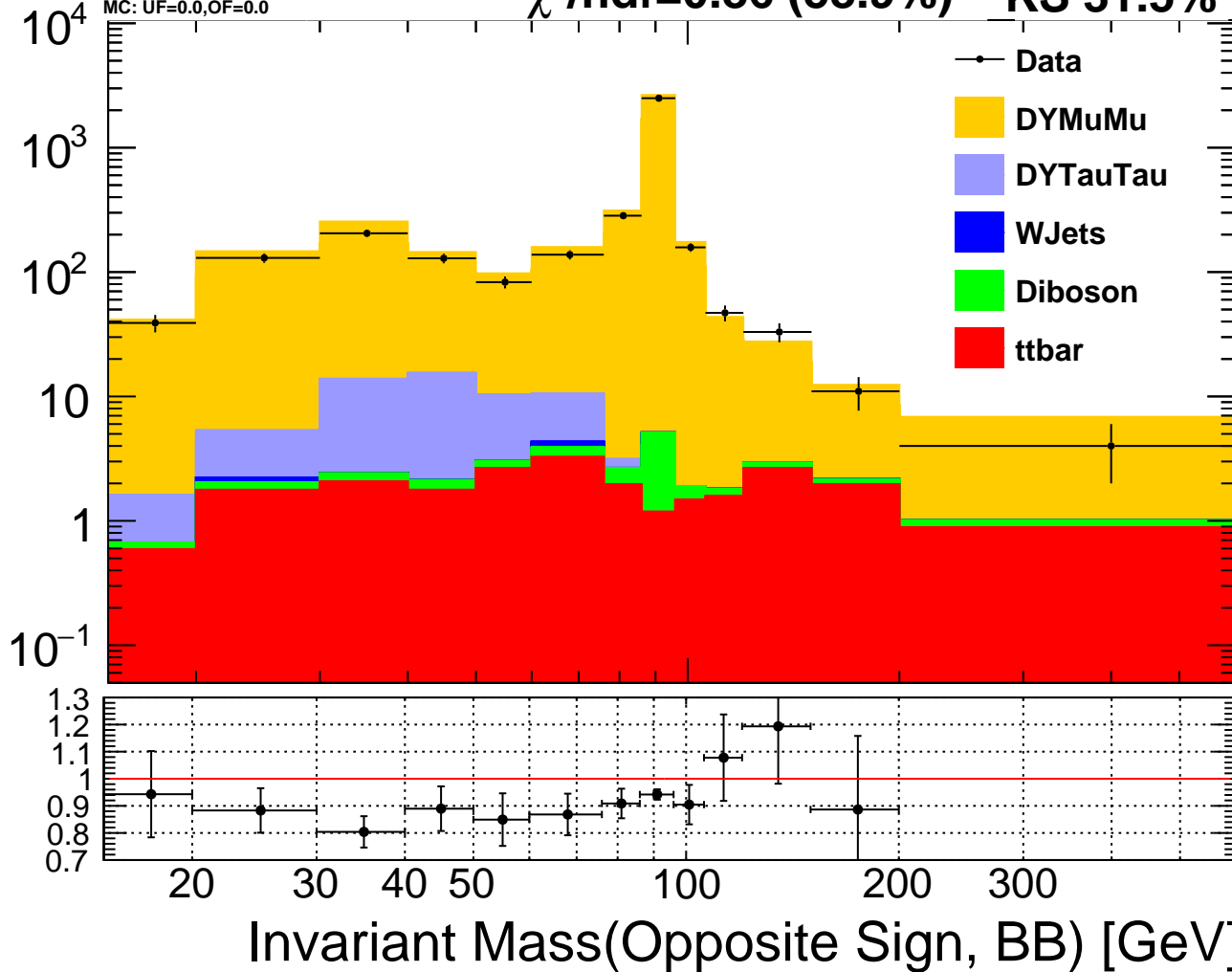
vertices

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=0.86$ (58.9%) KS 31.5%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar

data/Pred.

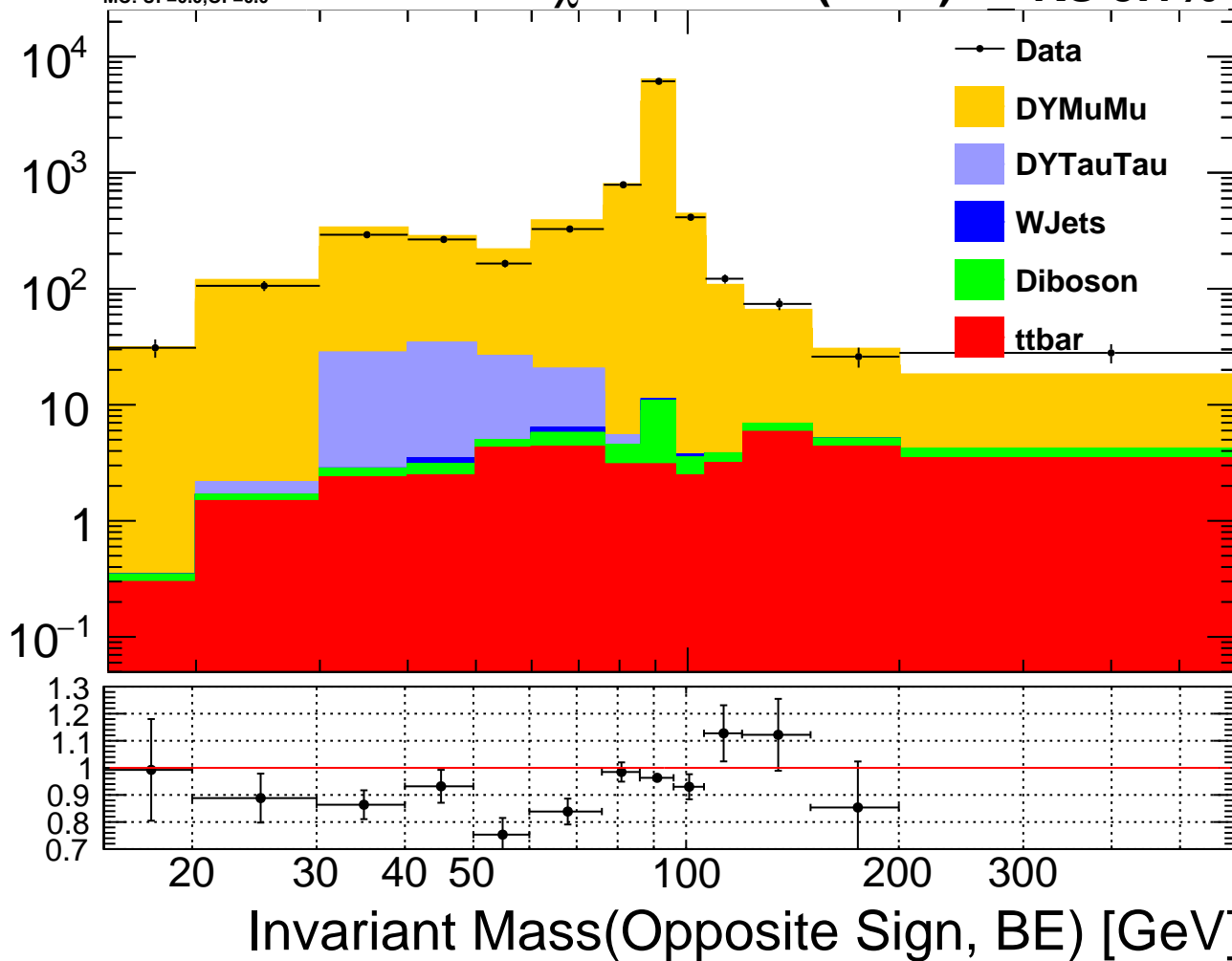


Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=2.49$ (0.3%)

KS 5.1%

data/Pred.

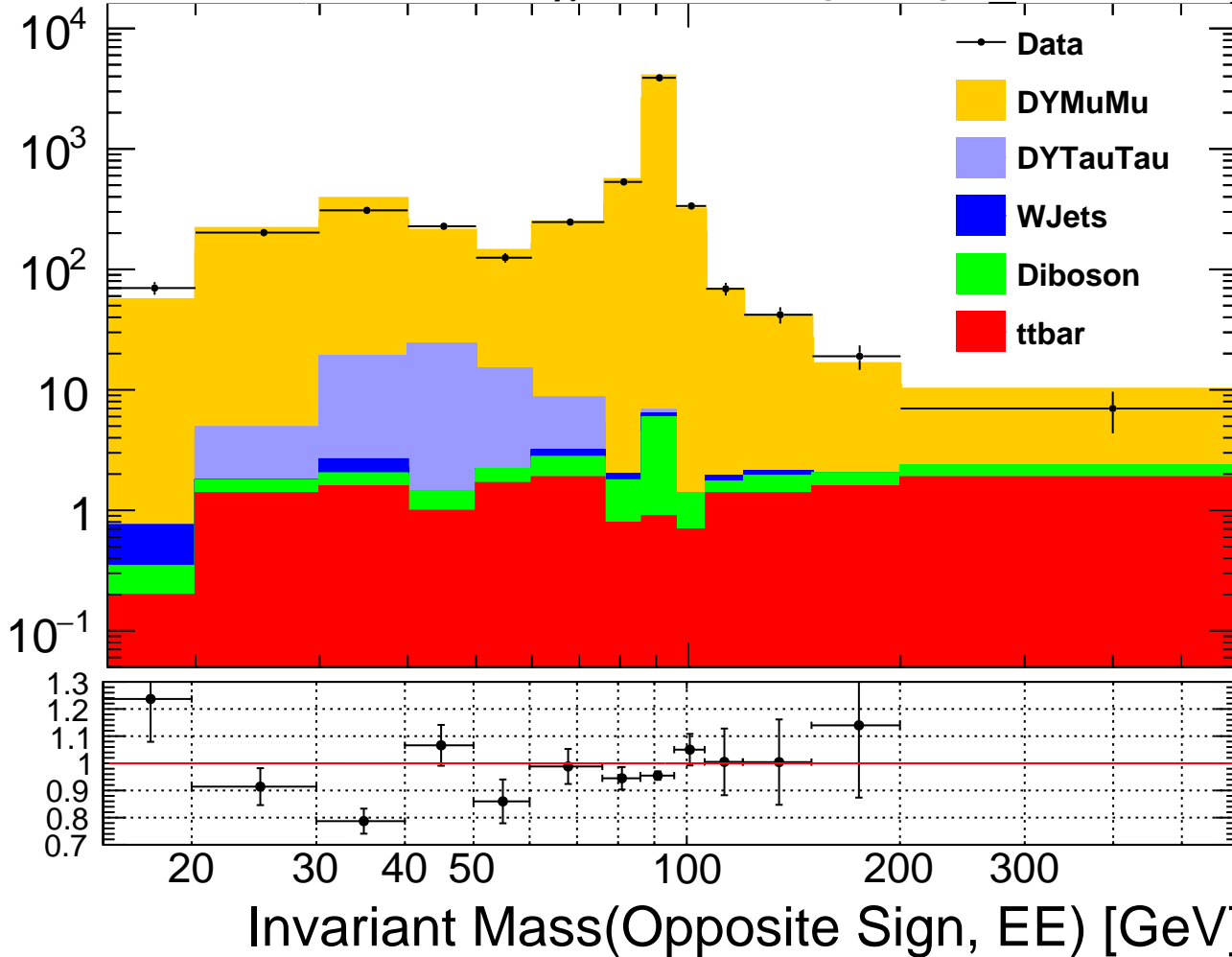


Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=2.01$ (2.0%) KS 66.3%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar

data/Pred.



Data: UF=0,OF=0
MC: UF=0.0,OF=0.0

$\chi^2/\text{ndf}=0.62$ (82.8%) KS 40.3%

Entry

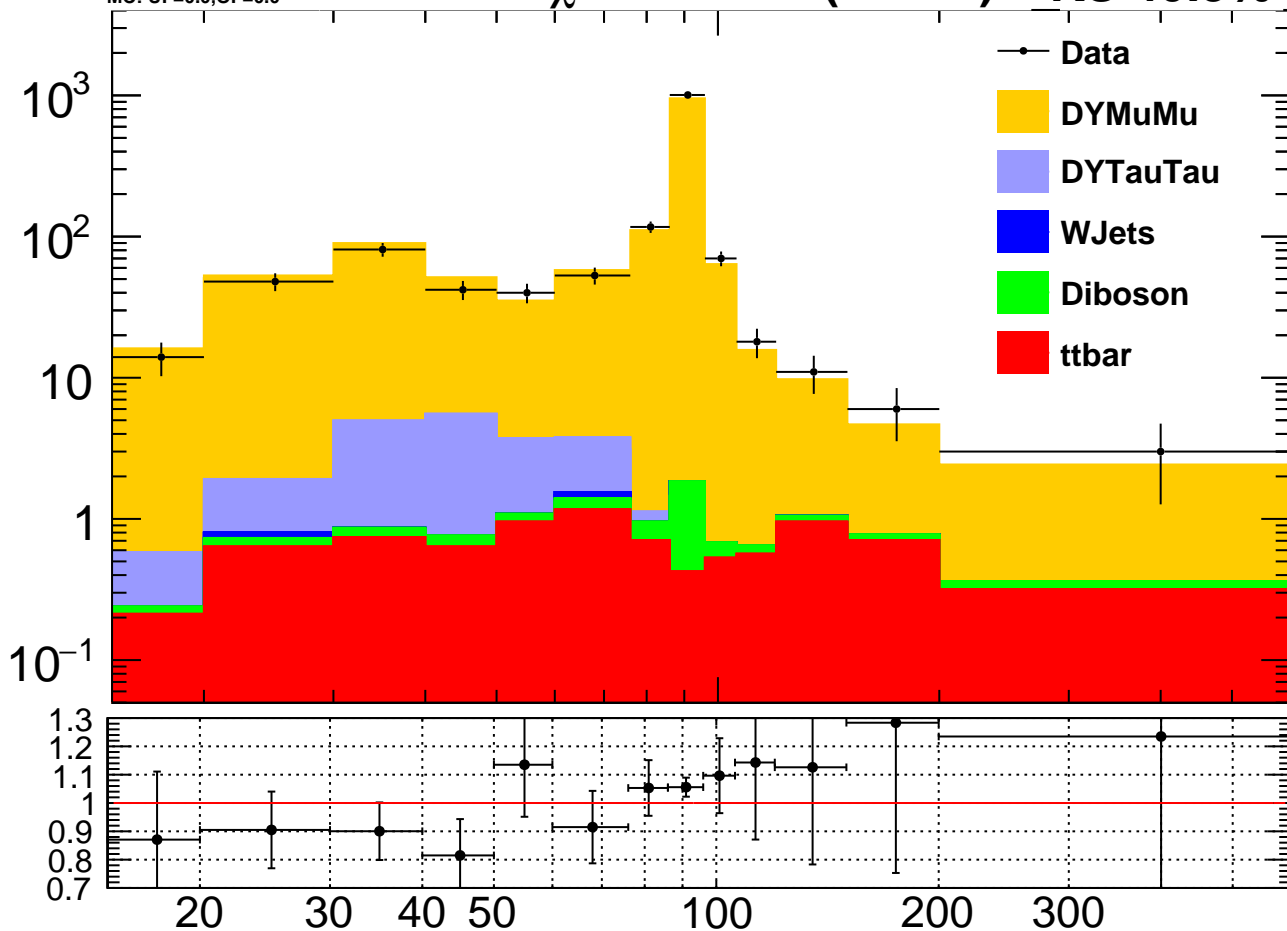
- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

10^3
 10^2
10
1
 10^{-1}

data/Pred.

1.3
1.2
1.1
1
0.9
0.8
0.7

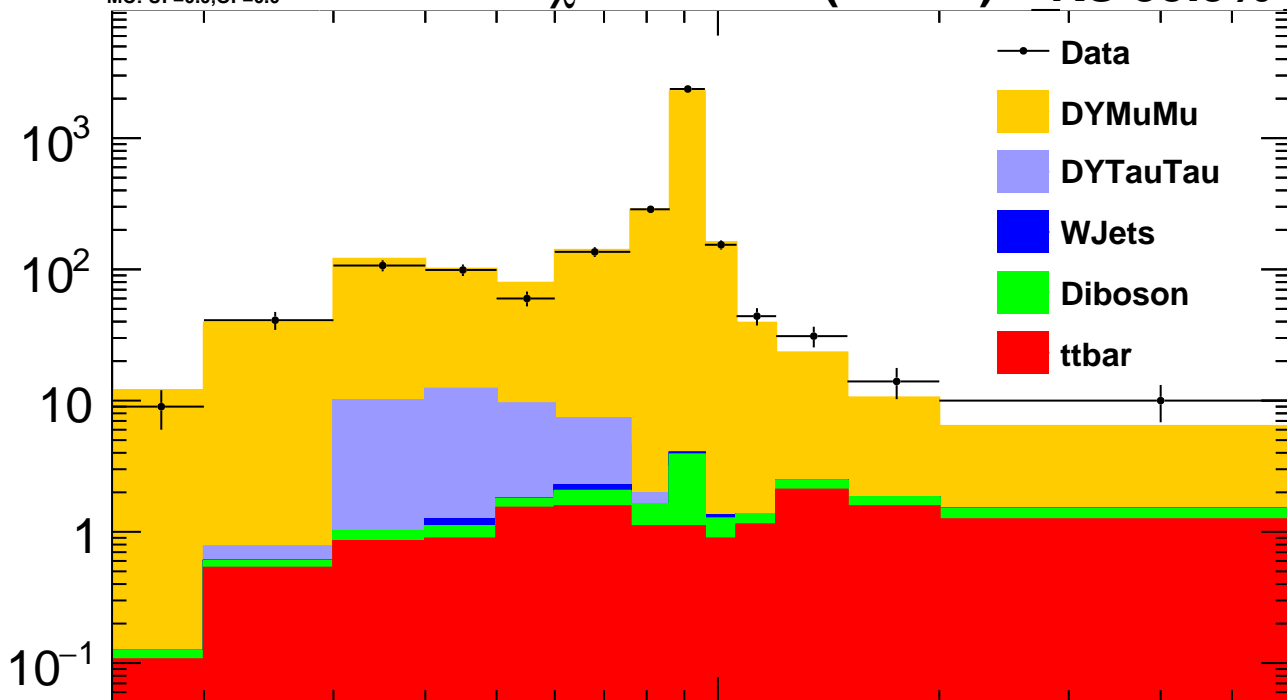
Invariant Mass(OS, BB) [GeV] (part1)



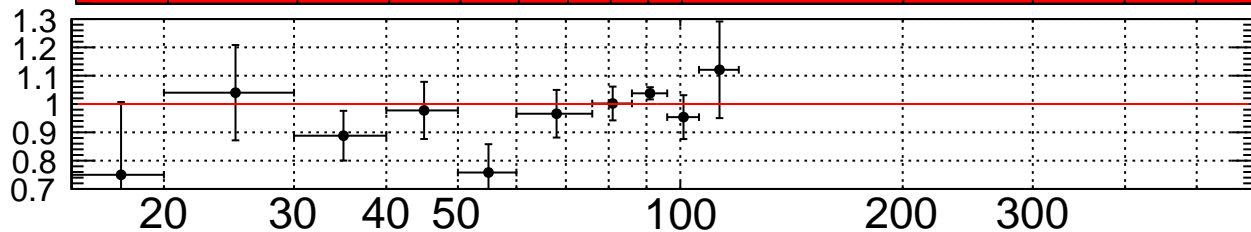
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.26$ (23.2%) KS 35.9%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



data/Pred.

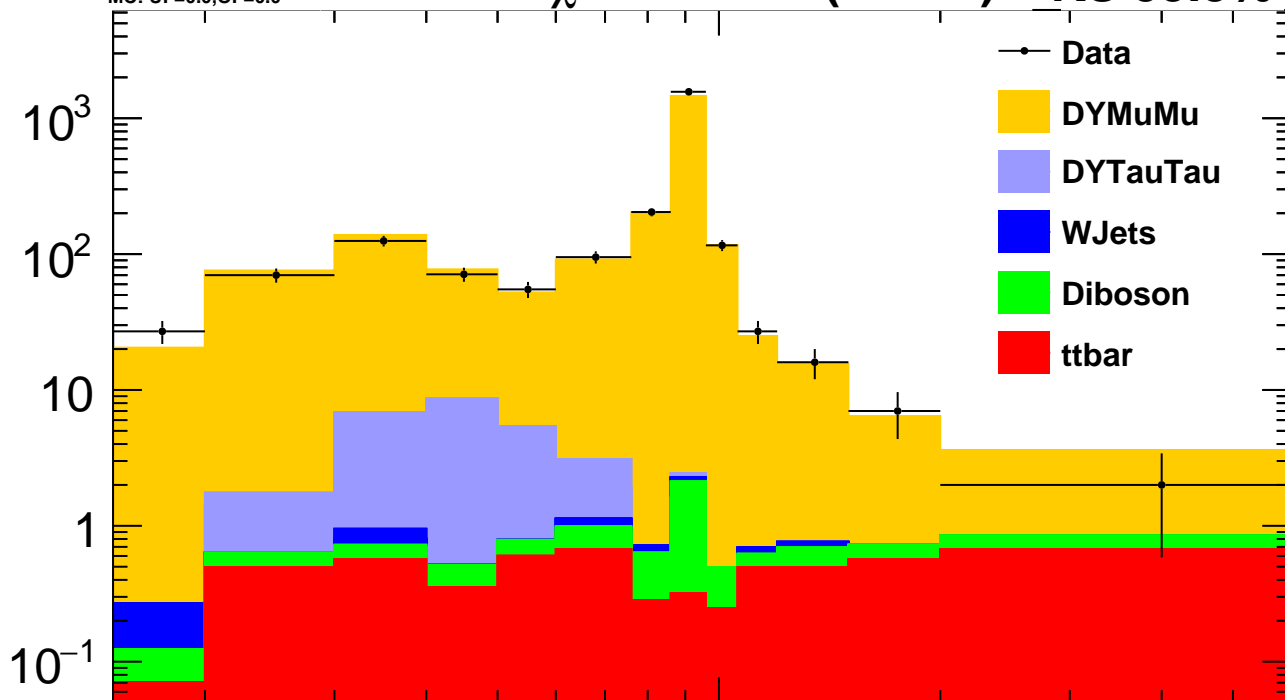


Invariant Mass(OS, BE) [GeV] (part1)

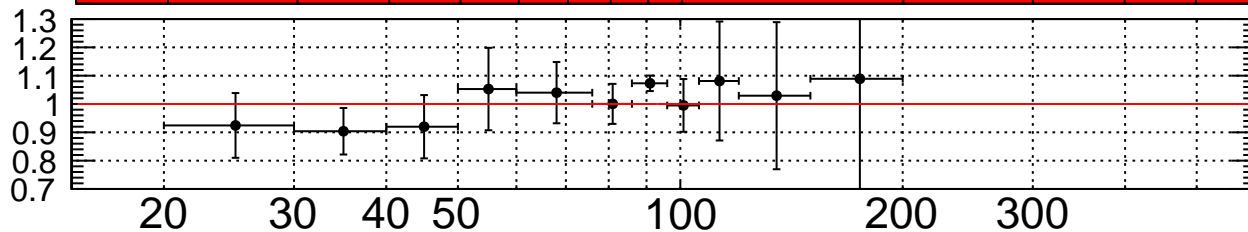
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0

$\chi^2/\text{ndf}=0.72$ (73.5%) KS 53.8%

Entry



data/Pred.



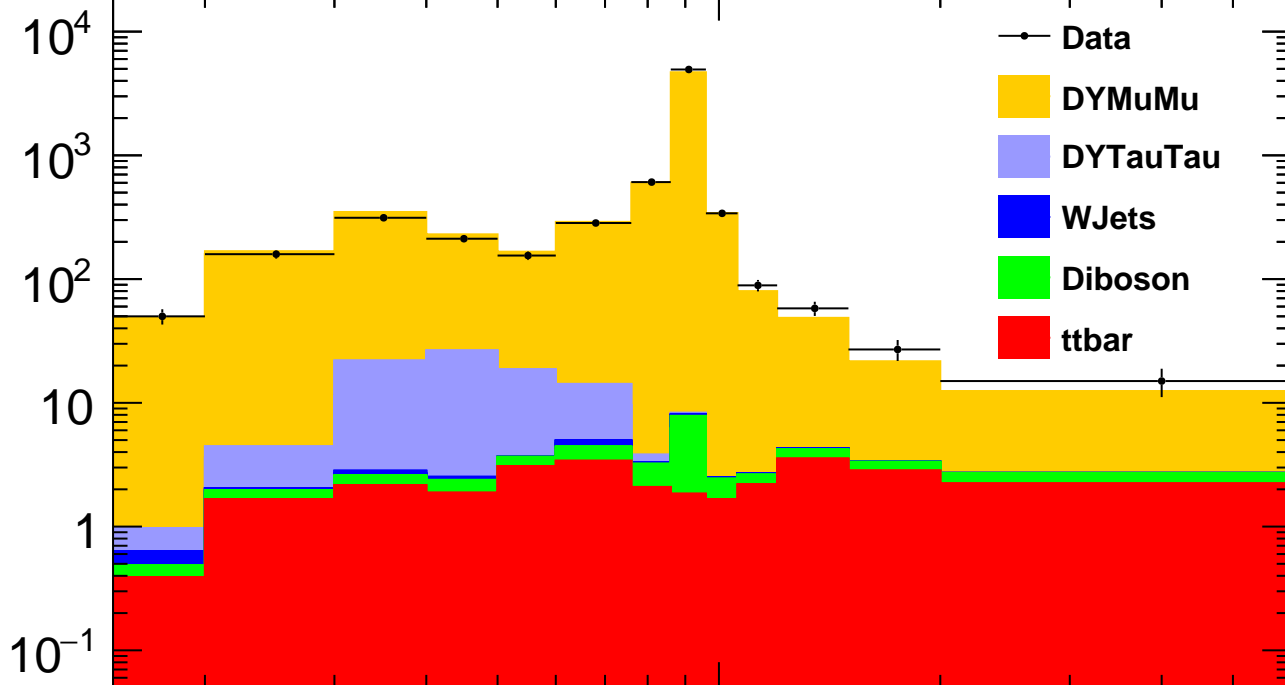
Invariant Mass(OS, EE) [GeV] (part1)

Entry

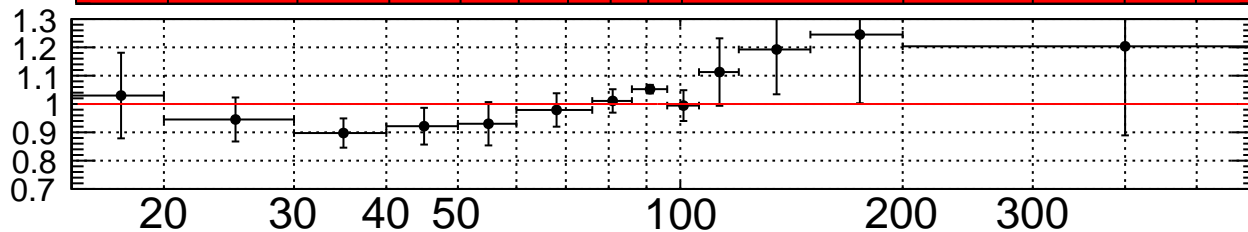
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.46$ (13.1%)

KS 3.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



Invariant Mass(Opposite Sign) [GeV] (part1)

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.06$ (38.6%) KS 91.0%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar

 10^3 10^2

10

1

 10^{-1}

data/Pred.

1.3

1.2

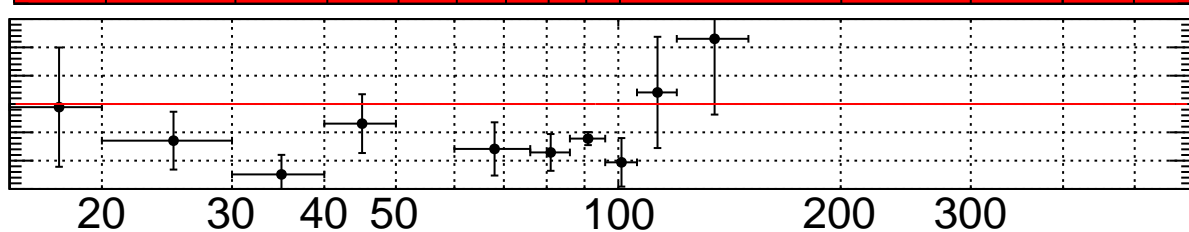
1.1

1.0

0.9

0.8

0.7



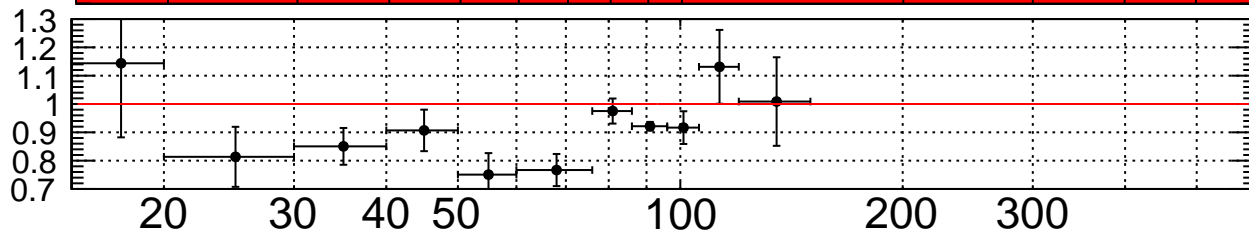
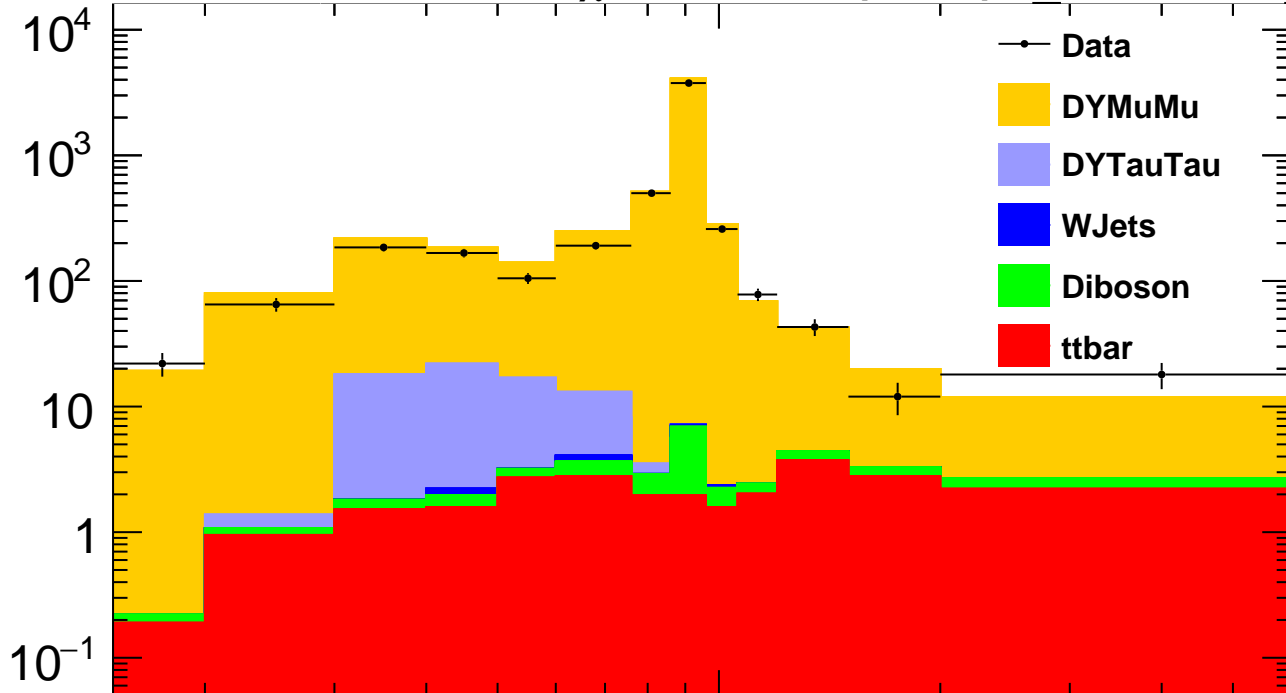
Invariant Mass(OS, BB) [GeV] (part2)

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=2.06$ (1.6%) KS 21.6%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar

data/Pred.



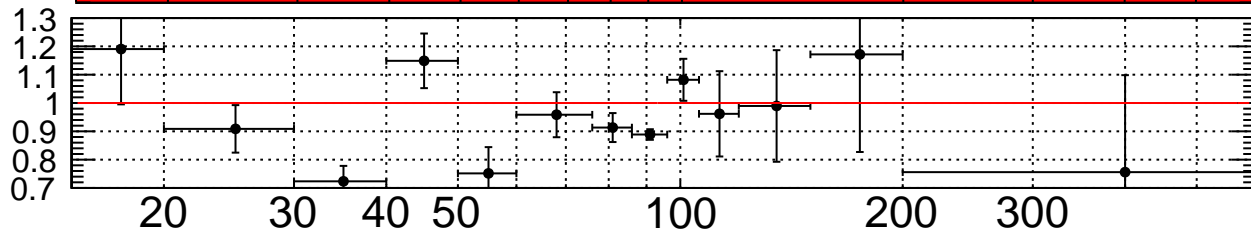
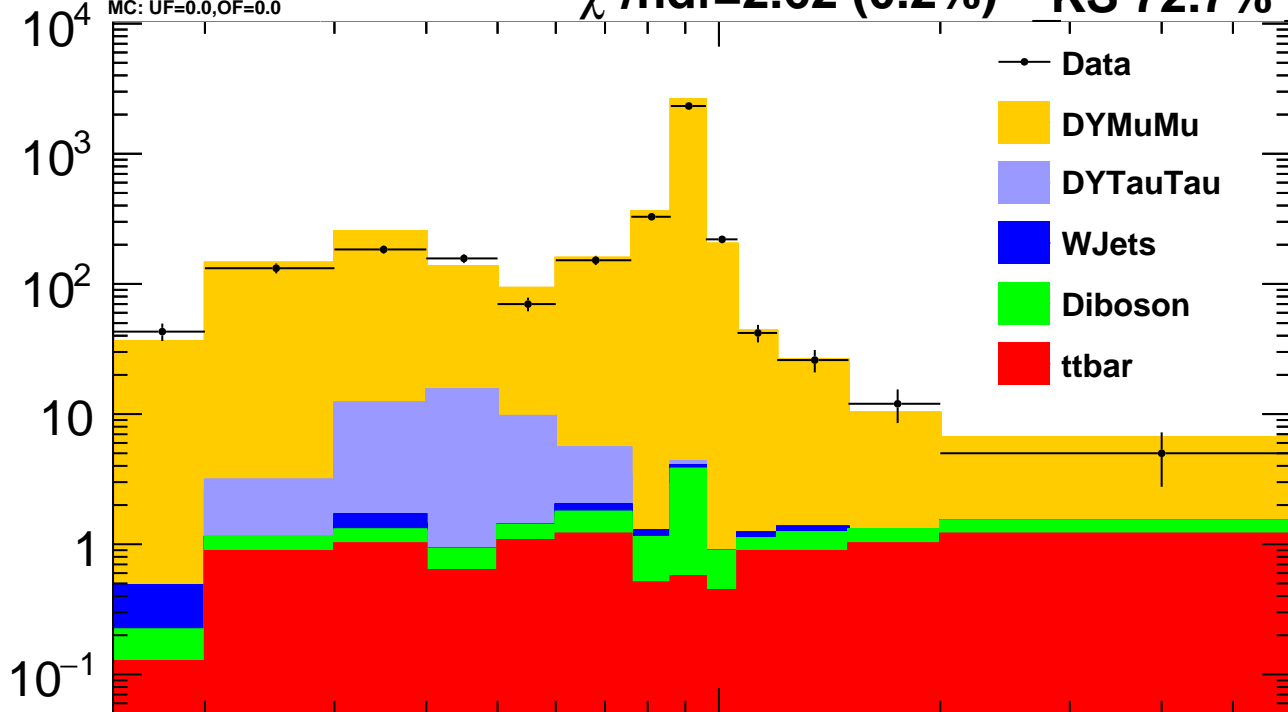
Invariant Mass(OS, BE) [GeV] (part2)

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=2.62$ (0.2%) KS 72.7%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

data/Pred.

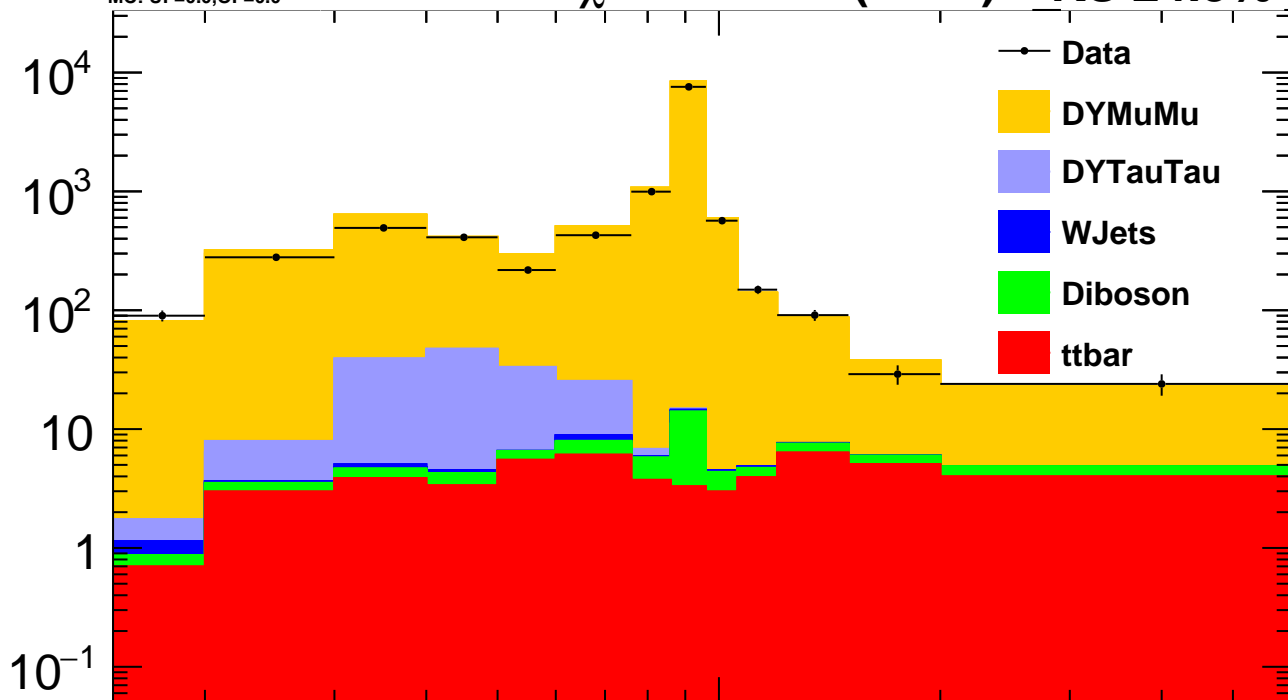


Invariant Mass(OS, EE) [GeV] (part2)

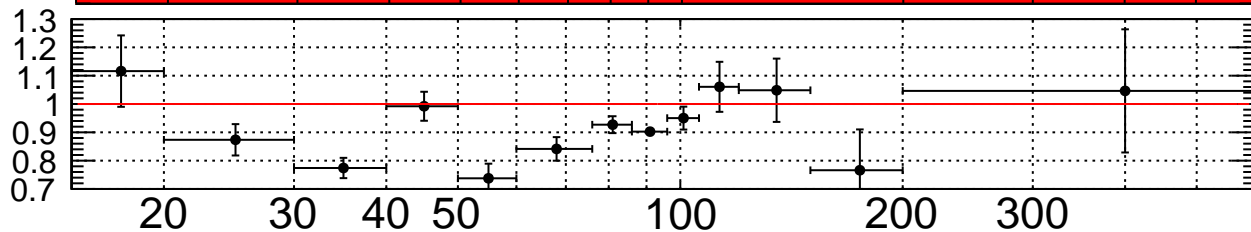
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0

$\chi^2/\text{ndf}=3.15$ (0.0%) KS 24.3%

Entry



data/Pred.



Invariant Mass (Opposite Sign) [GeV] (part2)

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=3.39$ (0.0%)

KS 1.0%

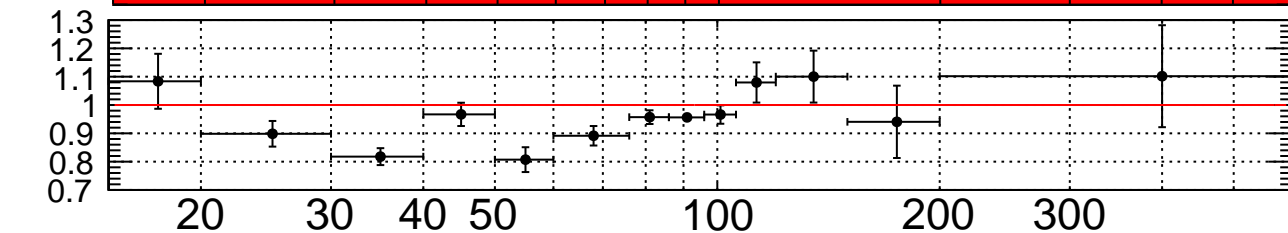
—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar

10⁴
10³
10²
10
1
10⁻¹

data/Pred.

1.3
1.2
1.1
1.0
0.9
0.8
0.7

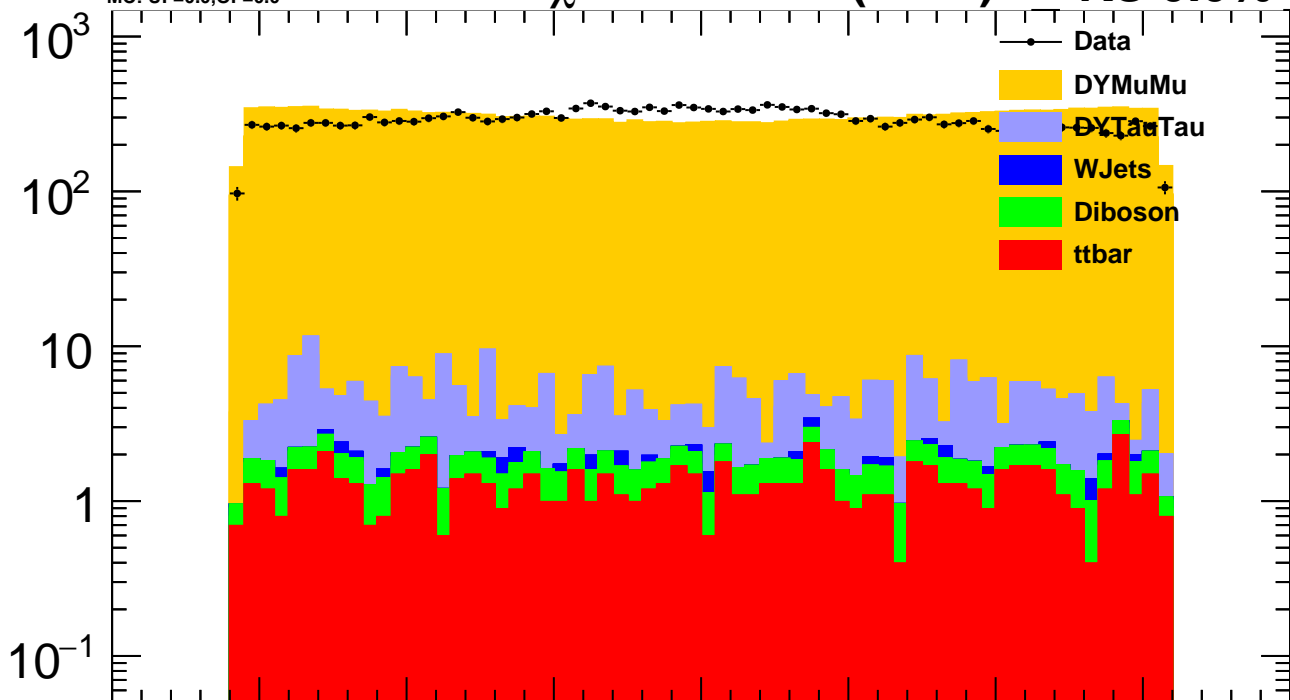
Invariant Mass(Opposite Sign) [GeV]



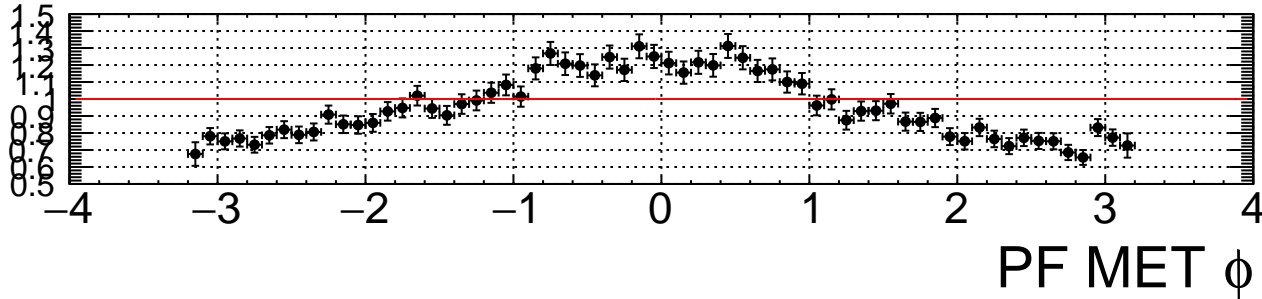
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=10.56$ (0.0%)

KS 0.0%



data/Pred.

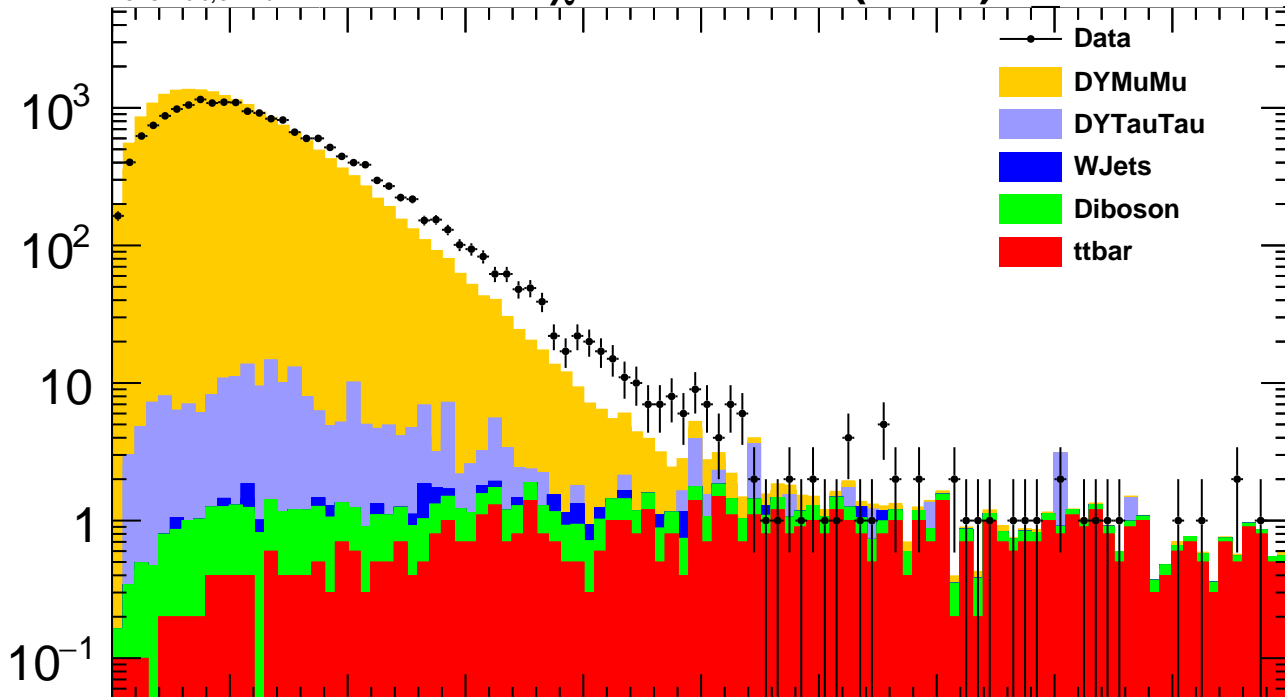


Entry

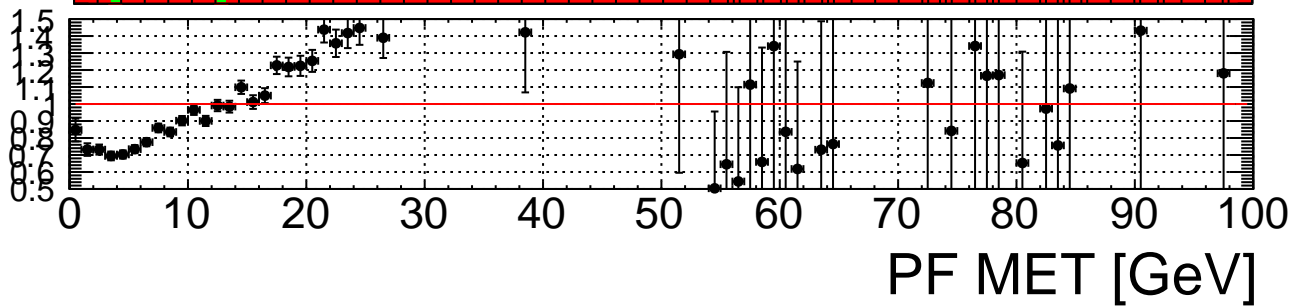
Data: UF=0,OF=10
MC: UF=0.0,OF=16.4 $\chi^2/\text{ndf}=13.06$ (0.0%)

KS 0.0%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



data/Pred.

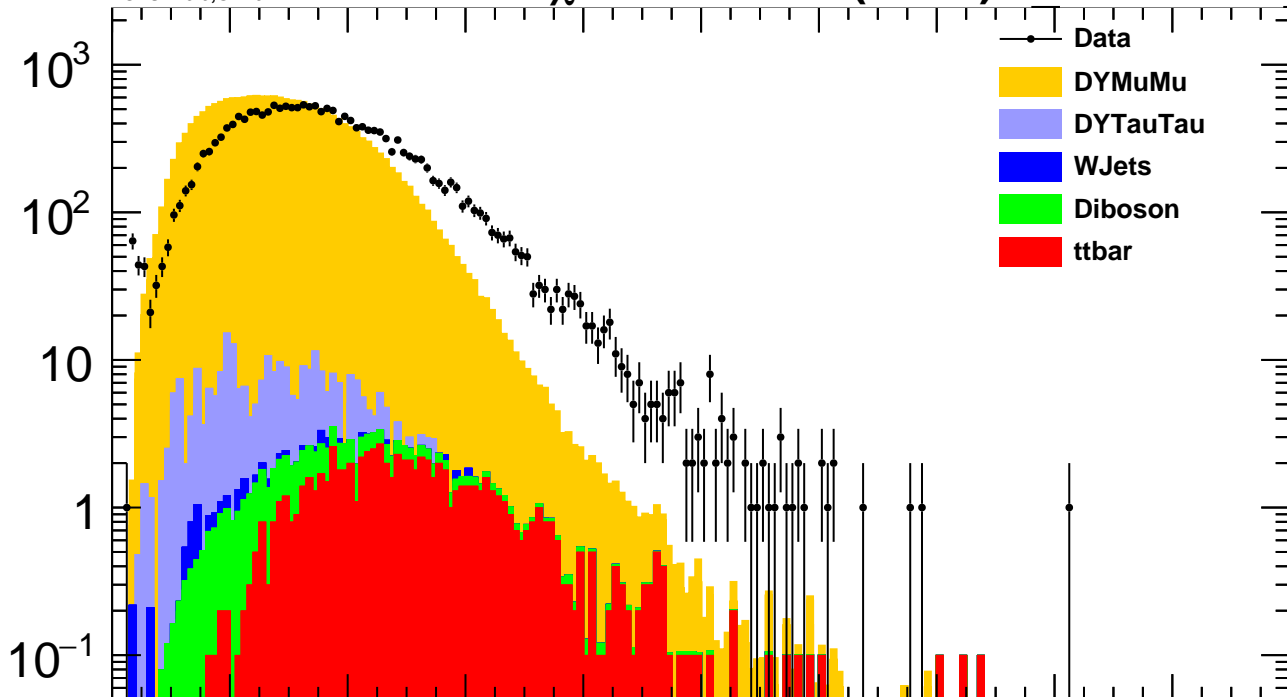


Entry

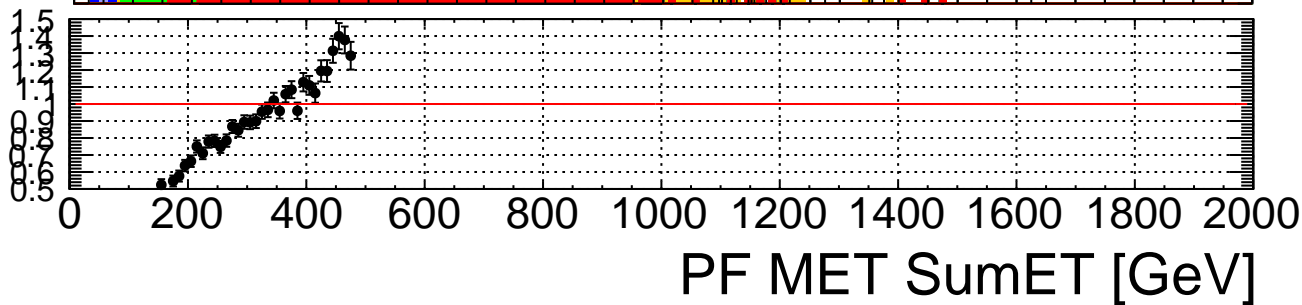
Data: UF=0,OF=0
MC: UF=0.0,OF=0.1 $\chi^2/\text{ndf}=60.61$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



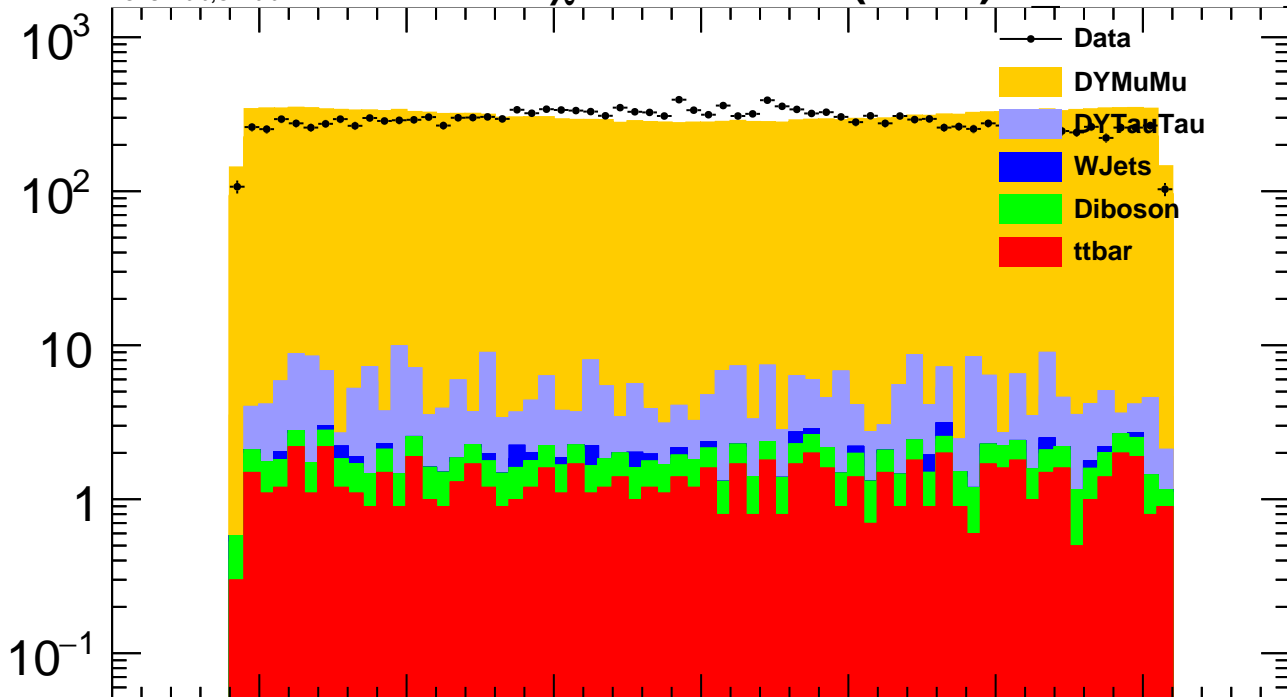
data/Pred.



Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=10.27$ (0.0%)

KS 0.0%



data/pred.

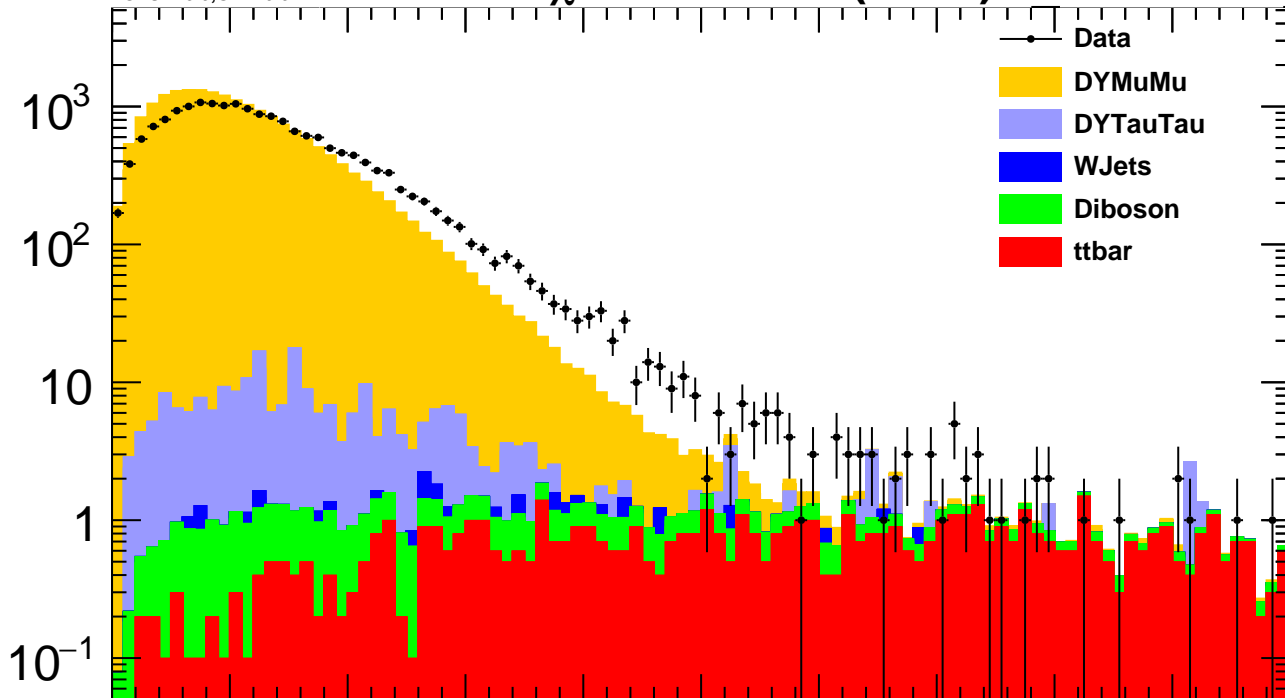
PF Type1 MET ϕ

Entry

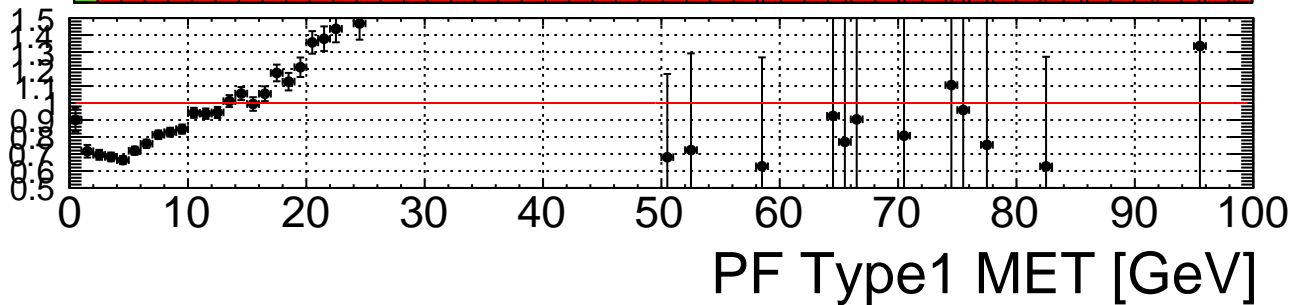
Data: UF=0,OF=13
MC: UF=0.0,OF=20.3 $\chi^2/\text{ndf}=17.80$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



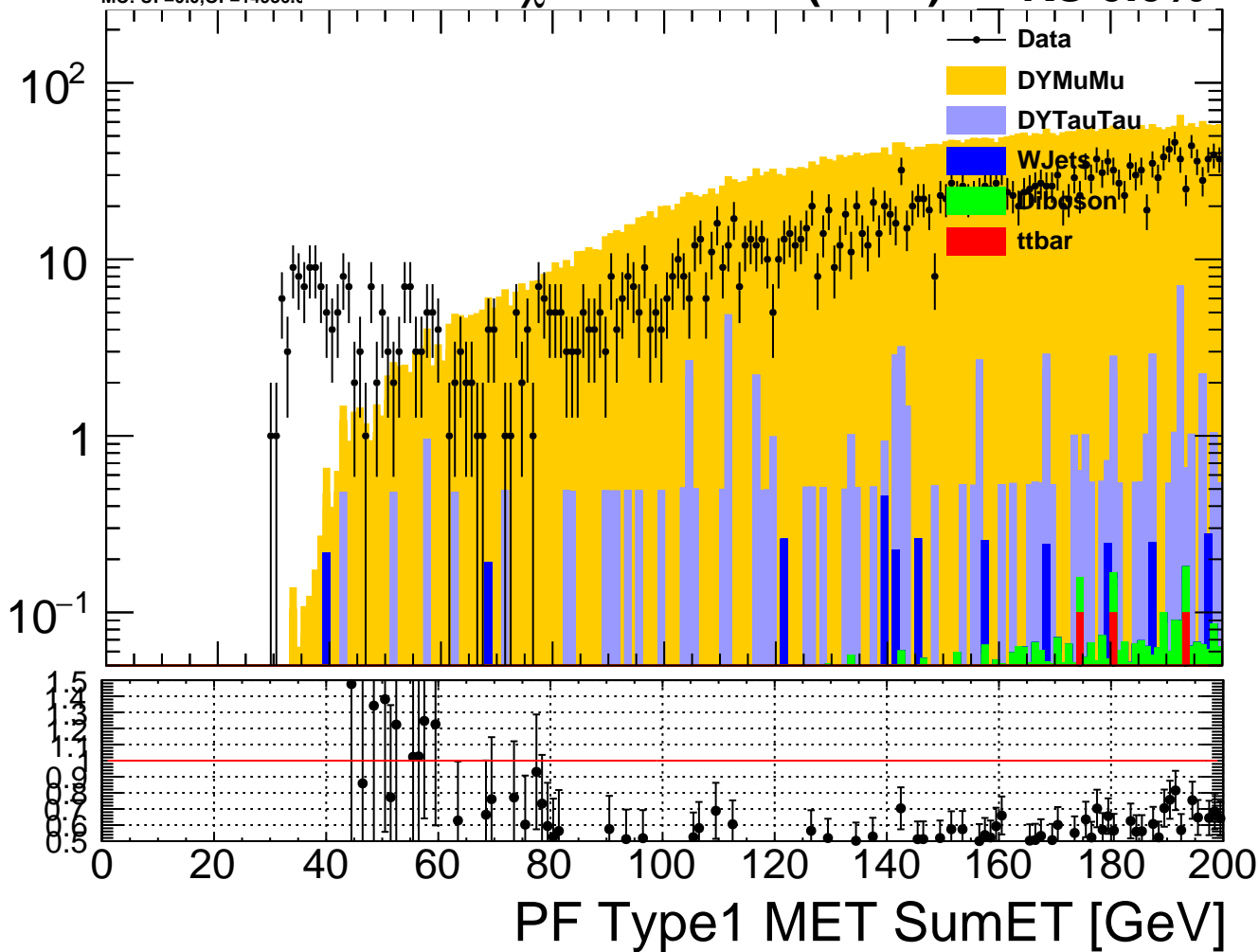
data/Pred.



Entry

Data: UF=0,OF=16173
MC: UF=0.0,OF=14936.0 $\chi^2/\text{n df}=22.76$ (0.0%)

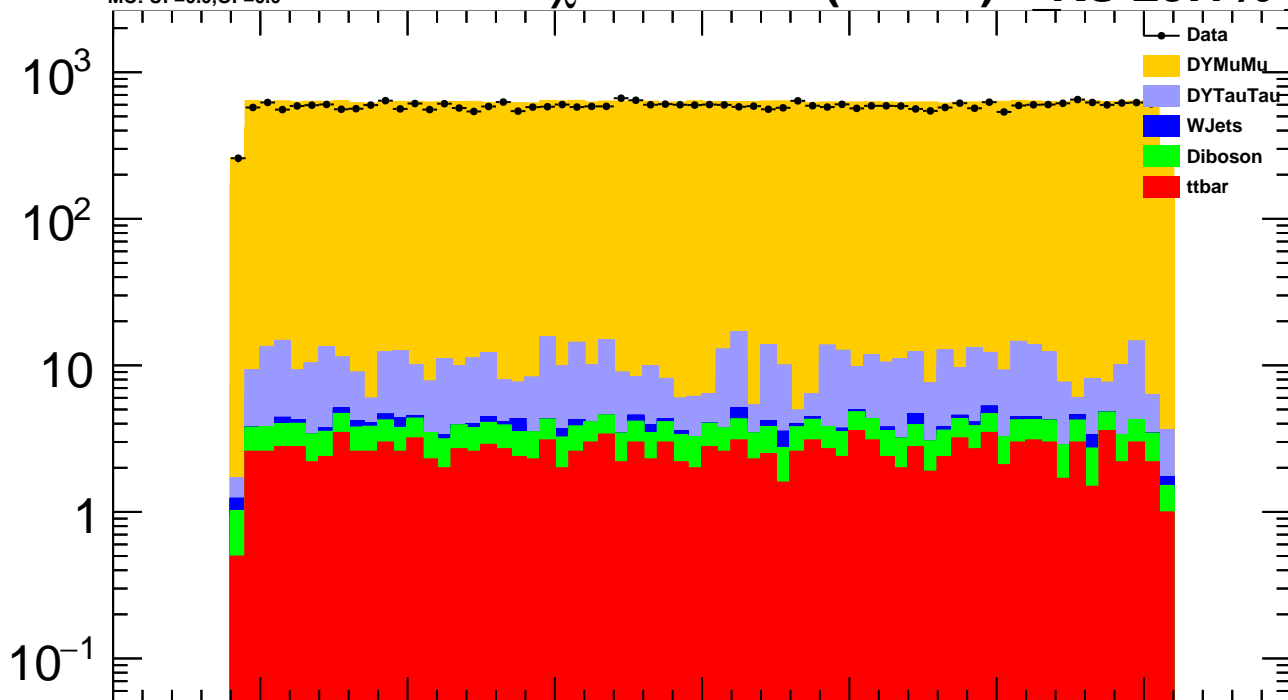
KS 0.0%



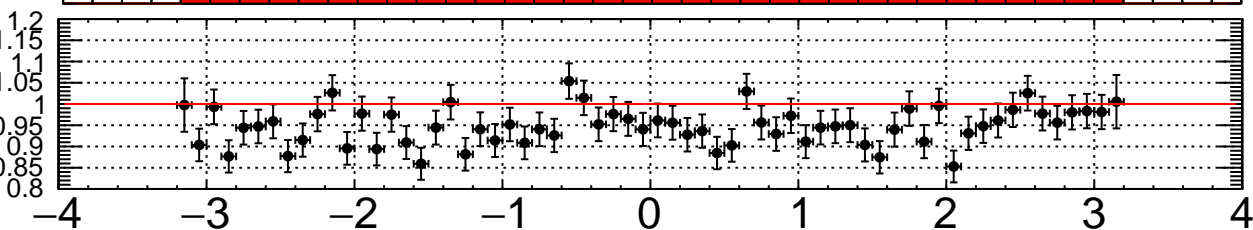
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0

$\chi^2/\text{ndf}=1.21$ (12.6%) KS 29.1%

Entry



data/Pred.



Muon ϕ

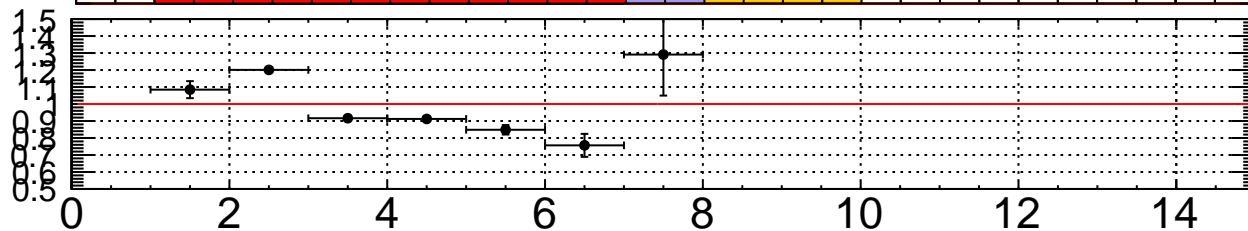
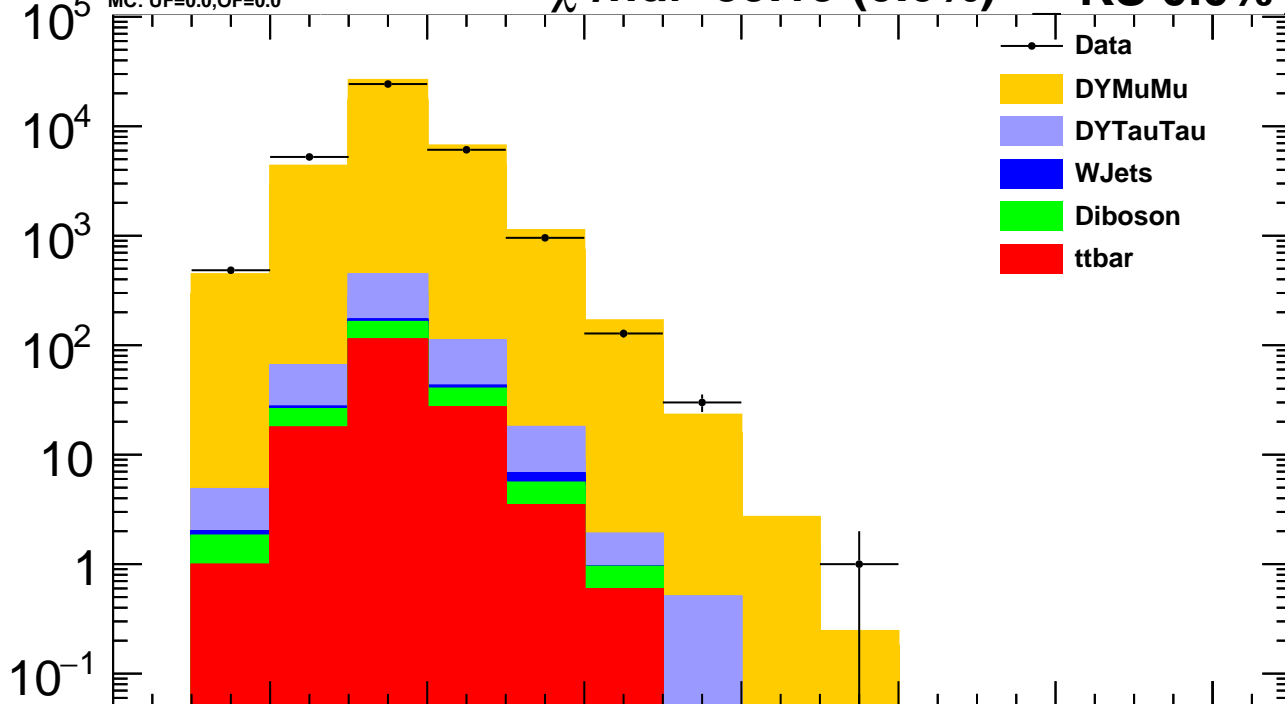
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=39.19$ (0.0%)

KS 0.0%

—•— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar

data/Pred.



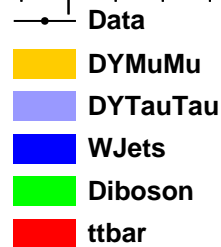
muon Pixel Hits

Data: UF=0,OF=2
MC: UF=0.0,OF=2.4

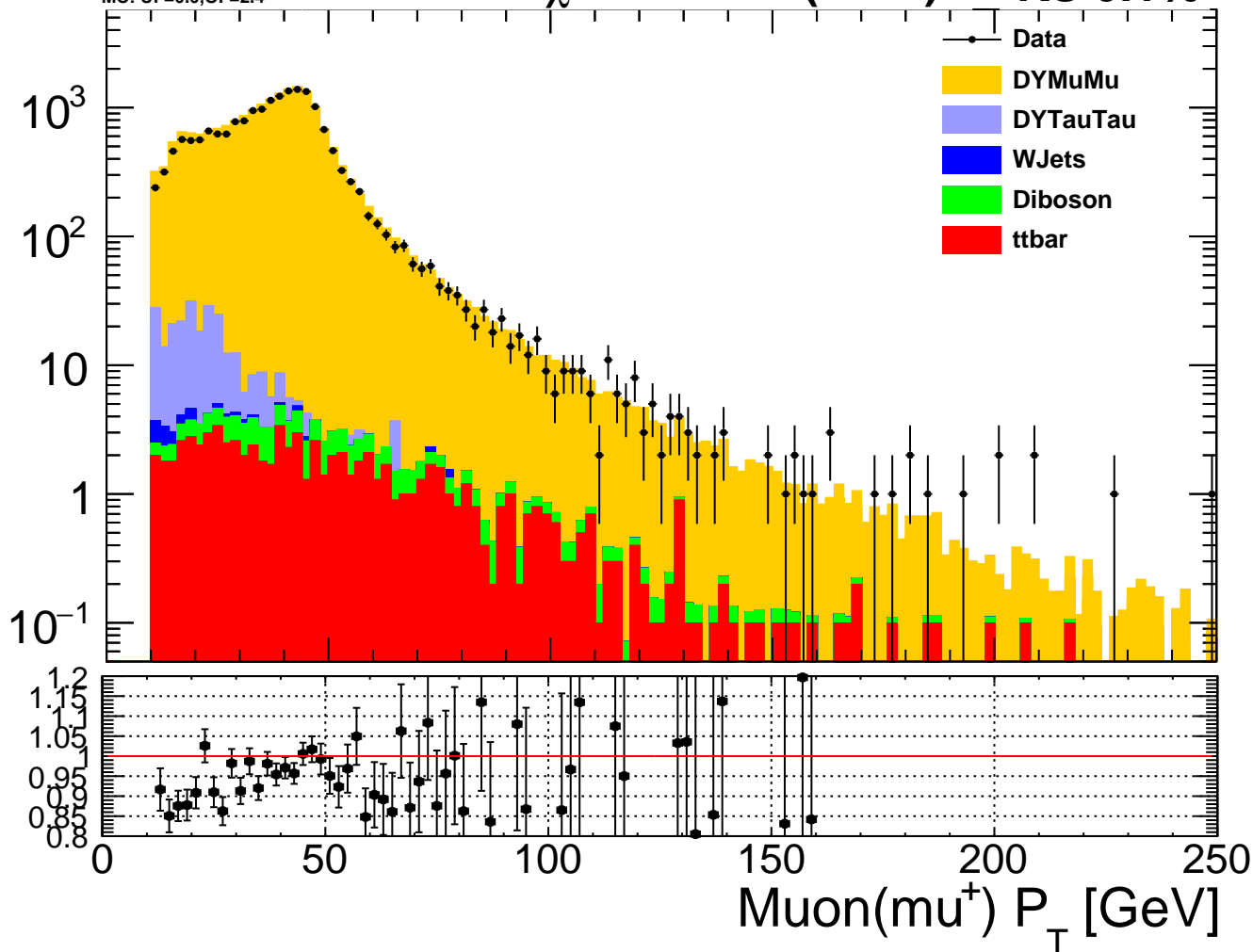
$\chi^2/\text{ndf}=1.25$ (3.5%)

KS 0.1%

Entry



data/Pred.

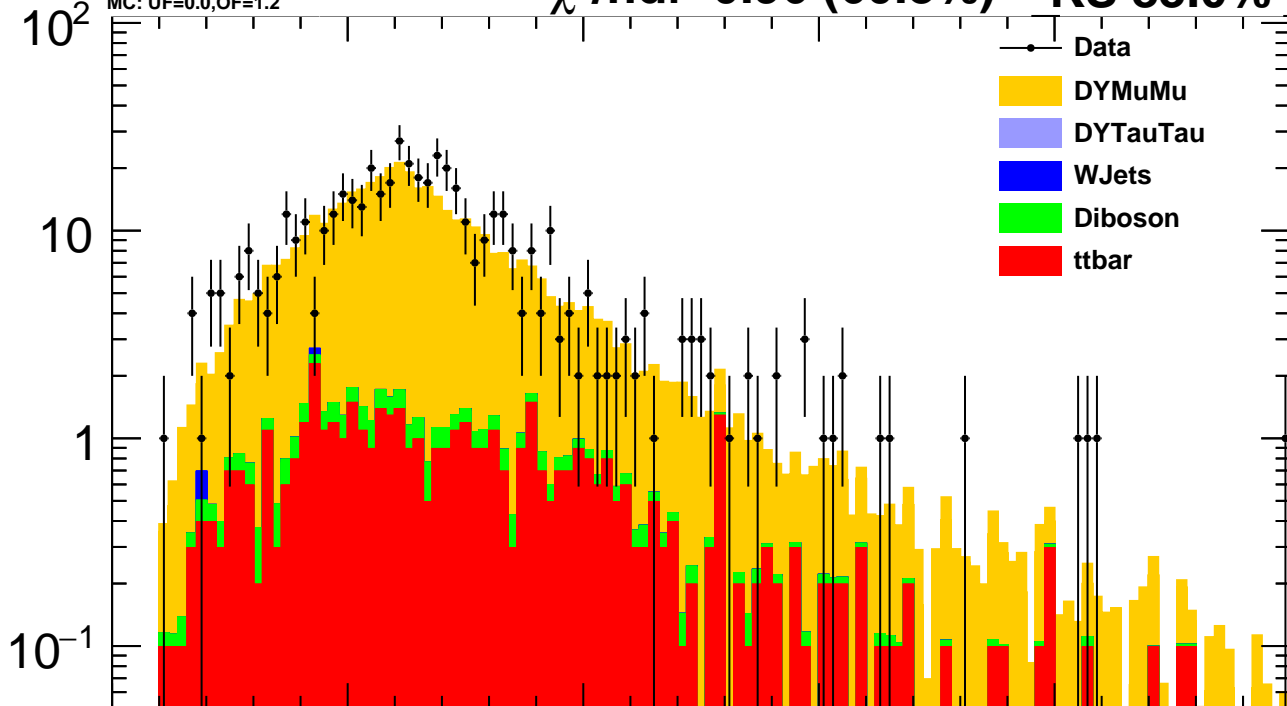


Entry

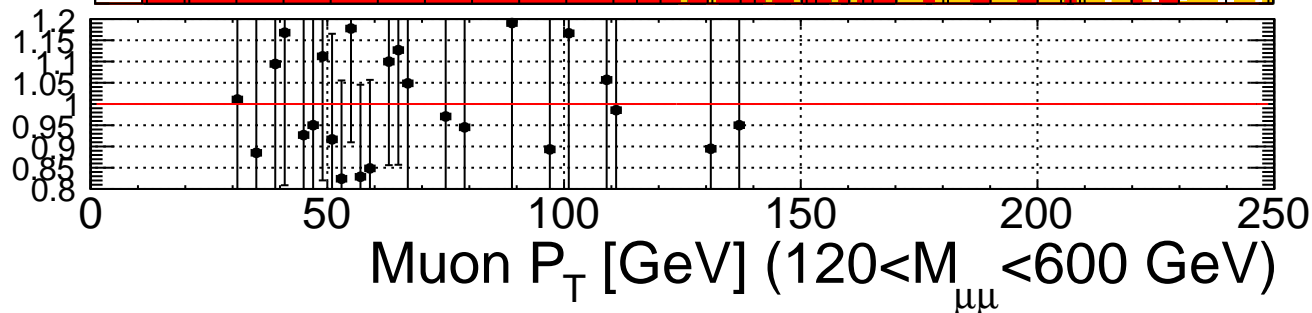
Data: UF=0,OF=1
MC: UF=0.0,OF=1.2 $\chi^2/\text{ndf}=0.96$ (60.8%)

KS 83.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.

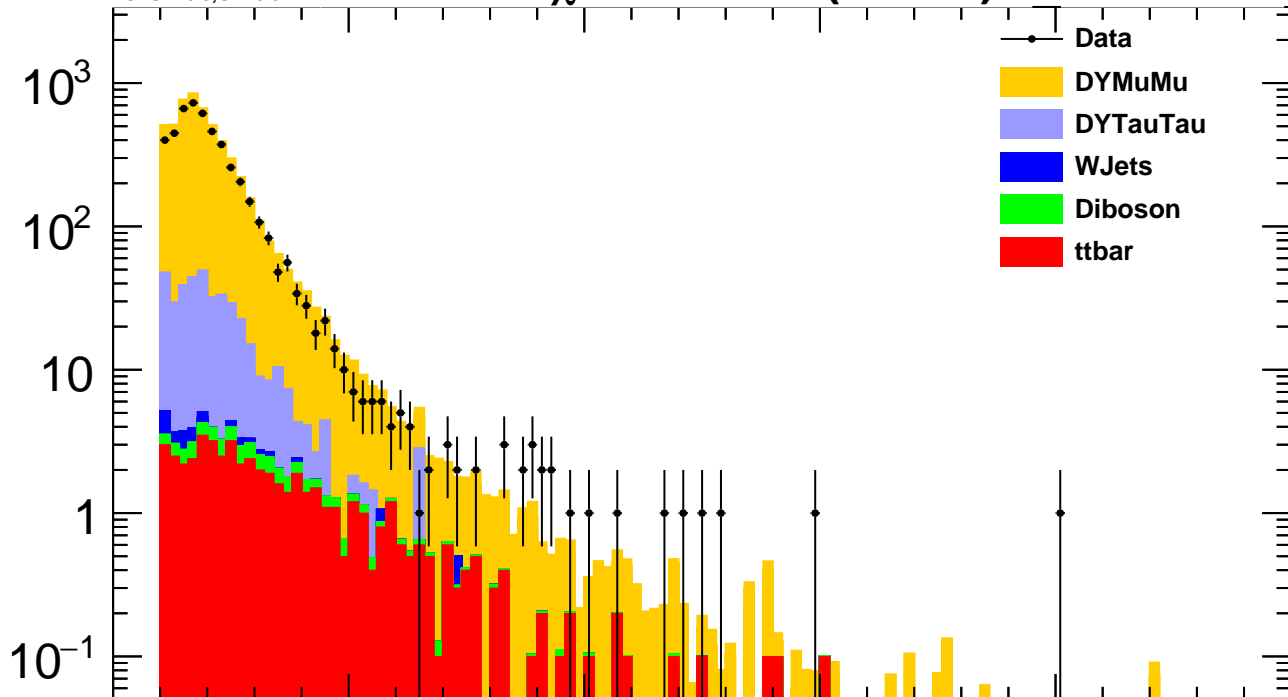
Muon P_T [GeV] ($120 < M_{\mu\mu} < 600$ GeV)

Entry

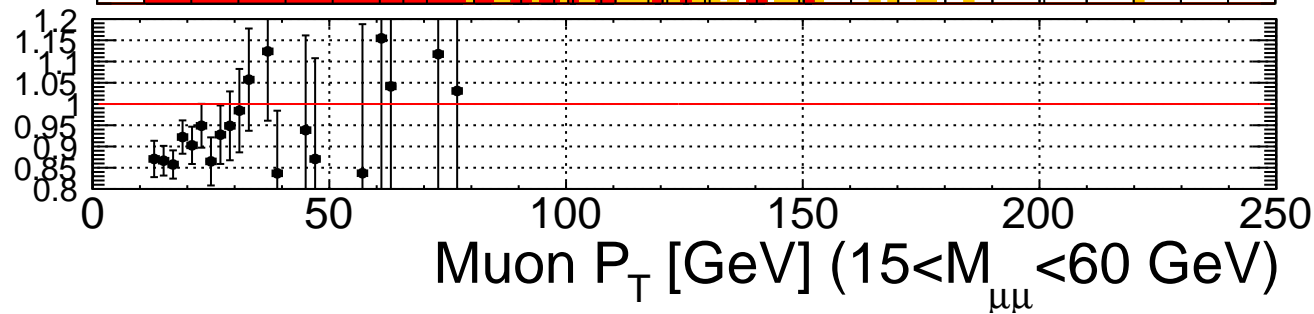
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=0.87$ (81.1%)

KS 9.5%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



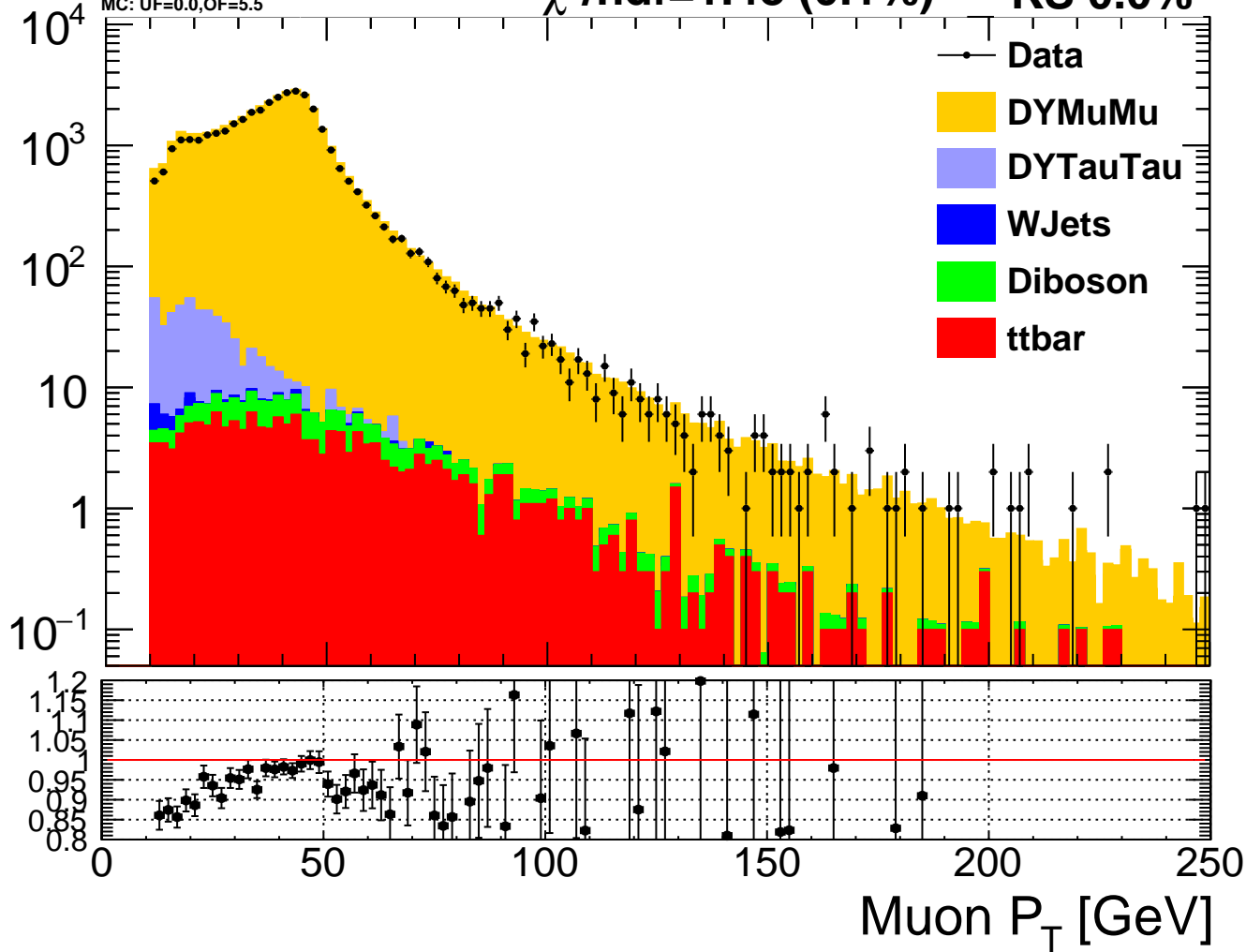
Entry

Data: UF=0,OF=3
MC: UF=0.0,OF=5.5 $\chi^2/\text{ndf}=1.48$ (0.1%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

data/Pred.



Entry

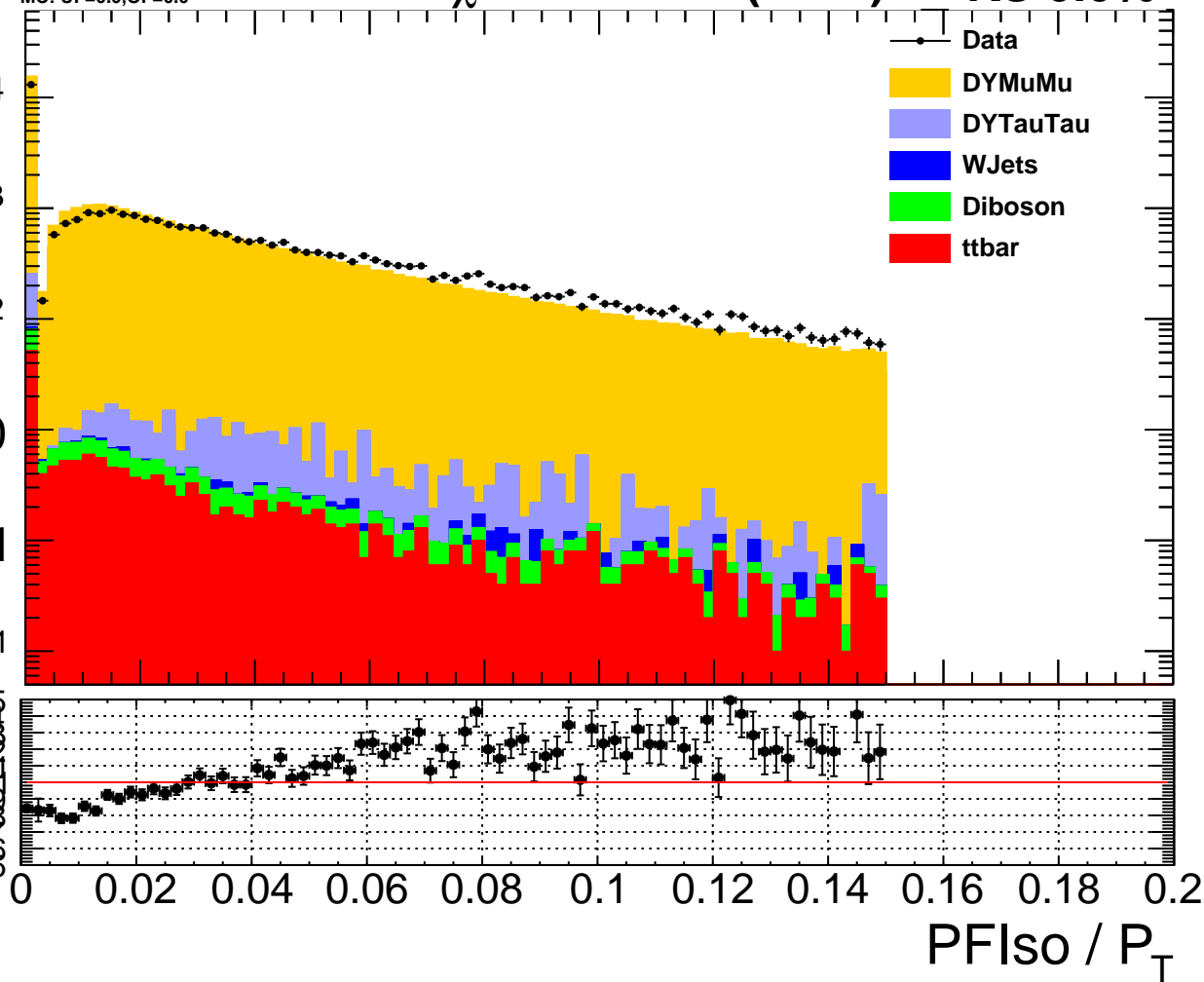
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=11.93$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

 10^4
 10^3
 10^2
 10
 1
 10^{-1}

data/Pred.

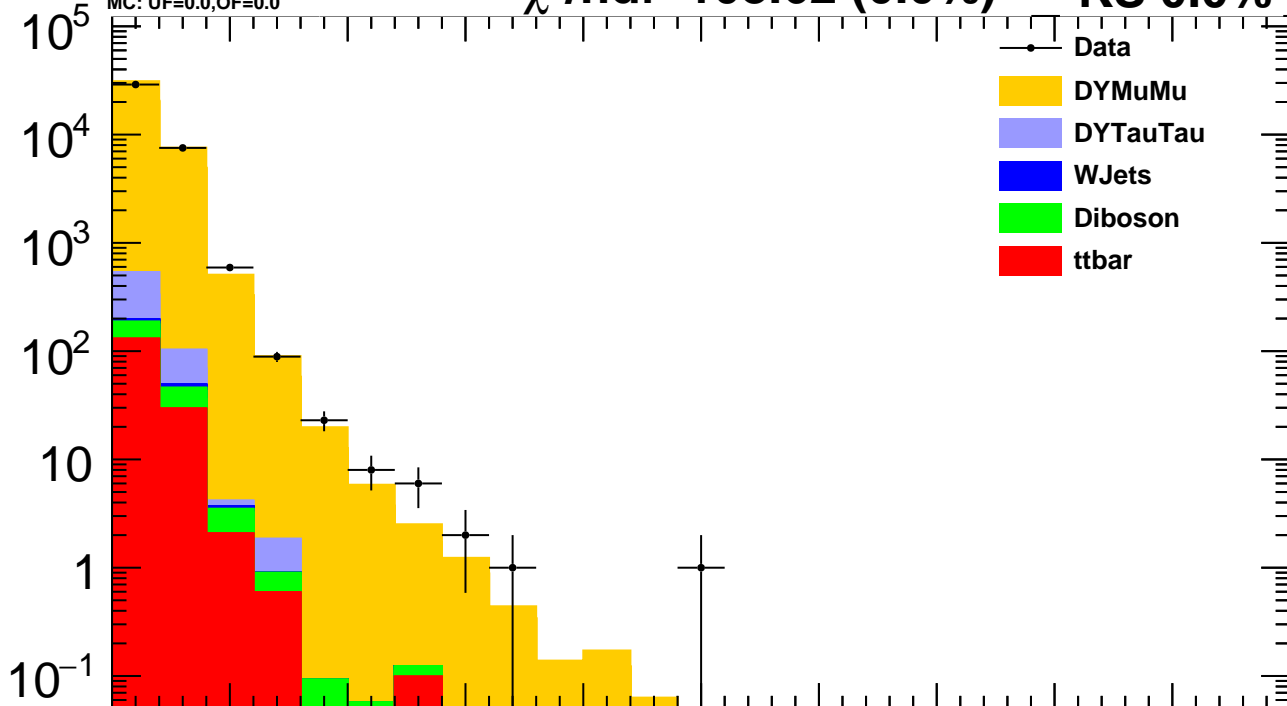
5
4
3
2
1
0.5
0.2
0.1 PFIso / P_T

Entry

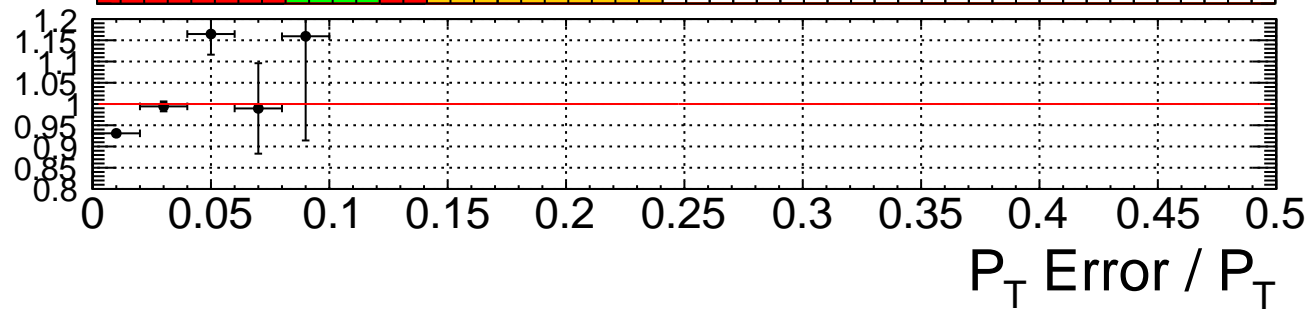
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=108.62$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.

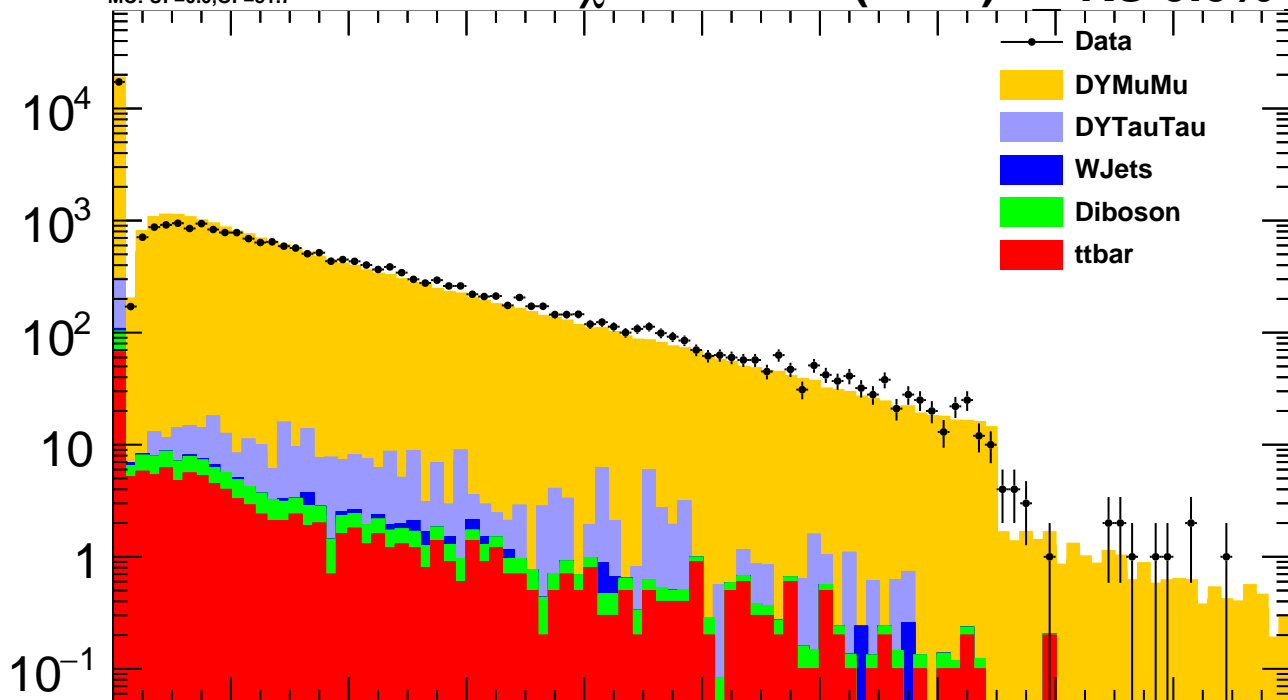


Entry

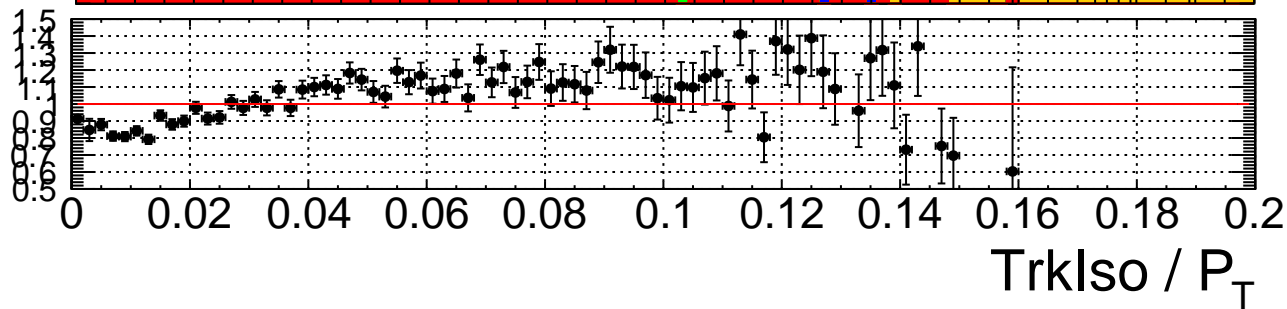
Data: UF=0,OF=45
MC: UF=0.0,OF=31.7 $\chi^2/\text{ndf}=4.49$ (0.0%)

KS 0.0%

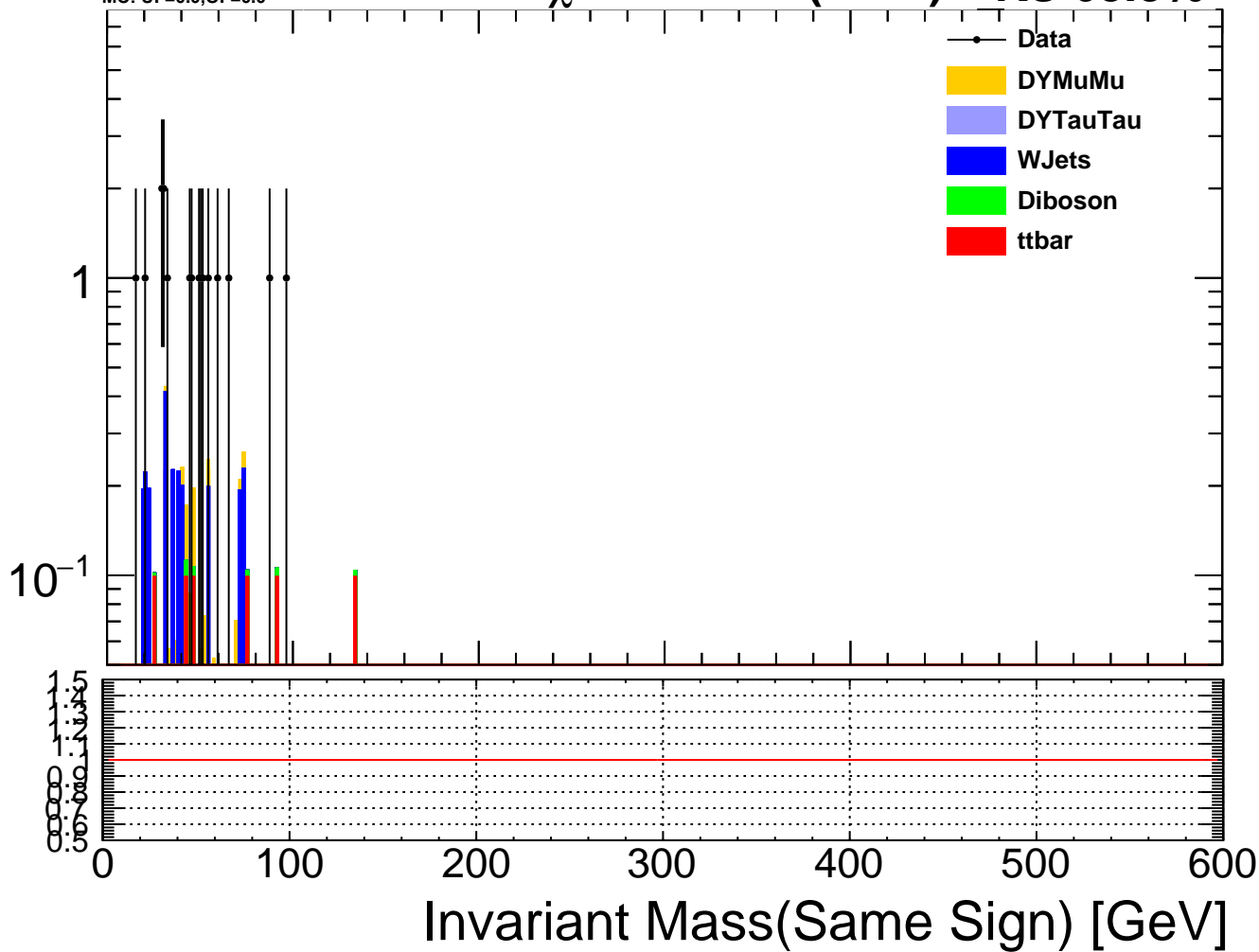
- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



data/Pred.



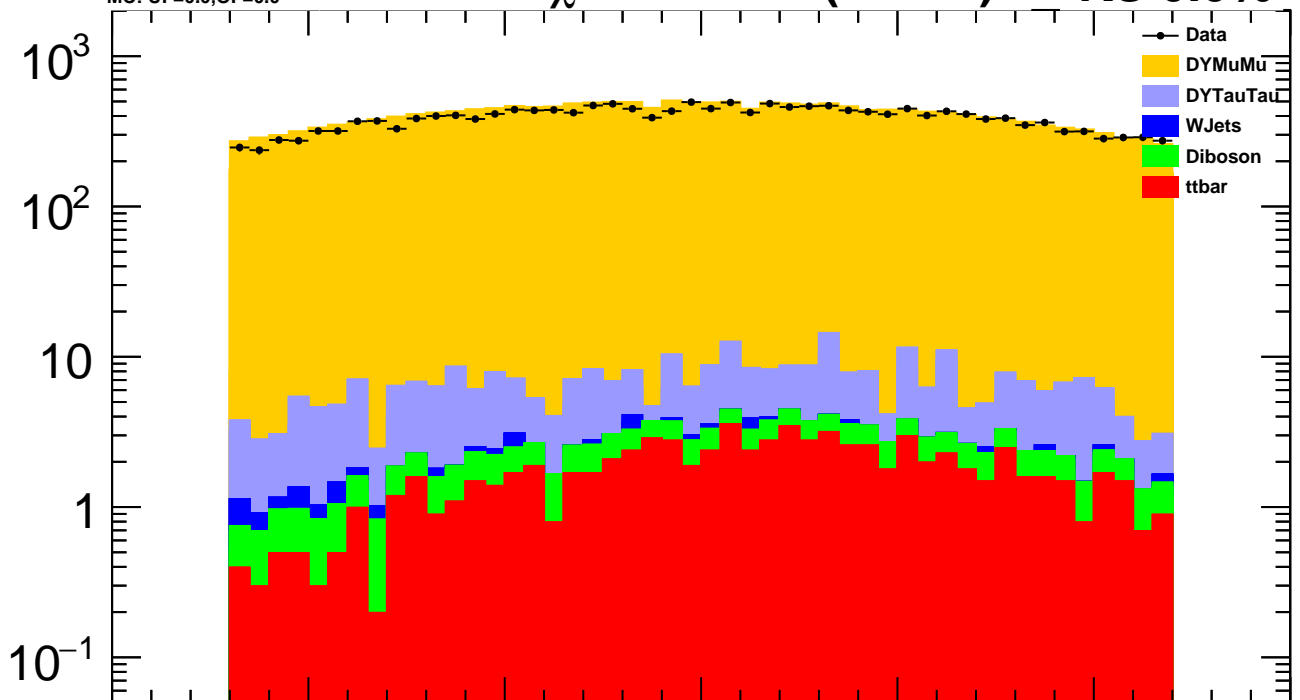
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=2.01$ (0.0%) KS 68.8%

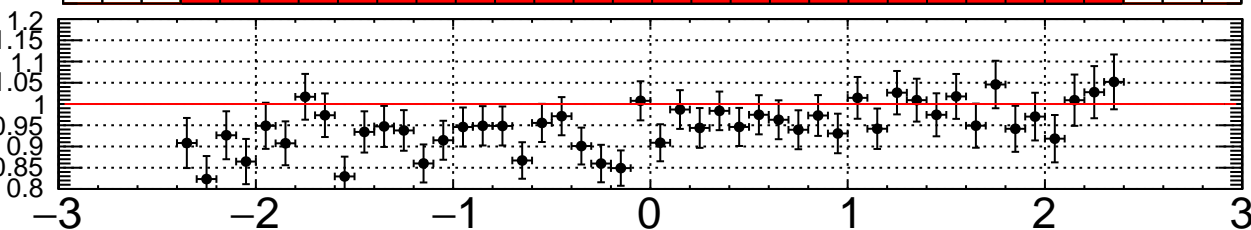
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.19$ (17.3%)

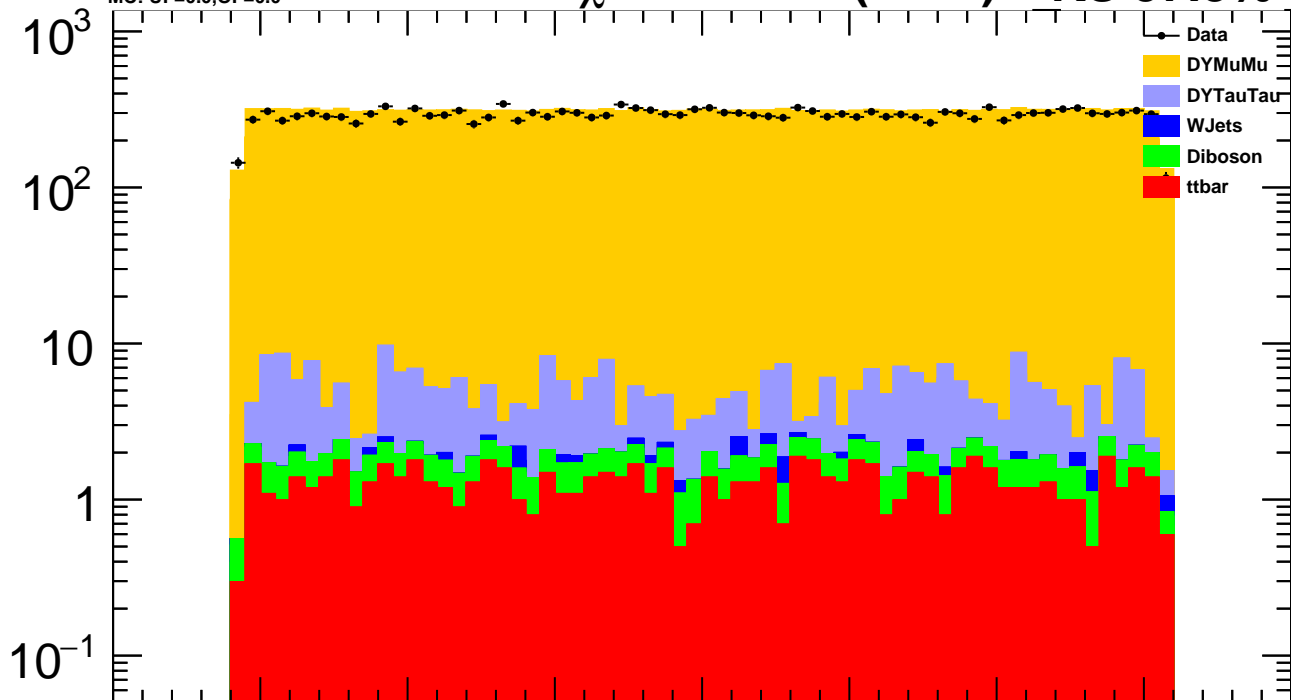
KS 0.0%



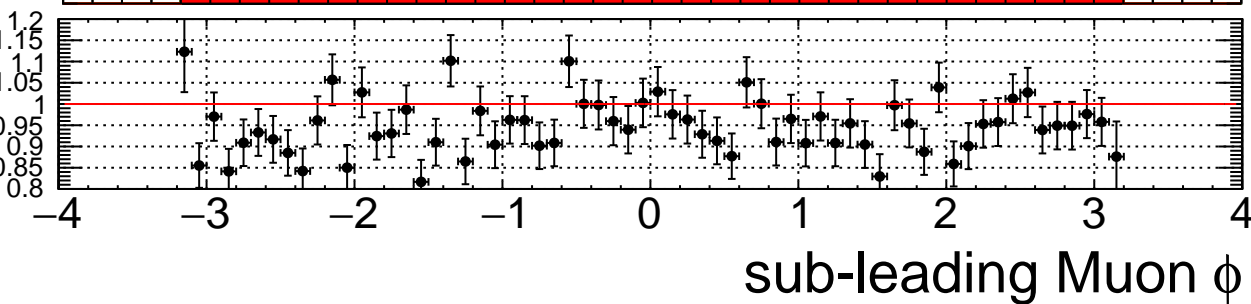
data/Pred.

sub-leading Muon η

Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.30$ (5.6%) KS 37.8%

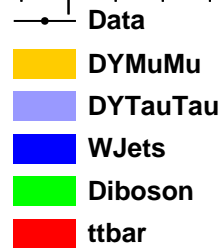
data/Pred.



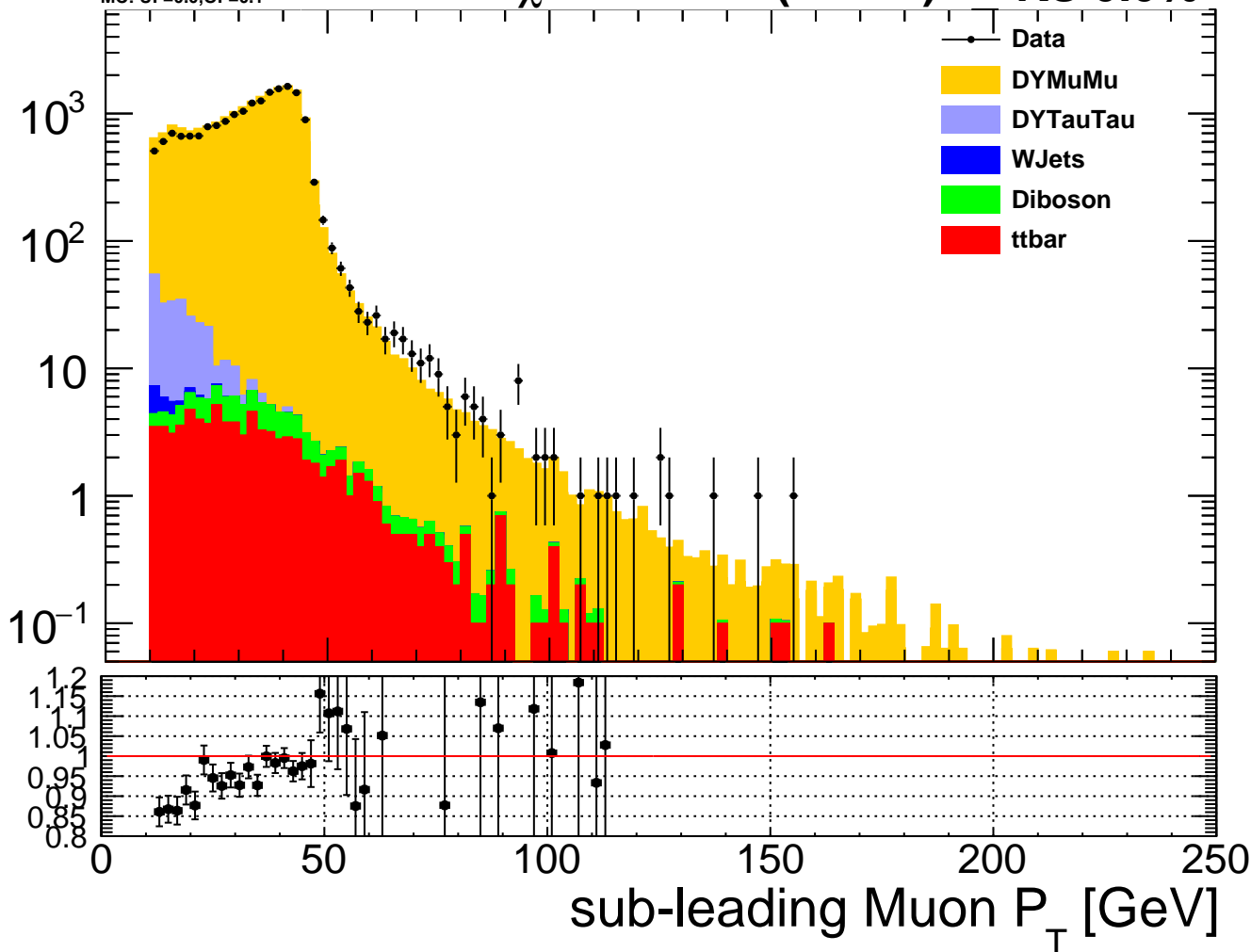
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.1 $\chi^2/\text{ndf}=1.11$ (20.8%)

KS 0.0%



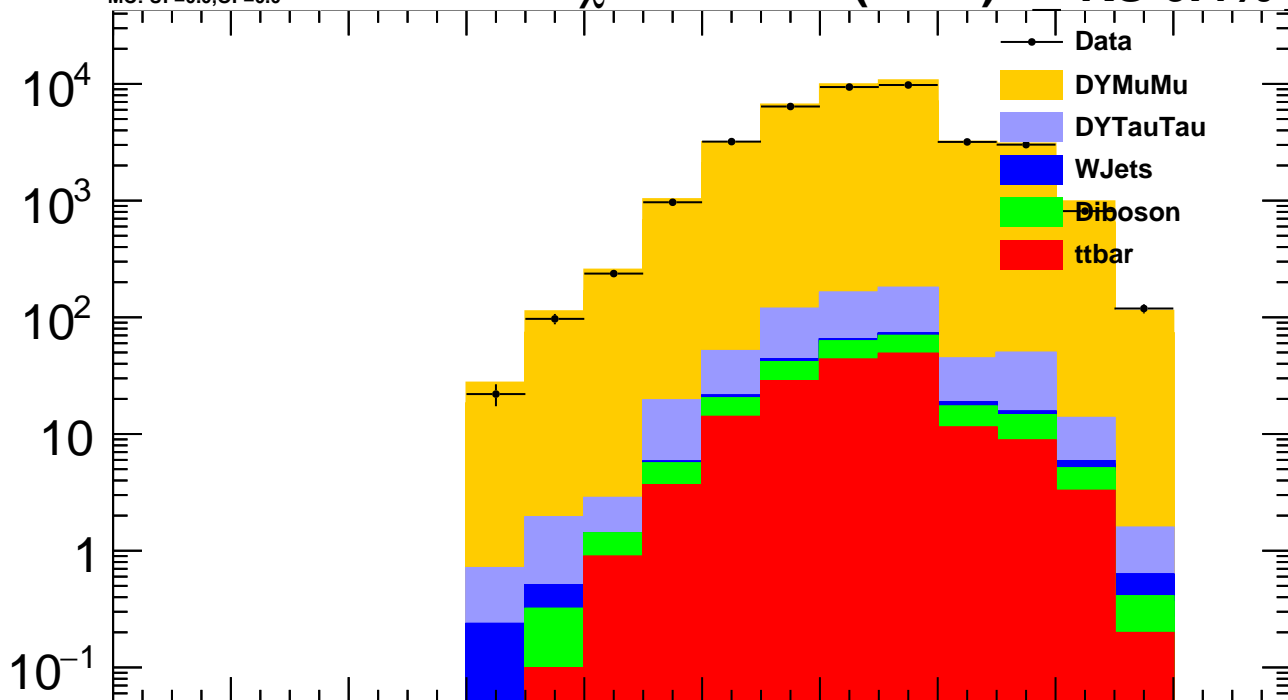
data/Pred.



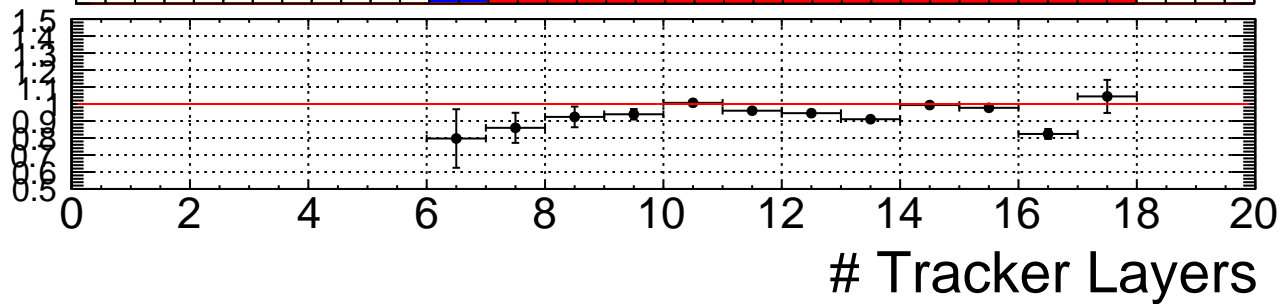
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=5.07$ (0.0%)

KS 6.4%



data/Pred.



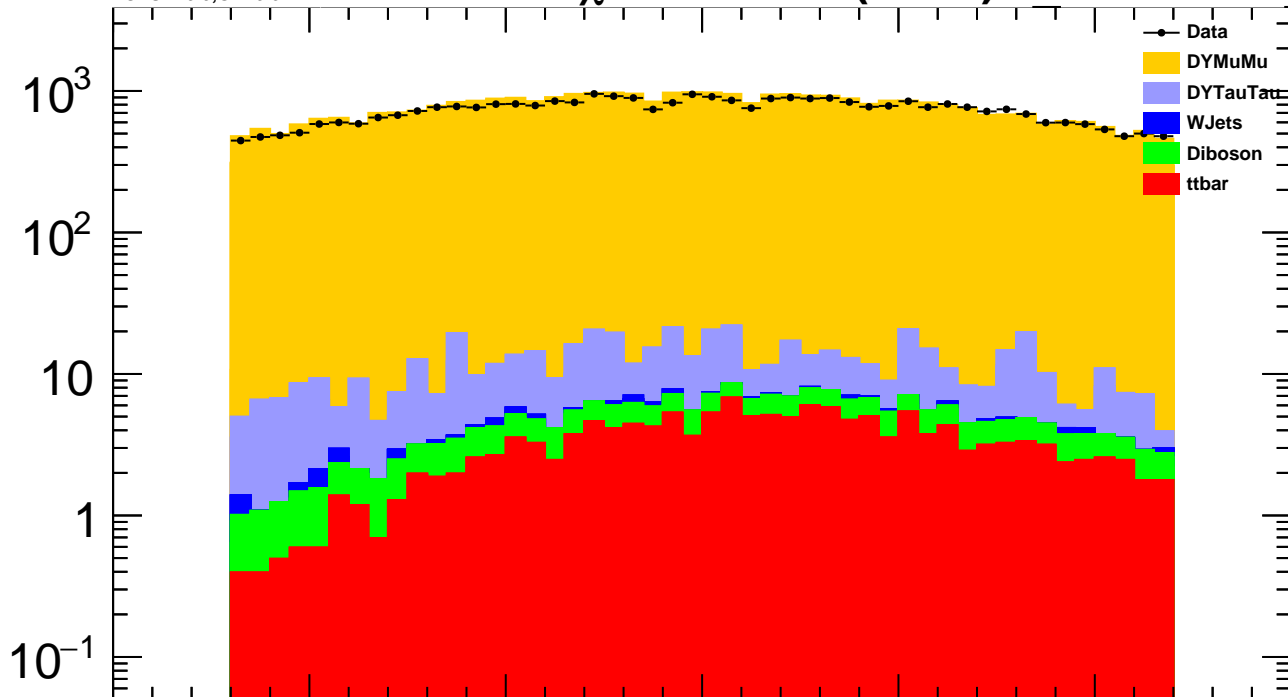
Tracker Layers

Entry

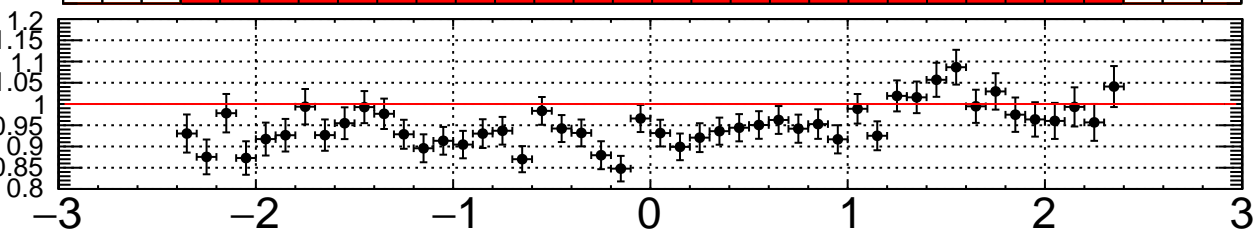
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.82$ (0.0%)

KS 0.0%

—●— Data
DYMuMu
DYTauTau
WJets
Diboson
ttbar



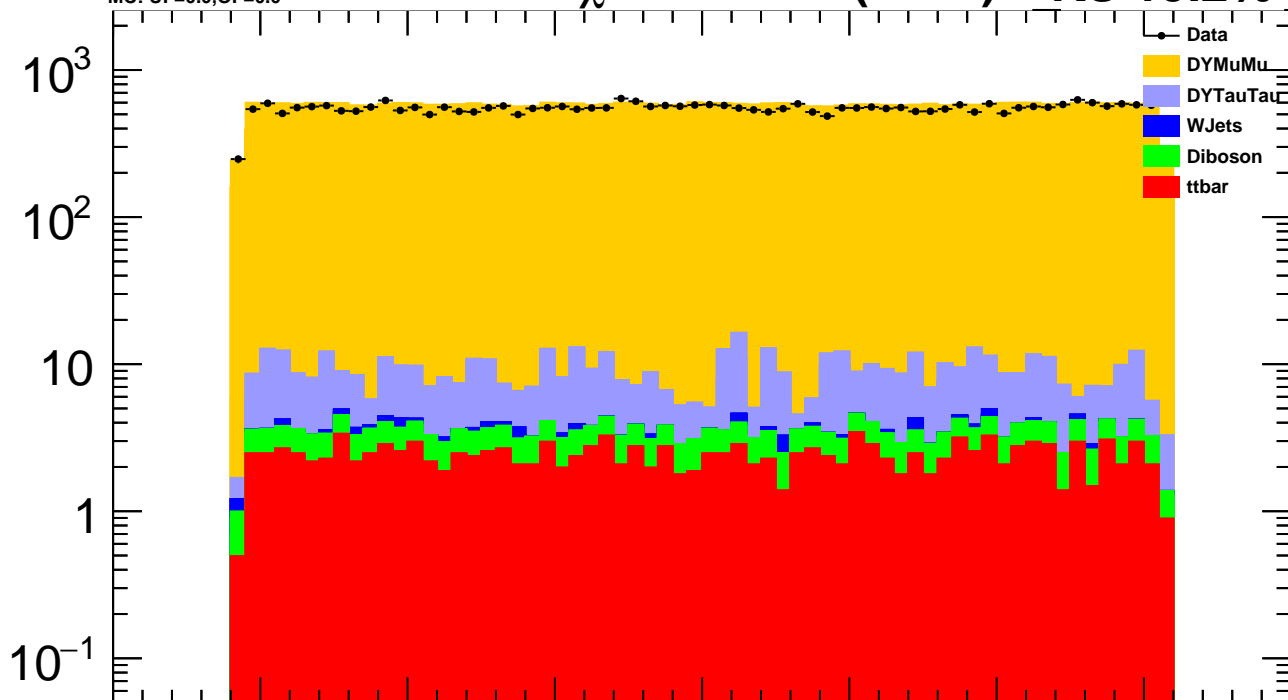
data/Pred.

Muon(Matched with Trigger) η

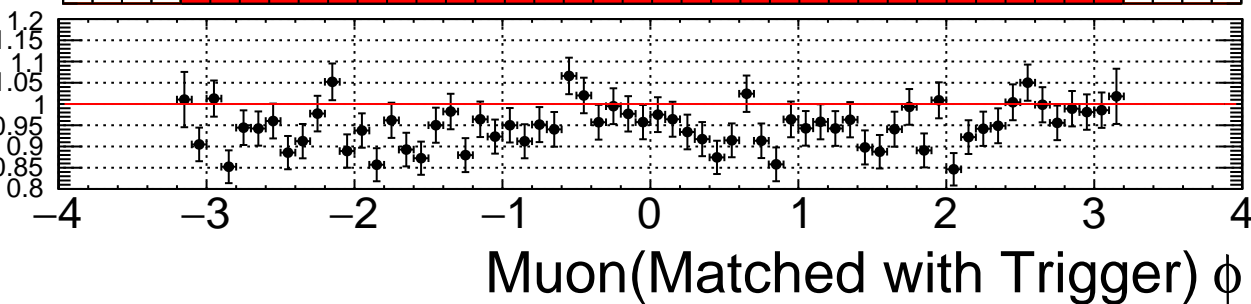
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0

$\chi^2/\text{ndf}=1.51$ (0.6%) KS 15.2%

Entry



data/Pred.



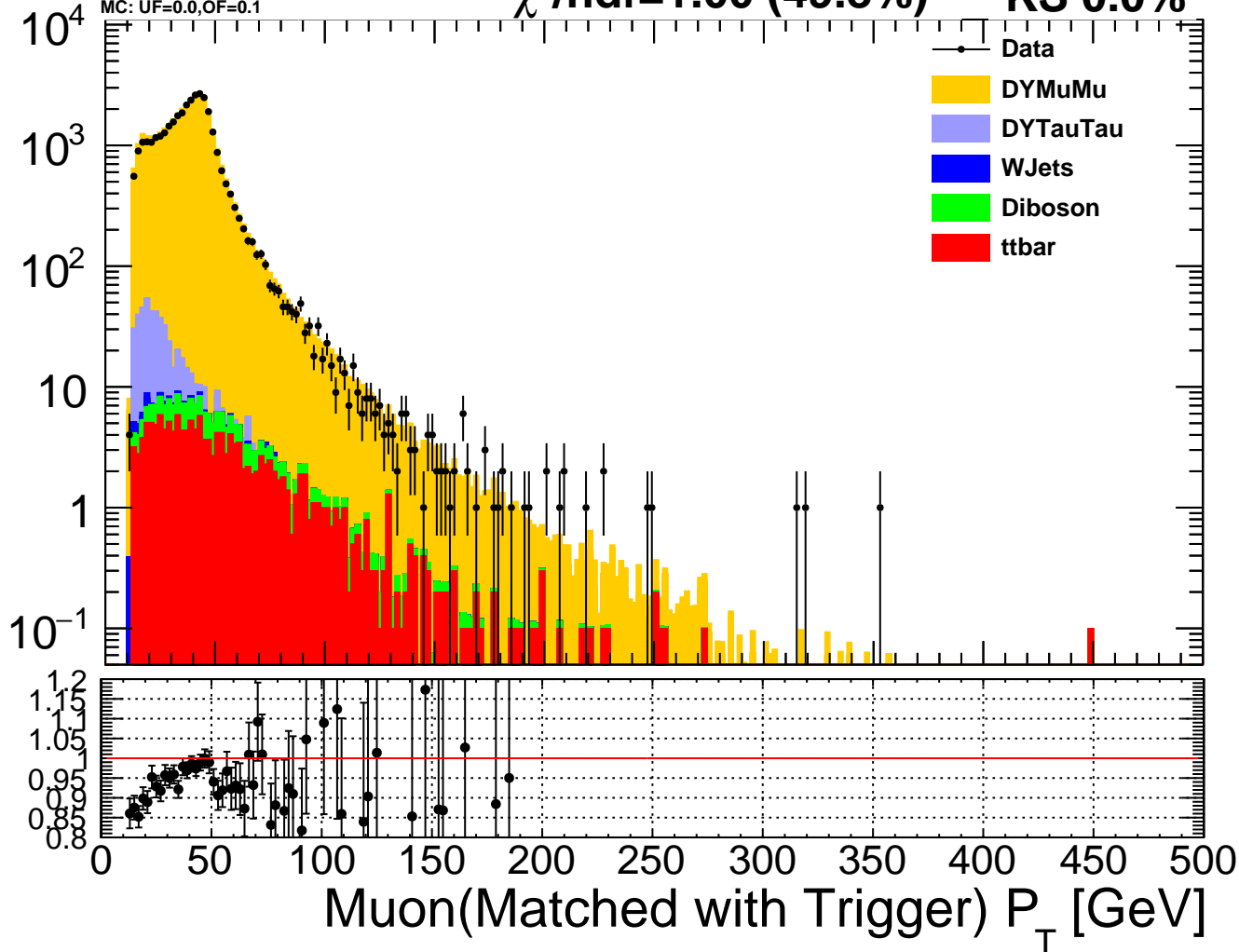
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.1 $\chi^2/\text{ndf}=1.00$ (49.8%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

data/Pred.



Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=5.49$ (0.0%)

KS 0.0%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar

 10^2

10

1

 10^{-1}

data/Pred.

1.2

1.15

1.1

1.05

1.0

0.95

0.9

0.85

0.8

-3

-2

-1

0

1

2

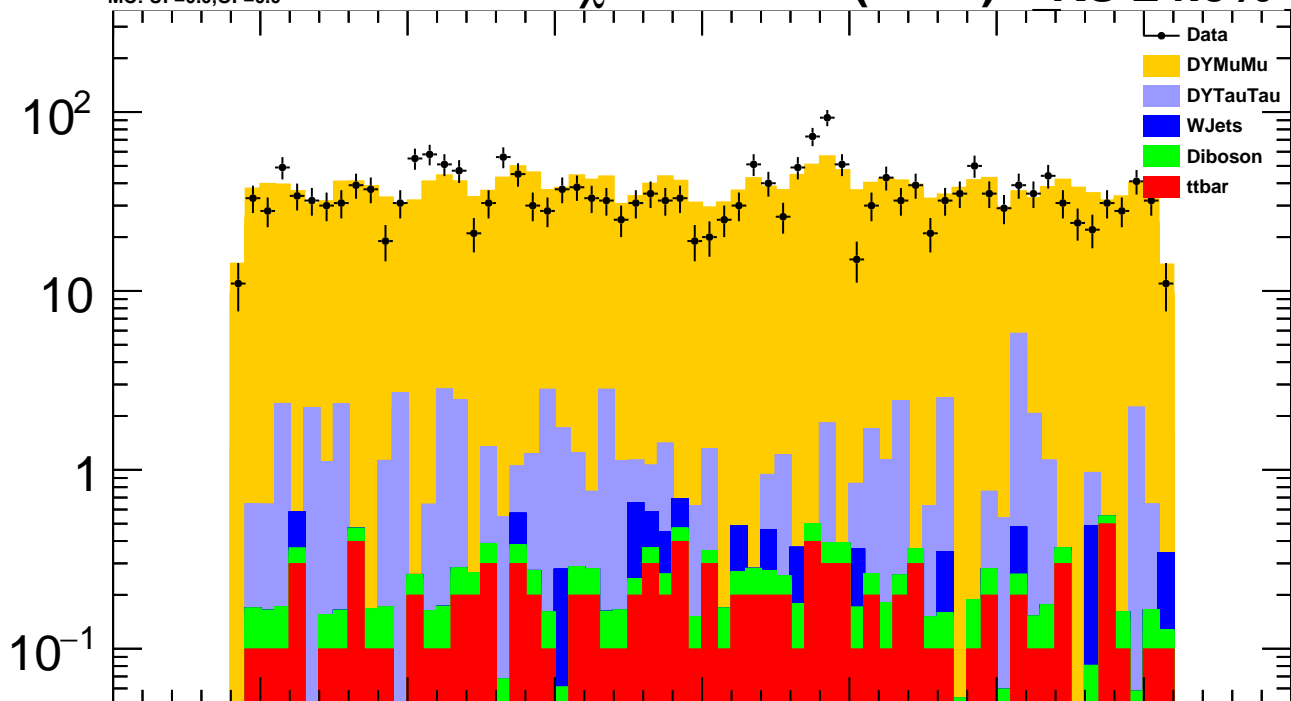
3

Muon(NOT Matched with Trigger) η

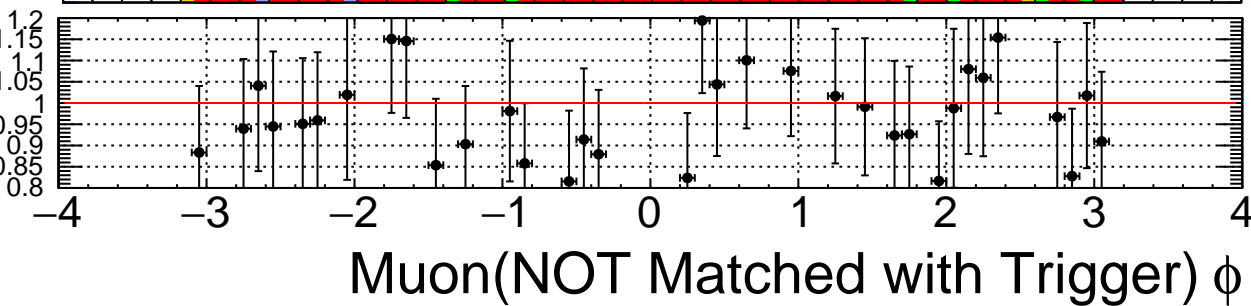
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0

$\chi^2/\text{ndf}=2.44$ (0.0%) KS 24.5%

Entry



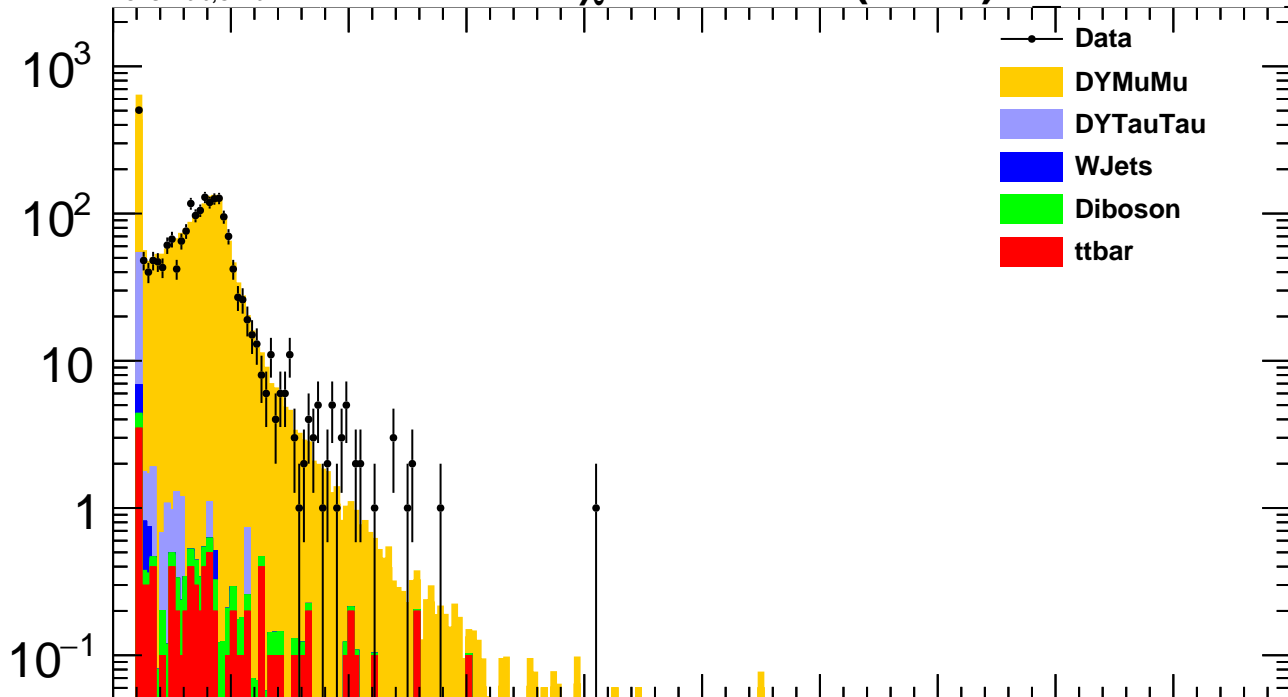
data/Pred.



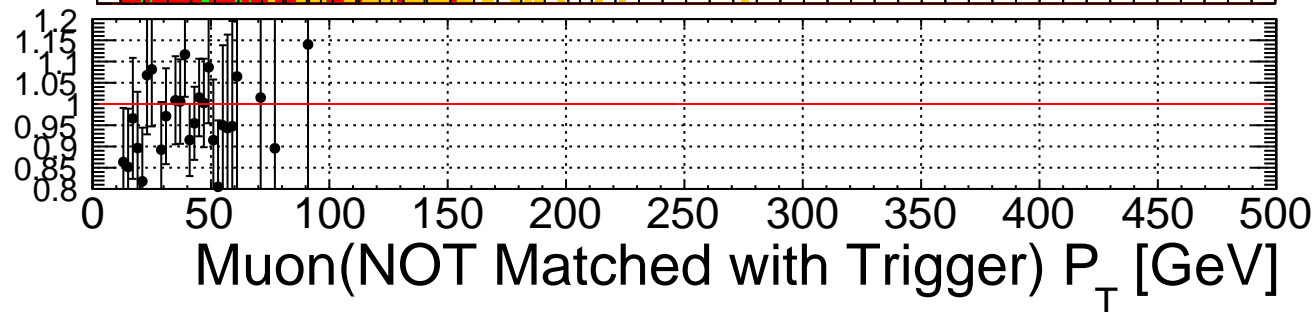
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.1 $\chi^2/\text{ndf}=1.41$ (0.2%)

KS 0.0%



data/Pred.

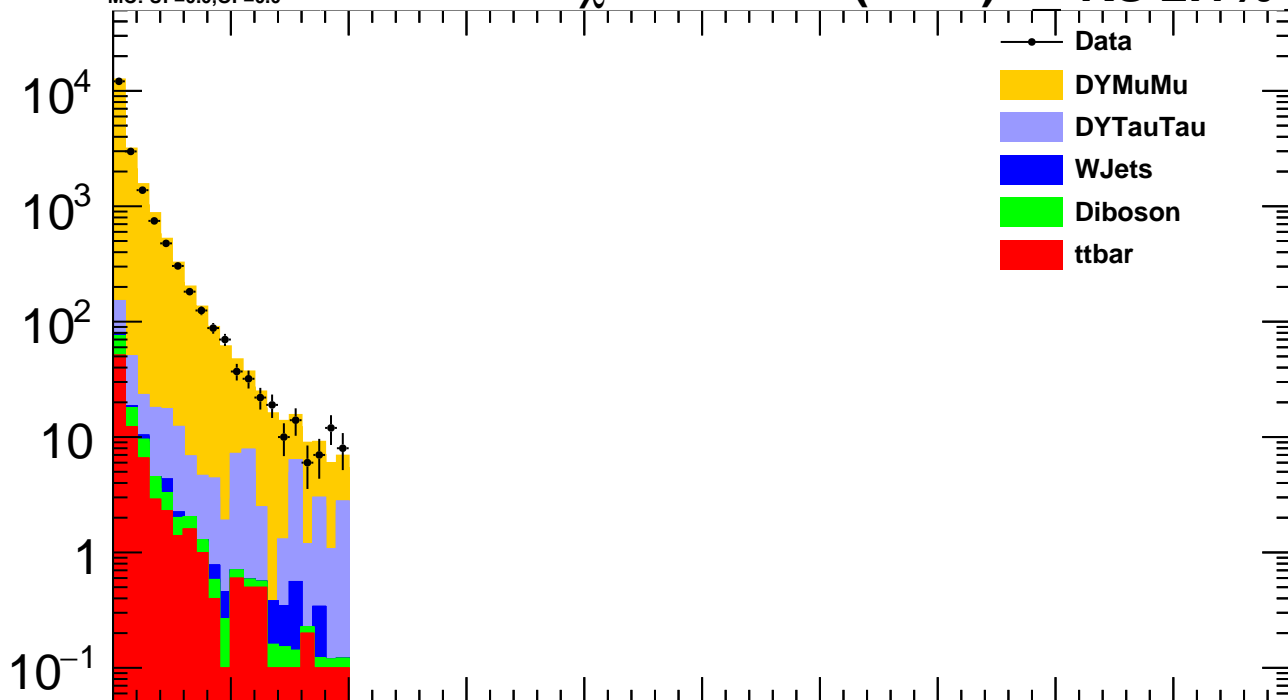


Entry

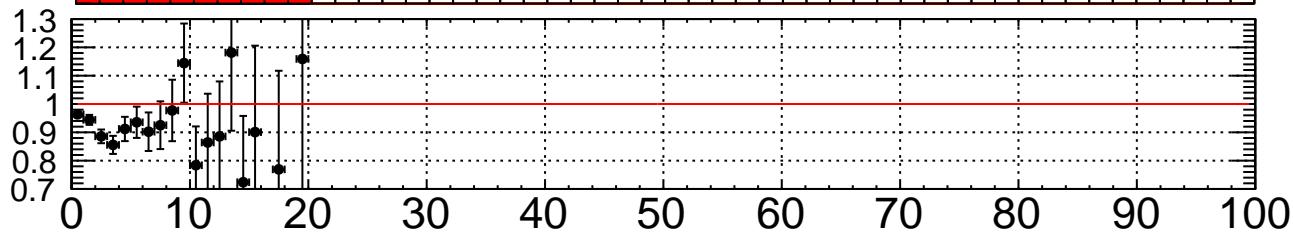
Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.62$ (4.3%)

KS 2.1%

- Data
- DYMuMu
- DYTauTau
- WJets
- Diboson
- ttbar



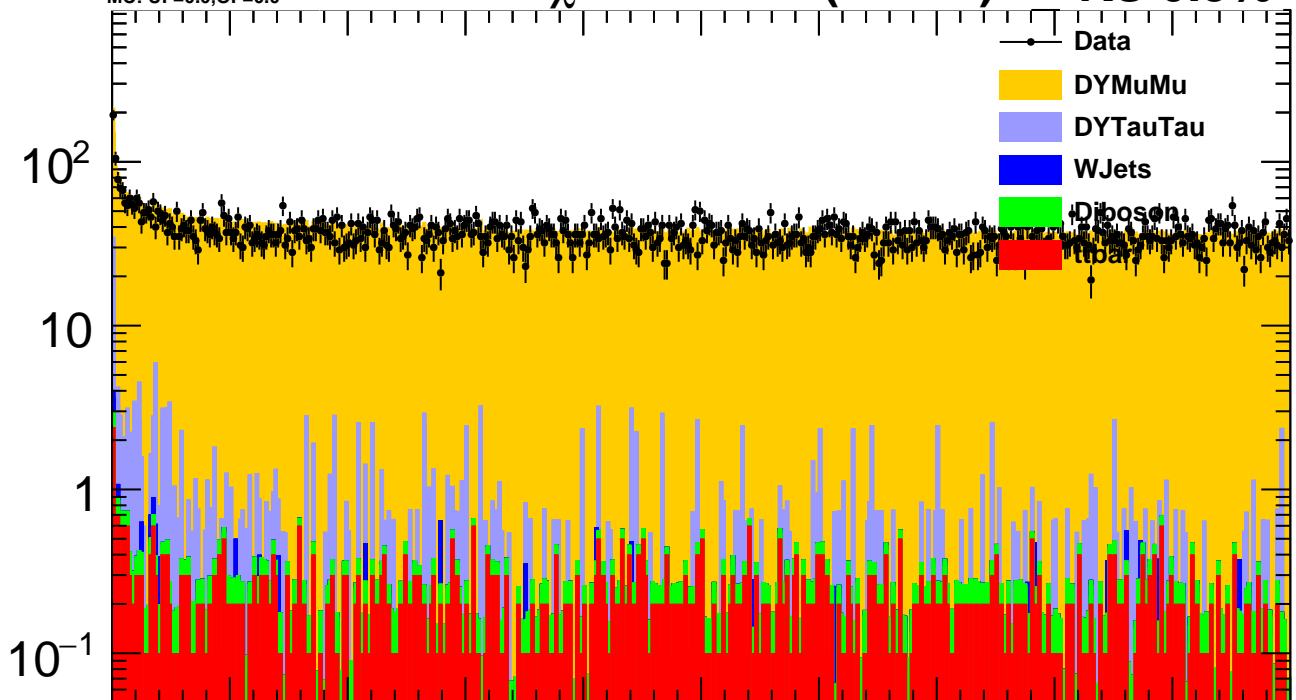
data/Pred.

Vertex Normalized χ^2

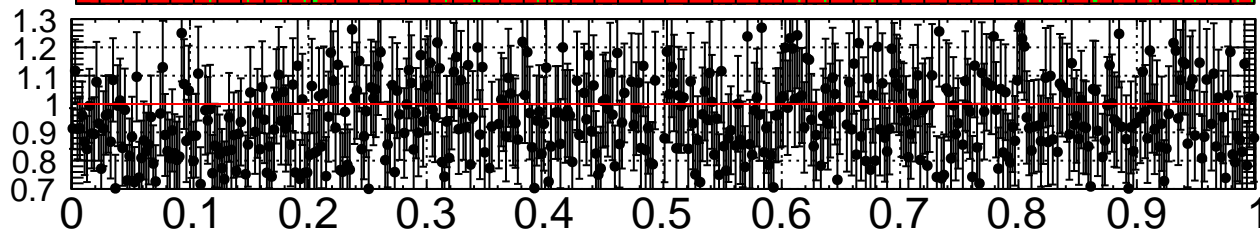
Entry

Data: UF=0,OF=0
MC: UF=0.0,OF=0.0 $\chi^2/\text{ndf}=1.00$ (48.3%)

KS 0.3%



data/Pred.



Vertex Probability