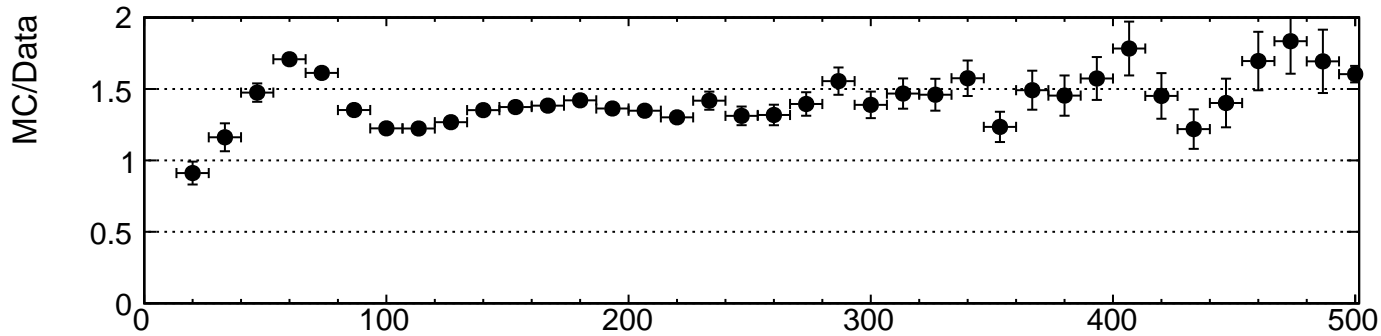
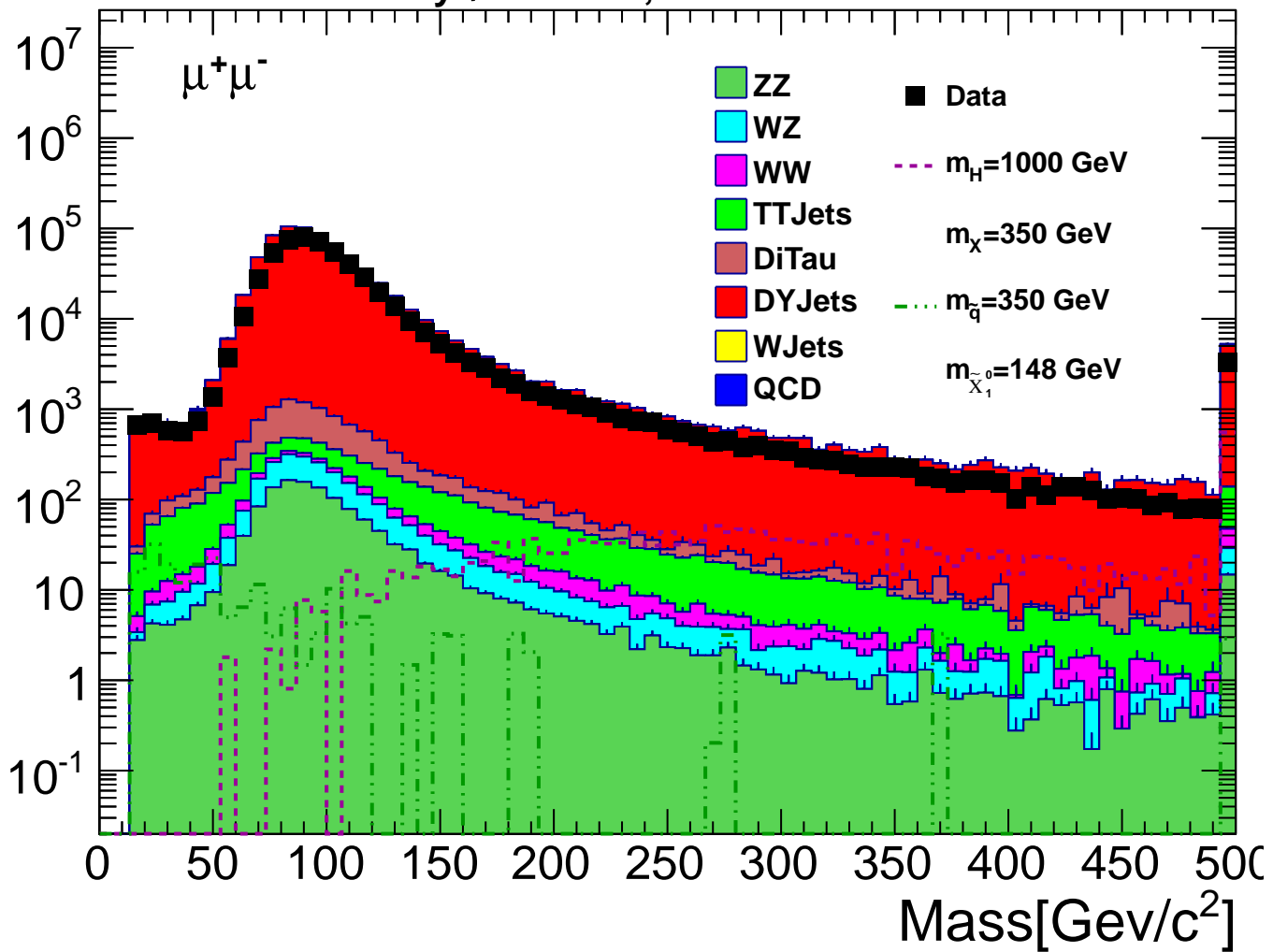


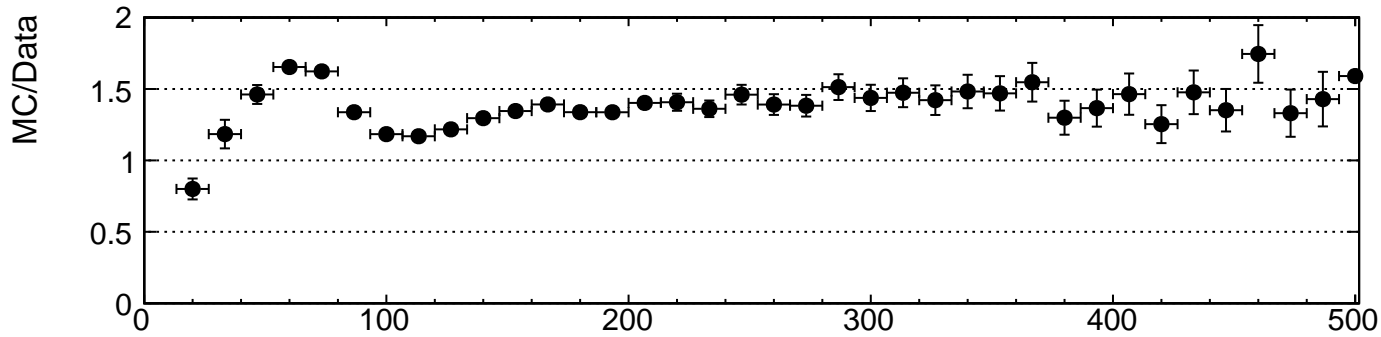
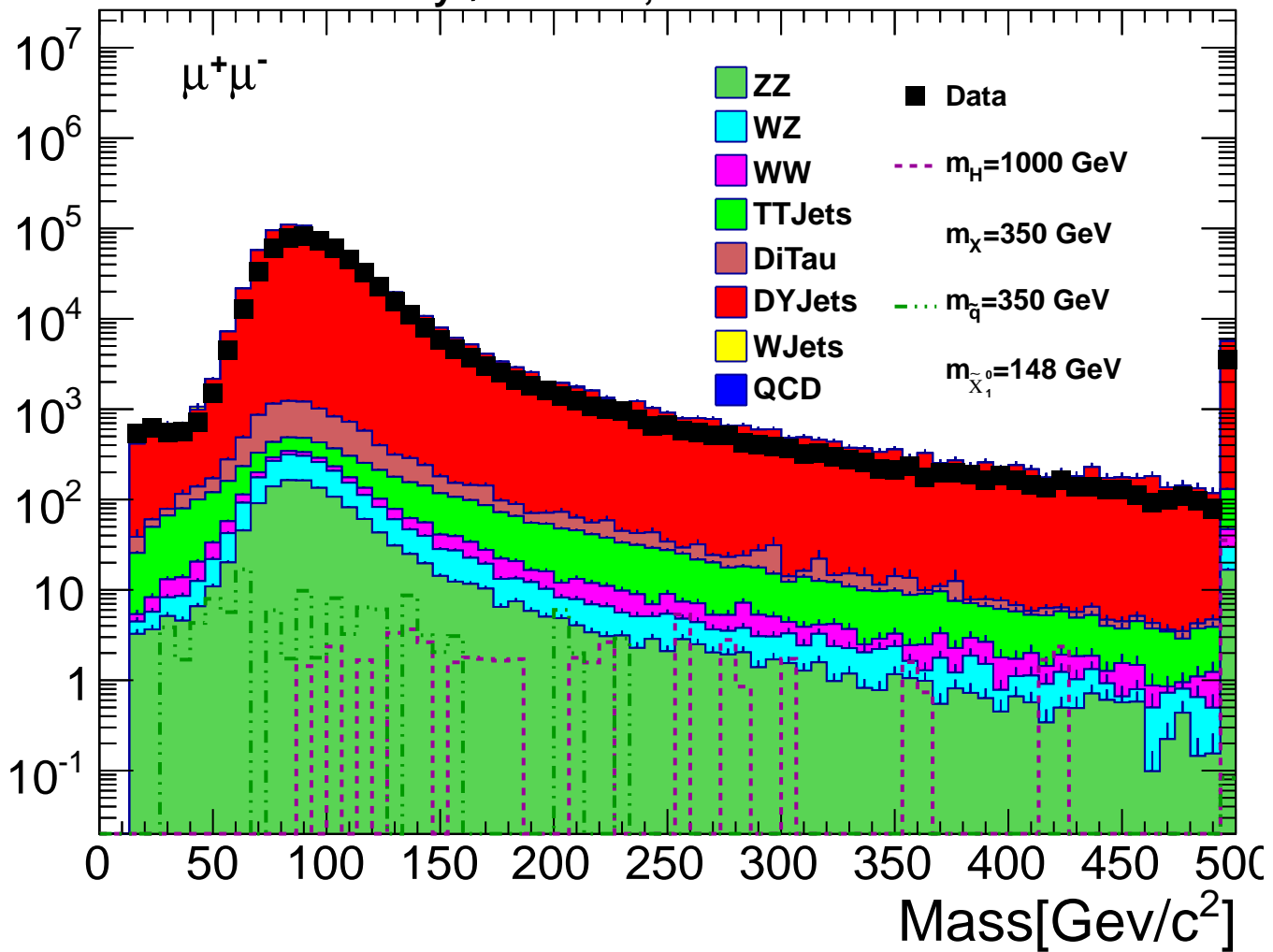
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries



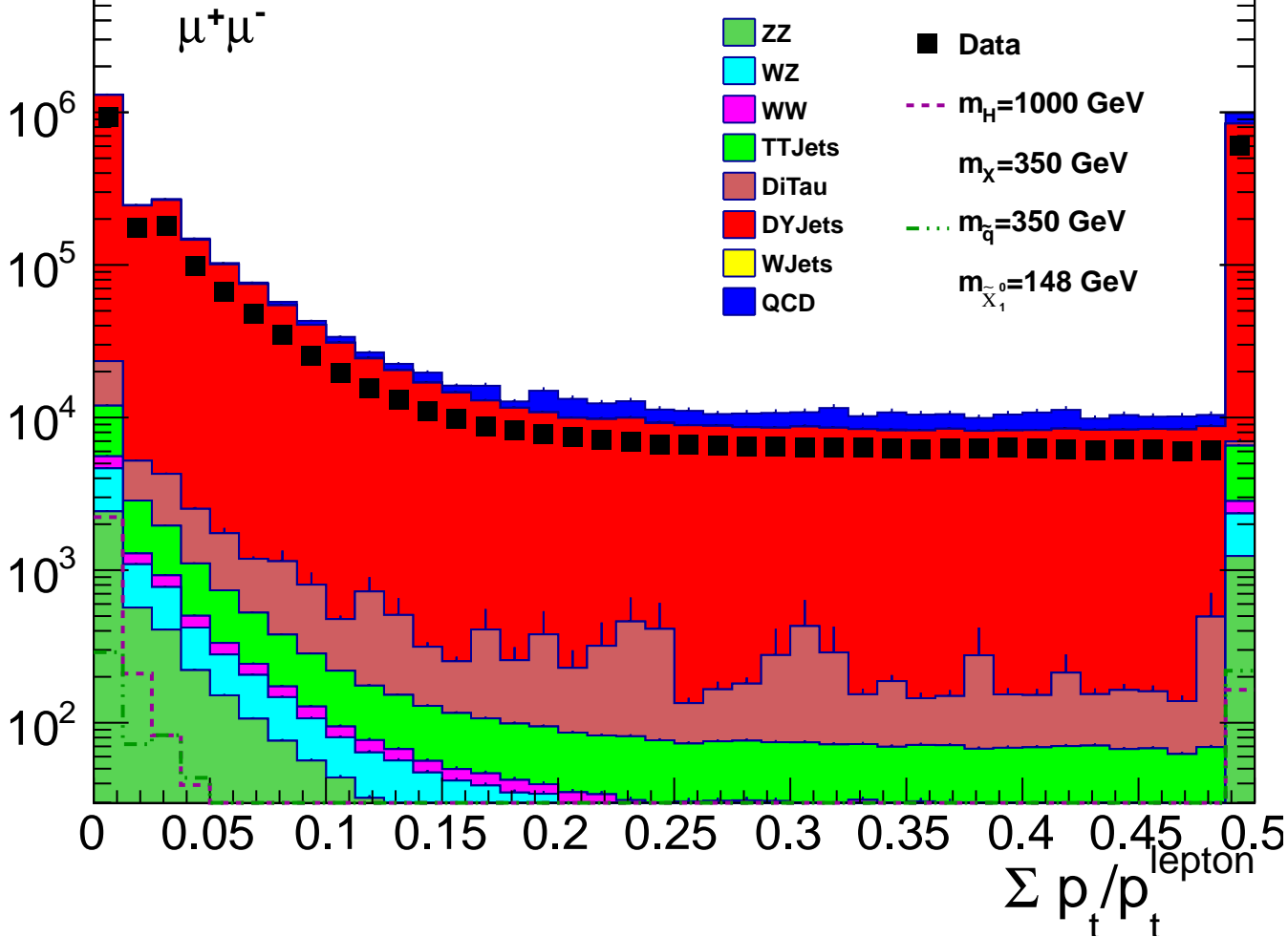
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

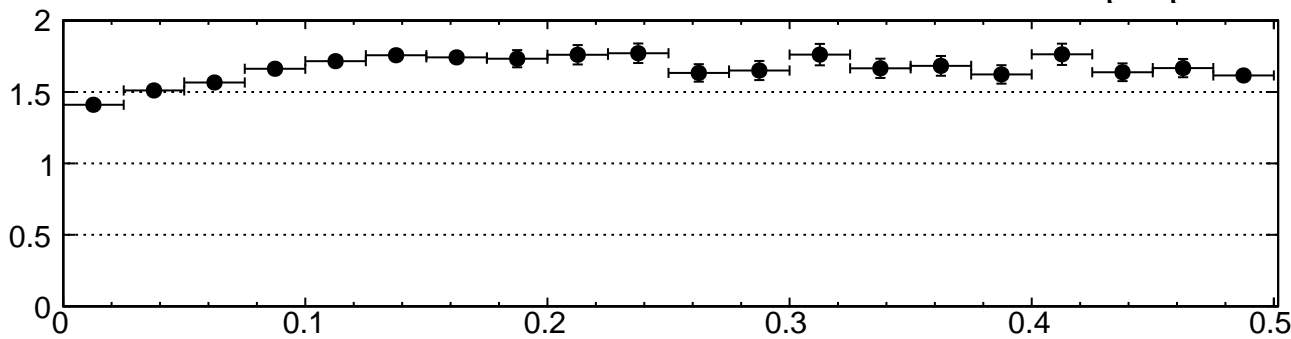


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

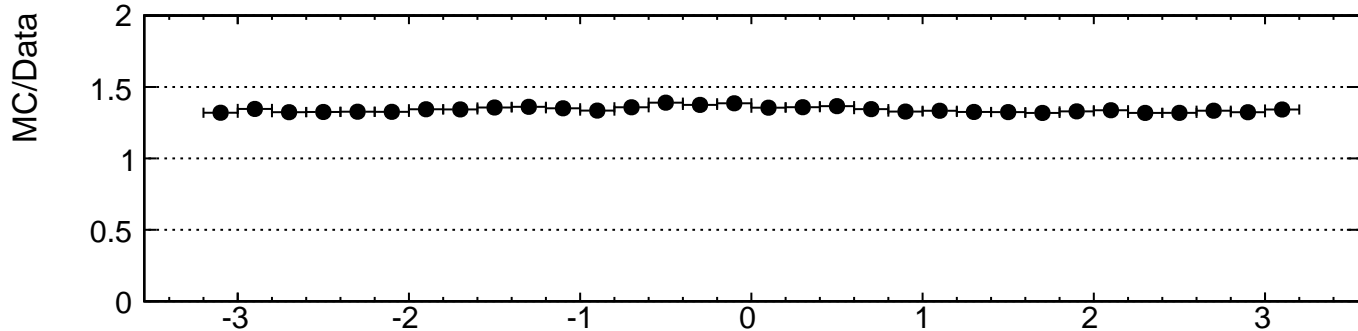
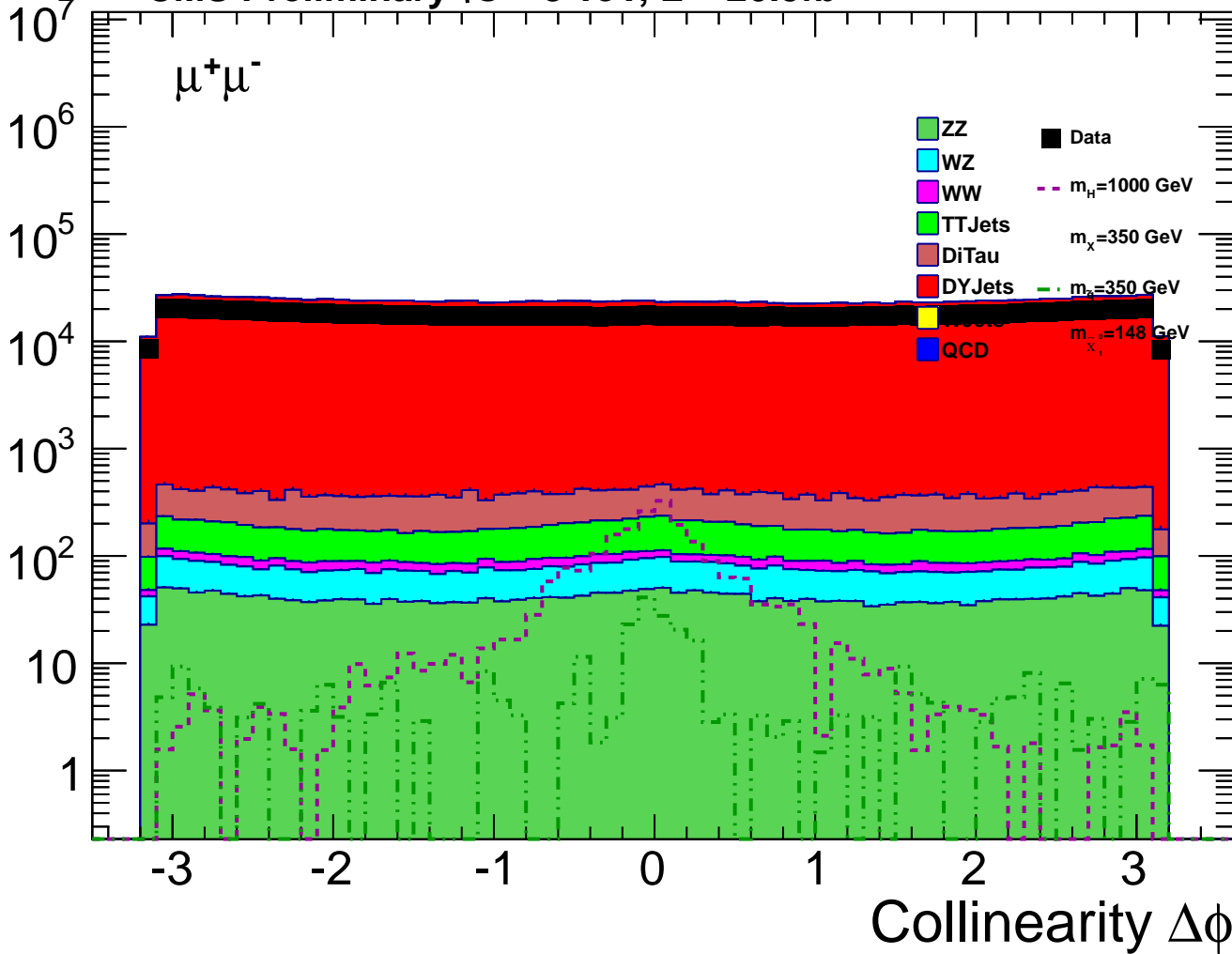


MC/Data



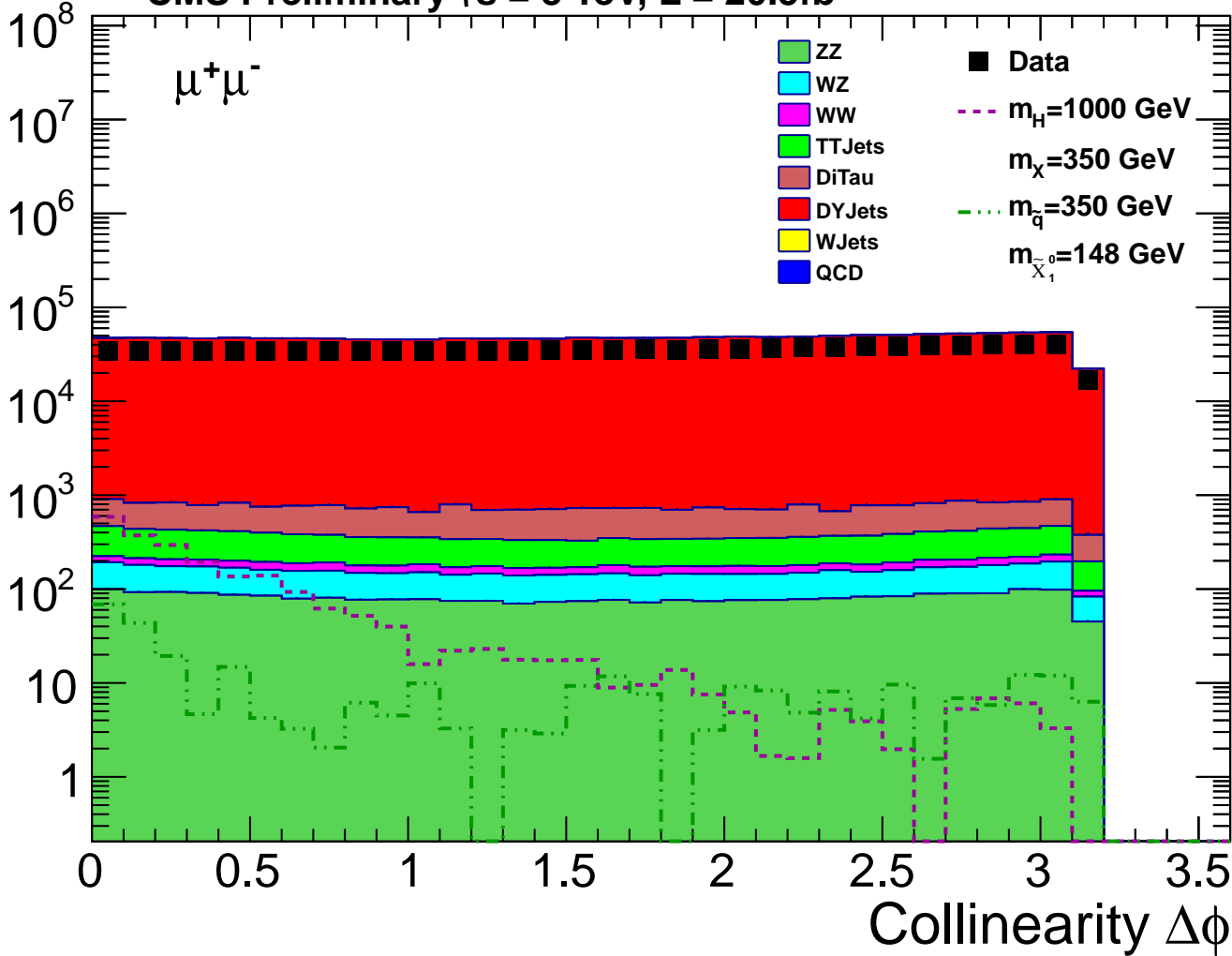
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

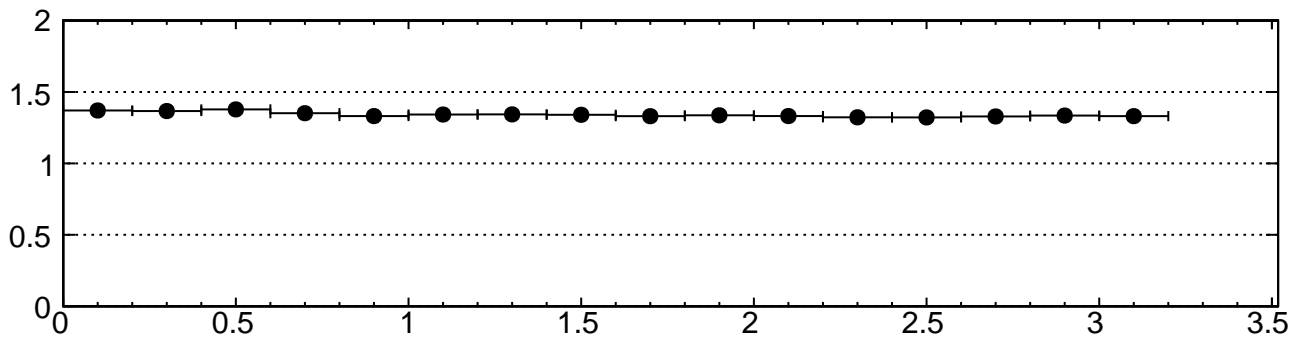


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}, L = 20.5 \text{ fb}^{-1}$

Entries

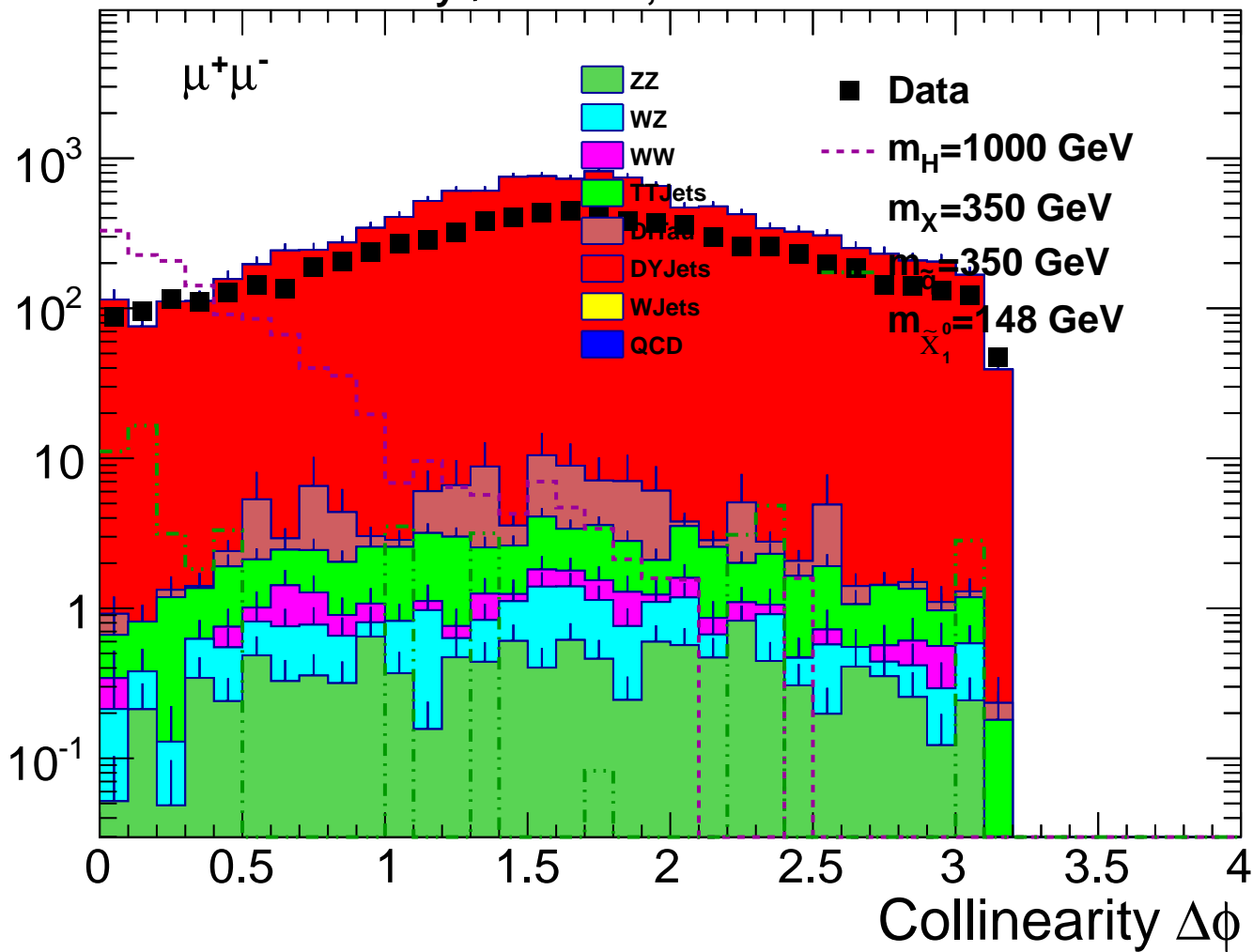


MC/Data

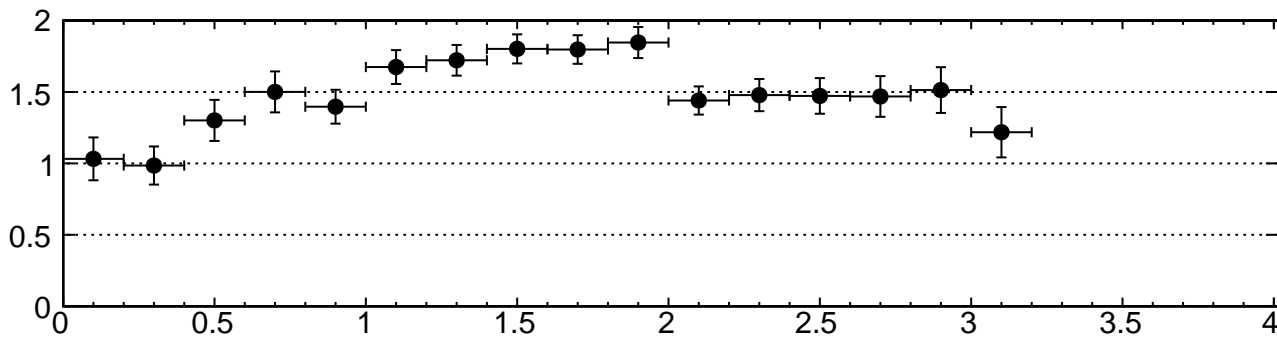


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

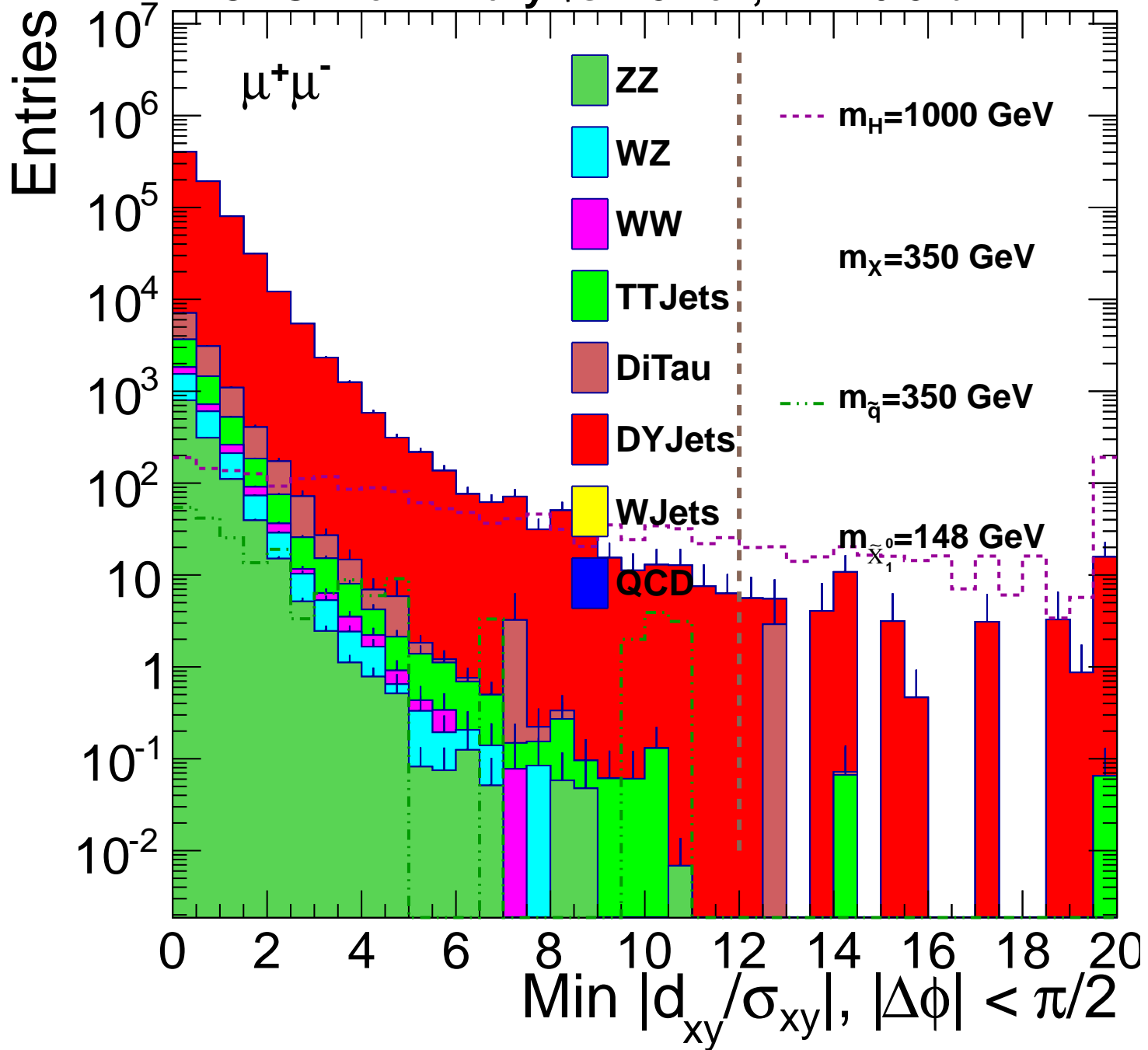
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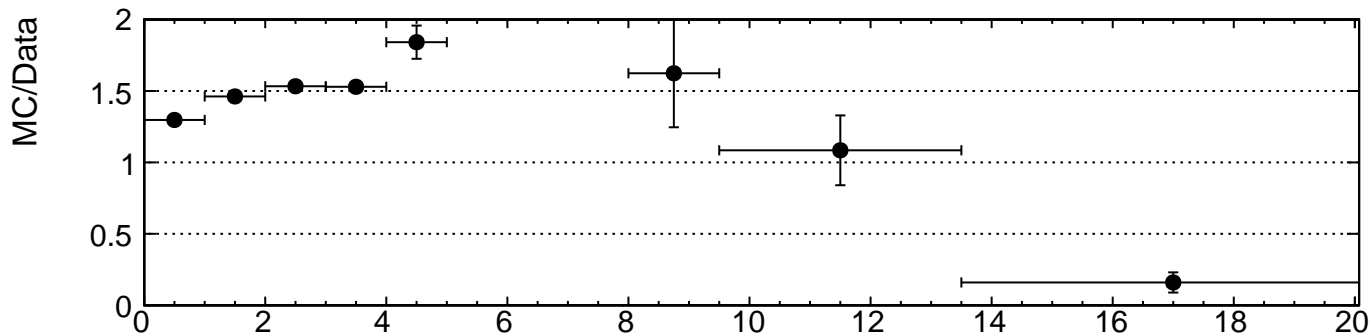
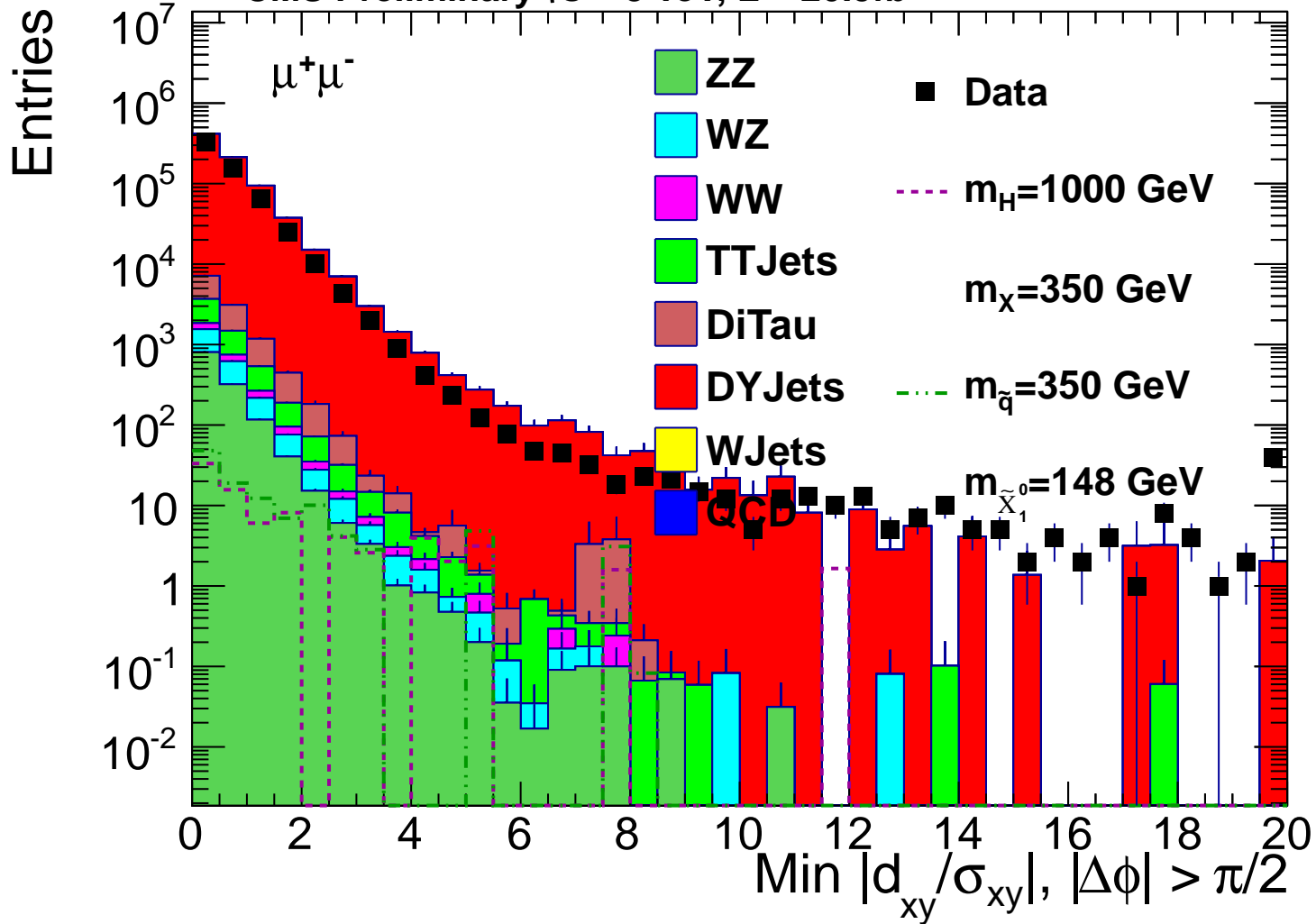
MC/Data



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

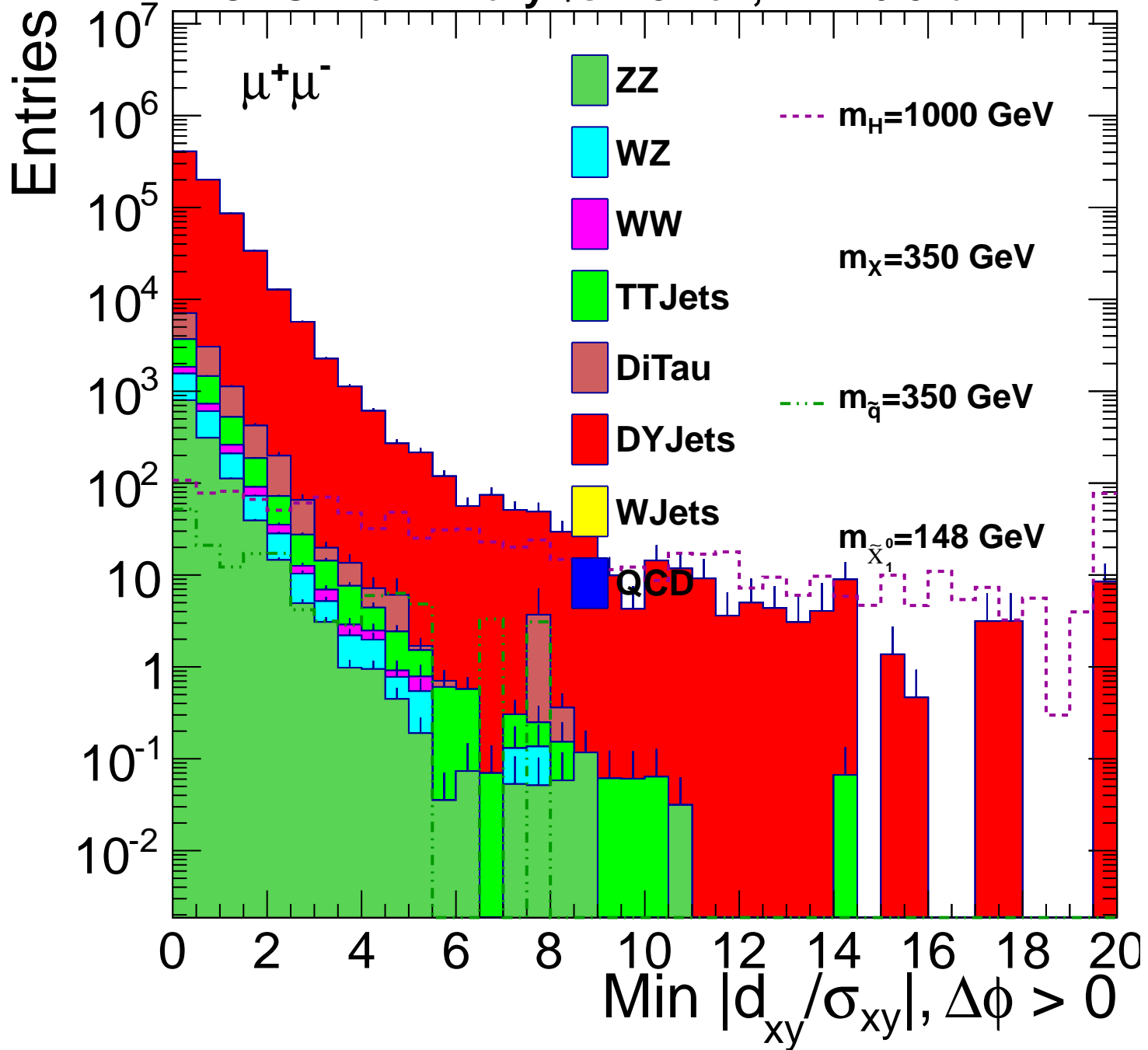


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

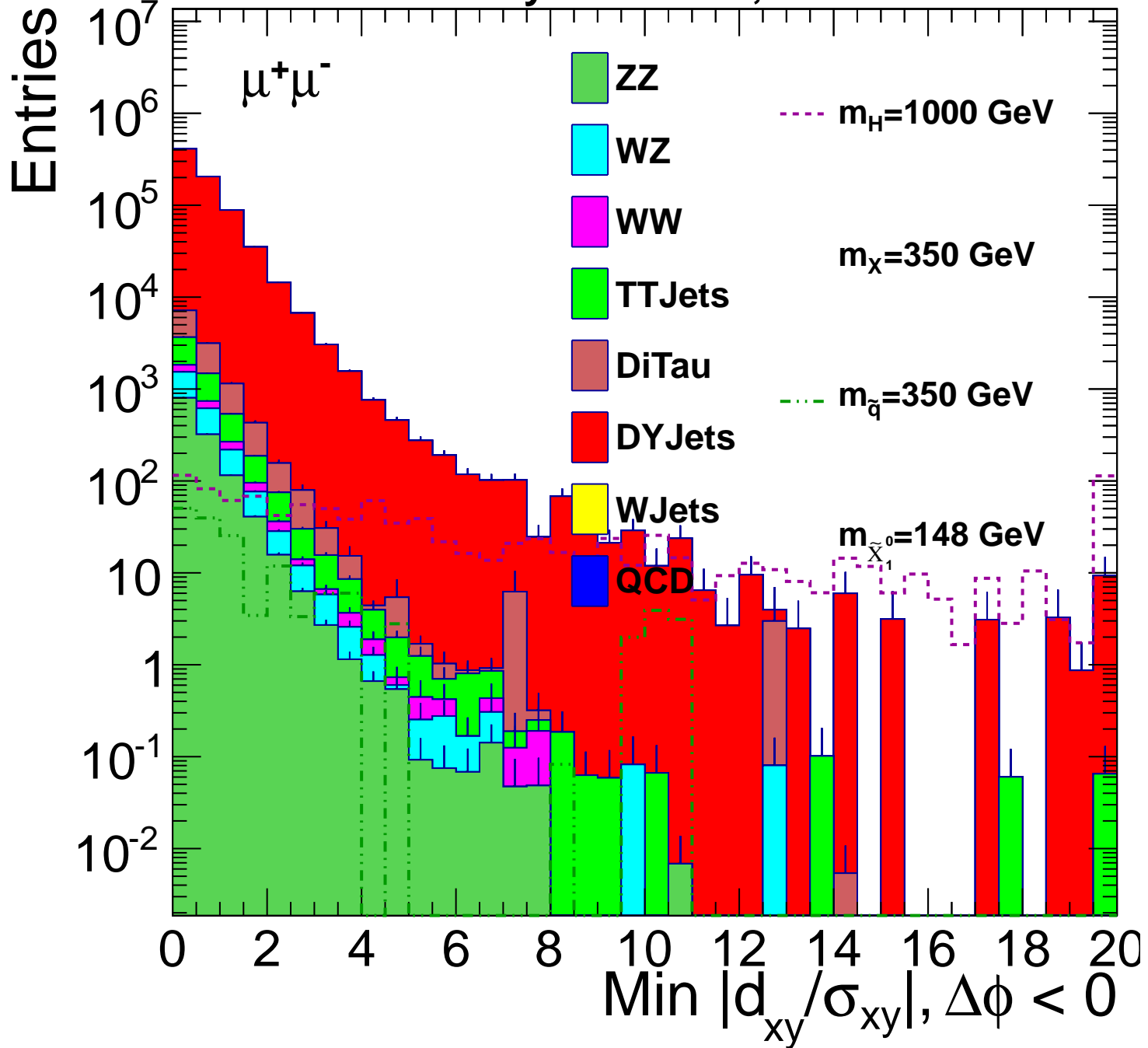




CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

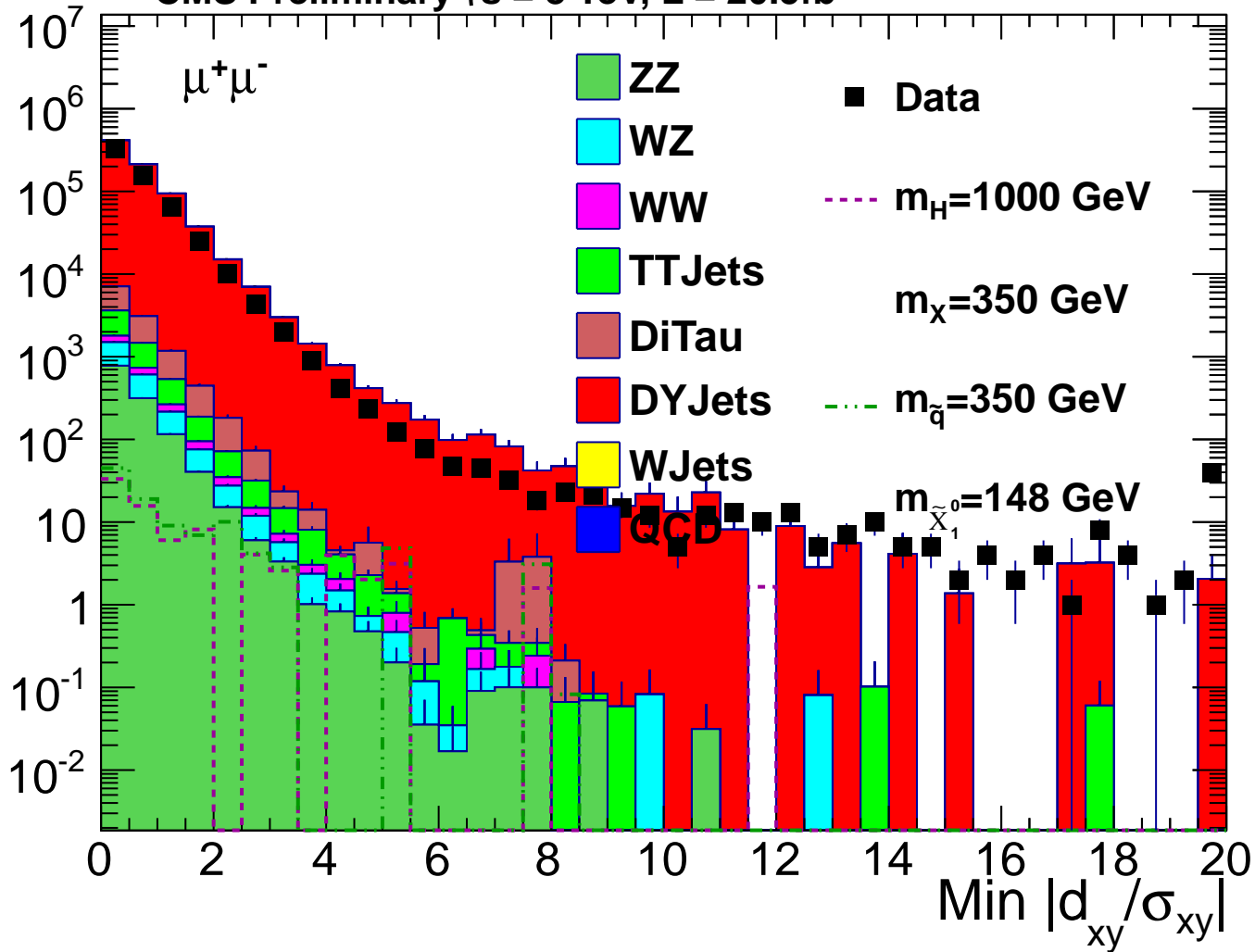


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

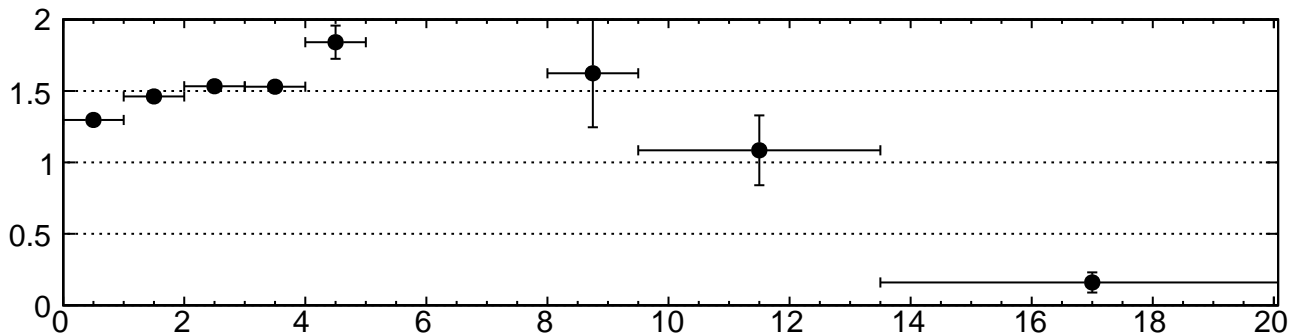


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

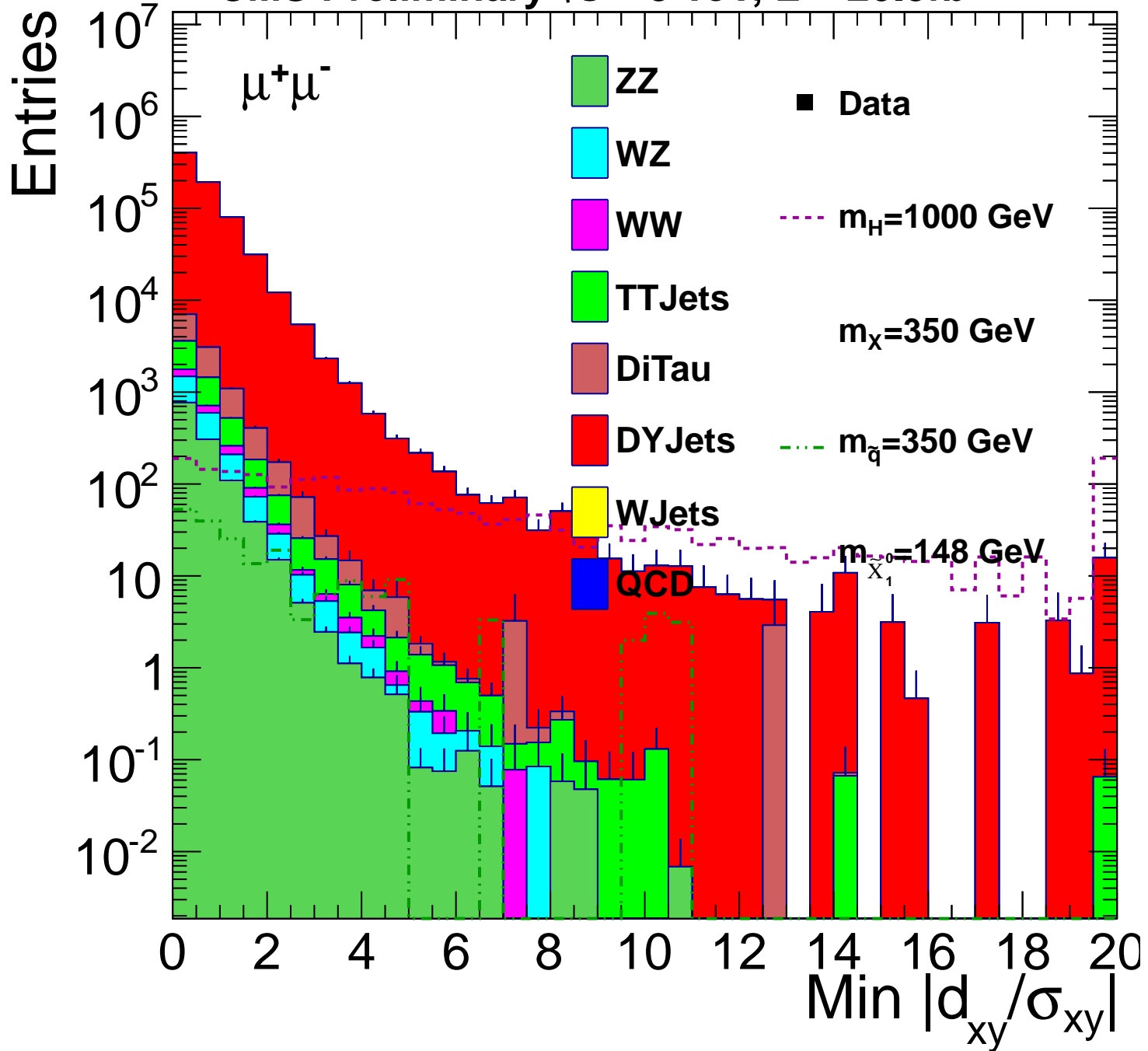
Entries



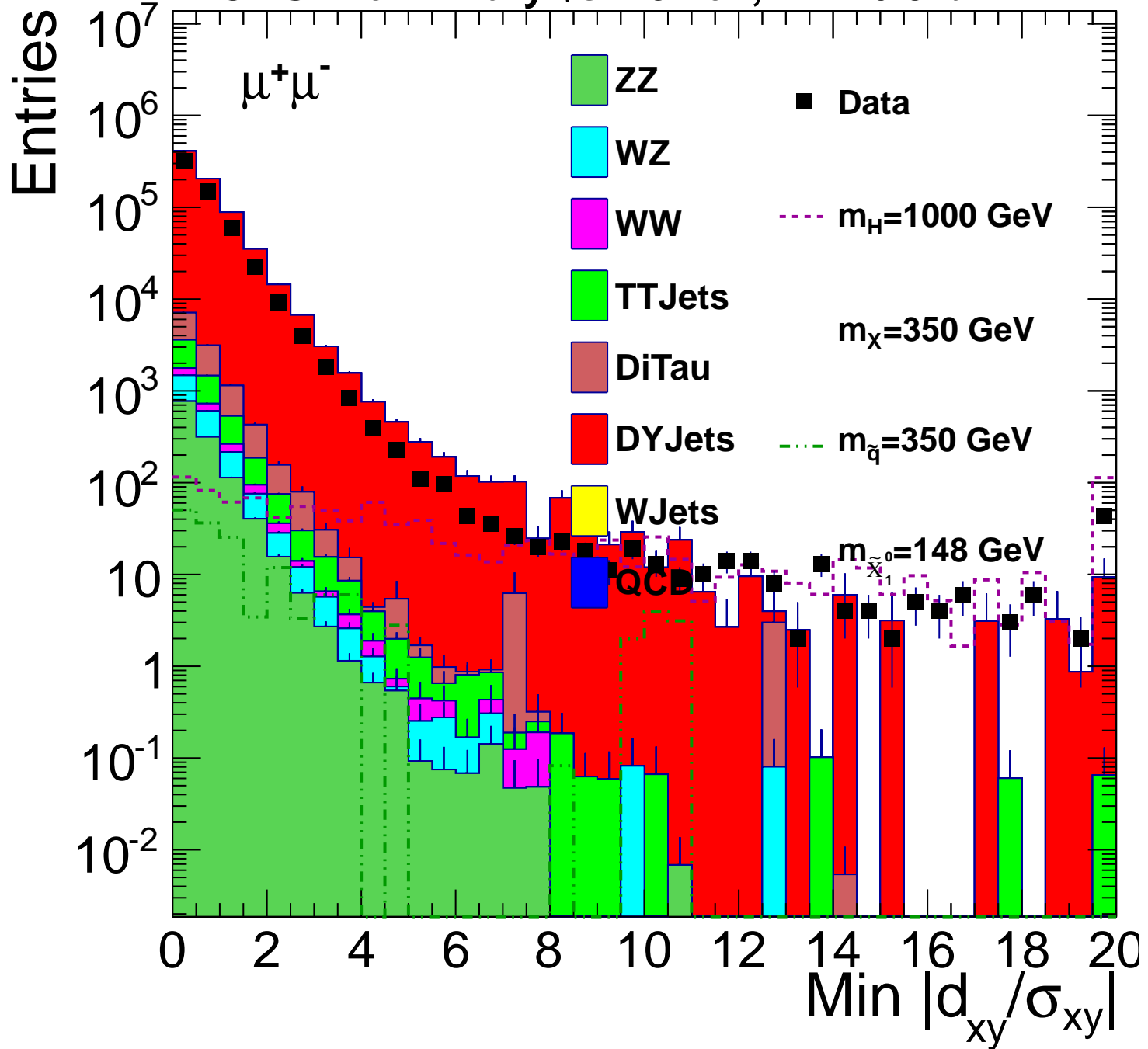
MC/Data



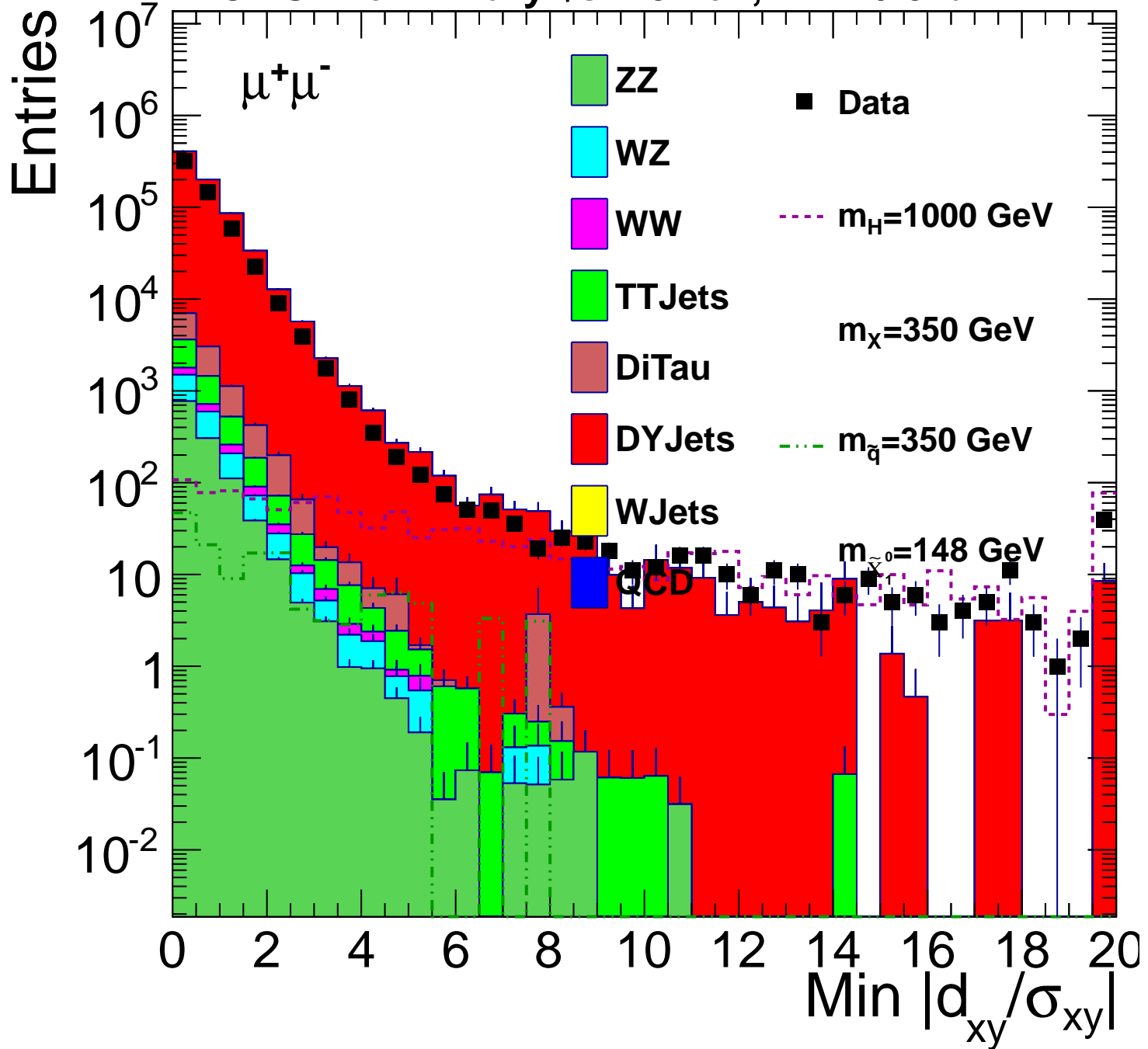
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



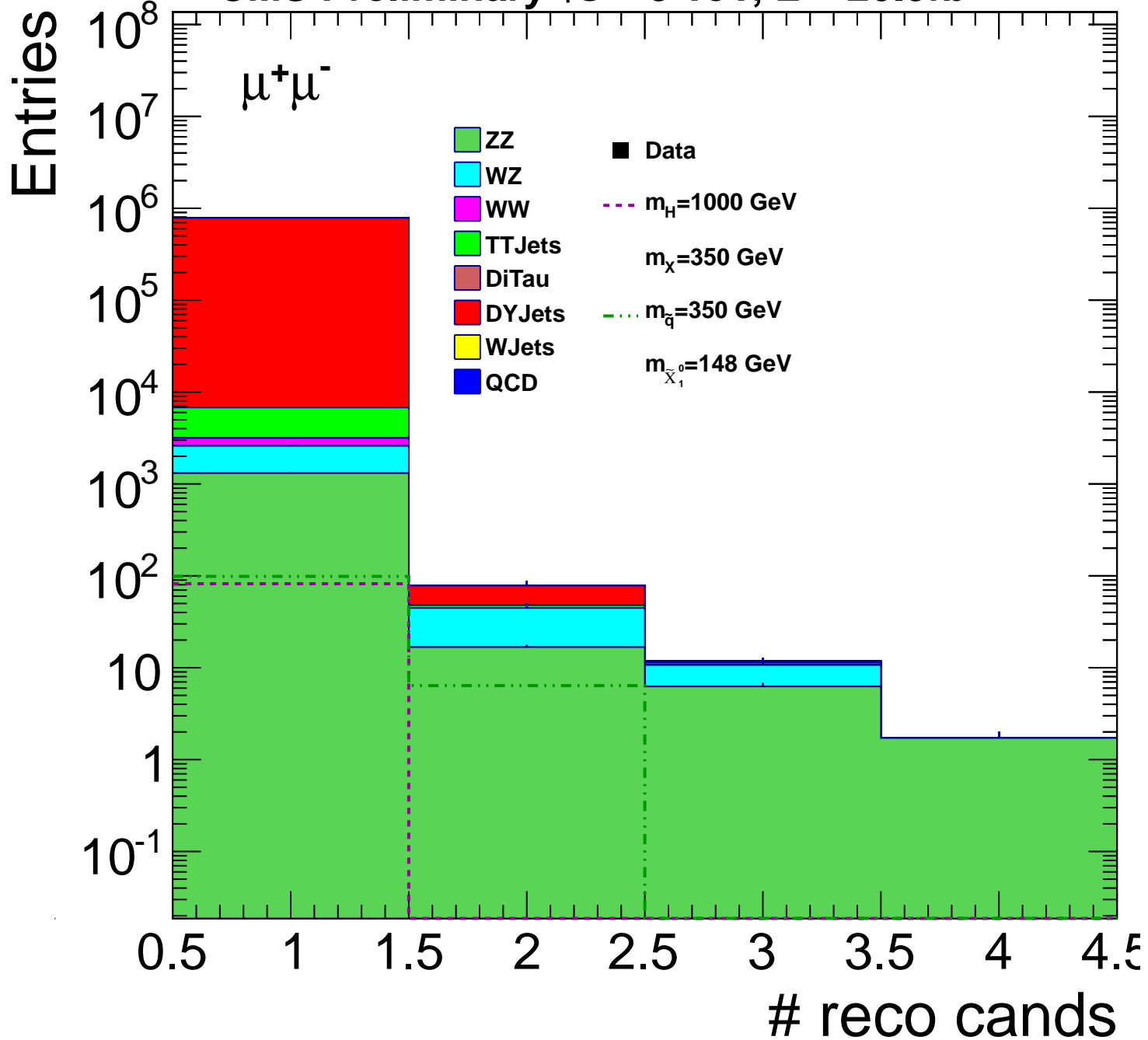
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



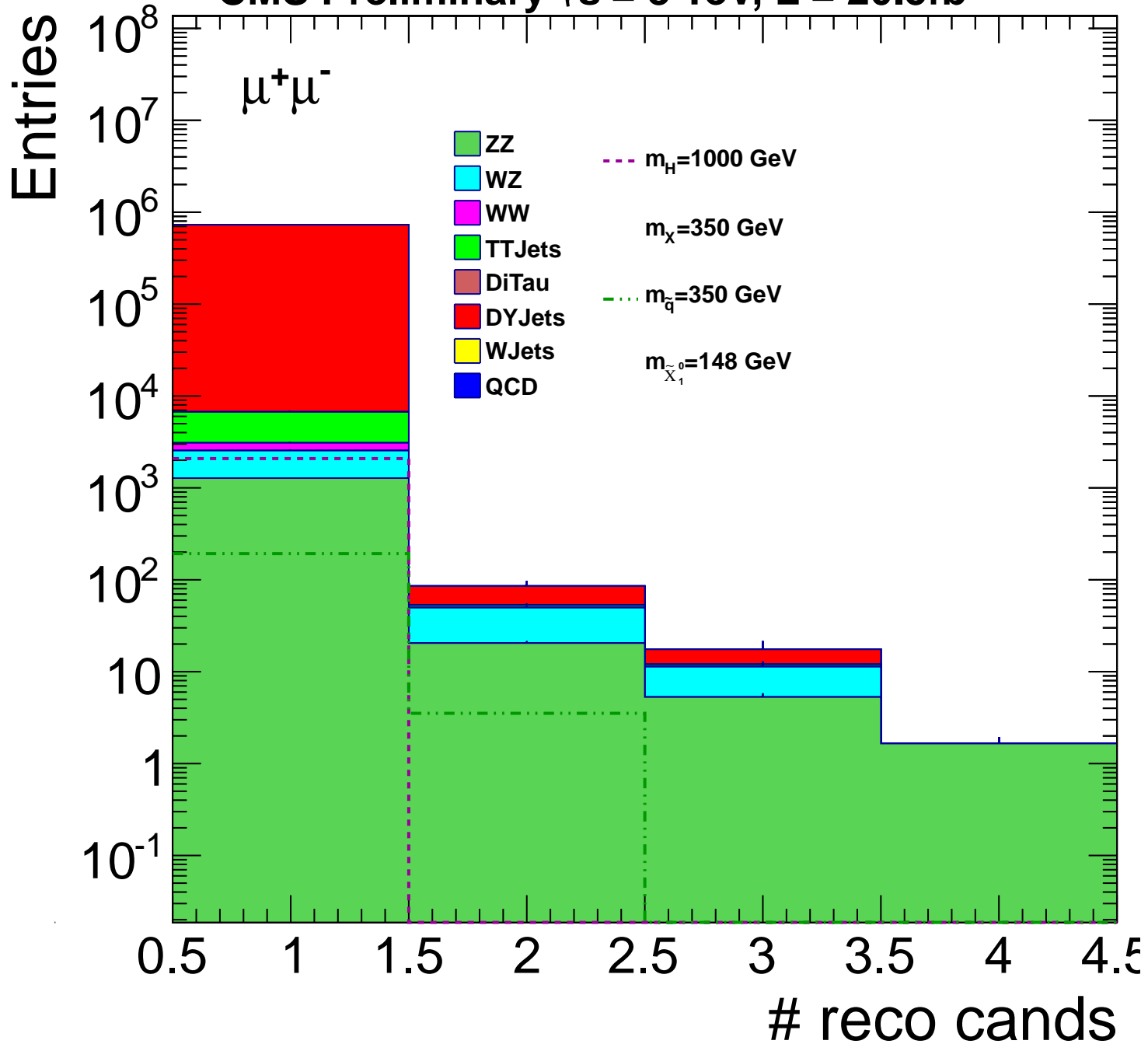
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



**CMS Preliminary  $\sqrt{s} = 8$  TeV,  $L = 20.5\text{fb}^{-1}$**



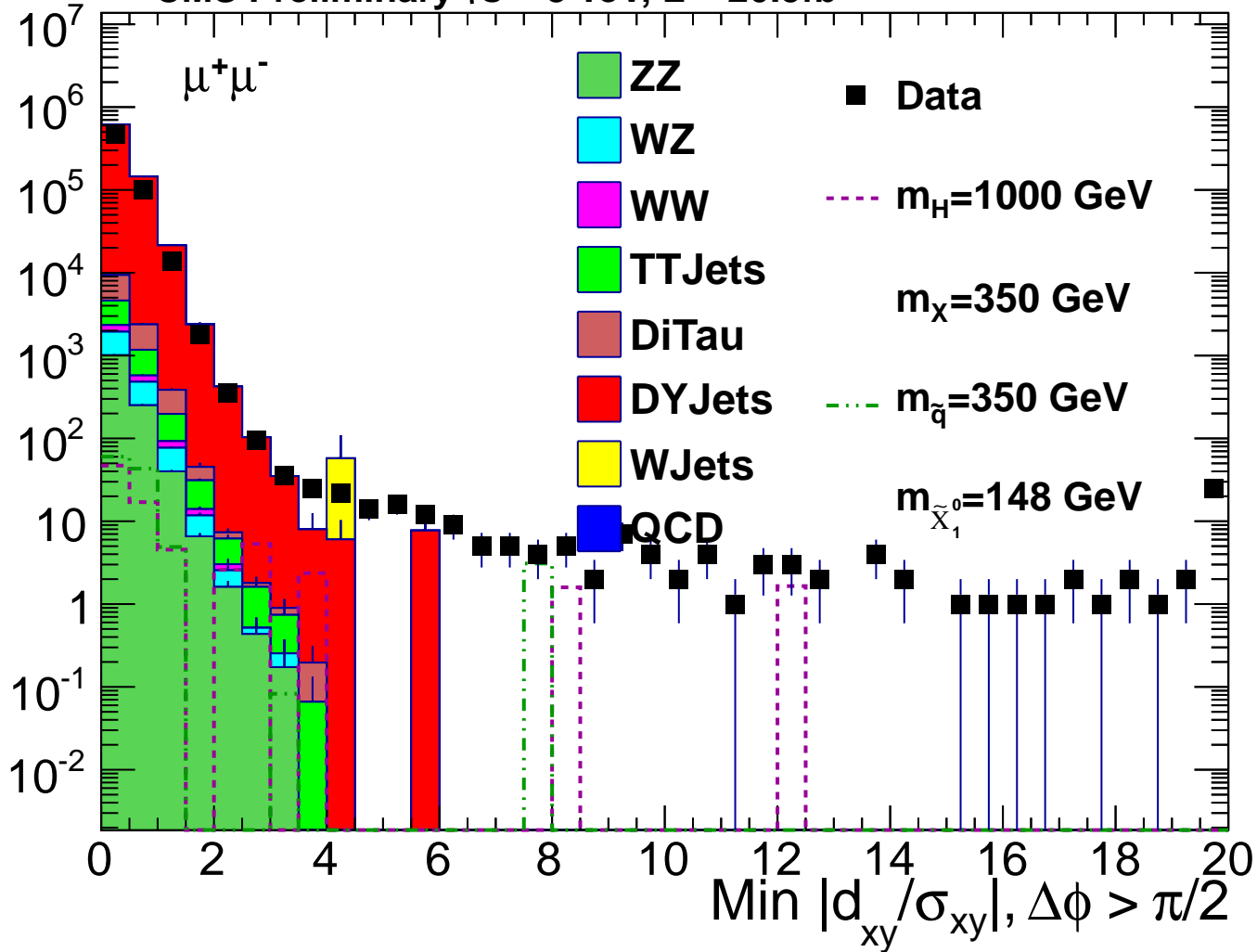
**CMS Preliminary  $\sqrt{s} = 8$  TeV,  $L = 20.5\text{fb}^{-1}$**



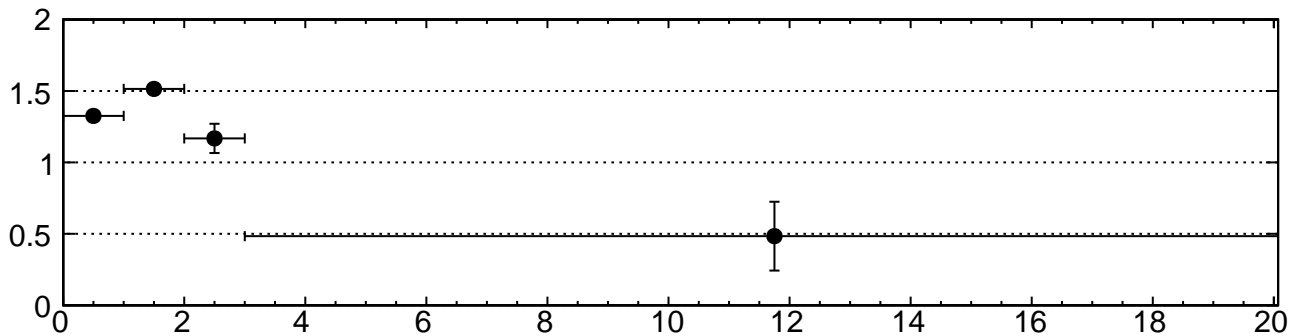


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries



MC/Data



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

$\mu^+\mu^-$

ZZ

WZ

WW

TTJets

DiTau

DYJets

WJets

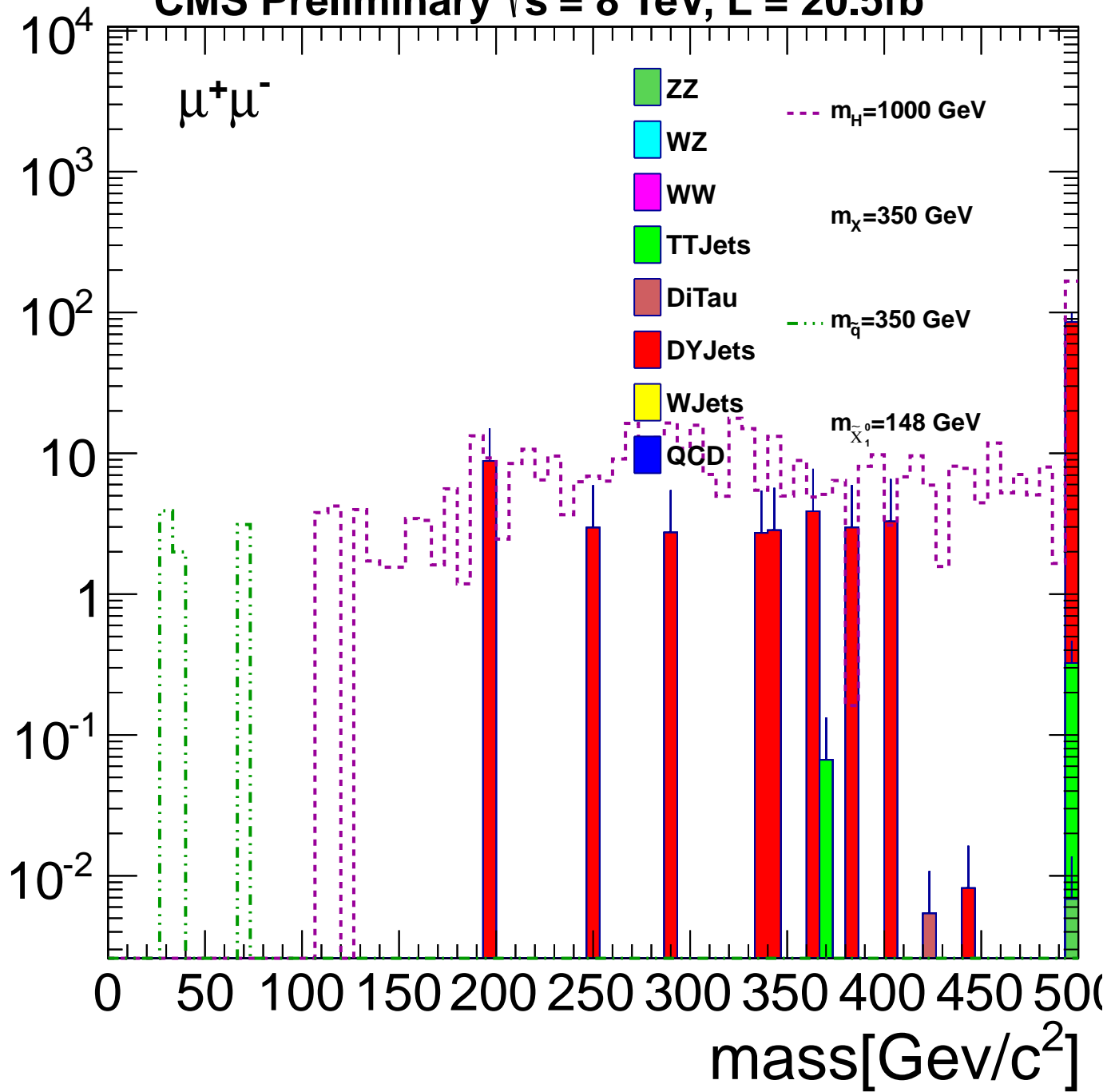
QCD

$m_H = 1000 \text{ GeV}$

$m_{\tilde{\chi}} = 350 \text{ GeV}$

$m_{\tilde{q}} = 350 \text{ GeV}$

$m_{\tilde{\chi}_0^0} = 148 \text{ GeV}$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

$\mu^+\mu^-$

ZZ

WZ

WW

TTJets

DiTau

DYJets

WJets

QCD

$m_H = 1000 \text{ GeV}$

$m_{\tilde{\chi}} = 350 \text{ GeV}$

$m_{\tilde{q}} = 350 \text{ GeV}$

$m_{\tilde{\chi}_1^0} = 148 \text{ GeV}$

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

0

10

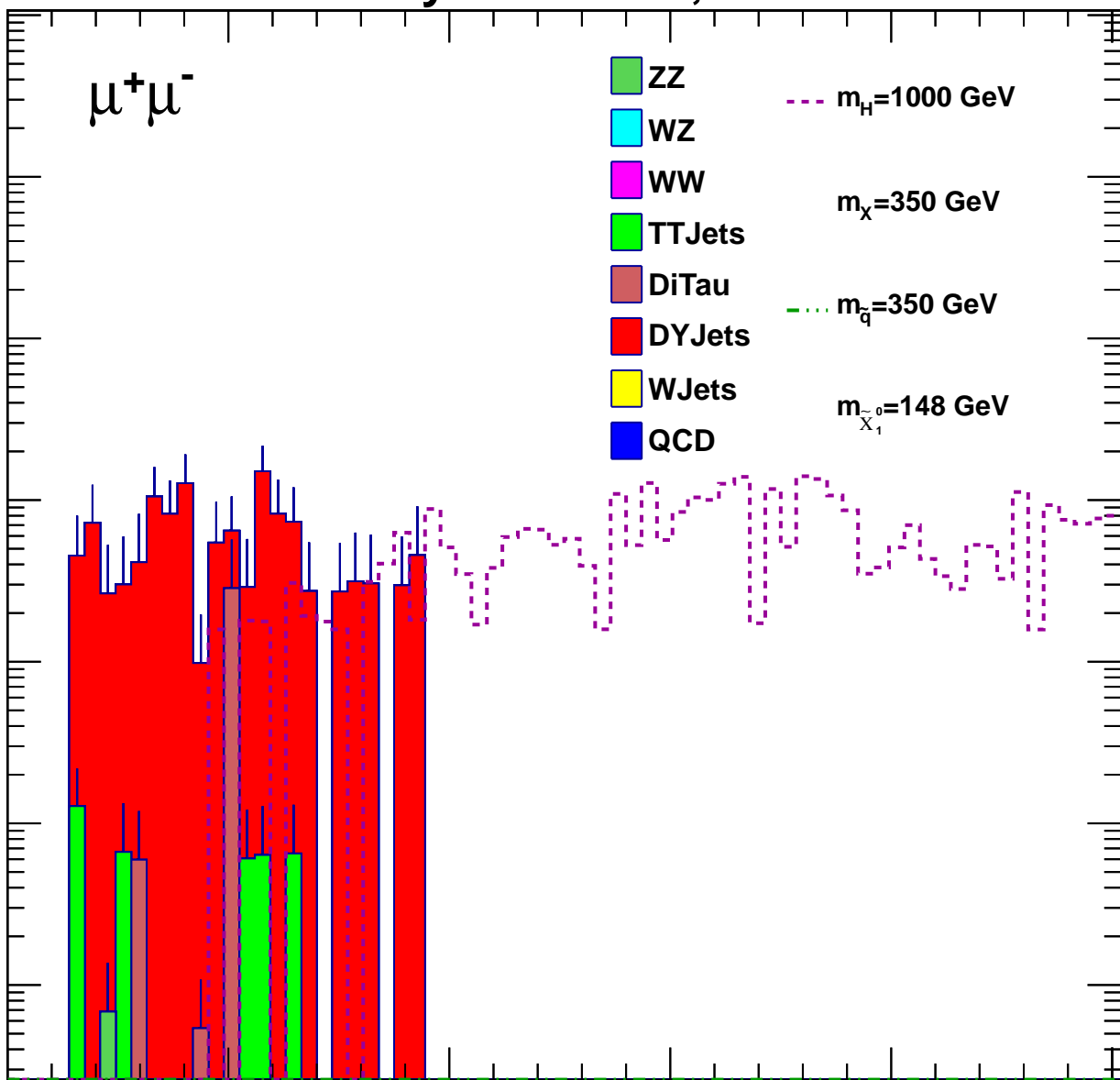
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30

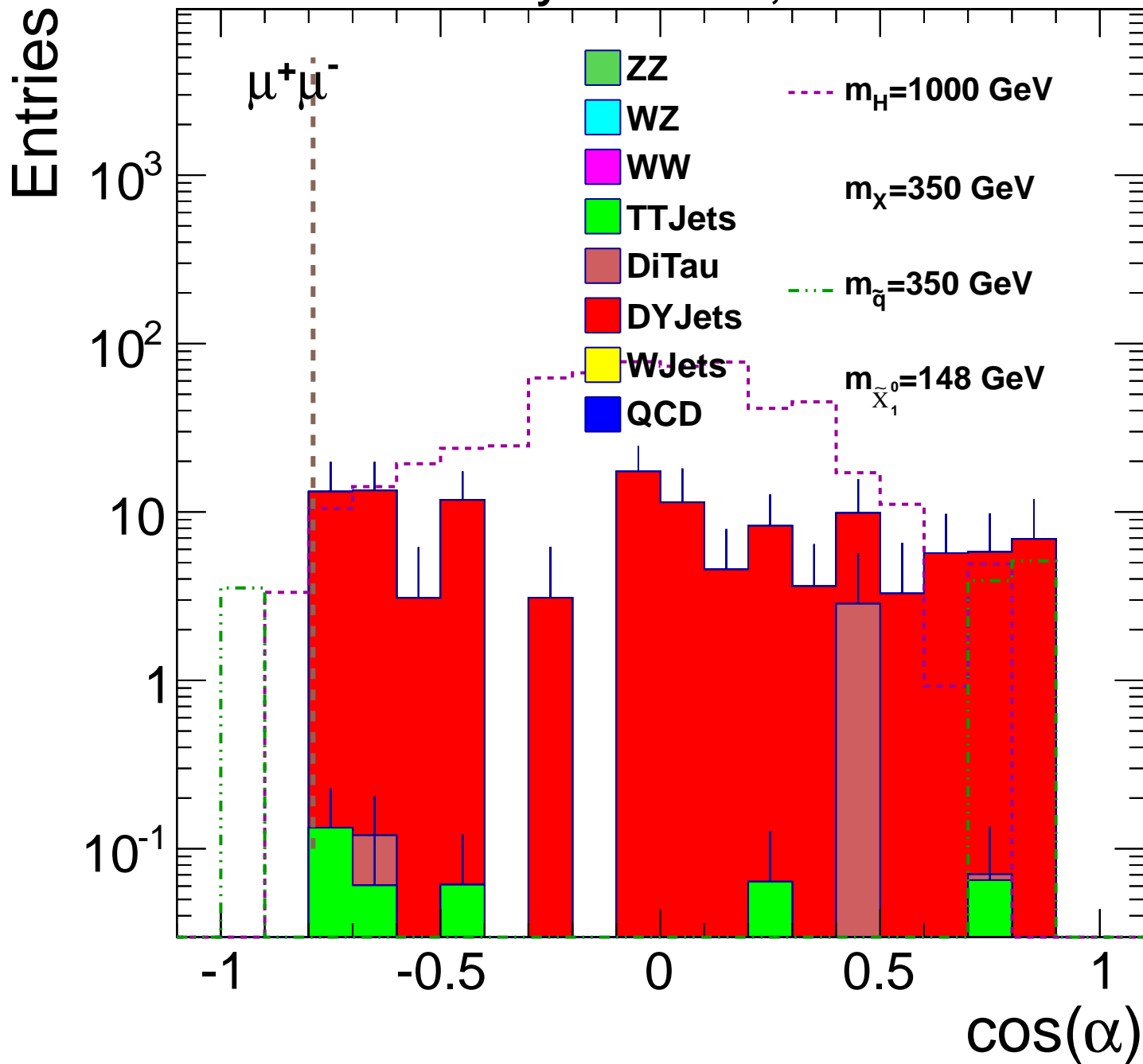
40

50

Candidate  $L_{xy} [\text{cm}]$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

$\mu^+\mu^-$

ZZ

WZ

WW

TTJets

DiTau

DYJets

WJets

QCD

$m_H = 1000 \text{ GeV}$

$m_{\tilde{\chi}} = 350 \text{ GeV}$

$m_{\tilde{q}} = 350 \text{ GeV}$

$m_{\tilde{X}_1^0} = 148 \text{ GeV}$

$10^2$

10

1

$10^{-1}$

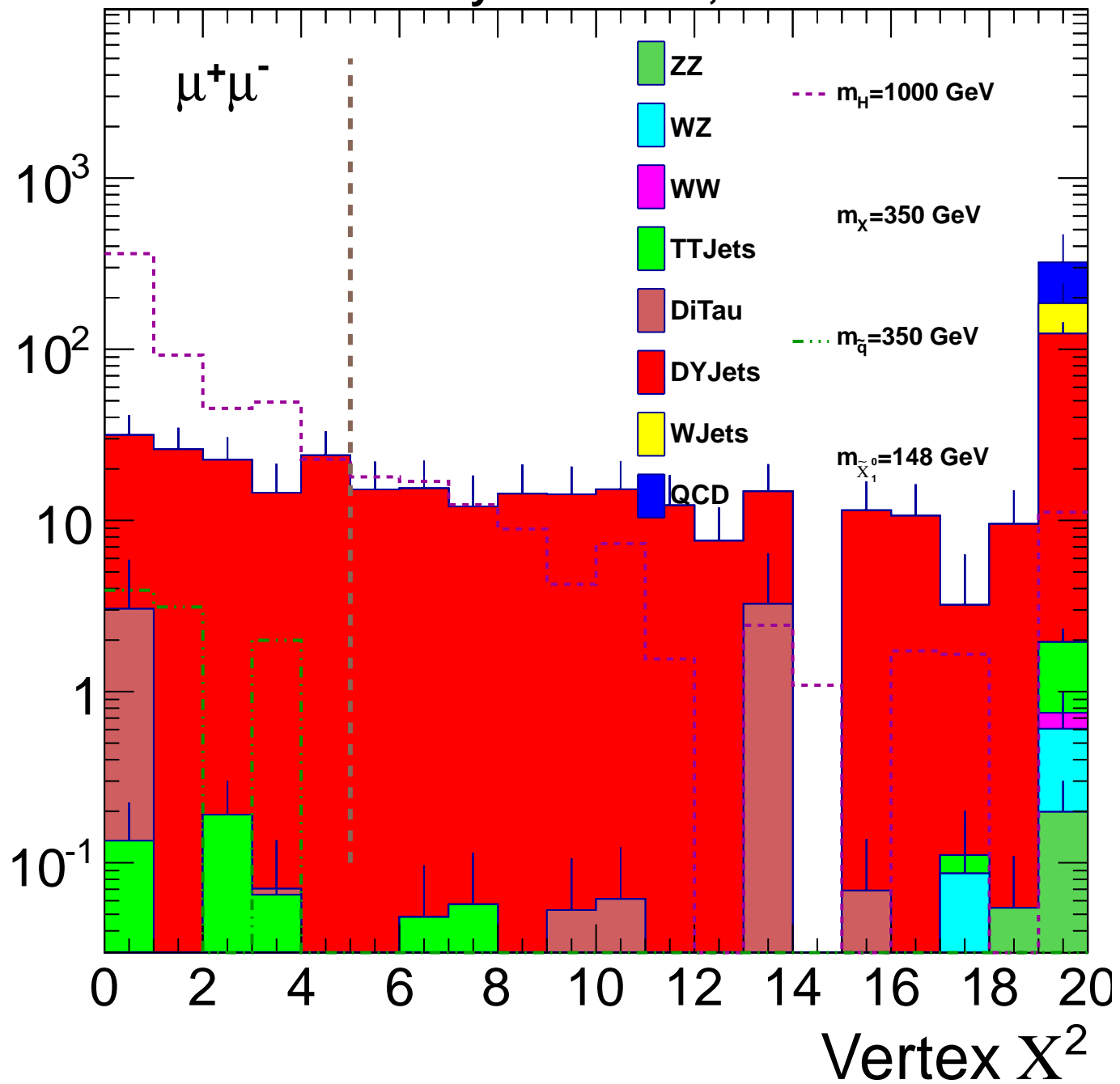
0 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50

$\Delta R$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

$\mu^+\mu^-$

ZZ

WZ

WW

TTJets

DiTau

DYJets

WJets

QCD

$m_H = 1000 \text{ GeV}$

$m_{\tilde{X}} = 350 \text{ GeV}$

$m_{\tilde{q}} = 350 \text{ GeV}$

$m_{\tilde{X}_1^0} = 148 \text{ GeV}$

$10^3$

$10^2$

10

1

$10^{-1}$

0

1

2

3

4

5

6

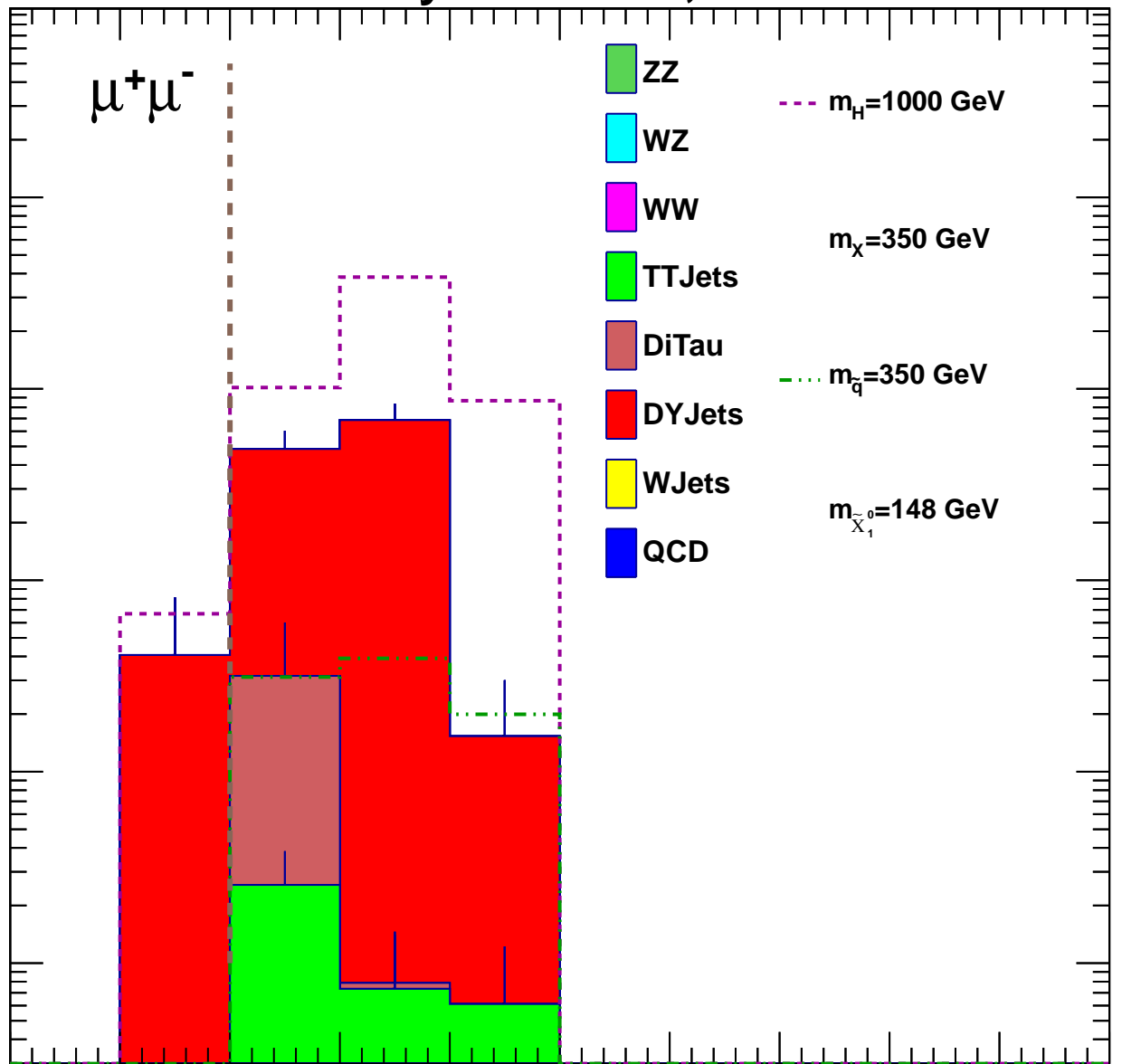
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8

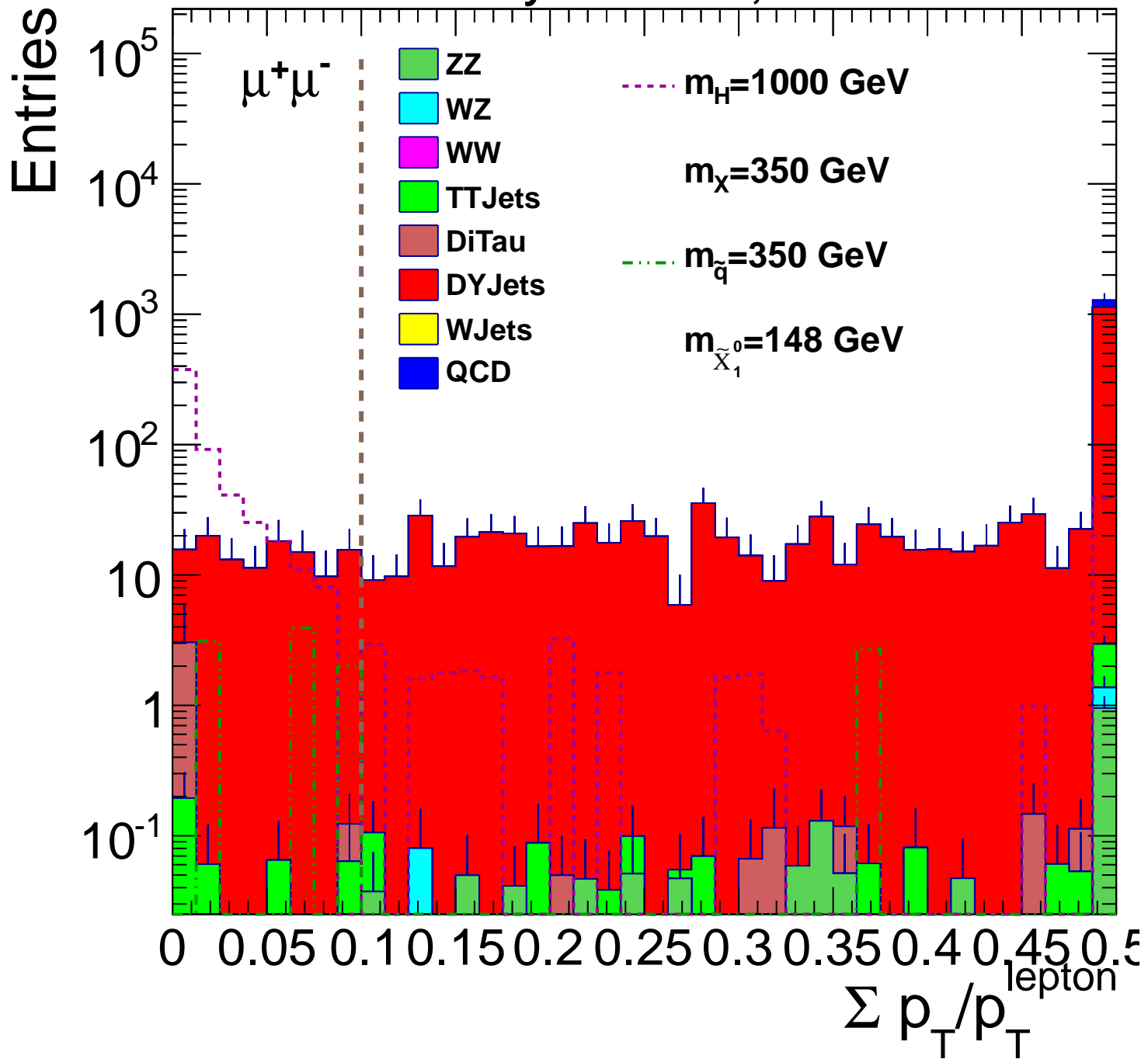
9

10

DT+CSC stations with valid hits

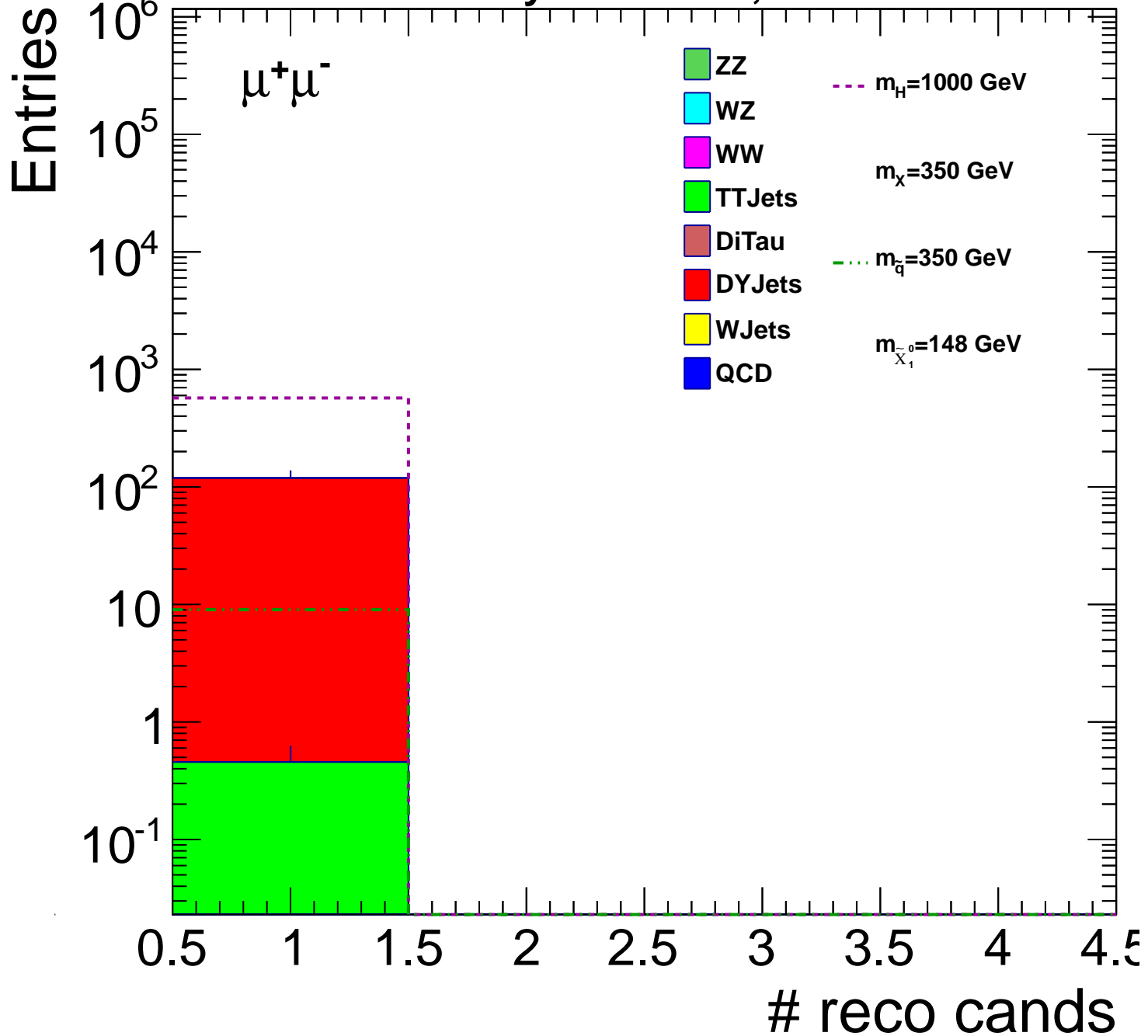


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$





CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

$\mu^+\mu^-$

ZZ

WZ

WW

TTJets

DiTau

DYJets

WJets

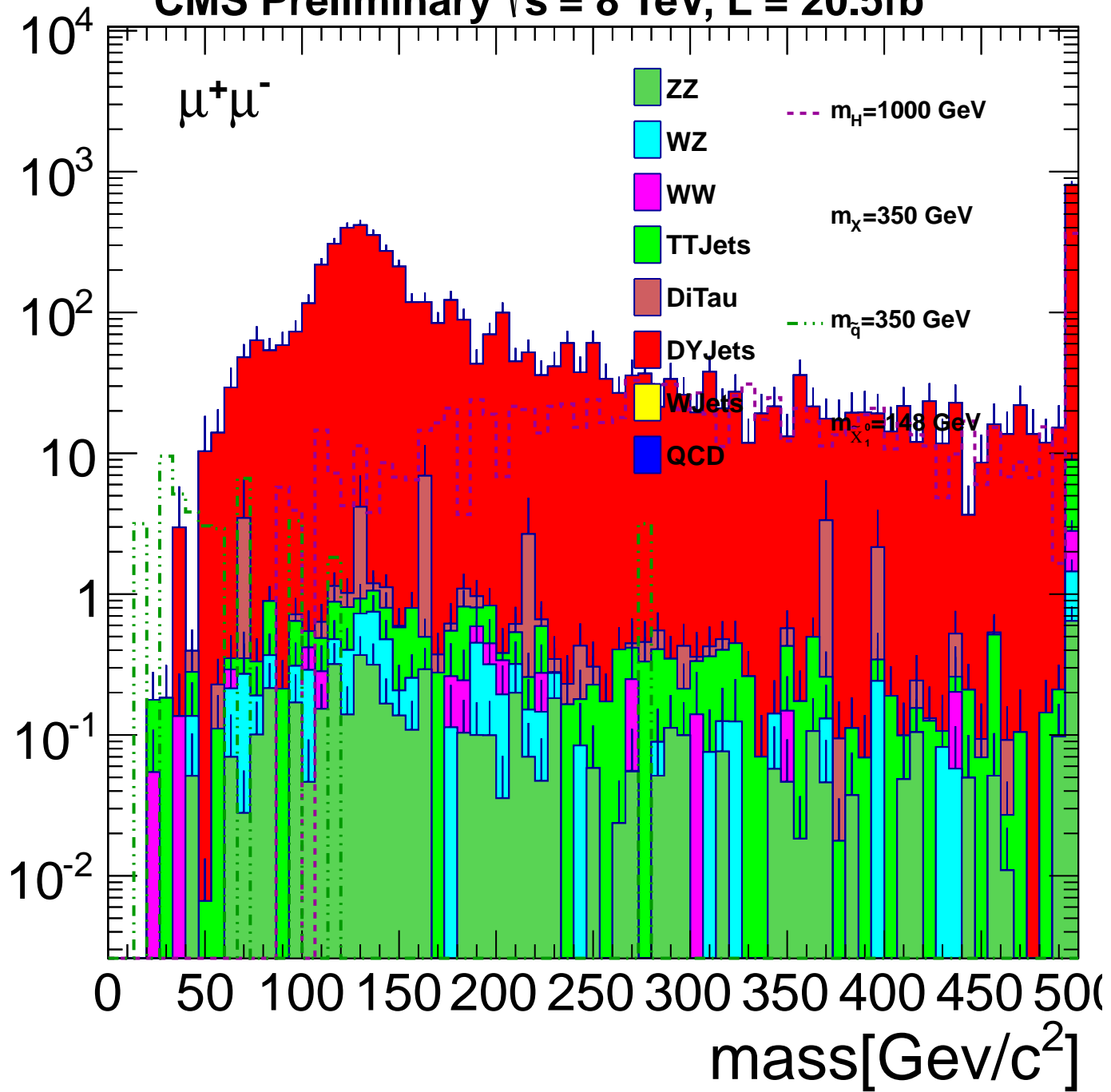
QCD

$m_H = 1000 \text{ GeV}$

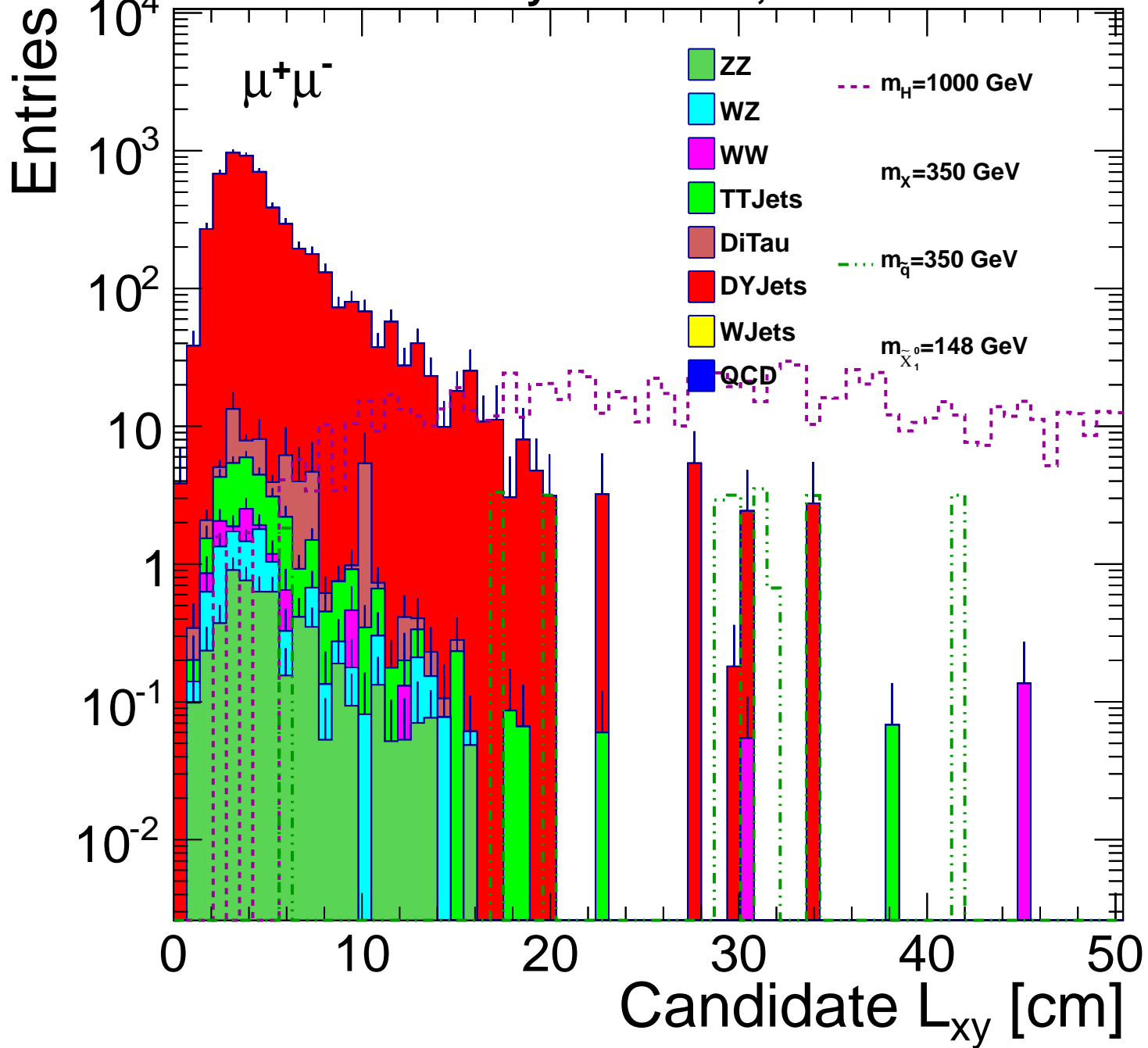
$m_{\chi} = 350 \text{ GeV}$

$m_{\tilde{q}} = 350 \text{ GeV}$

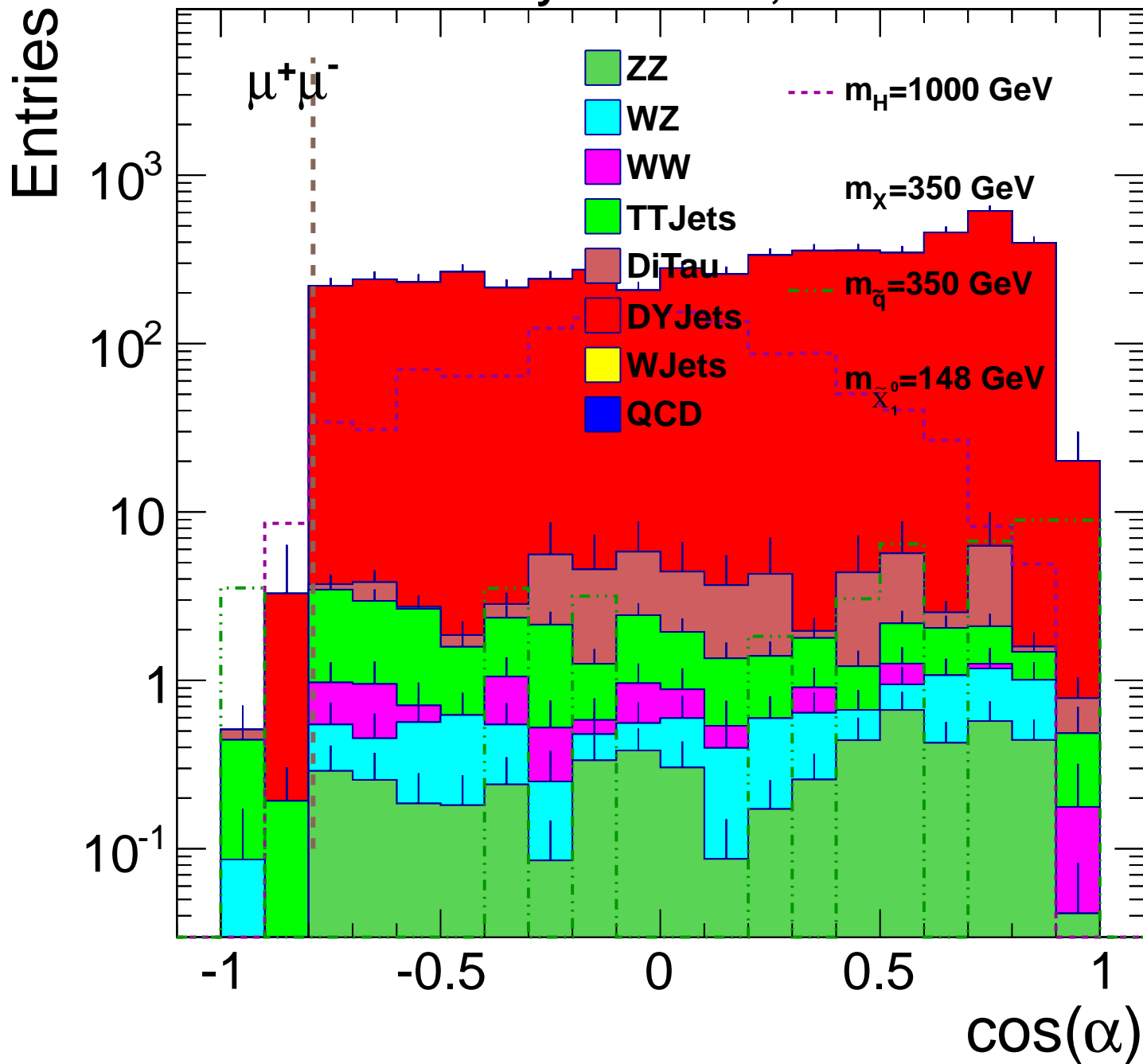
$m_{\tilde{X}_1^0} = 148 \text{ GeV}$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



**CMS Preliminary  $\sqrt{s} = 8$  TeV,  $L = 20.5\text{fb}^{-1}$**



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

$\mu^+\mu^-$

ZZ

WZ

WW

TTJets

DiTau

DYJets

WJets

QCD

$m_H = 1000 \text{ GeV}$

$m_{\tilde{\chi}} = 350 \text{ GeV}$

$m_{\tilde{q}} = 350 \text{ GeV}$

$m_{\tilde{X}_1^0} = 148 \text{ GeV}$

$10^2$

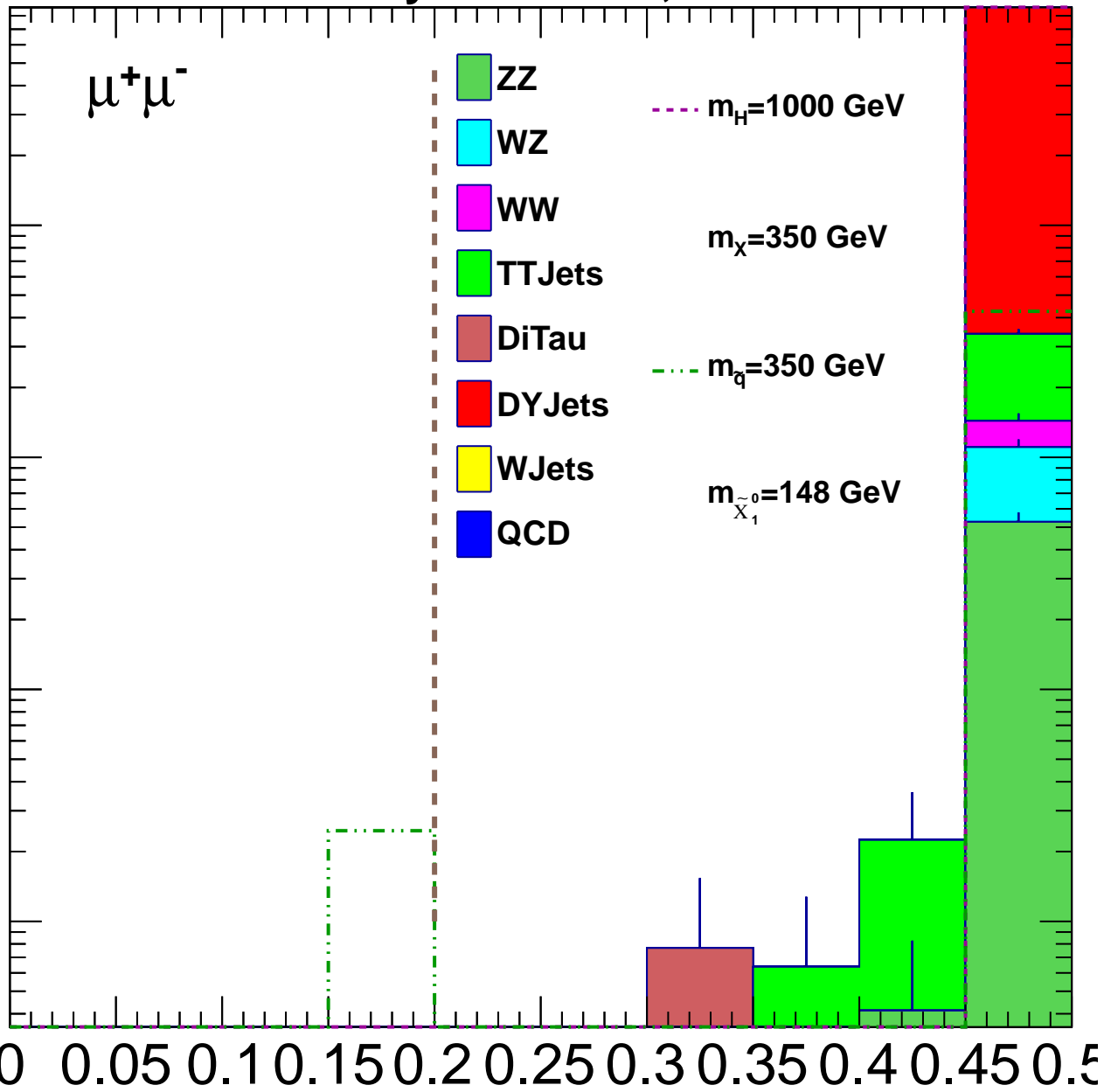
10

1

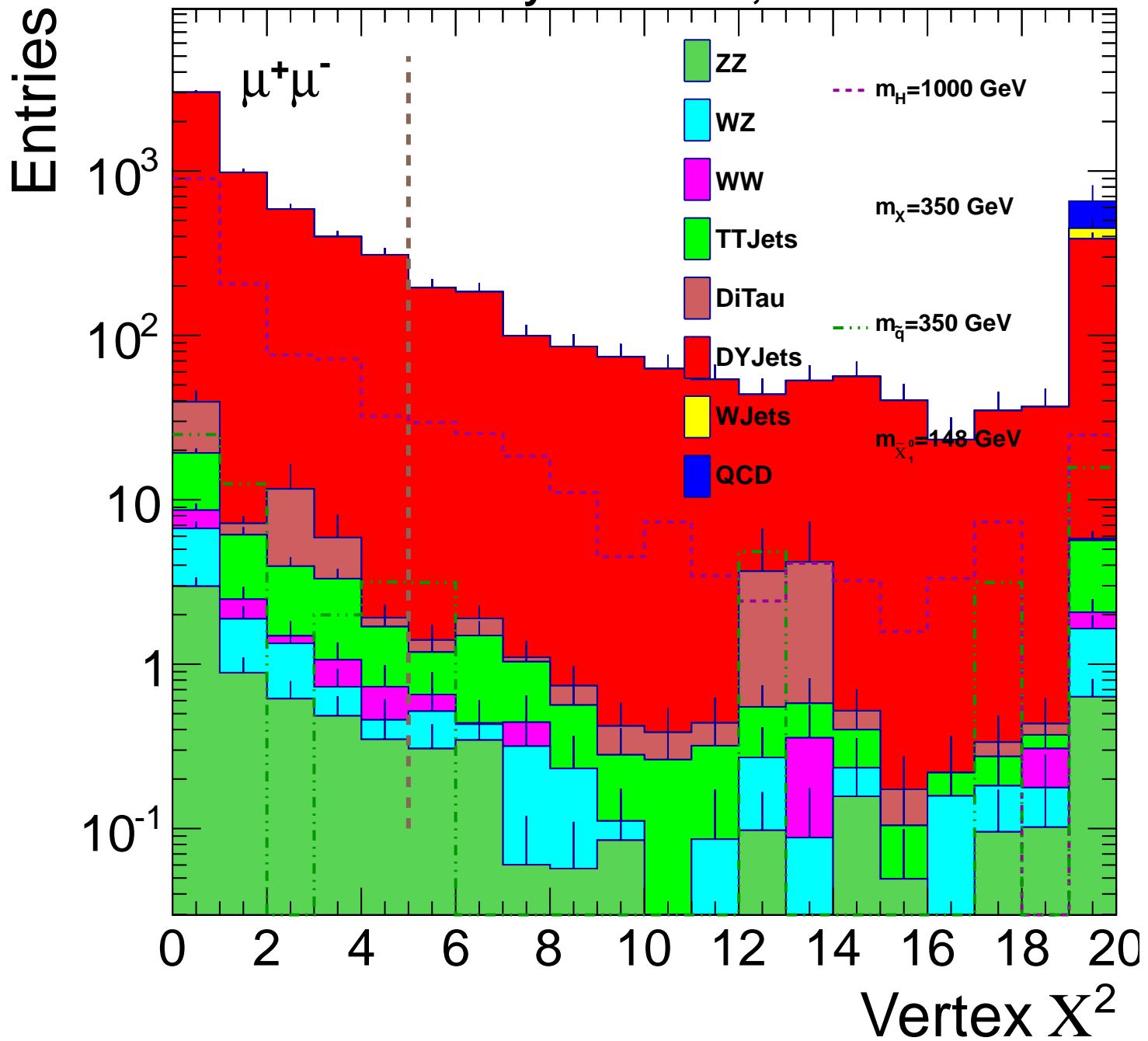
$10^{-1}$

0 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50

$\Delta R$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

$\mu^+\mu^-$

$10^3$

$10^2$

10

1

$10^{-1}$

0

1

2

3

4

5

6

7

8

9

10

DT+CSC stations with valid hits

ZZ

WZ

WW

TTJets

DiTau

DYJets

WJets

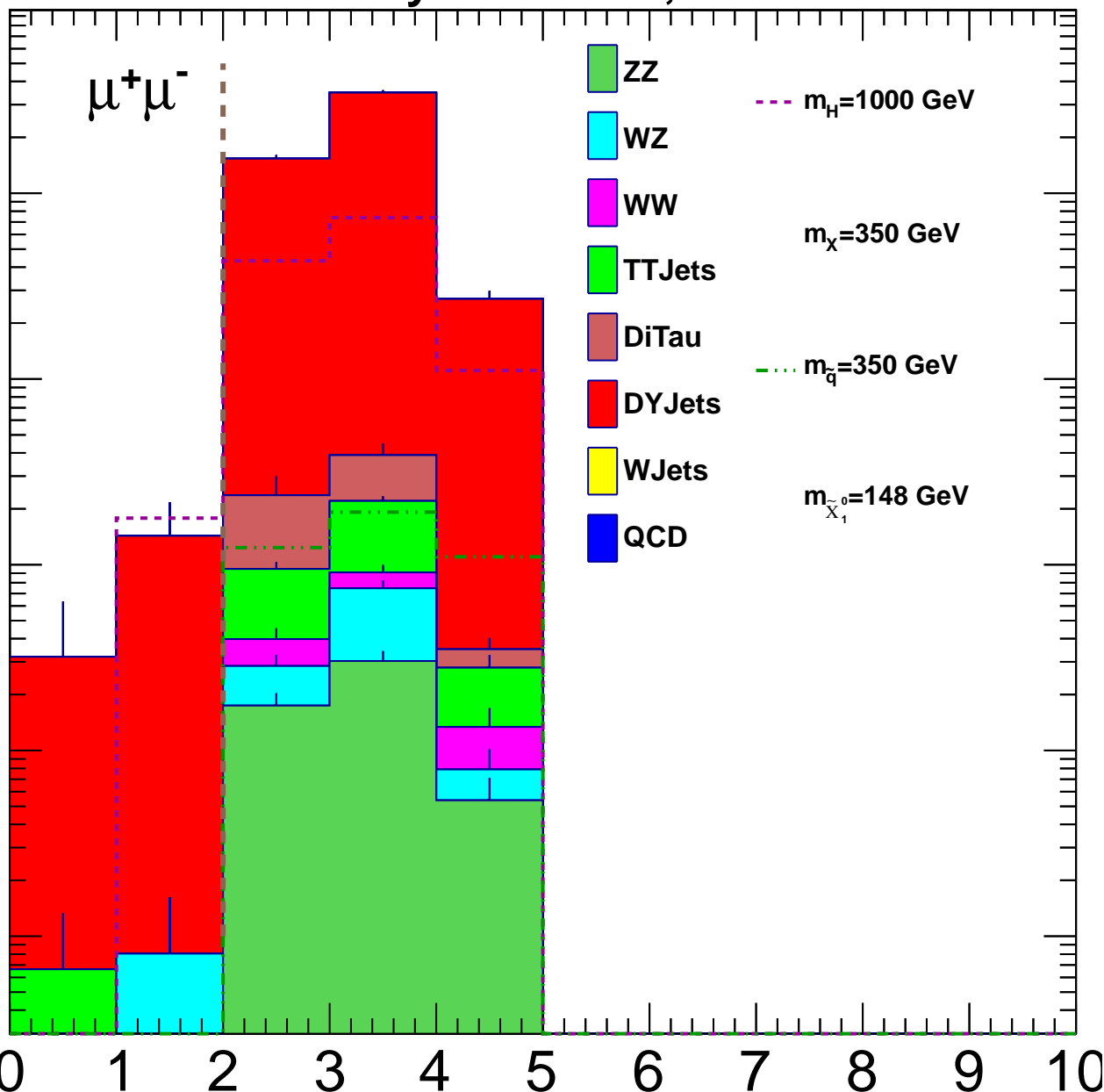
QCD

$m_H = 1000 \text{ GeV}$

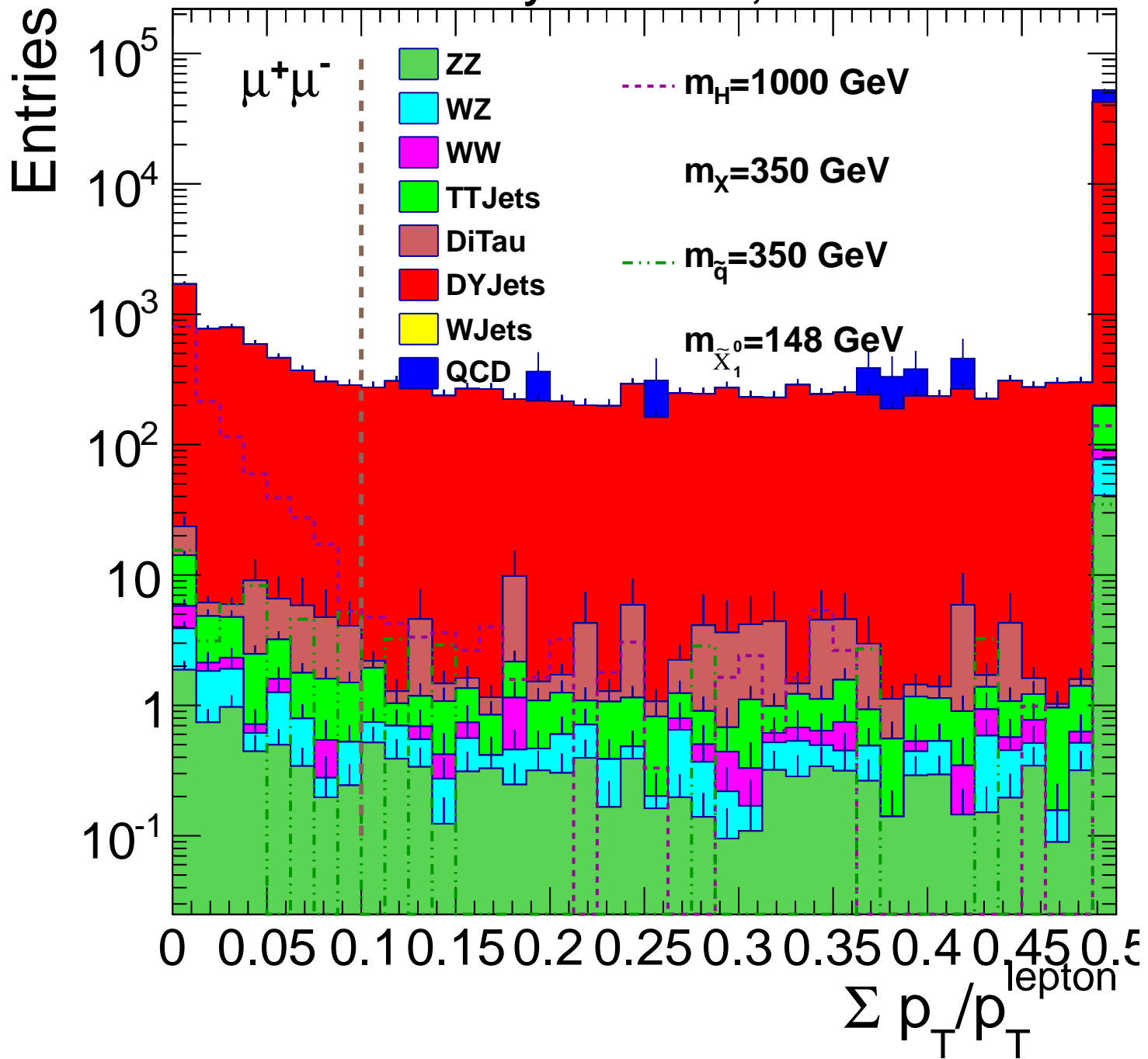
$m_{\tilde{X}} = 350 \text{ GeV}$

$m_{\tilde{q}} = 350 \text{ GeV}$

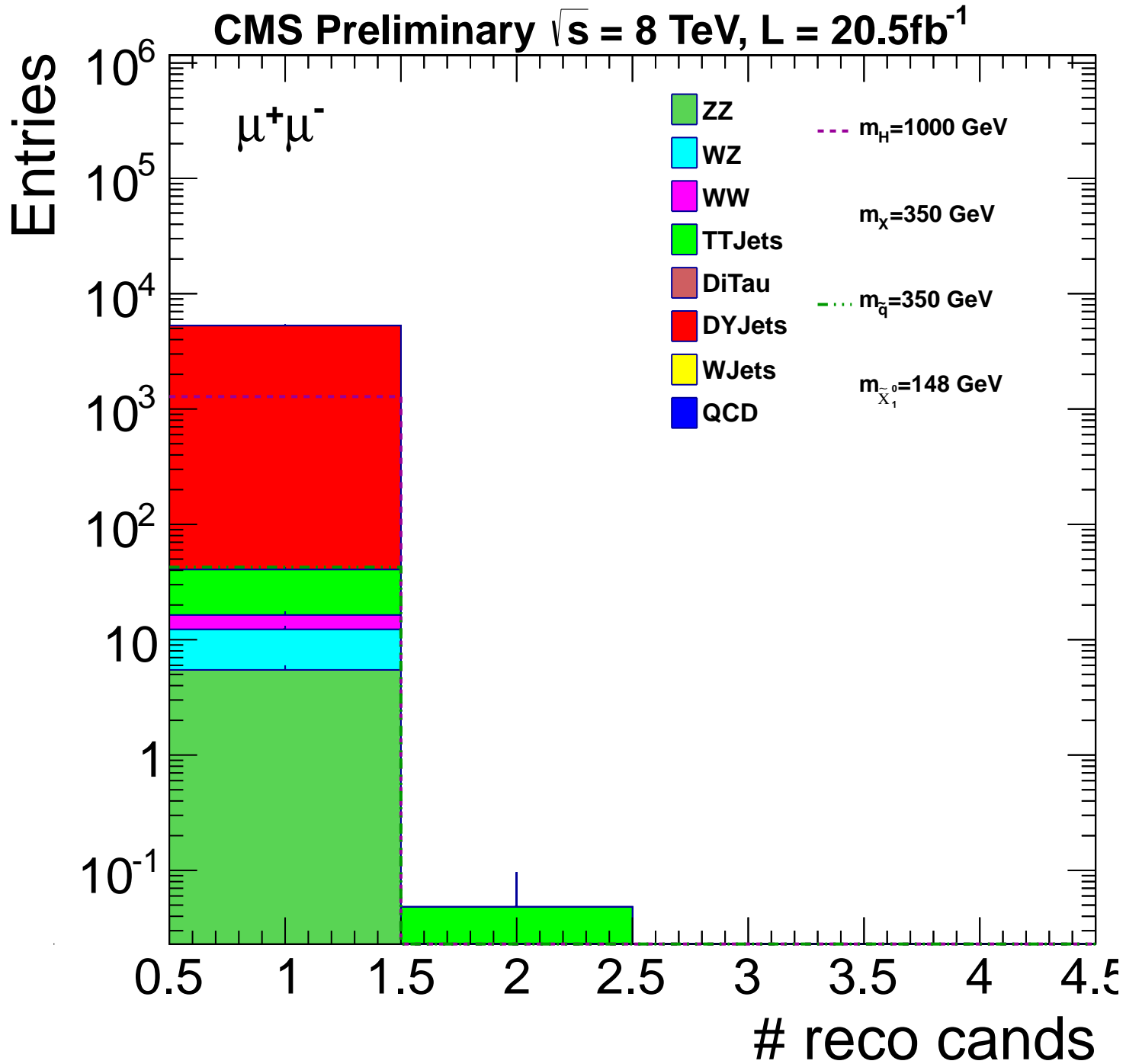
$m_{\tilde{X}_1^0} = 148 \text{ GeV}$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

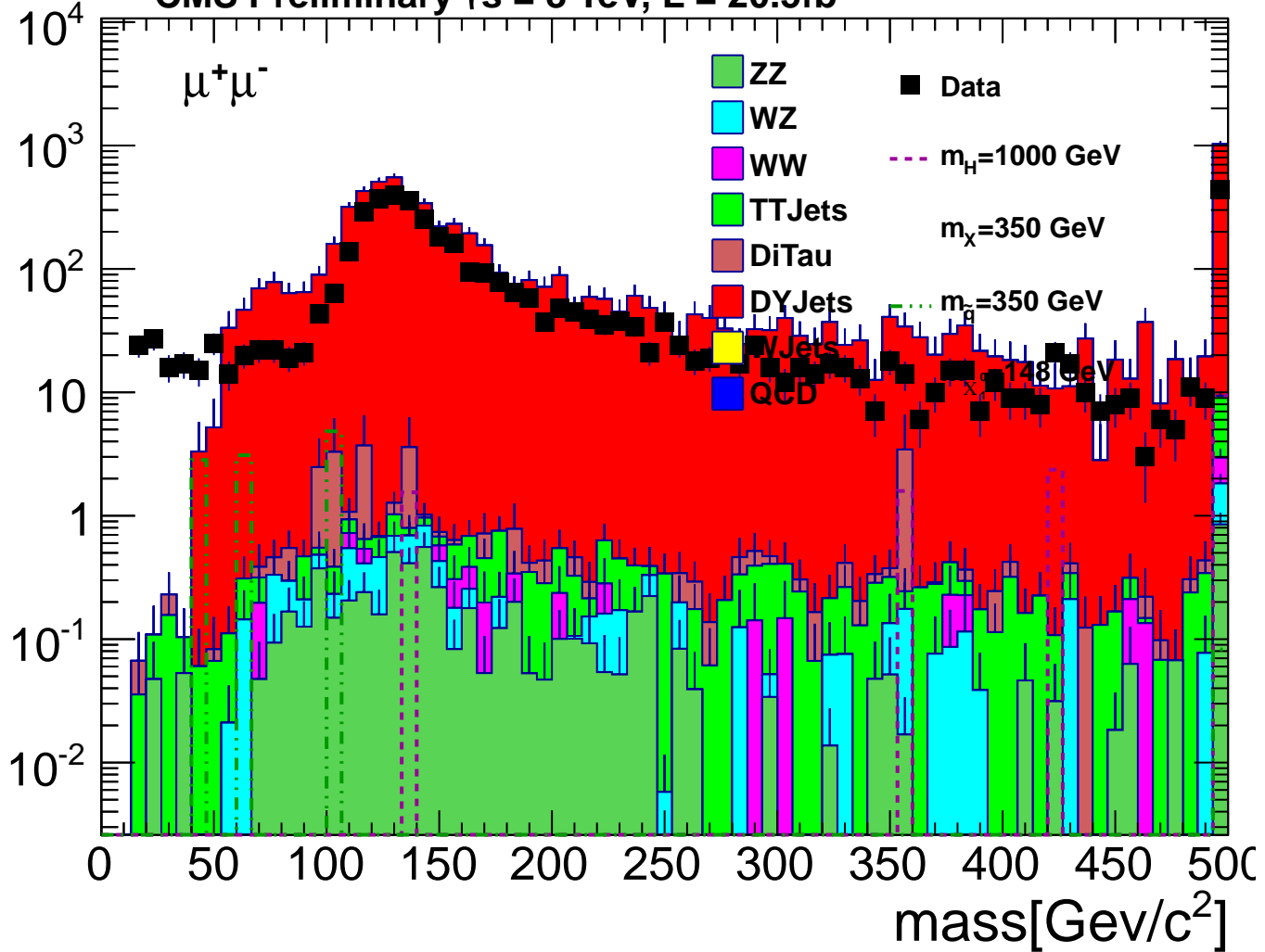




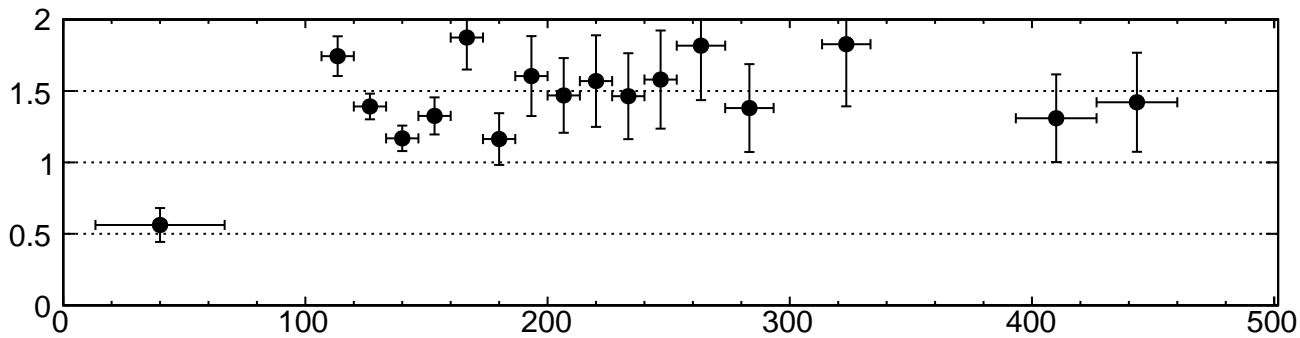


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}, L = 20.5 \text{ fb}^{-1}$

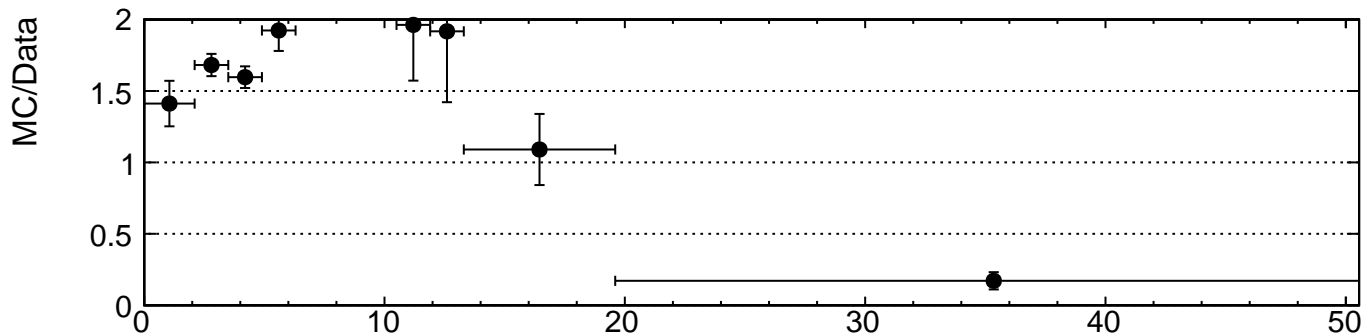
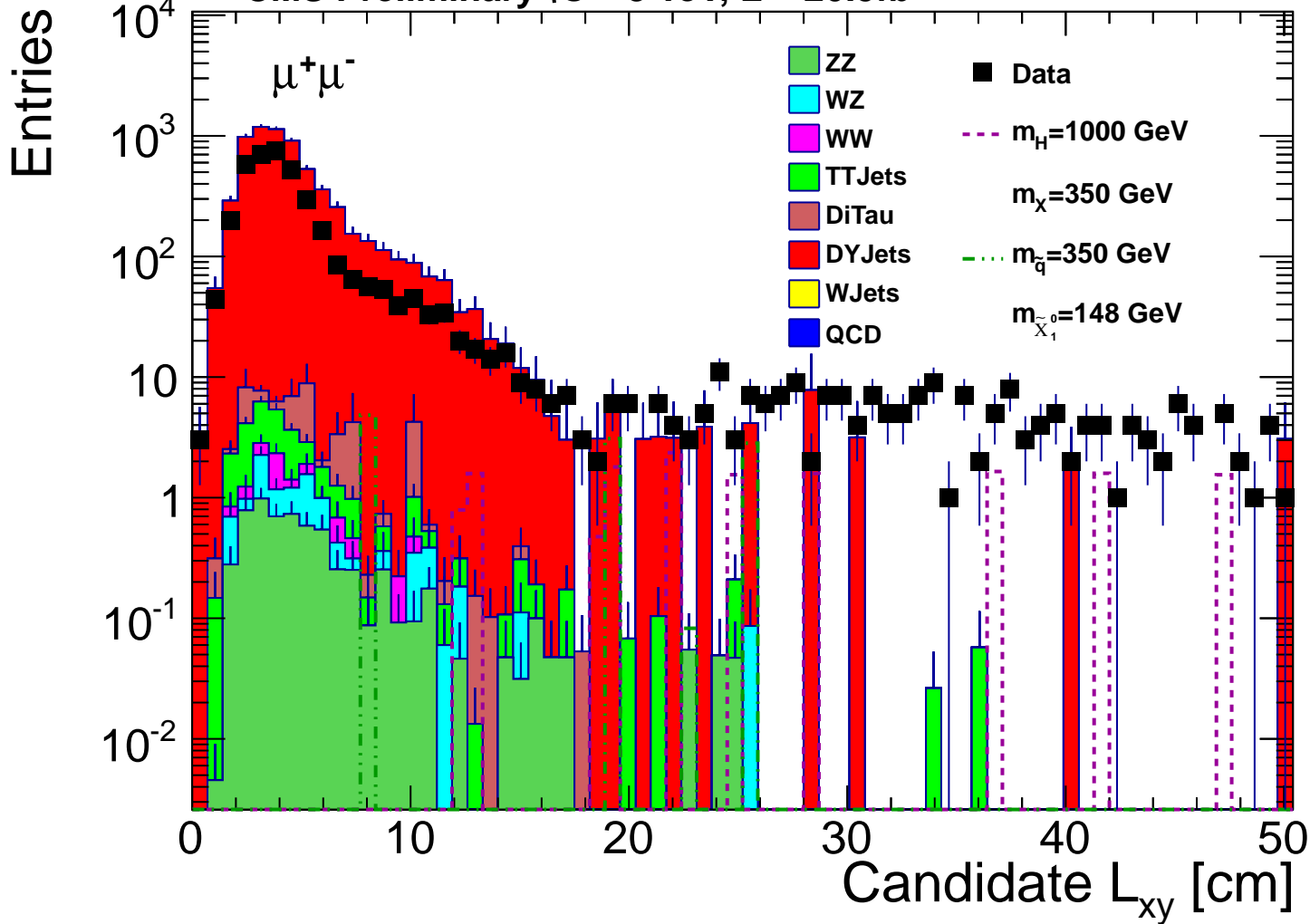
Entries



MC/Data

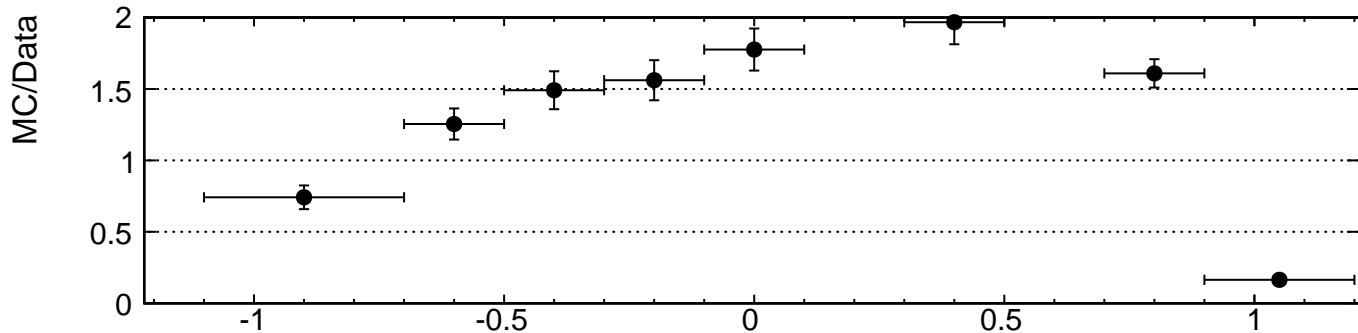
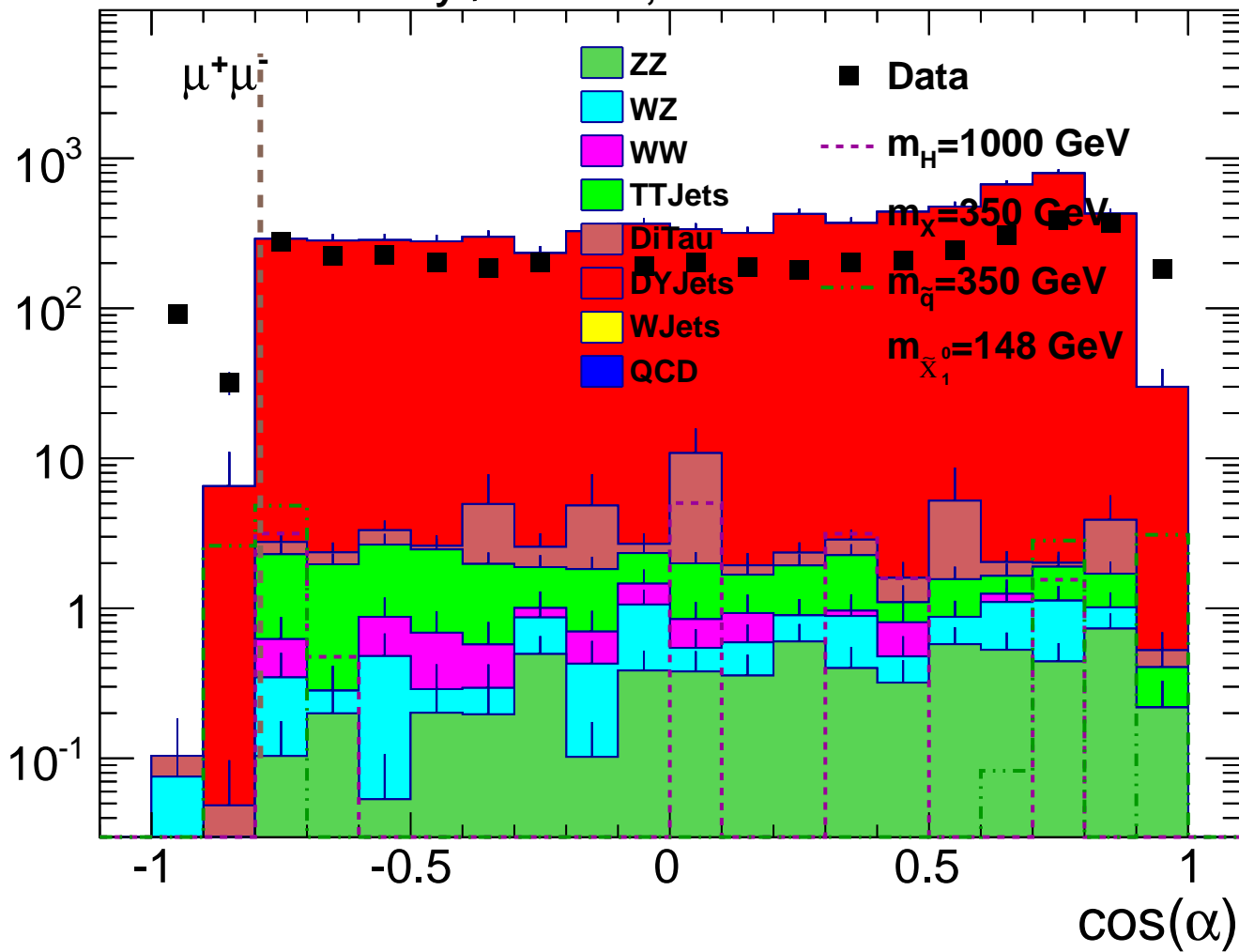


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



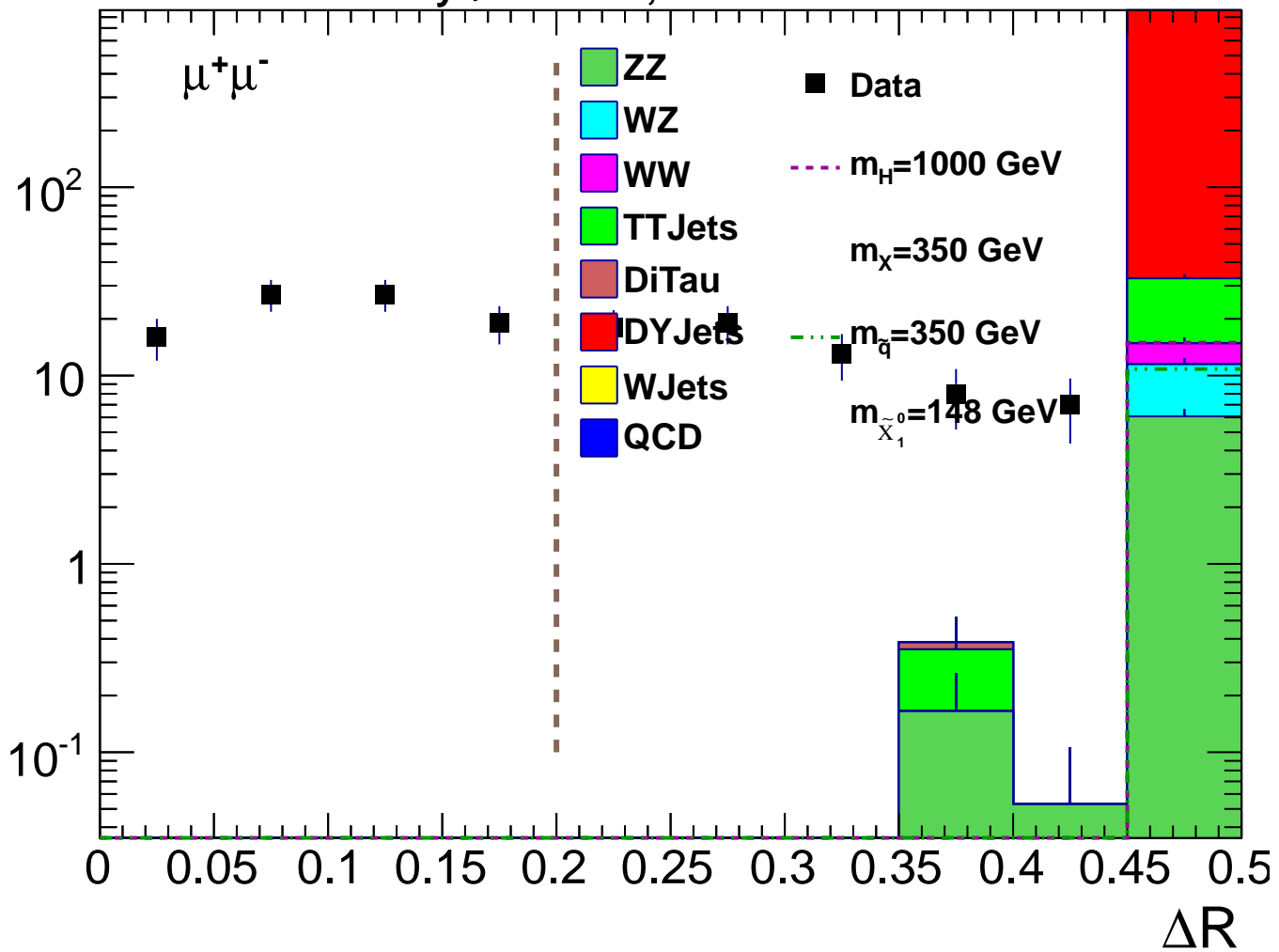
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}, L = 20.5 \text{ fb}^{-1}$

Entries

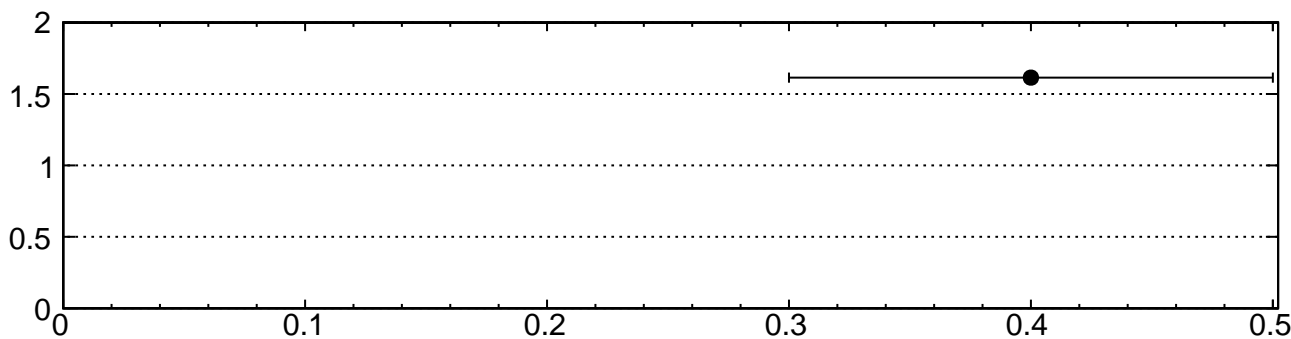


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

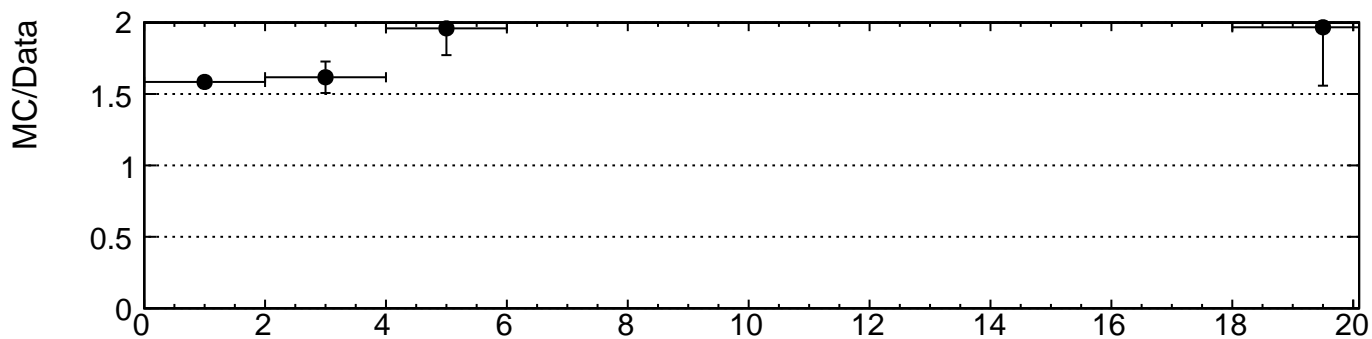
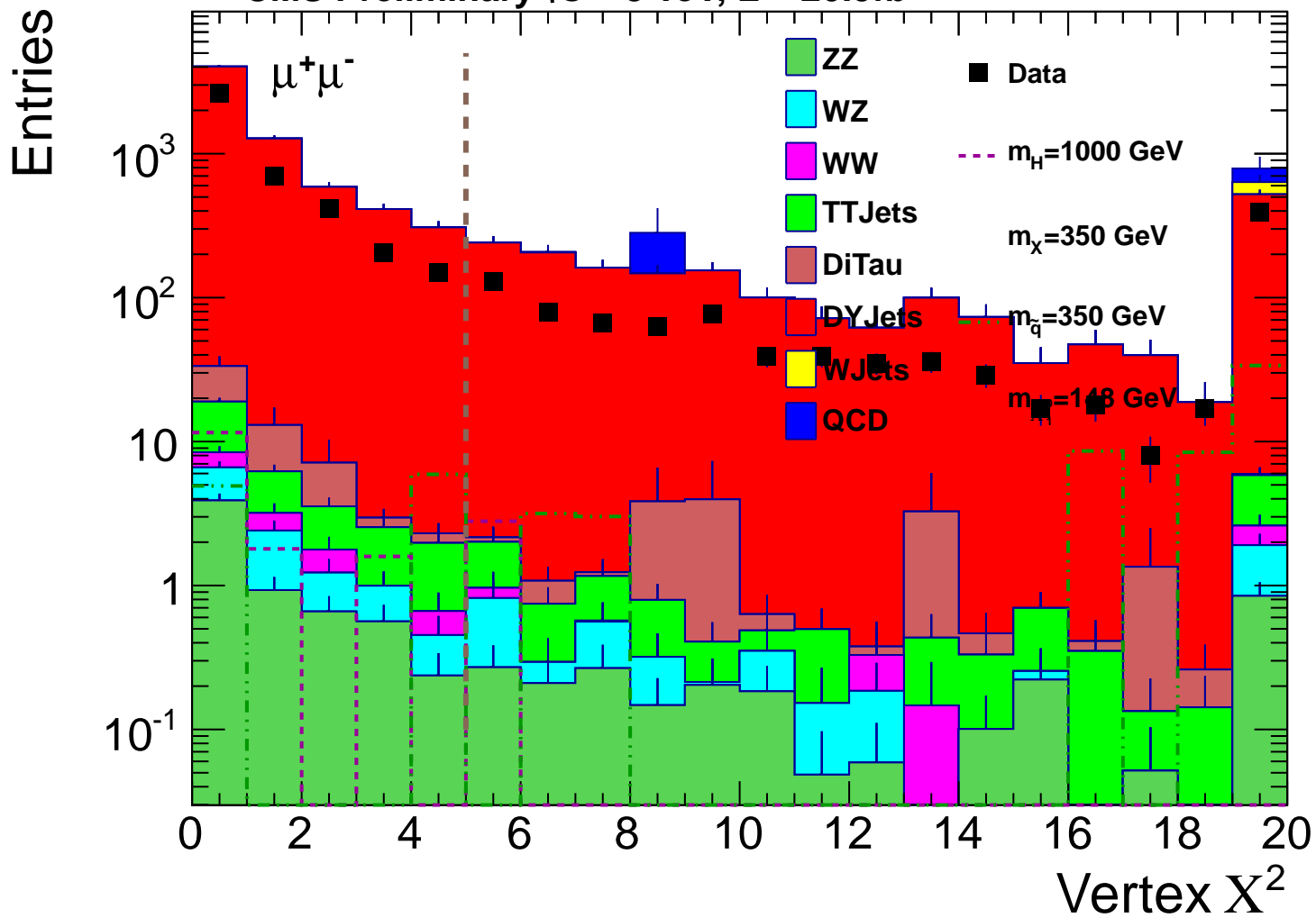
Entries



MC/Data

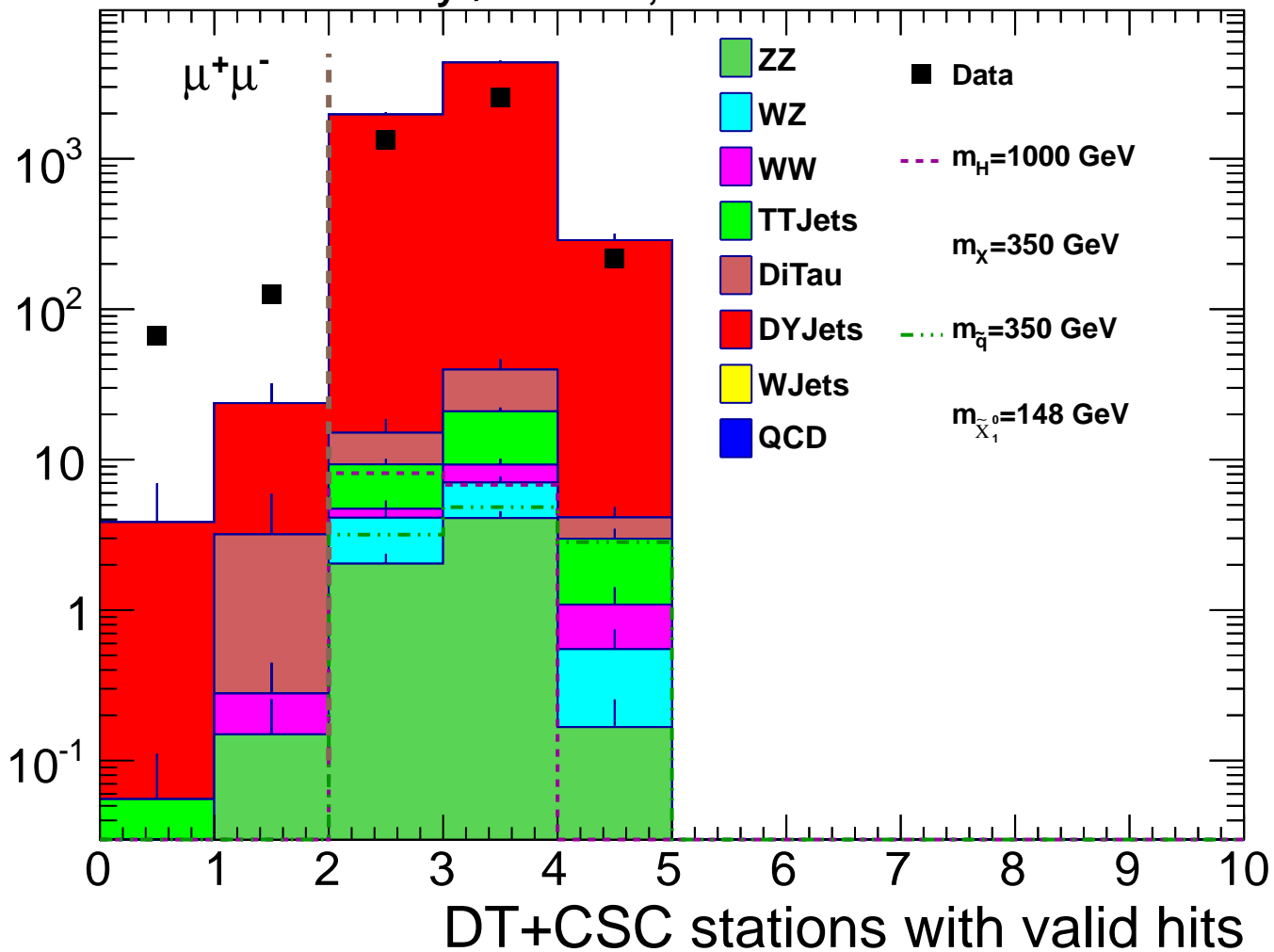


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

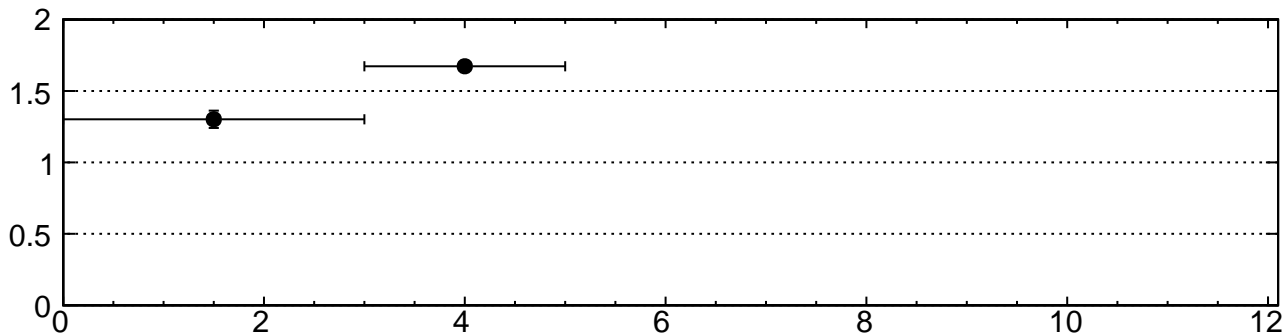


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

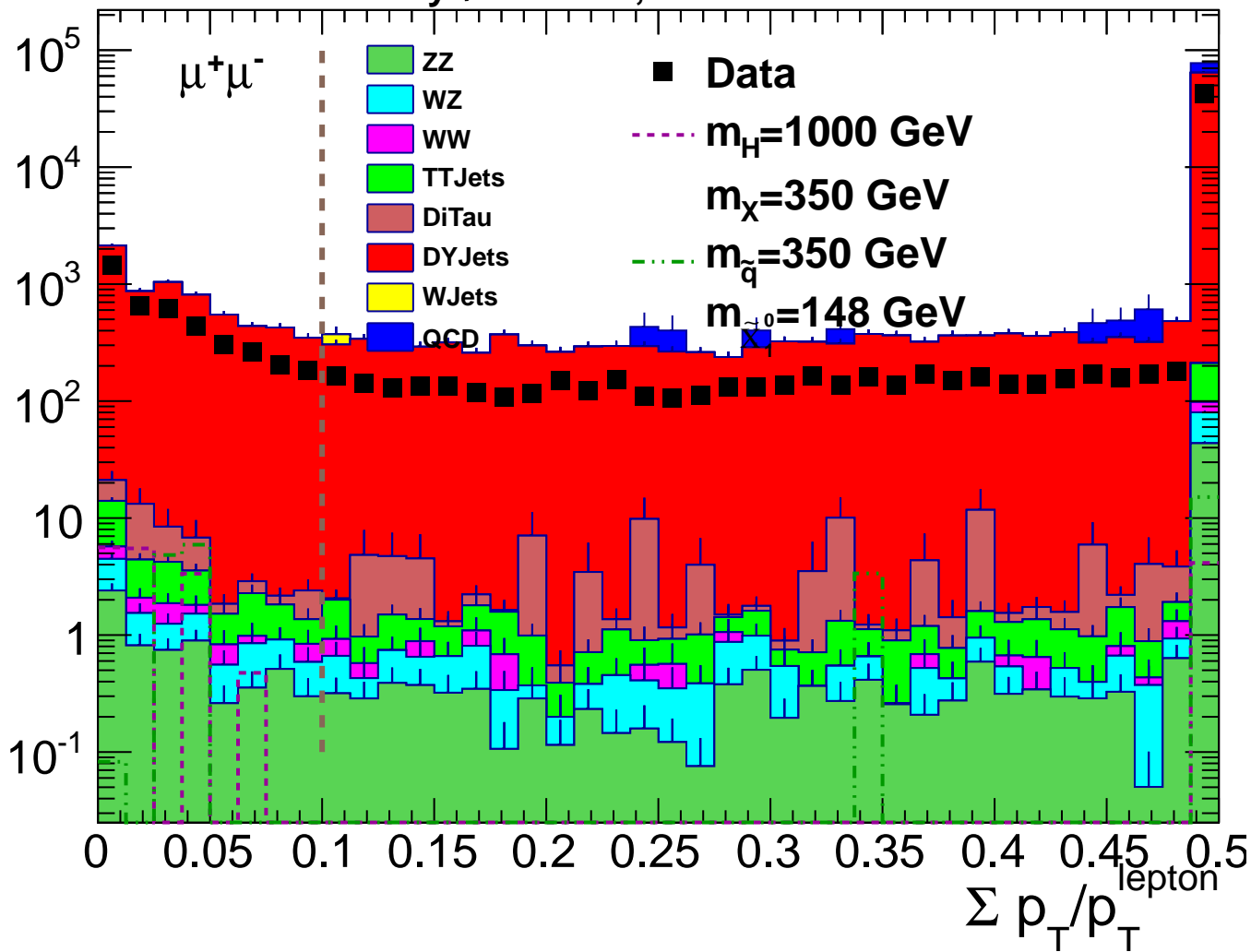


MC/Data

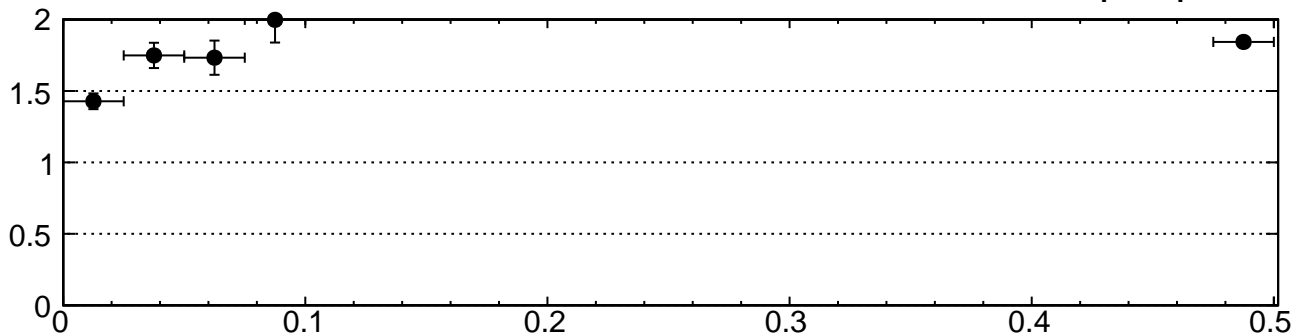


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries



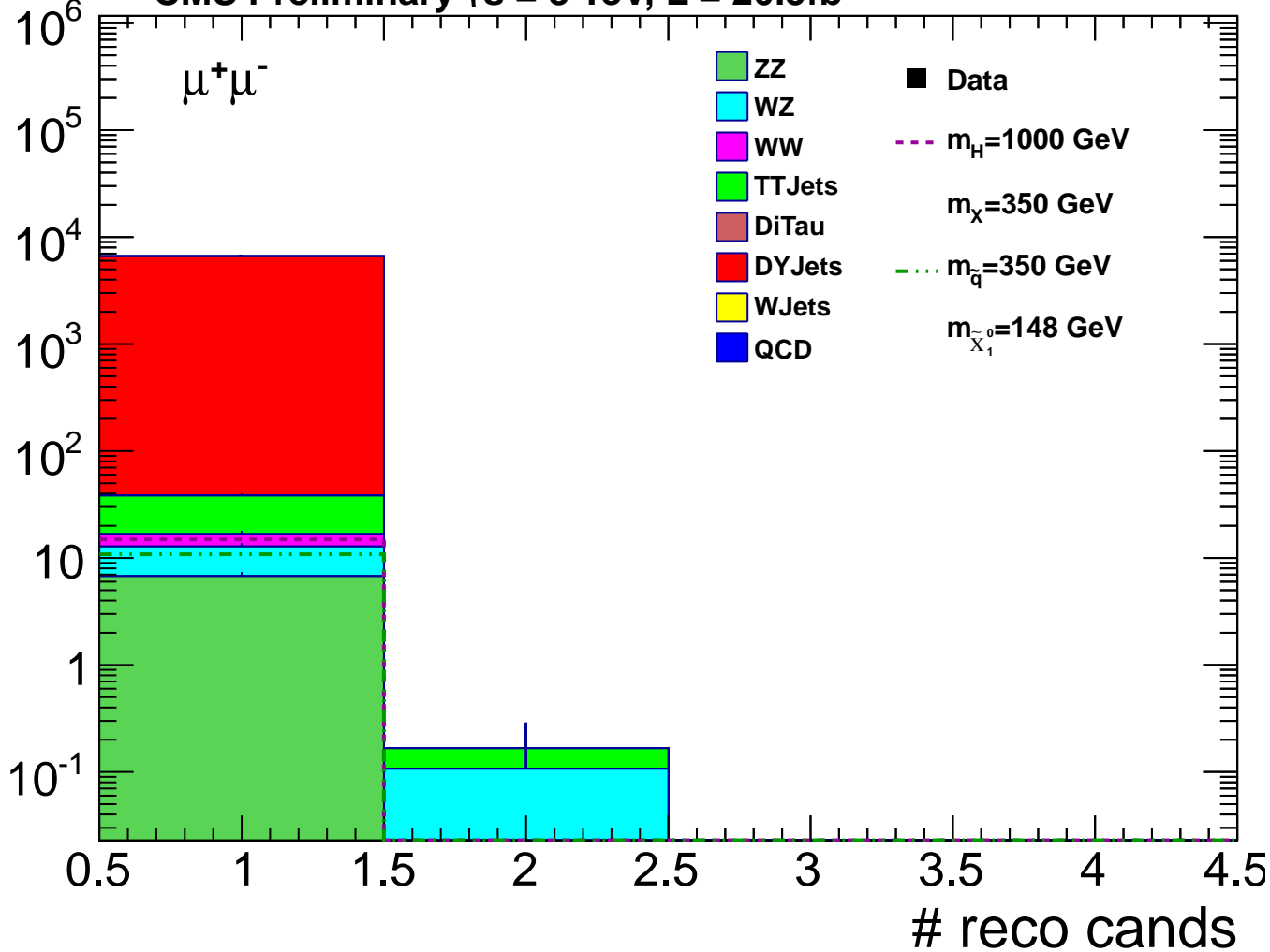
MC/Data



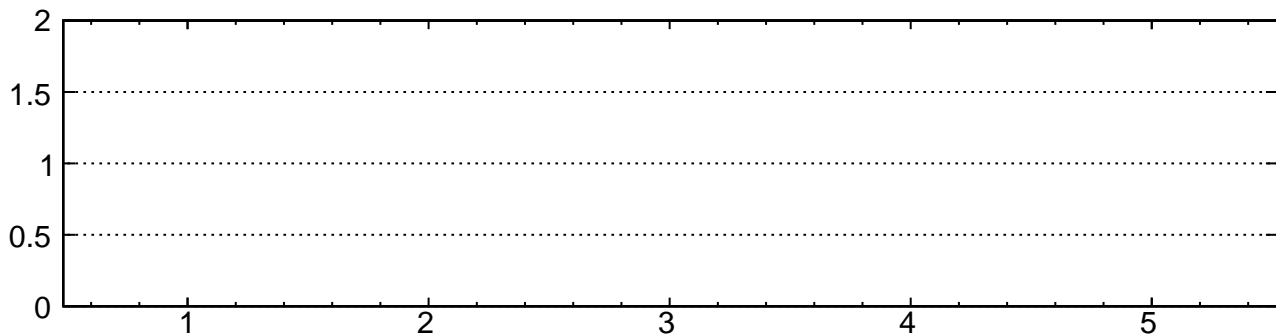


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

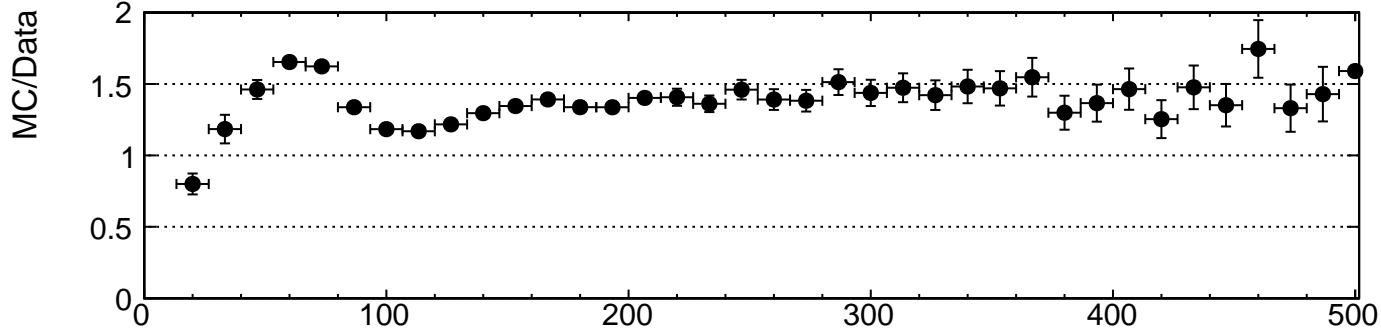
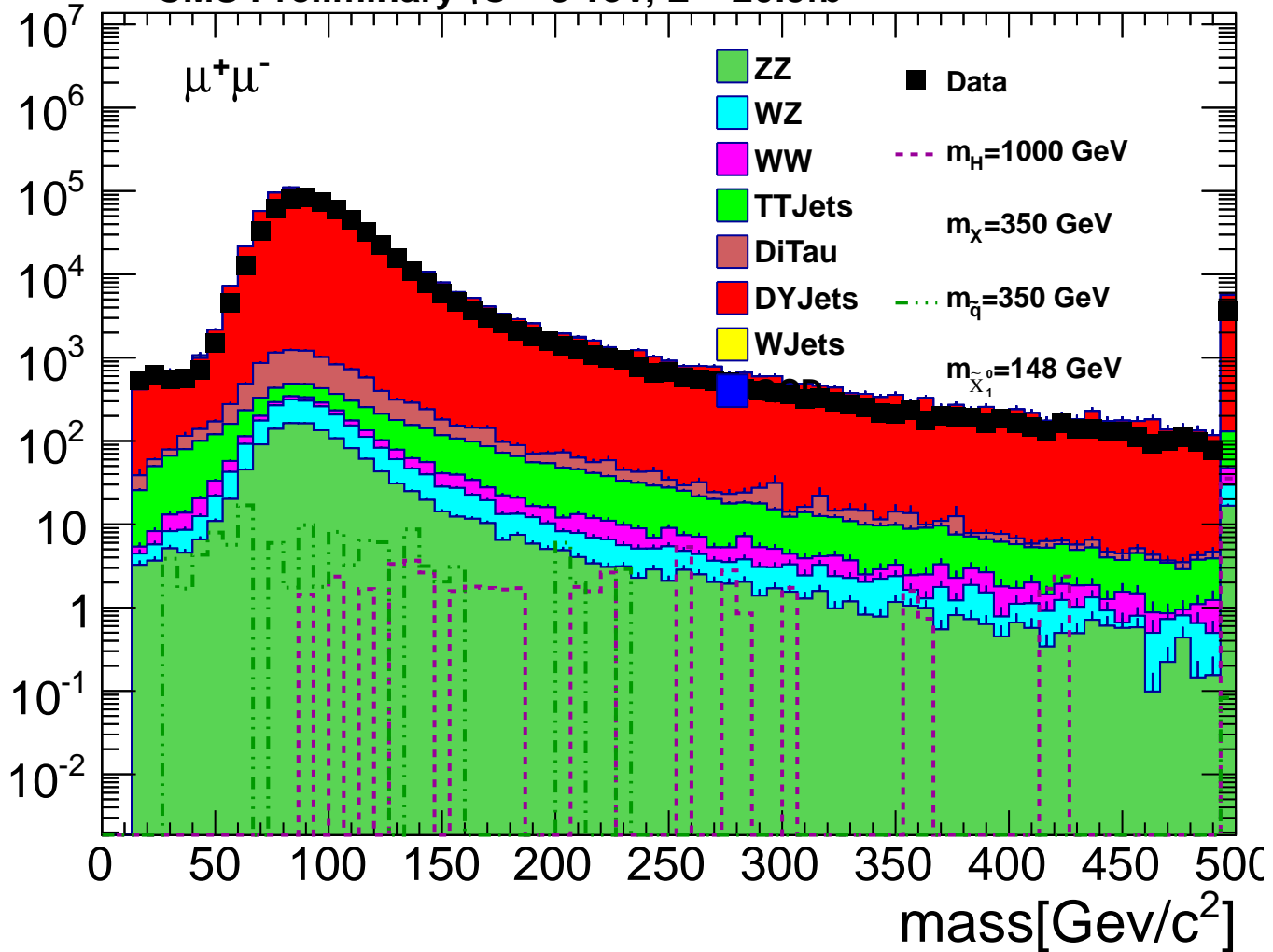


MC/Data



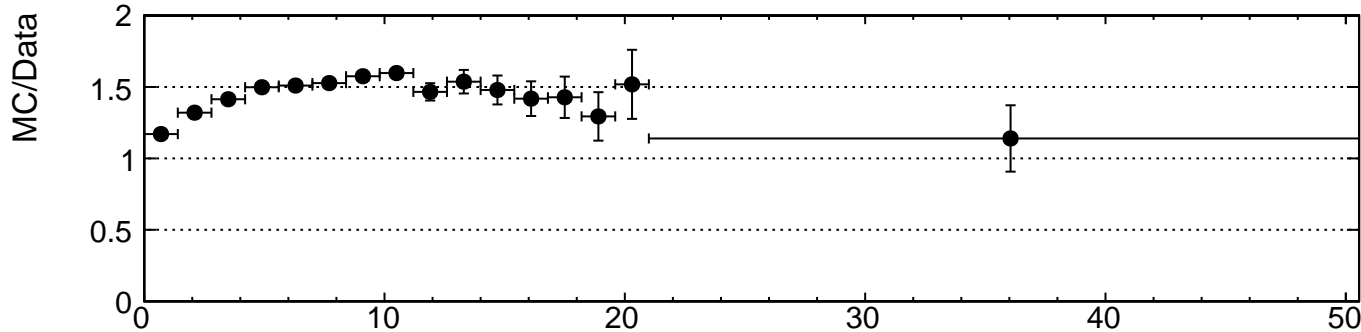
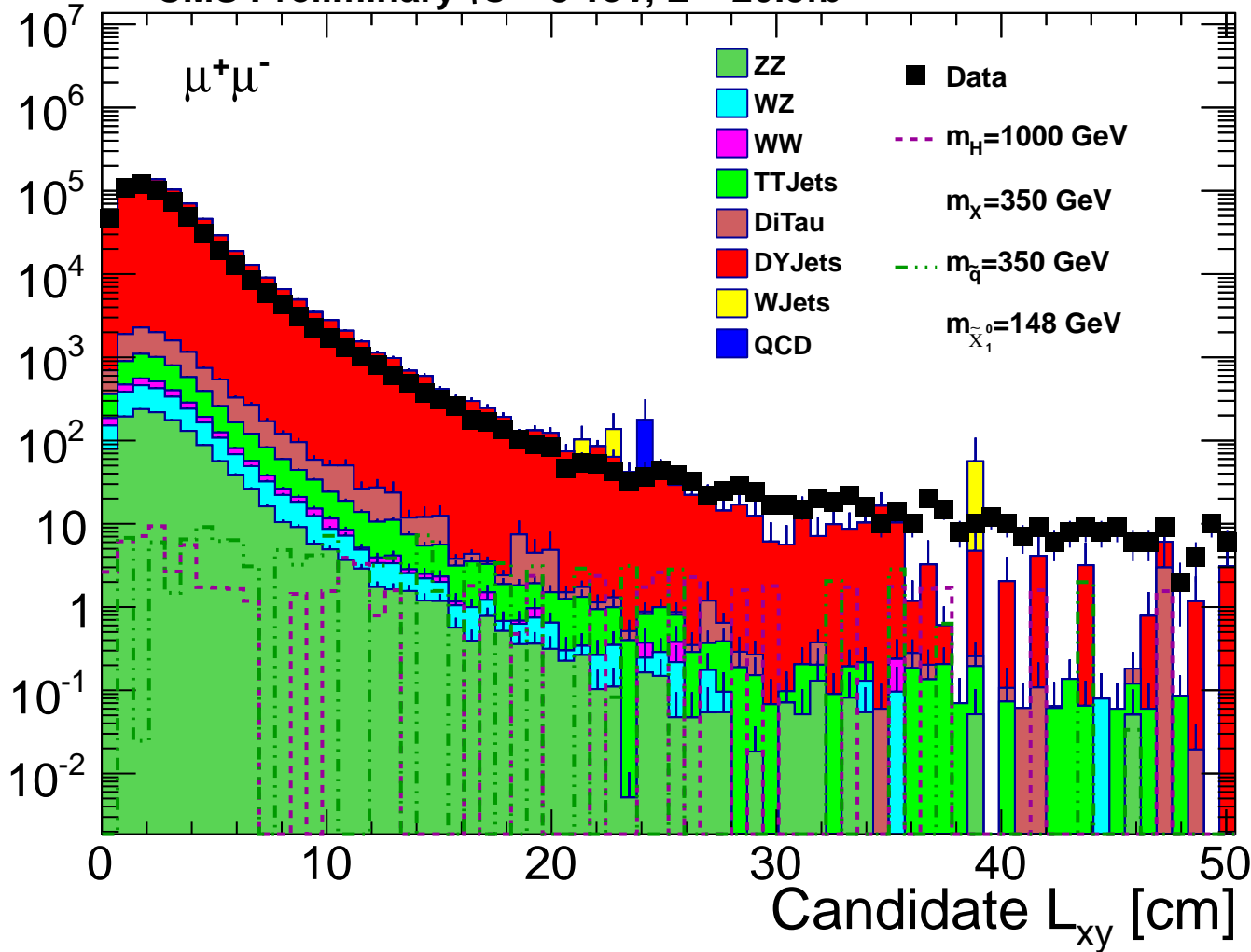
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

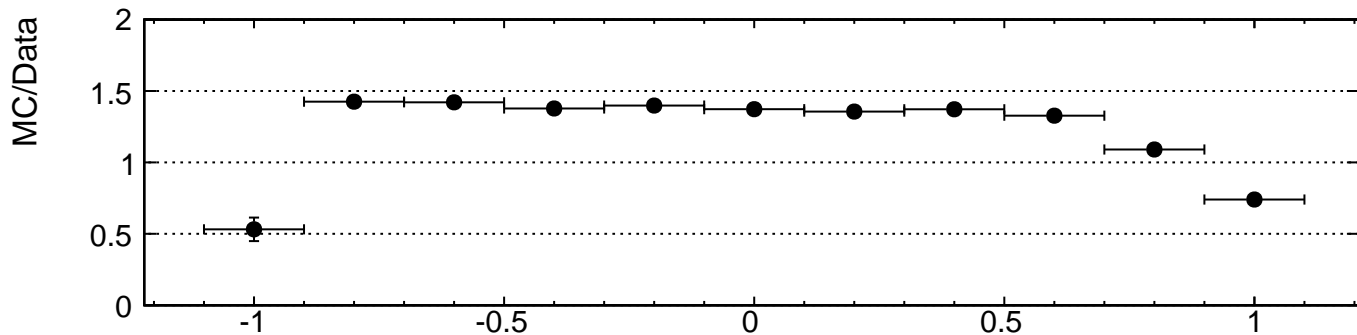
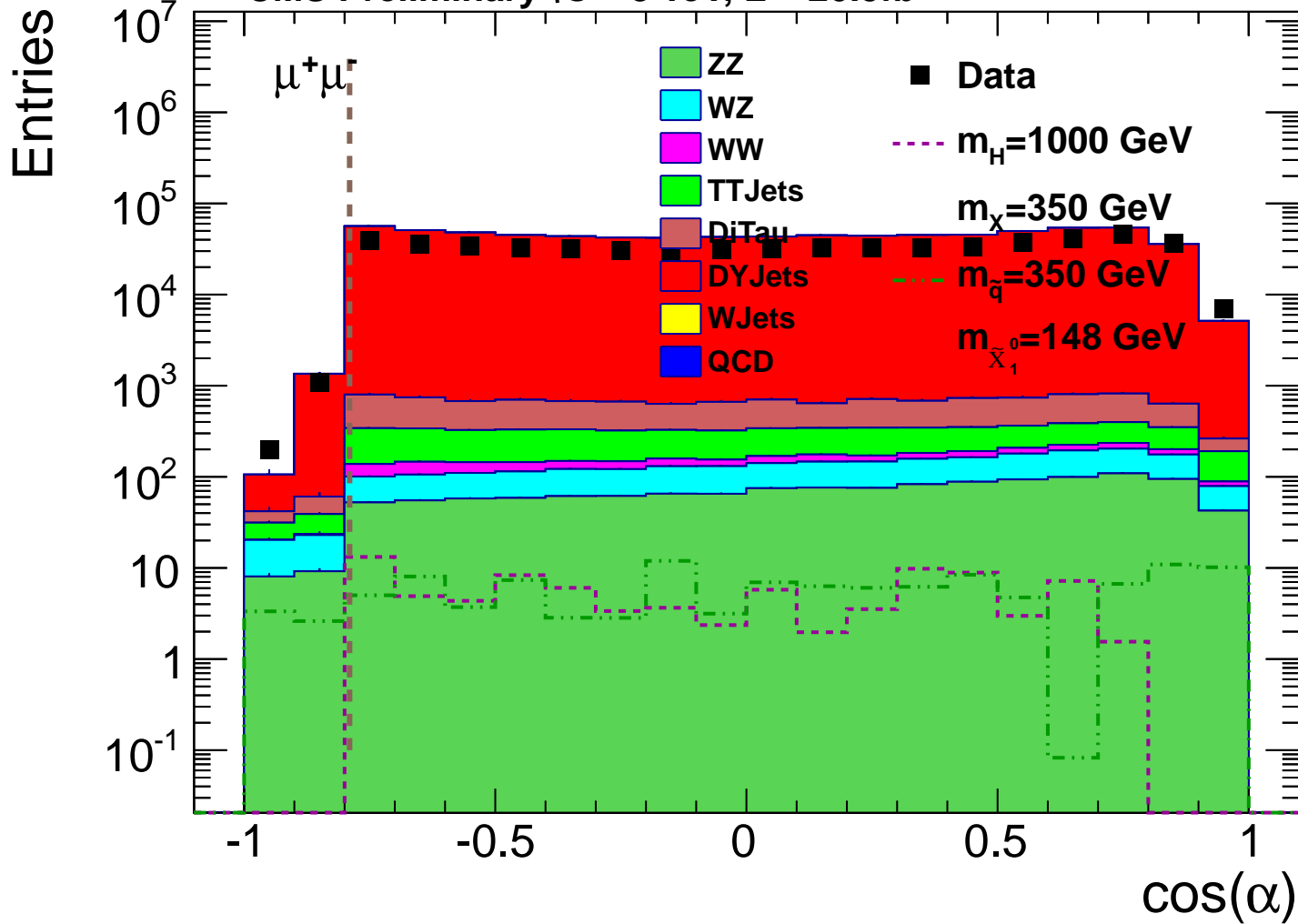


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

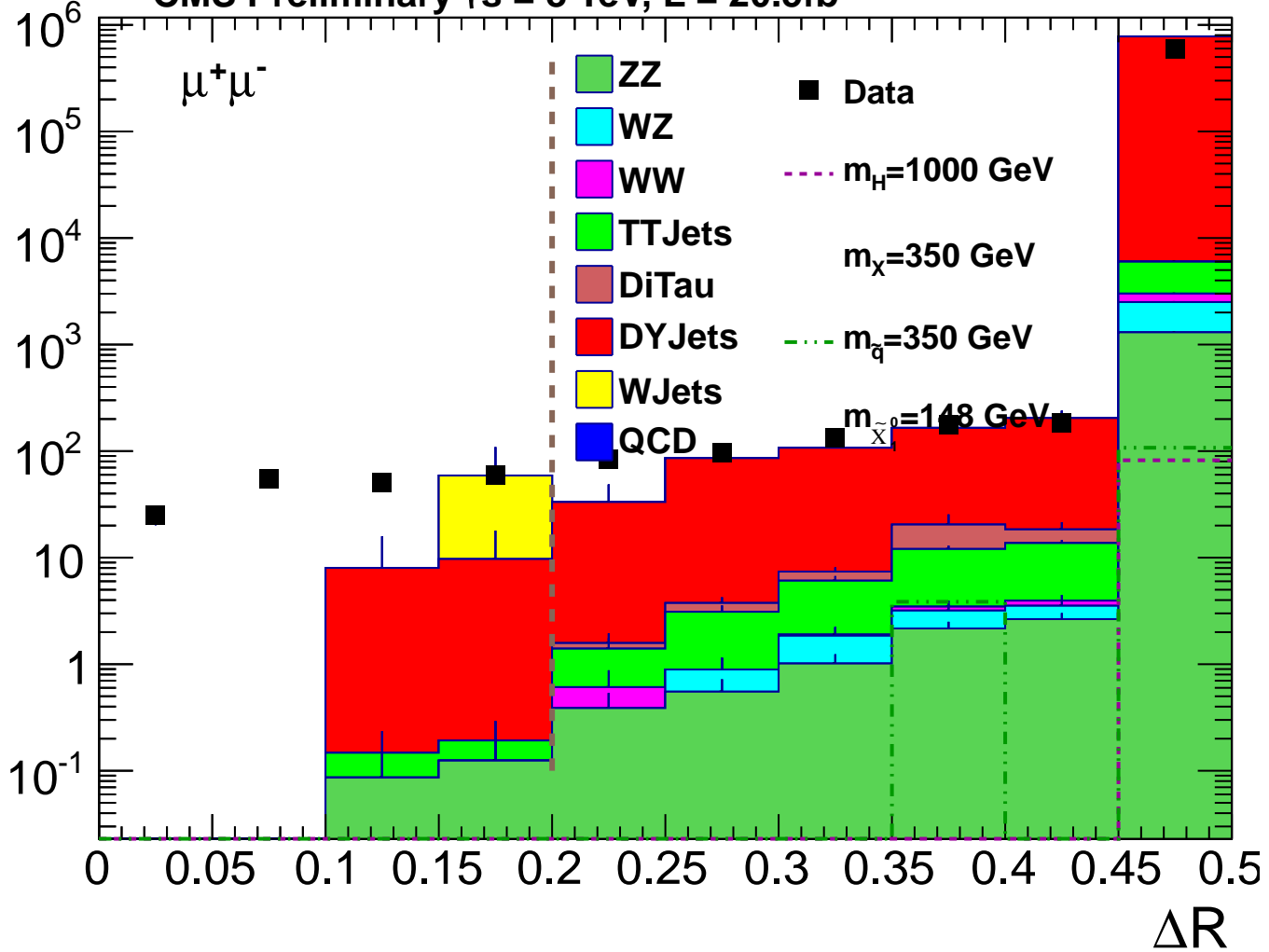


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}, L = 20.5 \text{ fb}^{-1}$

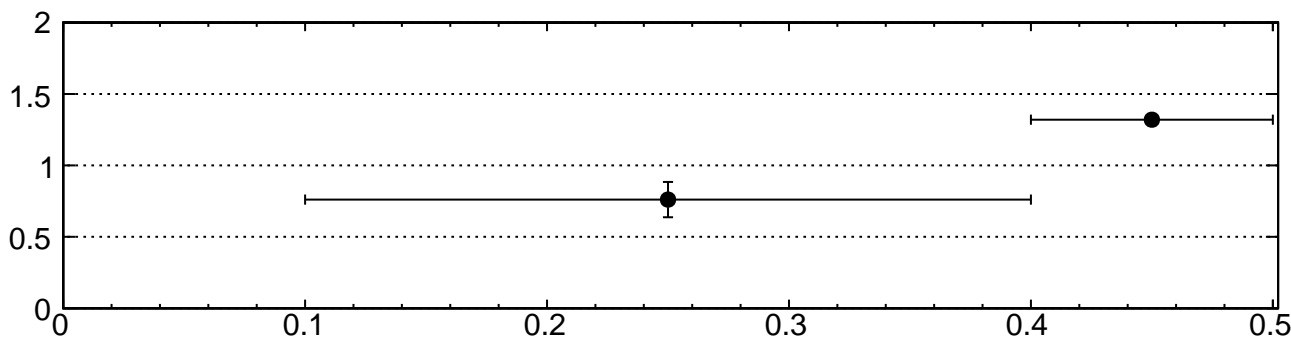


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}, L = 20.5 \text{ fb}^{-1}$

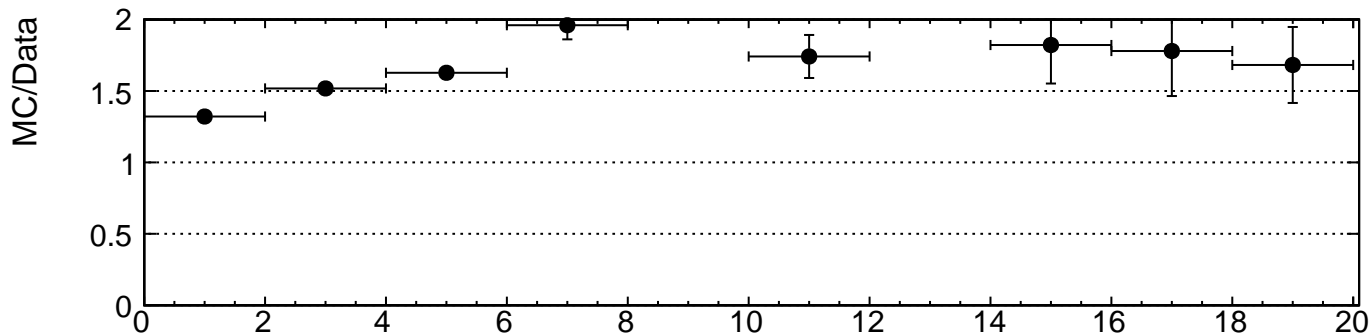
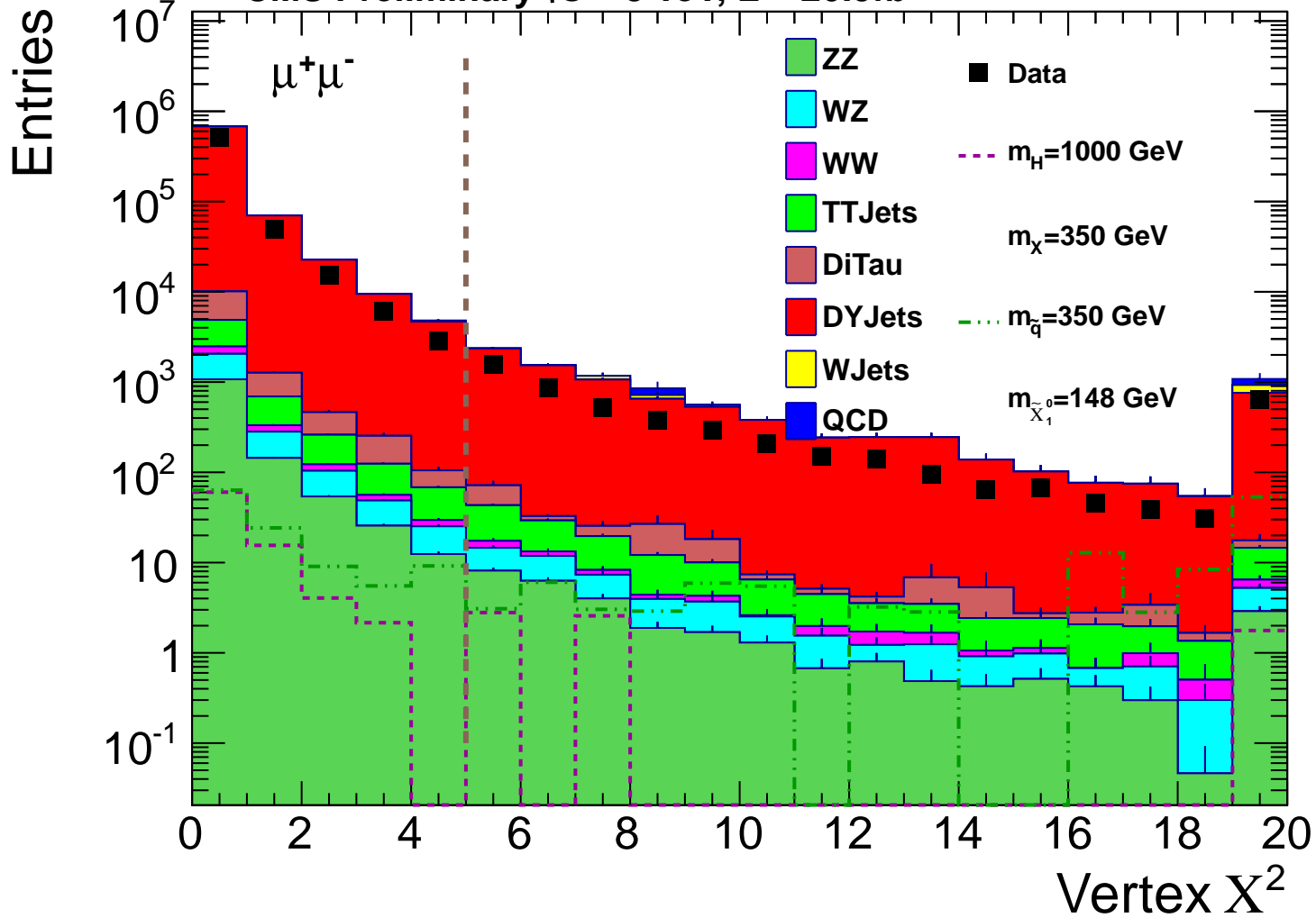
Entries



MC/Data

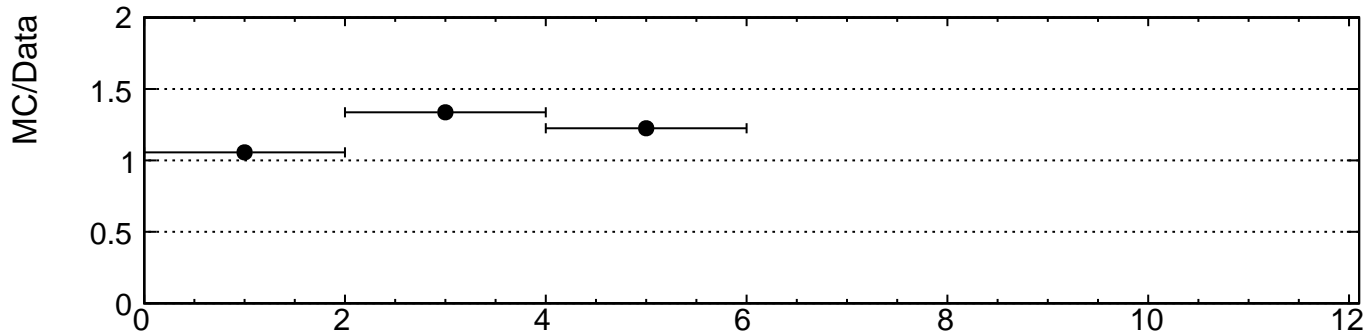
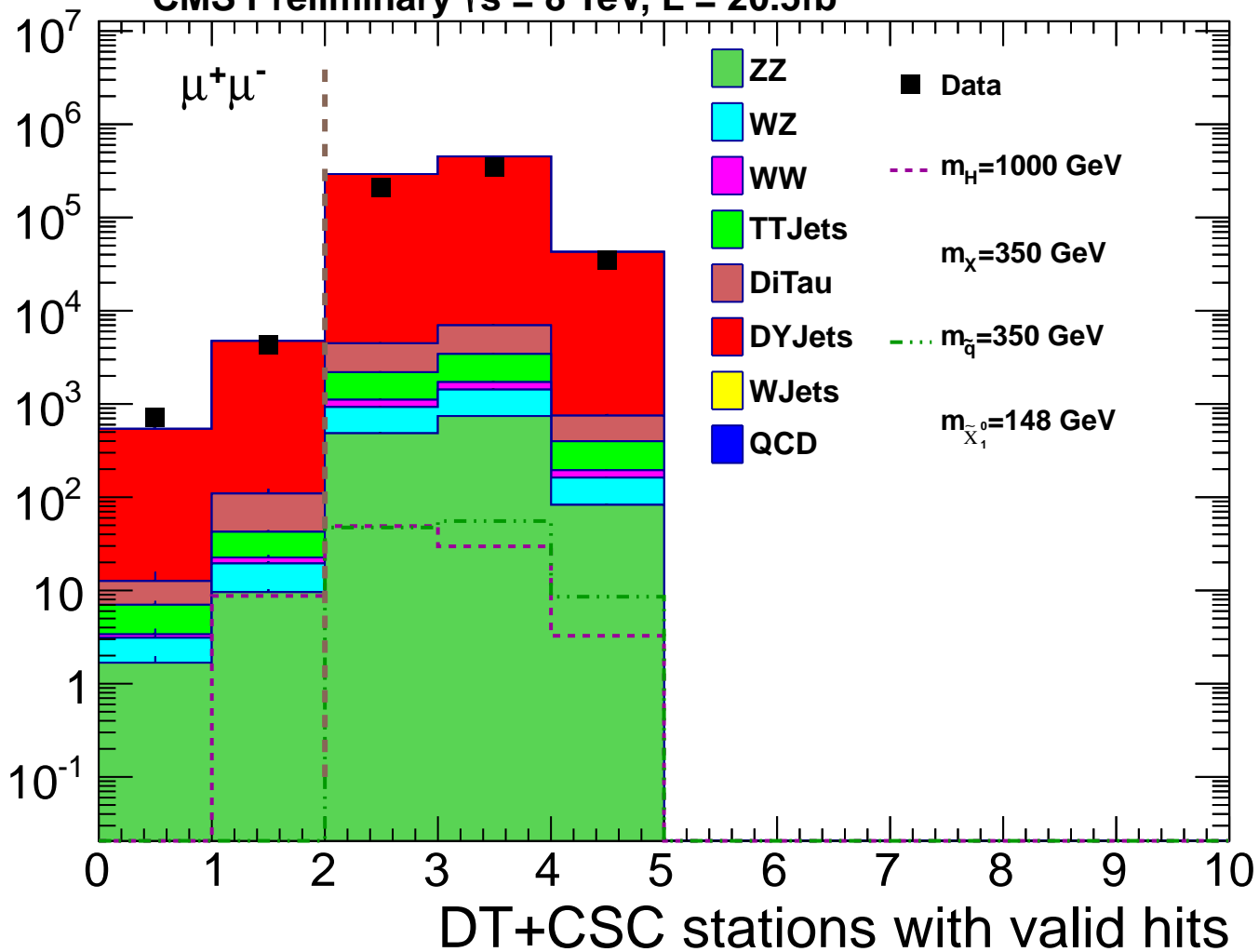


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$



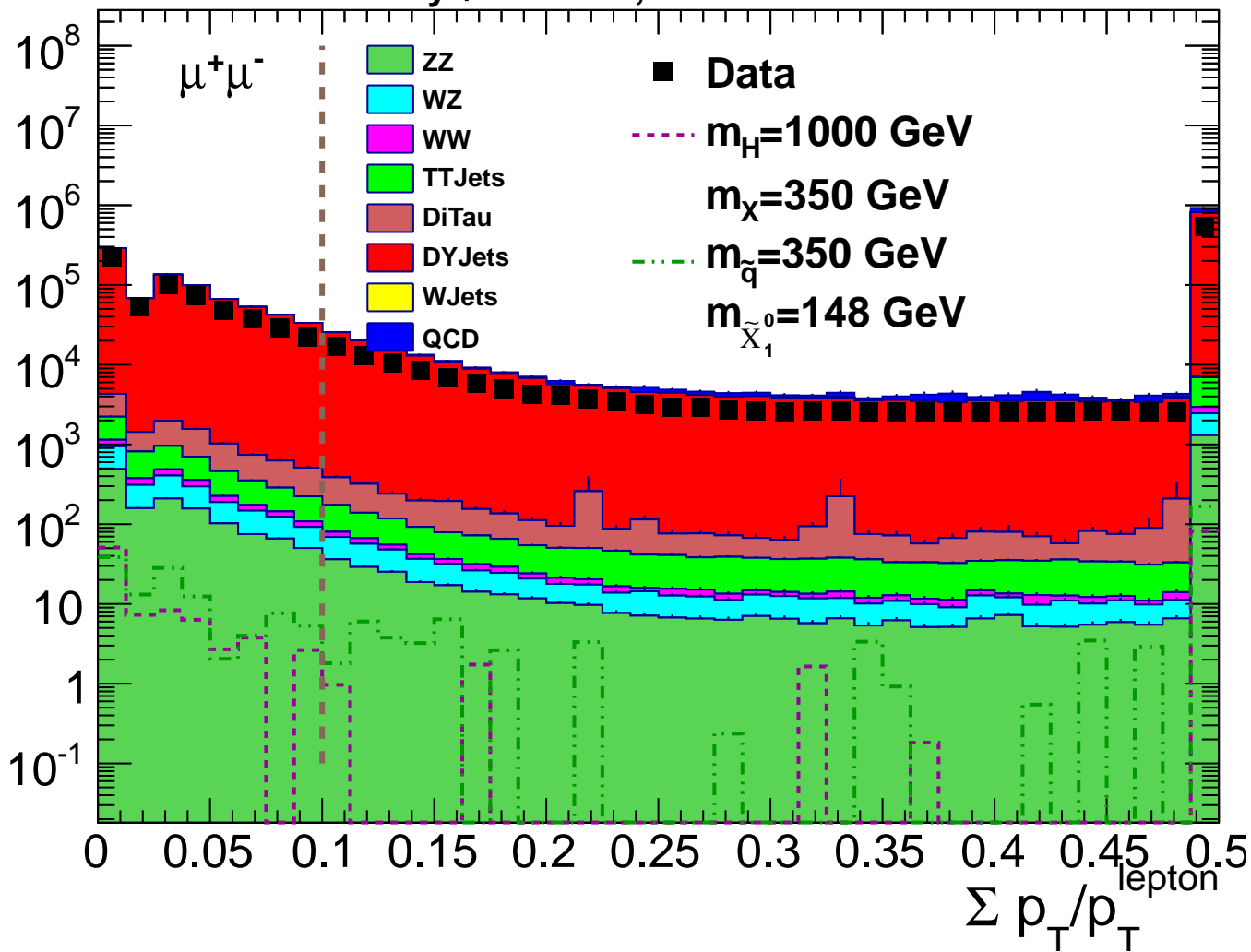
CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

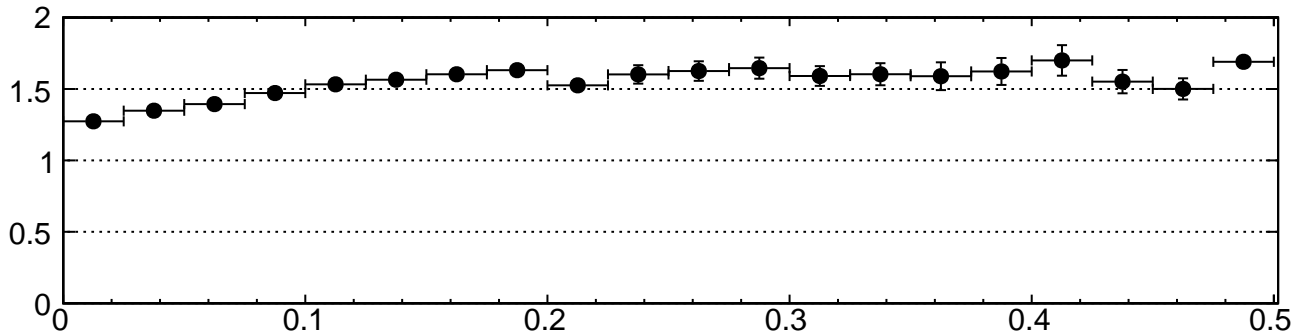


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries



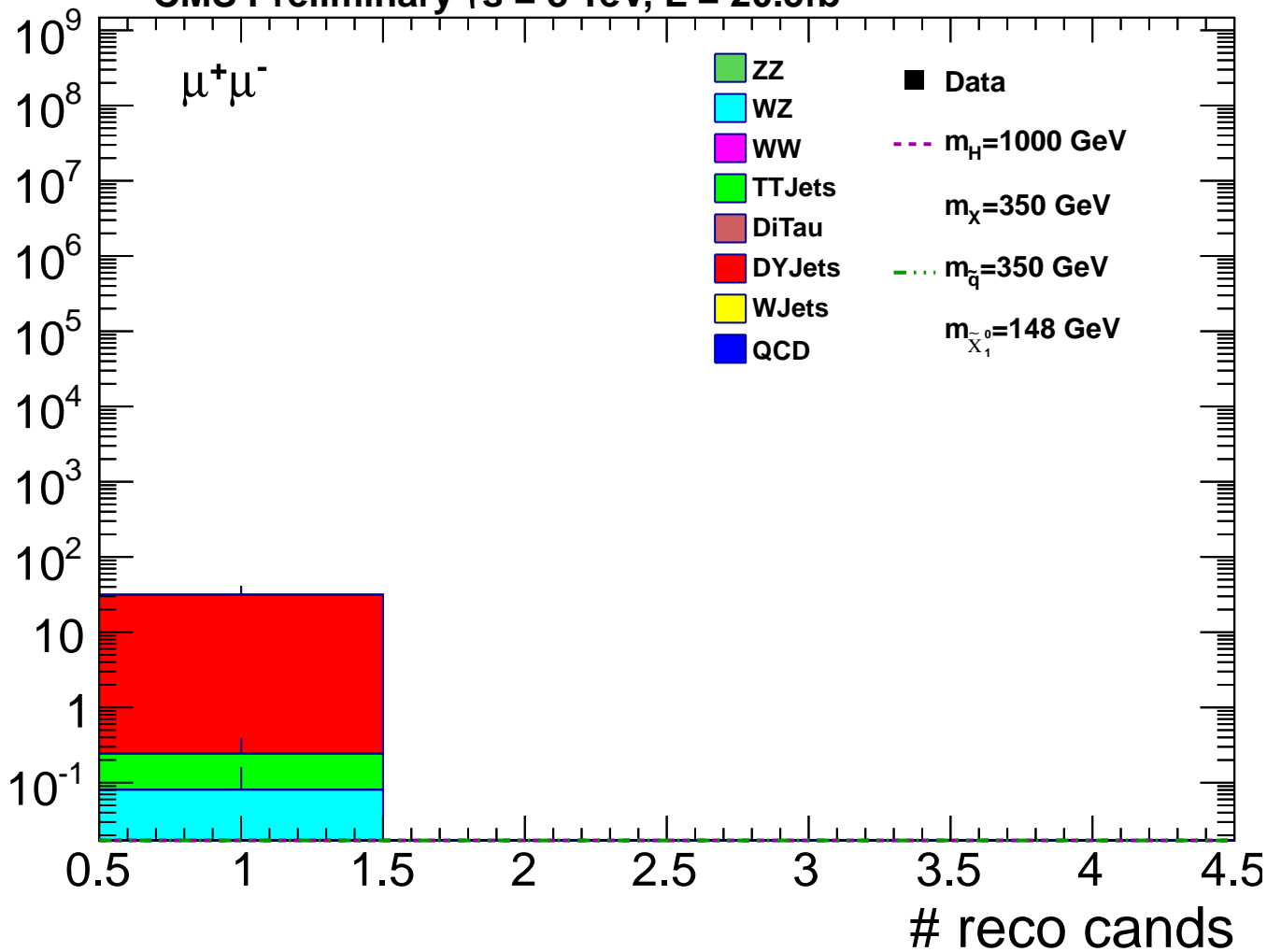
MC/Data



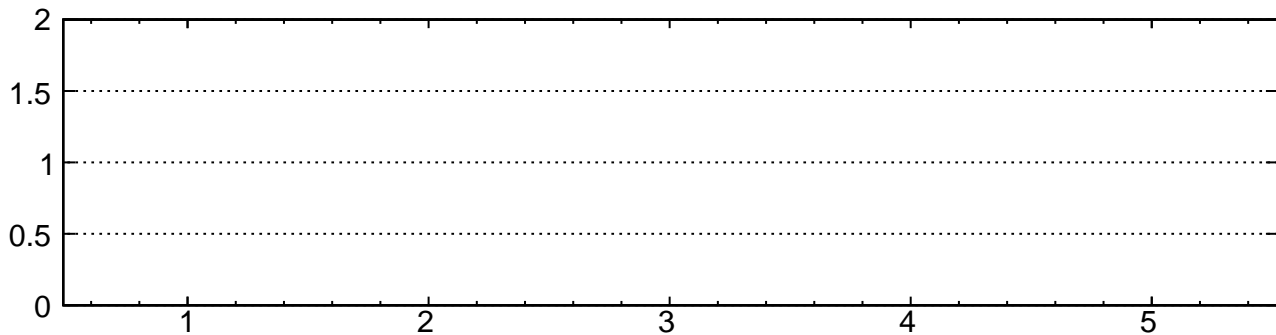


CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}, L = 20.5 \text{ fb}^{-1}$

Entries



MC/Data



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

$\mu^+\mu^-$

ZZ

WZ

WW

TTJets

DiTau

DYJets

WJets

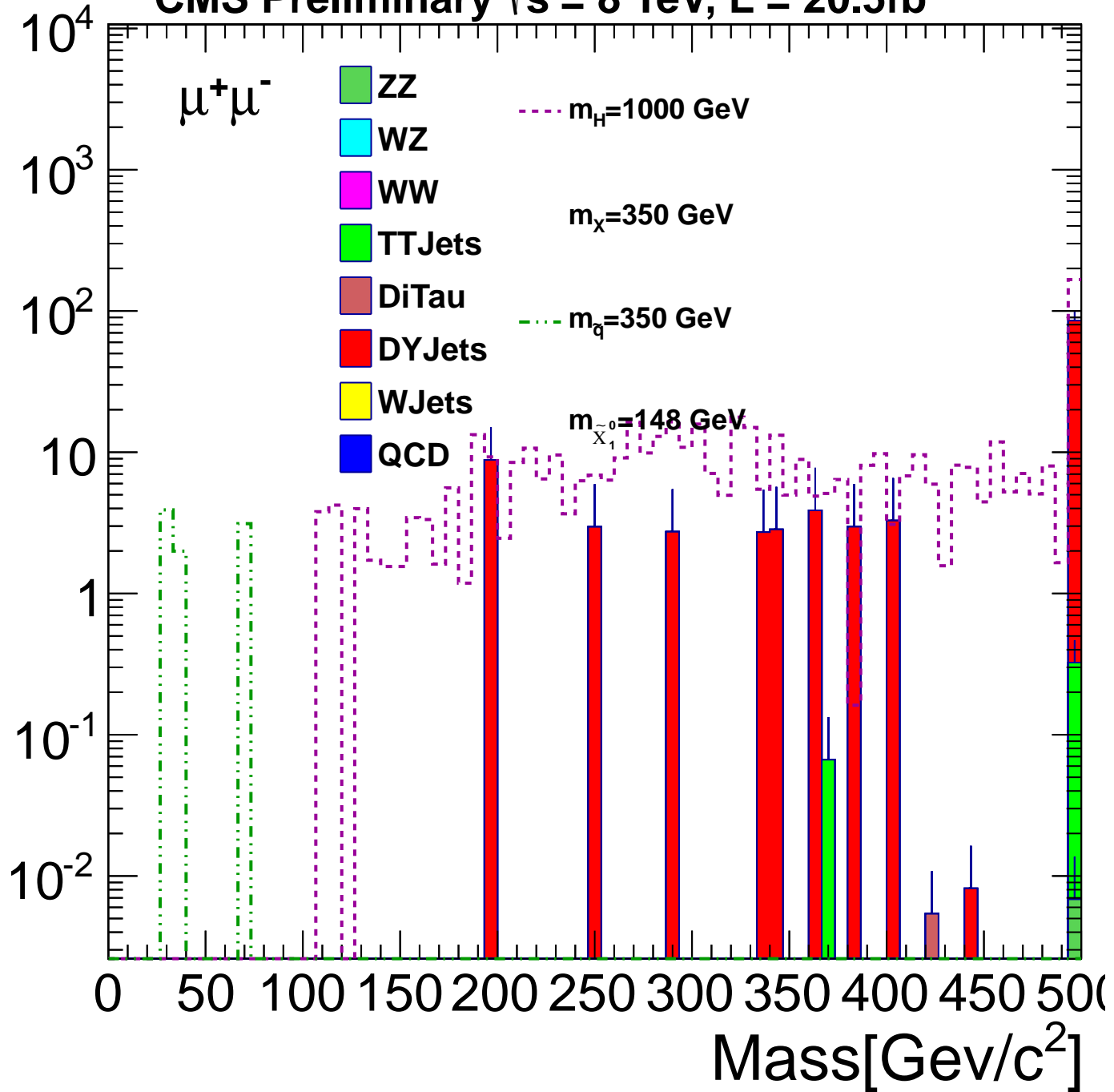
QCD

$m_H = 1000 \text{ GeV}$

$m_{\chi} = 350 \text{ GeV}$

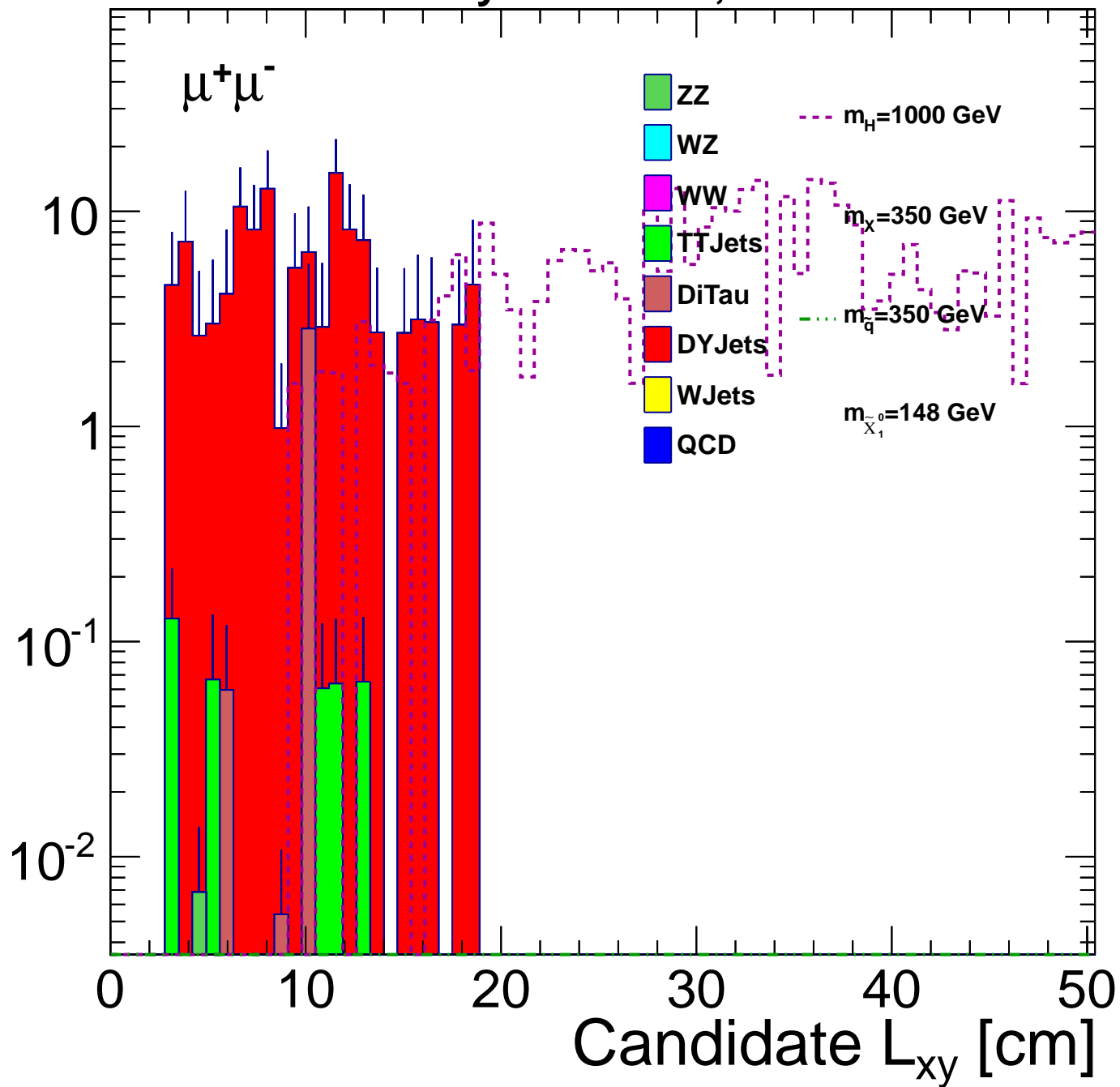
$m_{\tilde{q}} = 350 \text{ GeV}$

$m_{\tilde{\chi}_0^0} = 148 \text{ GeV}$



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries



CMS Preliminary  $\sqrt{s} = 8 \text{ TeV}$ ,  $L = 20.5 \text{ fb}^{-1}$

Entries

