

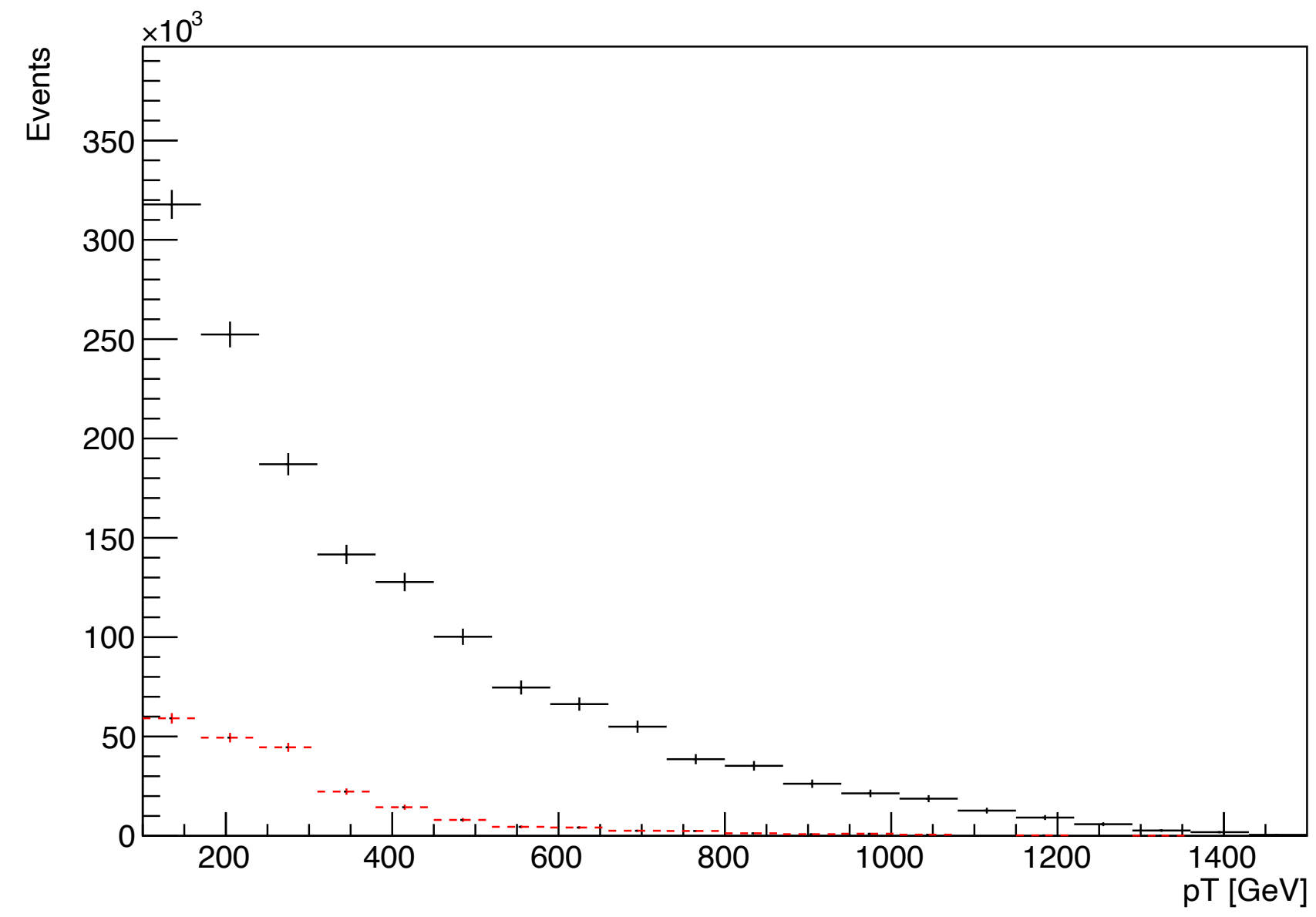
**$W+W$ -mumu Beam Remnant**

**Selection**

**Tuesday Feb 8**

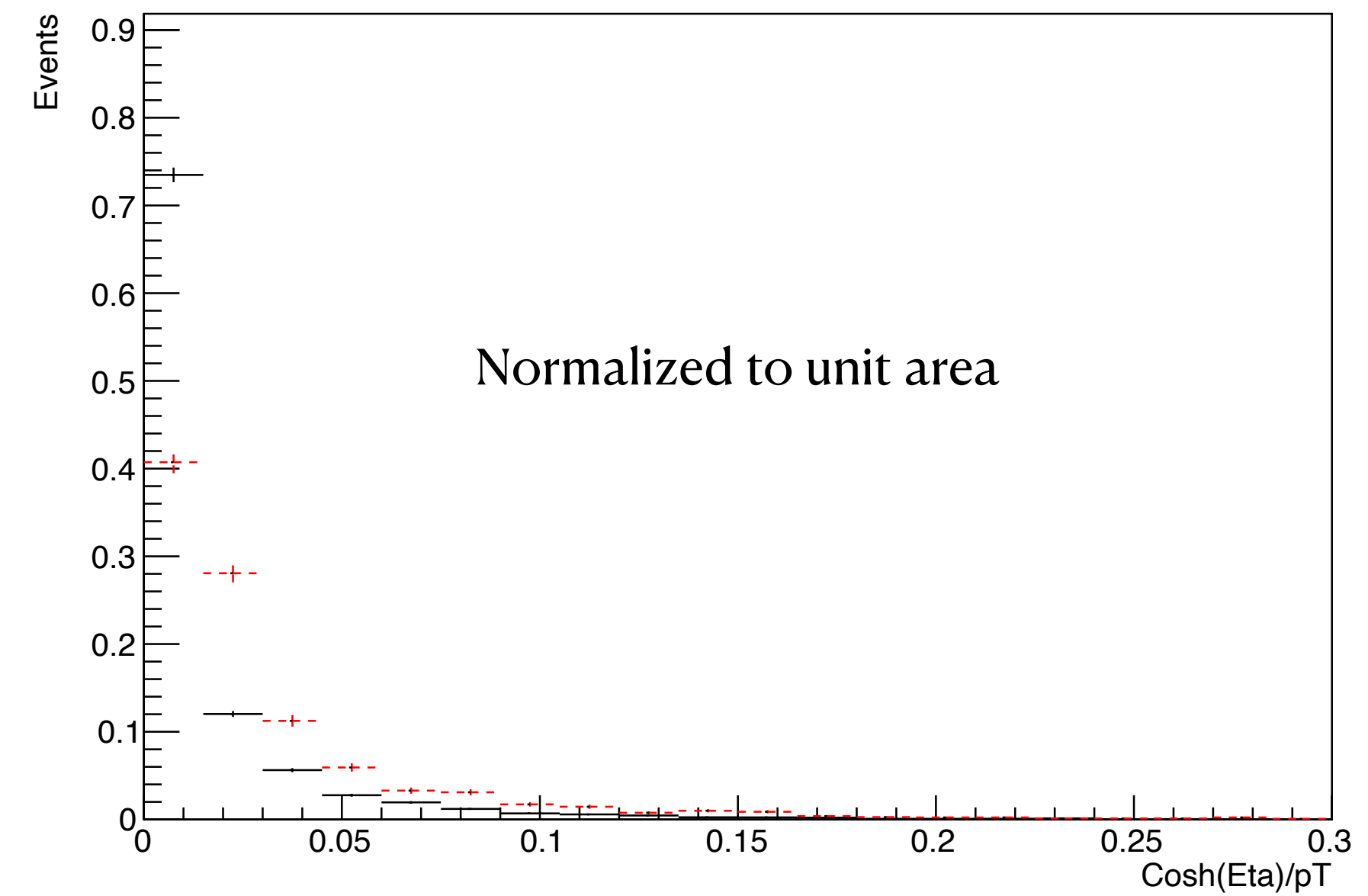
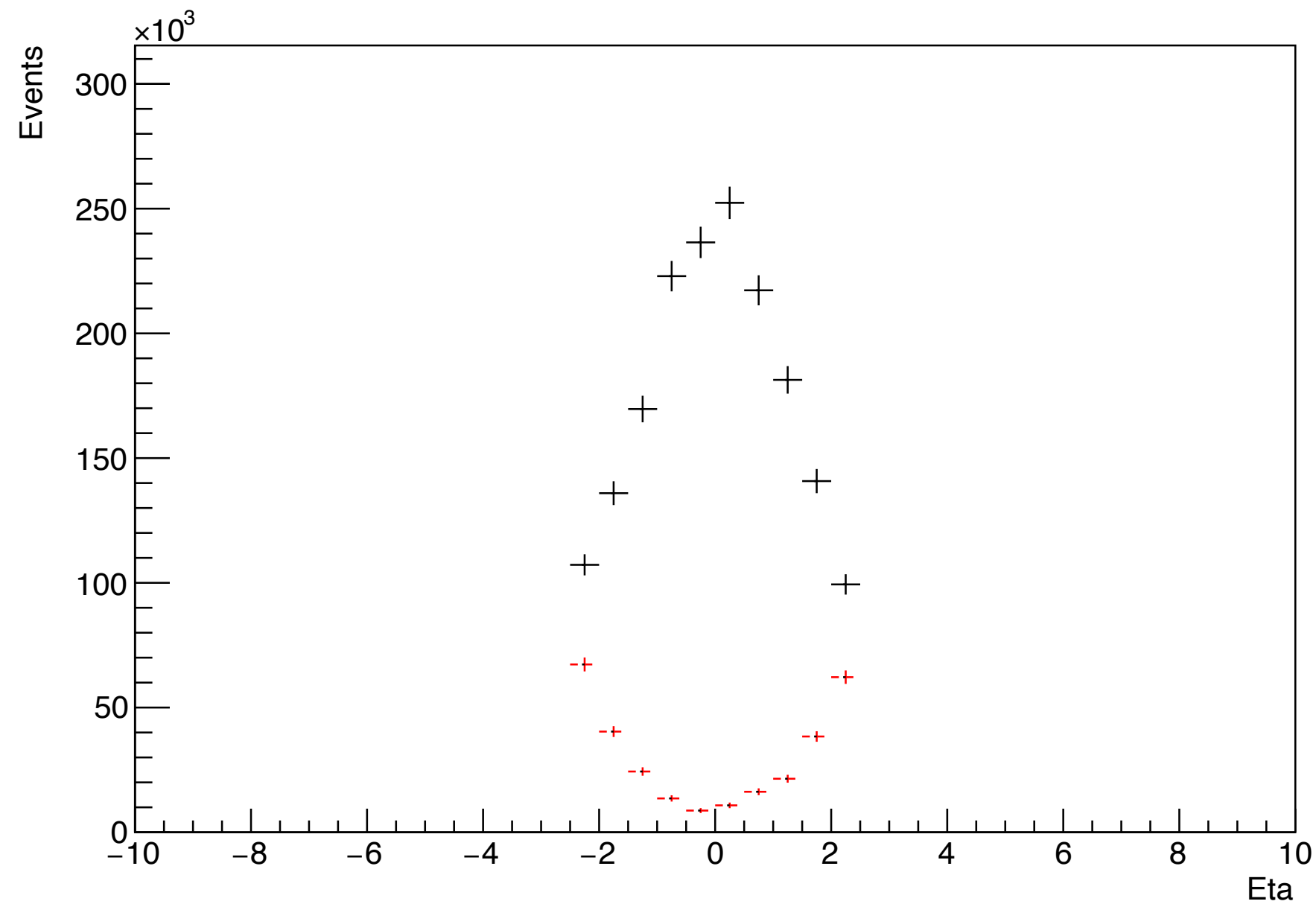
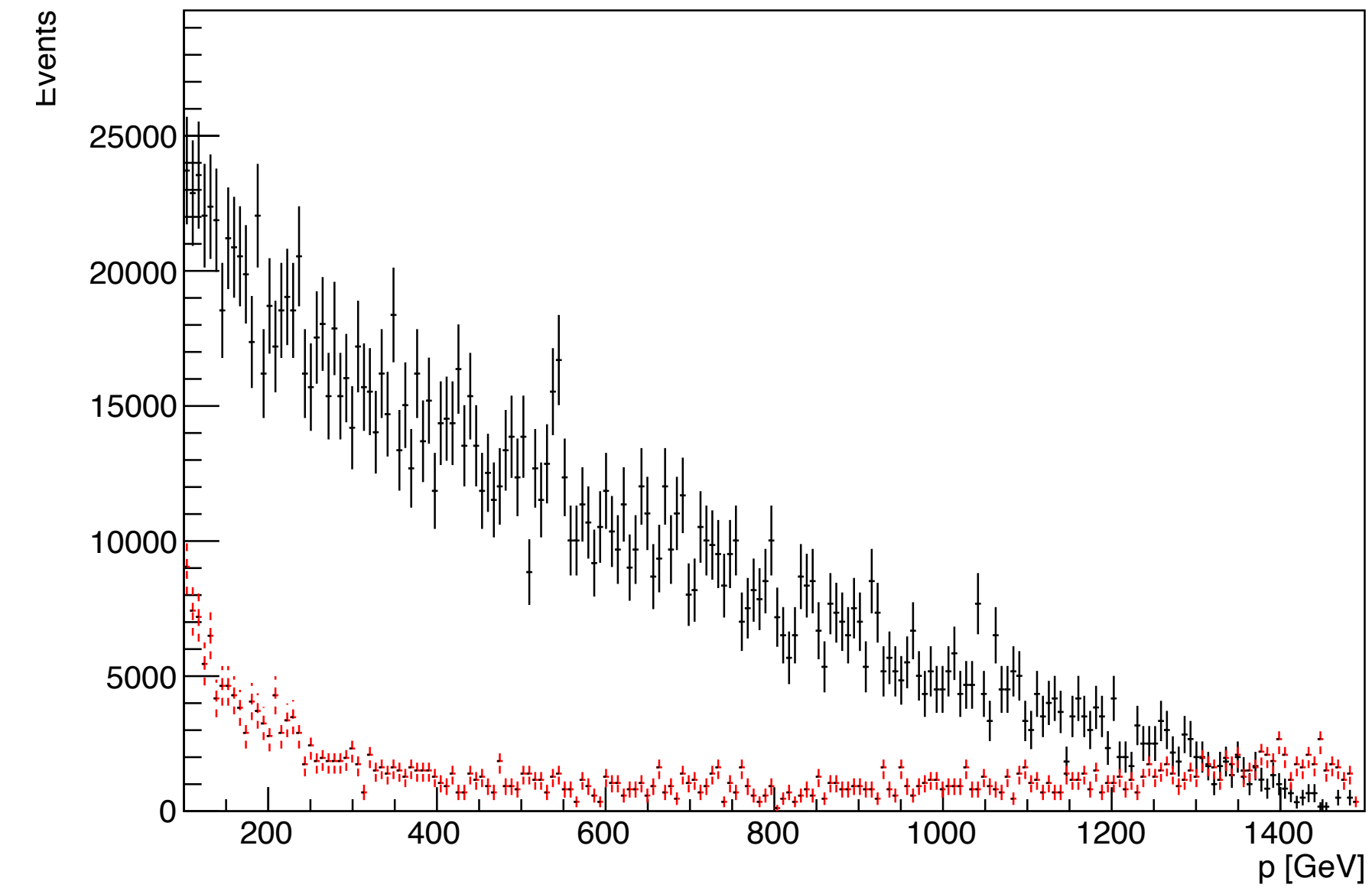
Connor Waits

# 3 TeV



Truth data with Reco BRM characterization:  
Eta < 2.5 and p > 100 GeV

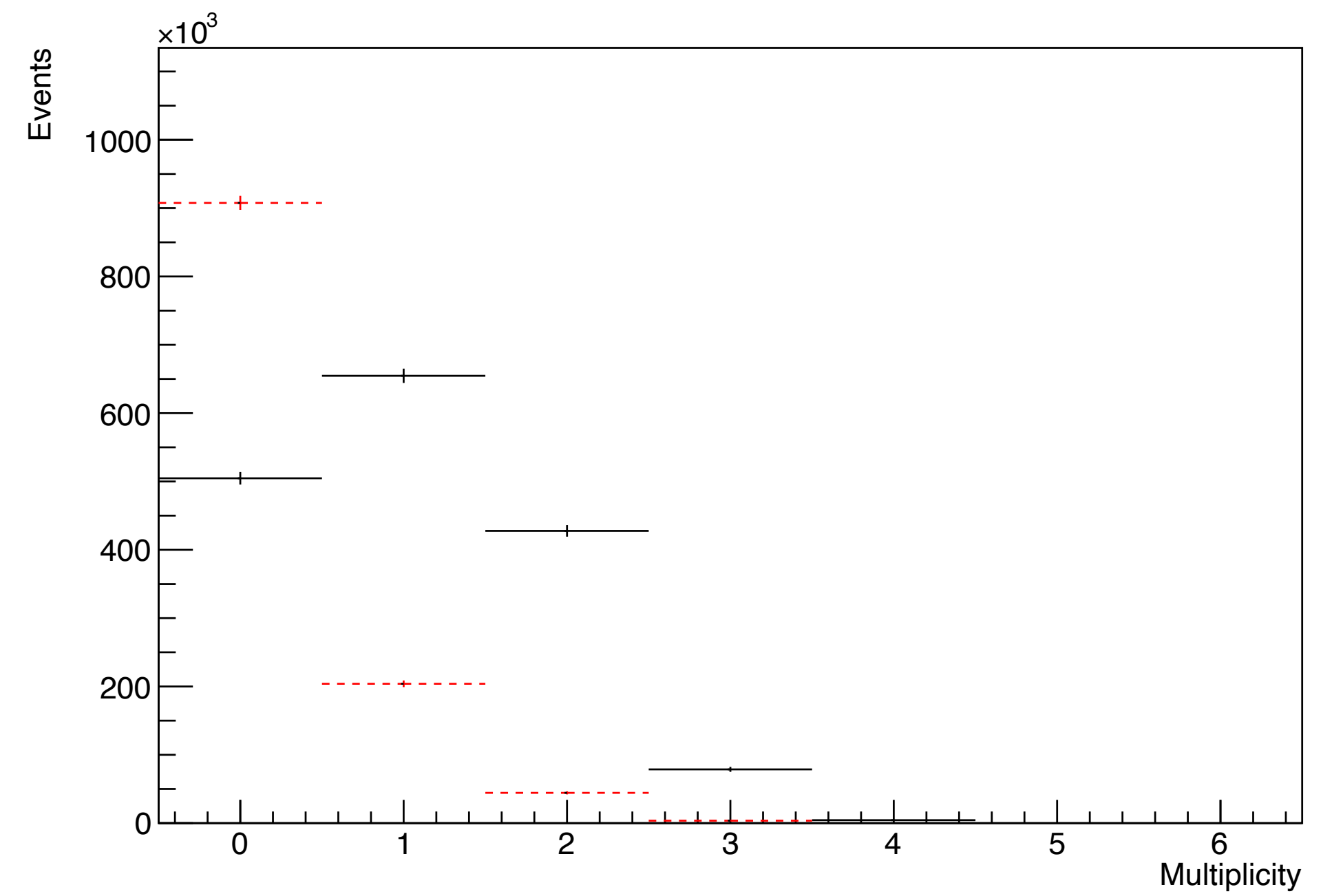
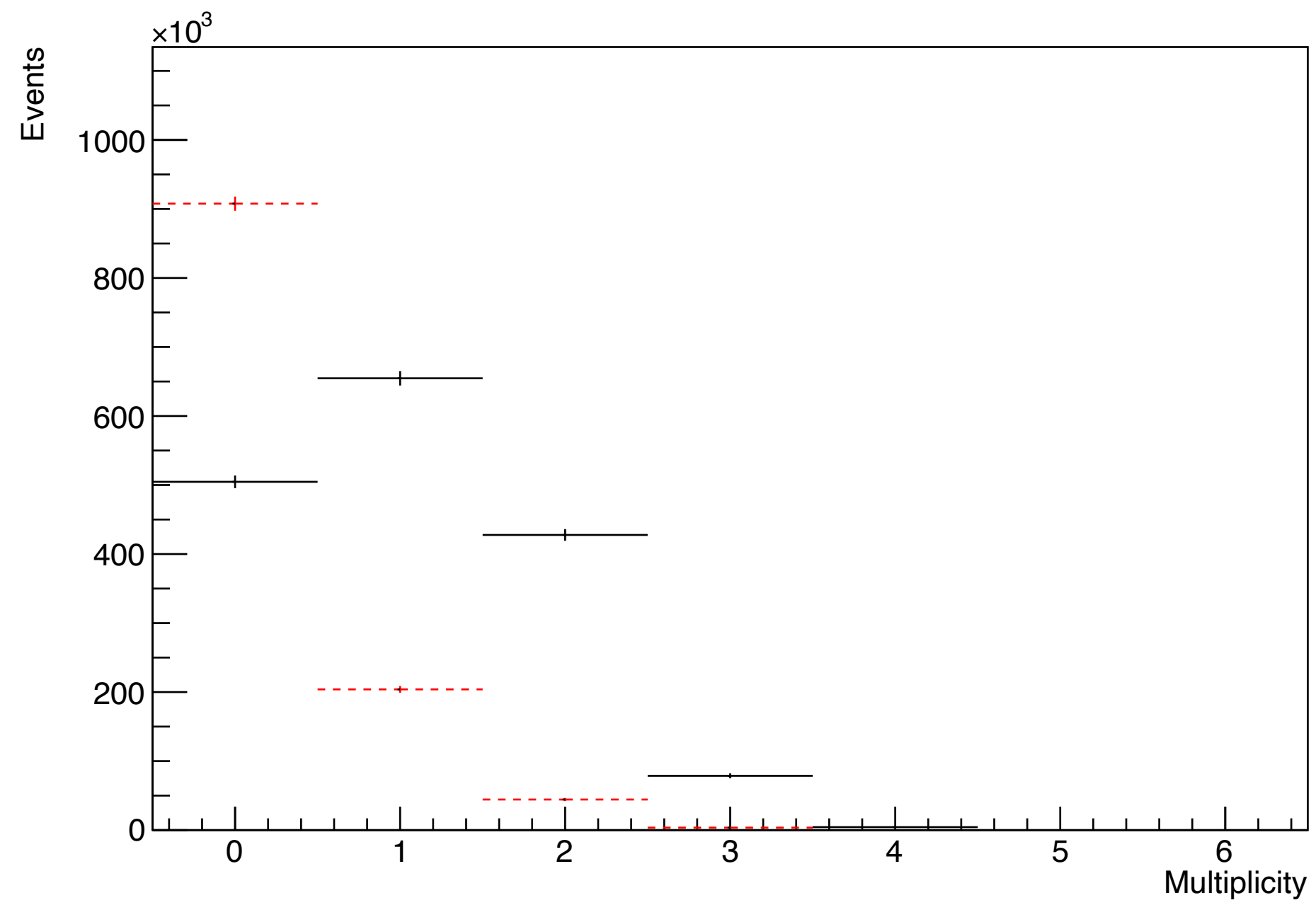
INT+QUAD (black)  
SM (red)



# 3 TeV

Truth data with Reco BRM characterization:  
Eta<2.5 and p>100 GeV (left) or p>sqrt(S)/30 (right)

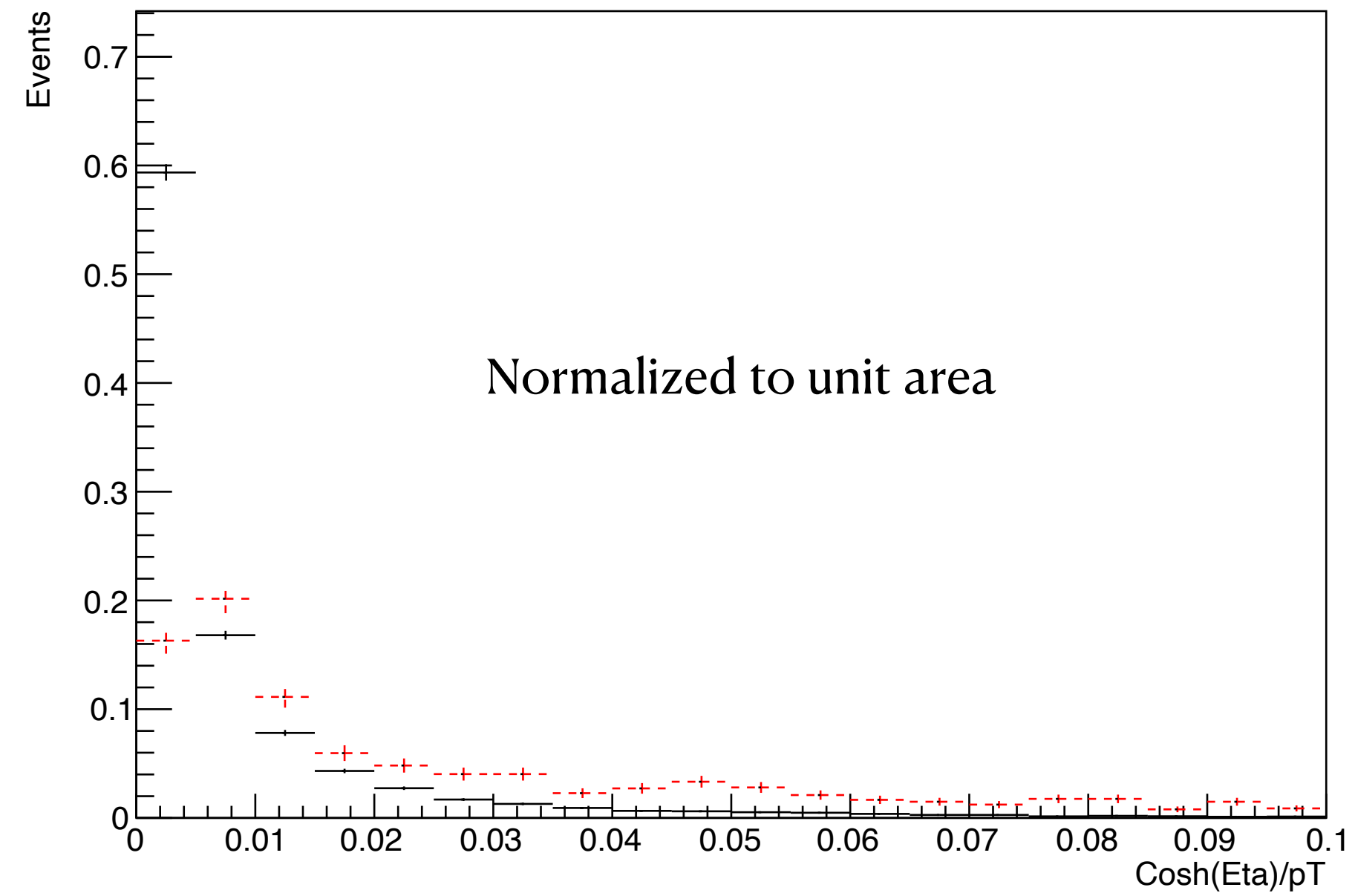
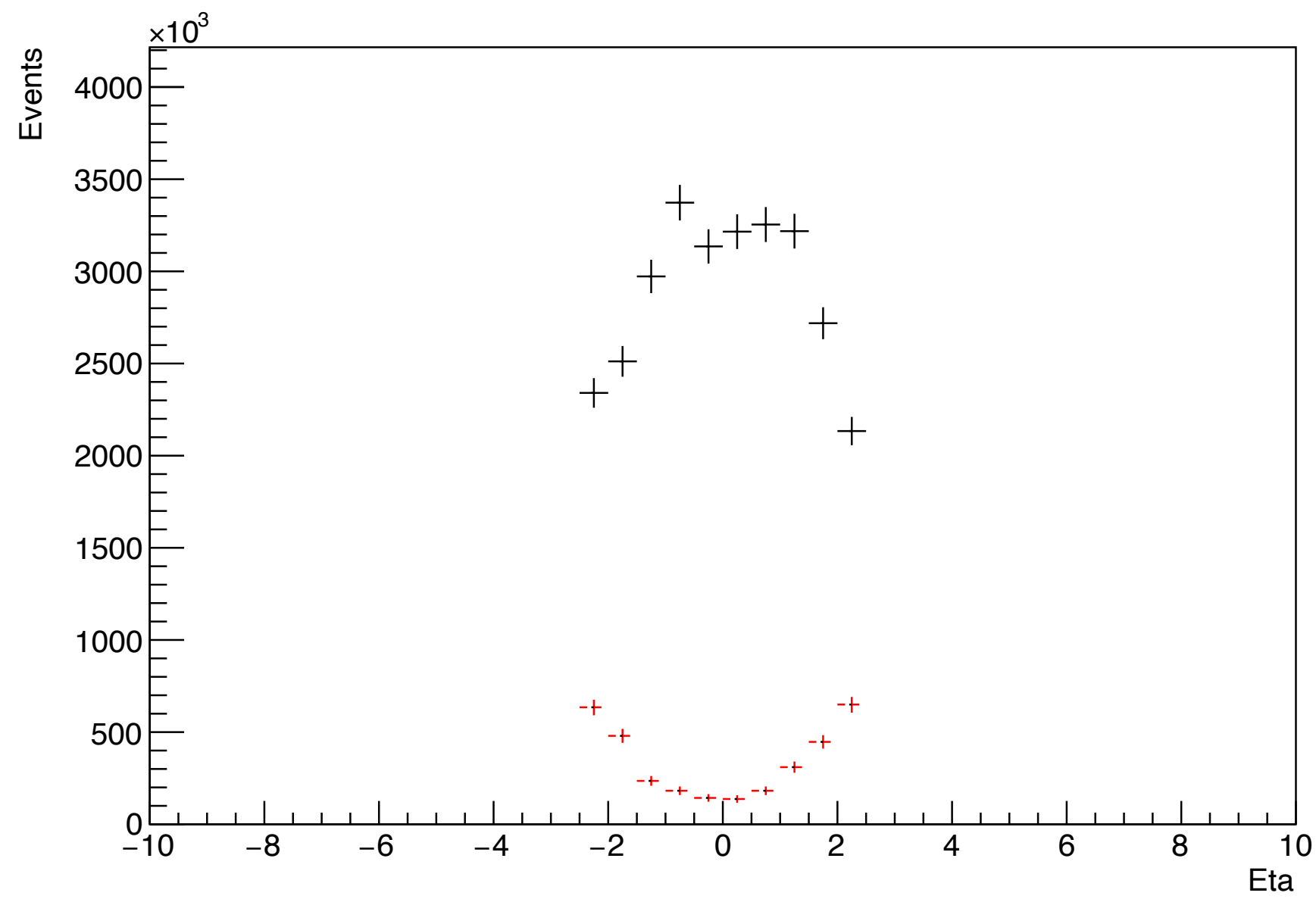
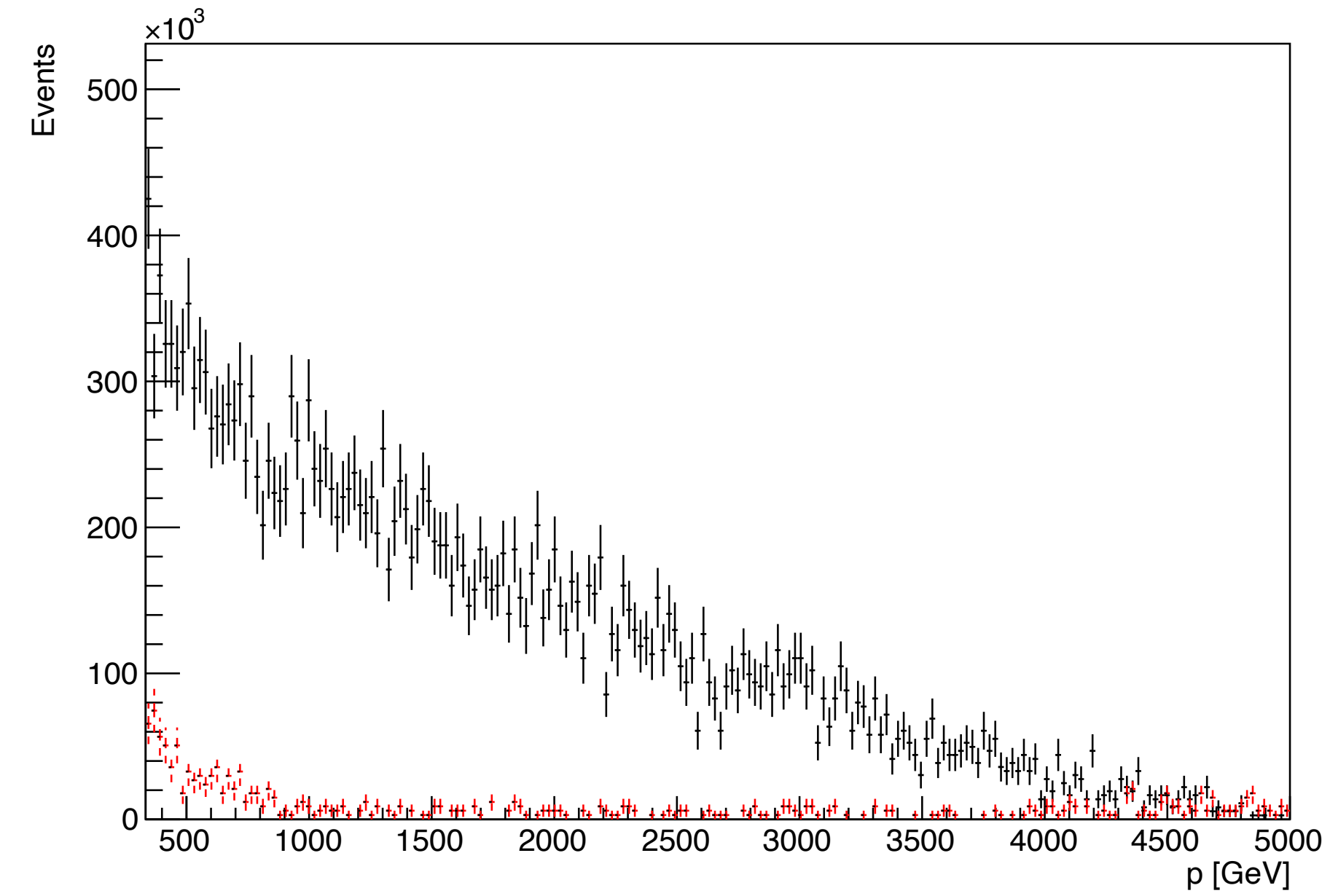
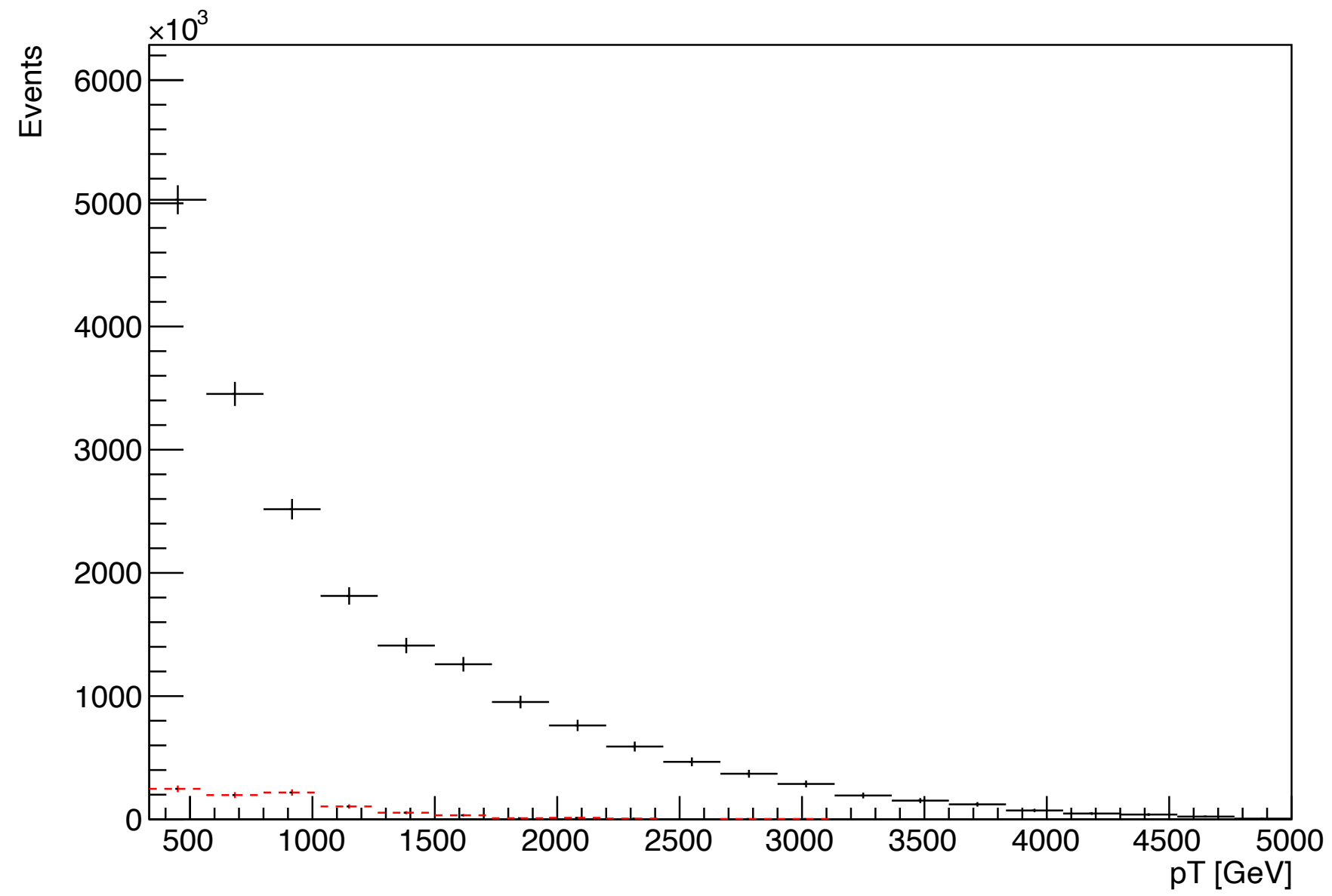
INT+QUAD (black)  
SM (red)



# 10 TeV

Truth data with Reco BRM characterization:  
Eta < 2.5 and p > 100 GeV

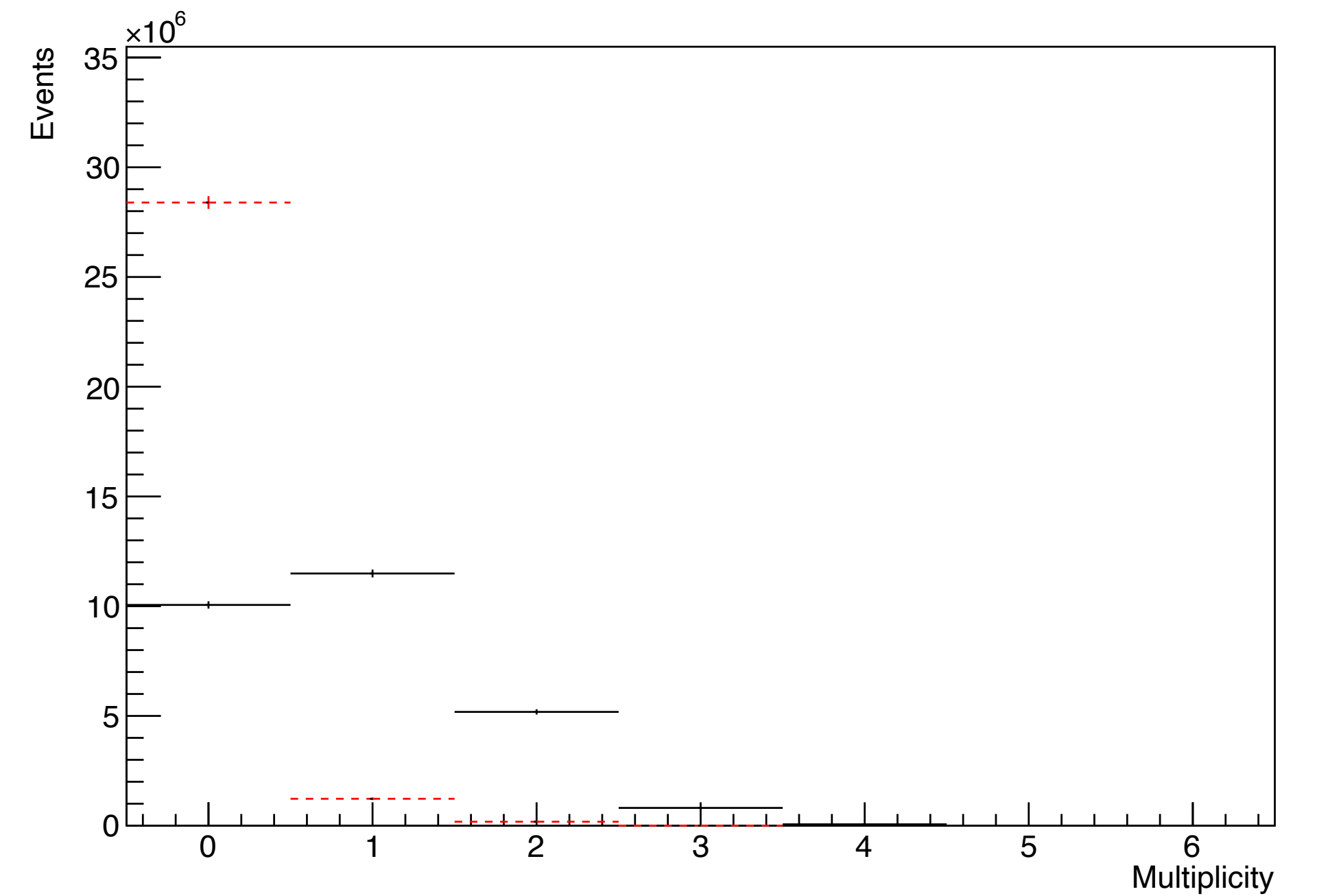
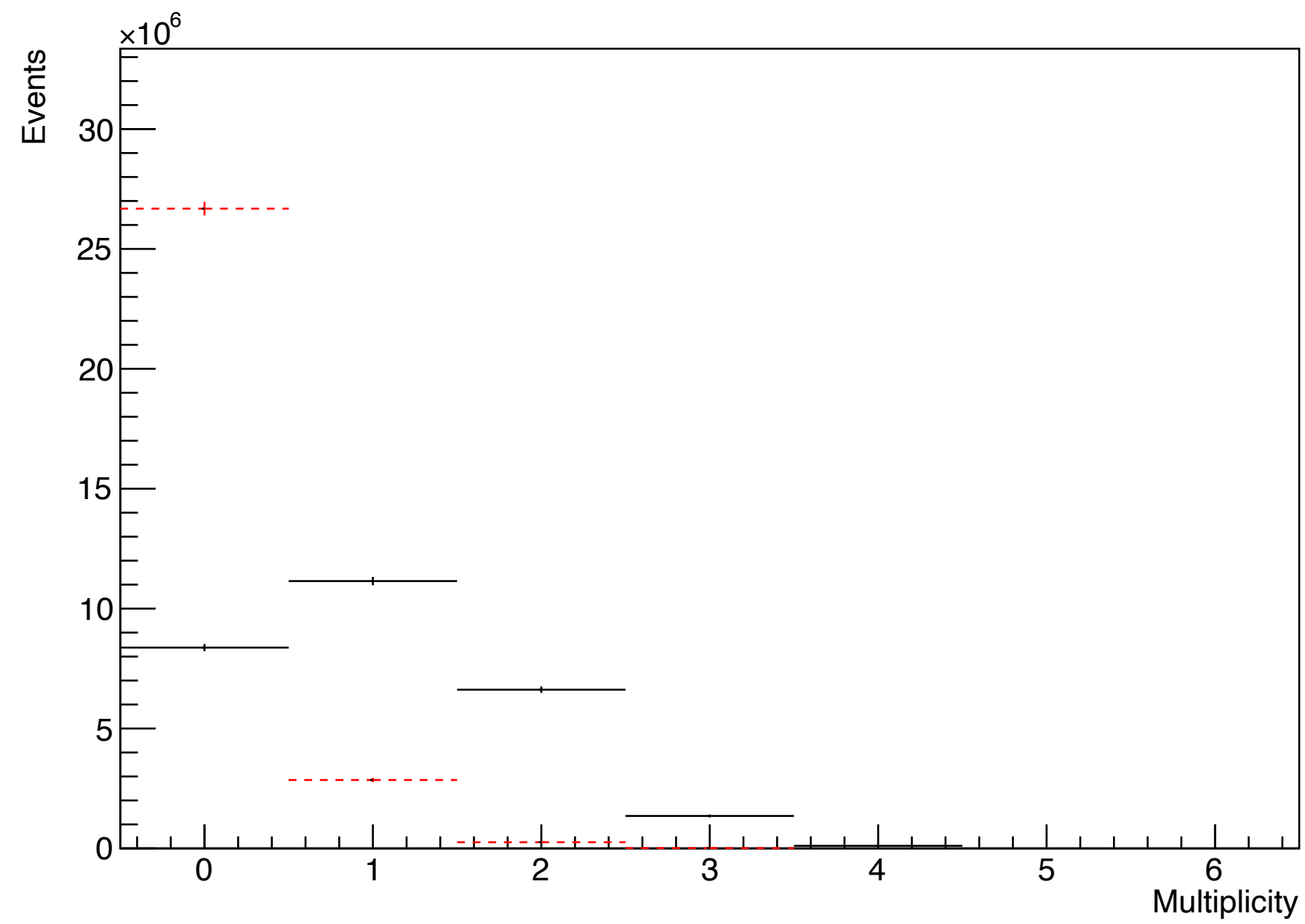
INT+QUAD (black)  
SM (red)



# 10 TeV

Truth data with Reco BRM characterization:  
Eta<2.5 and p>100 GeV (left) or p>sqrt(S)/30 (right)

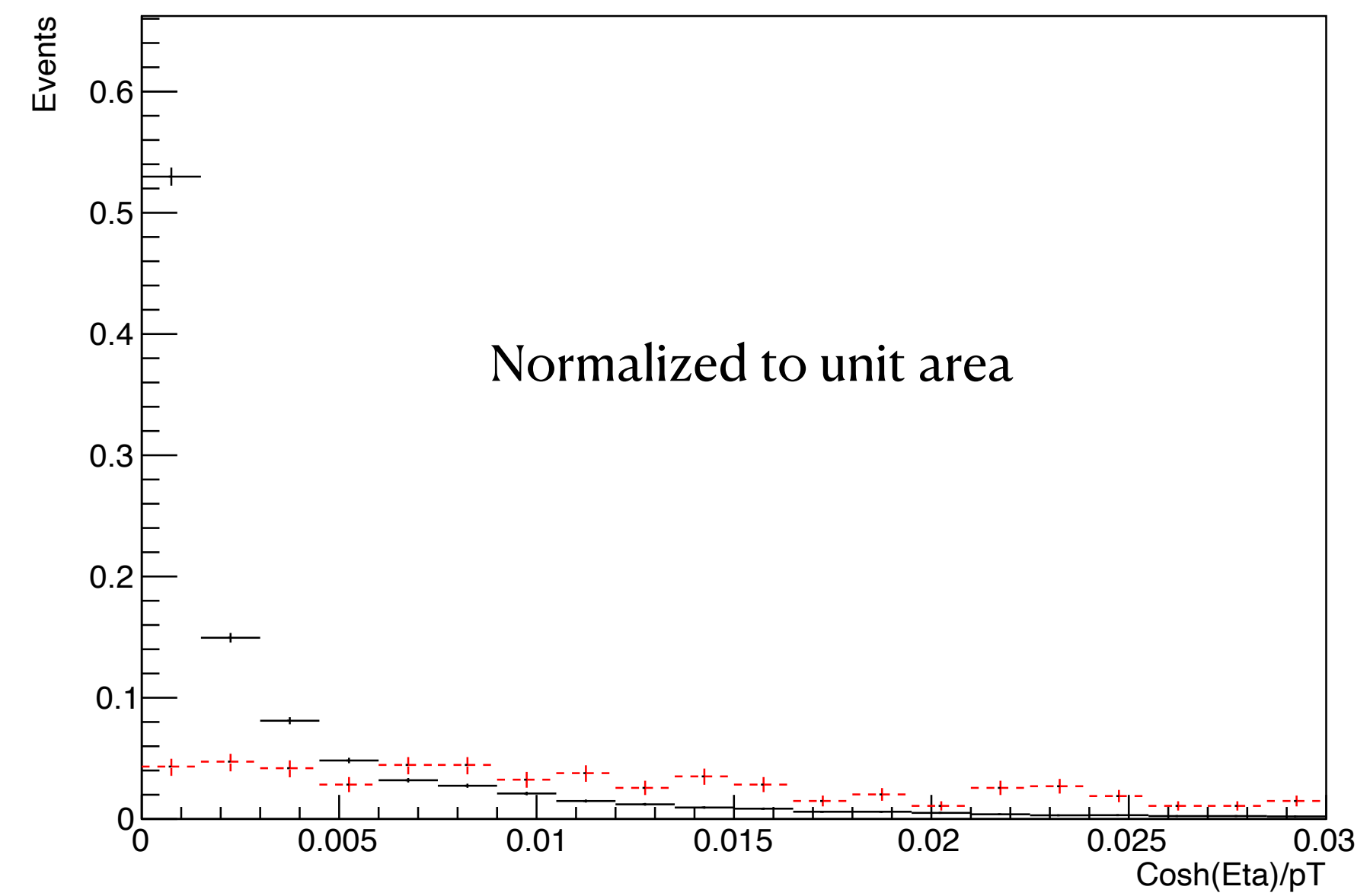
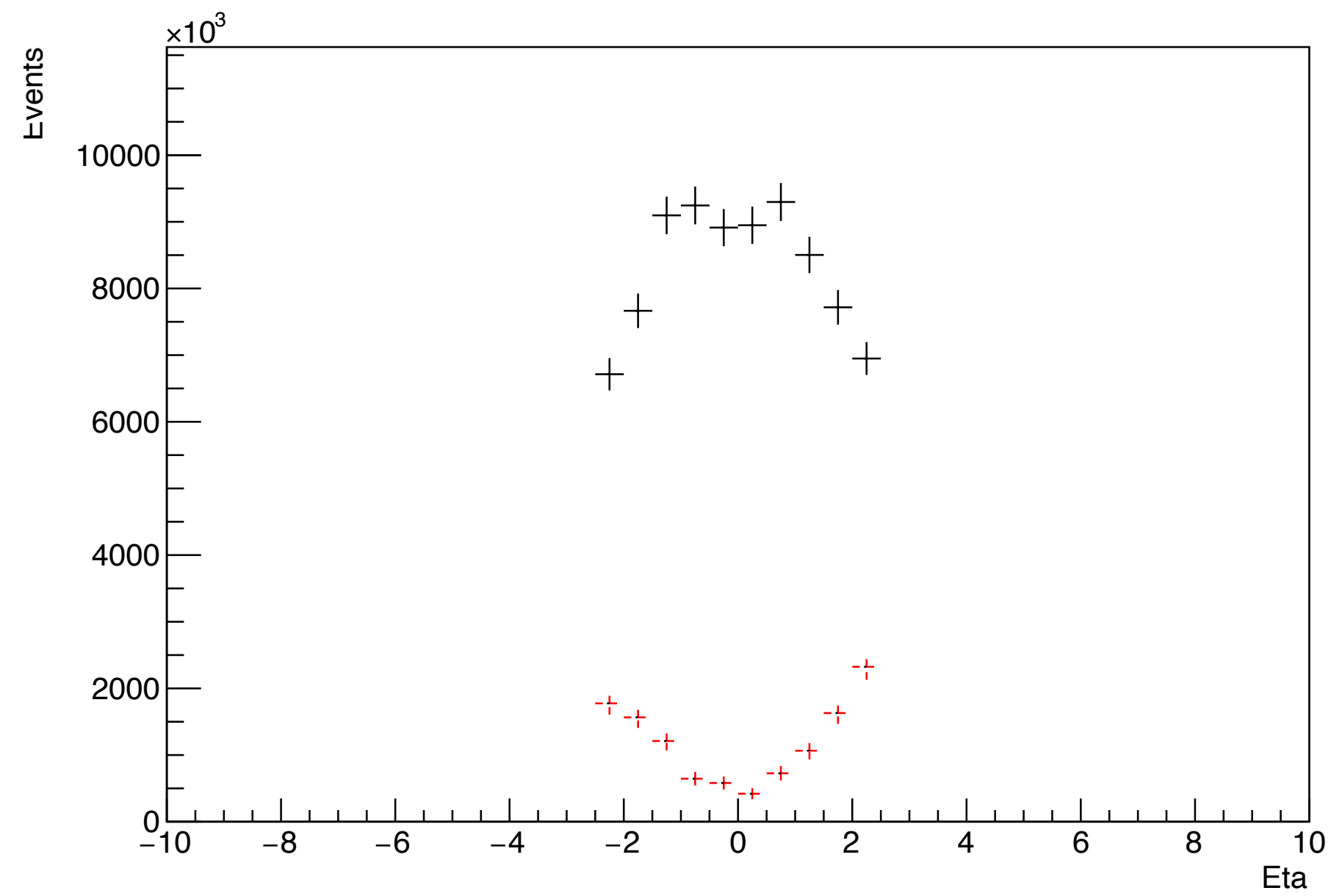
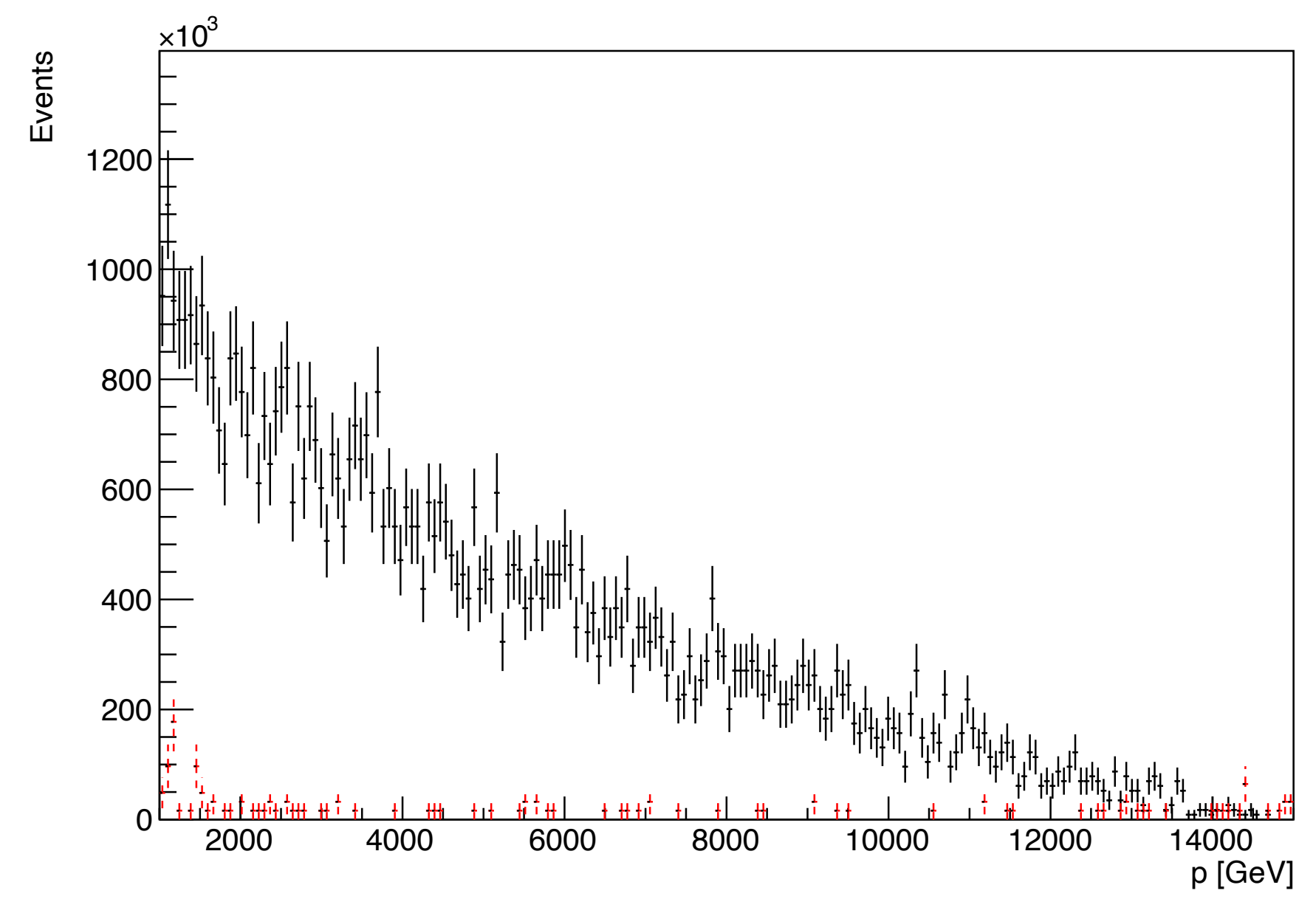
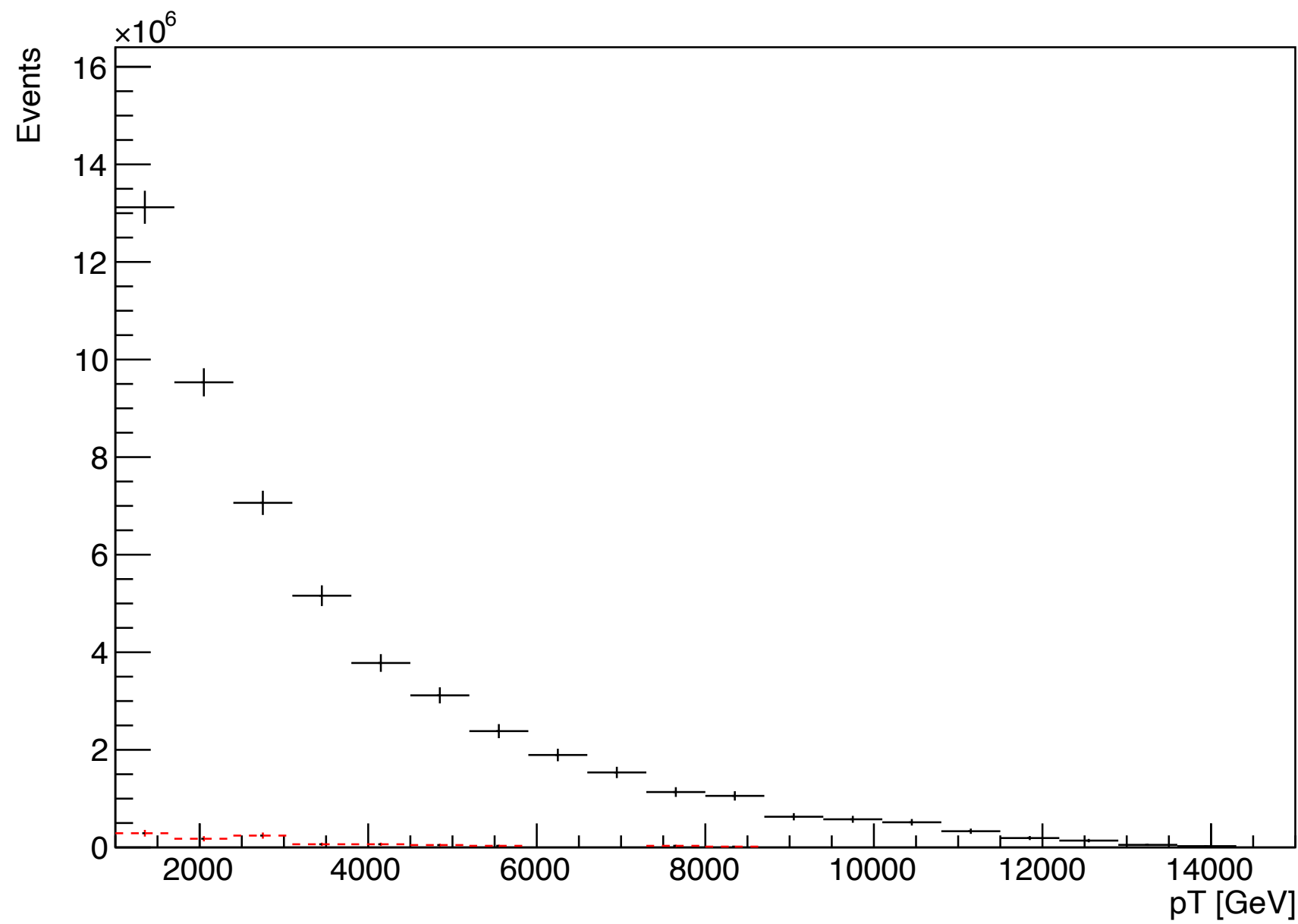
INT+QUAD (black)  
SM (red)



# 30 TeV

Truth data with Reco BRM characterization:  
Eta < 2.5 and p > 100 GeV

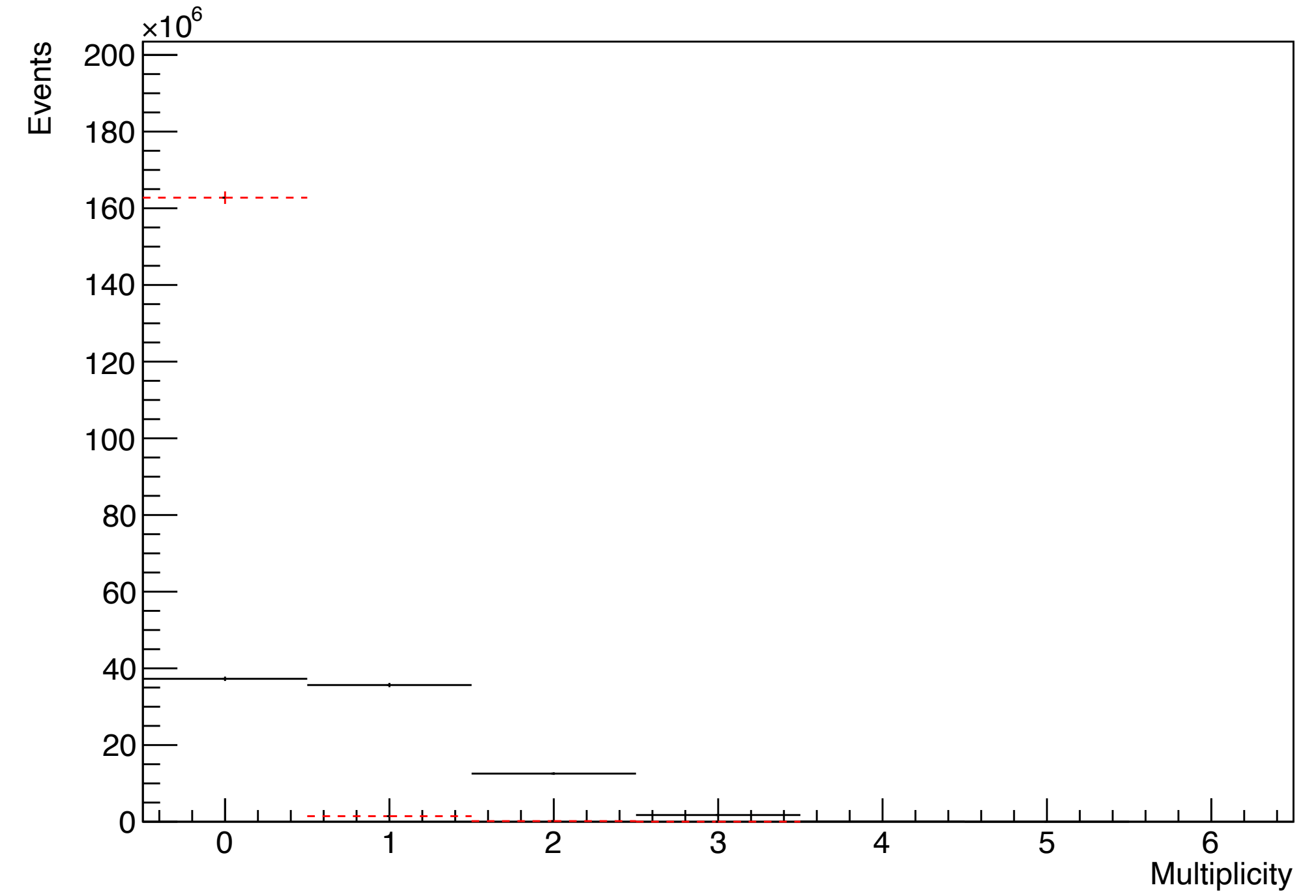
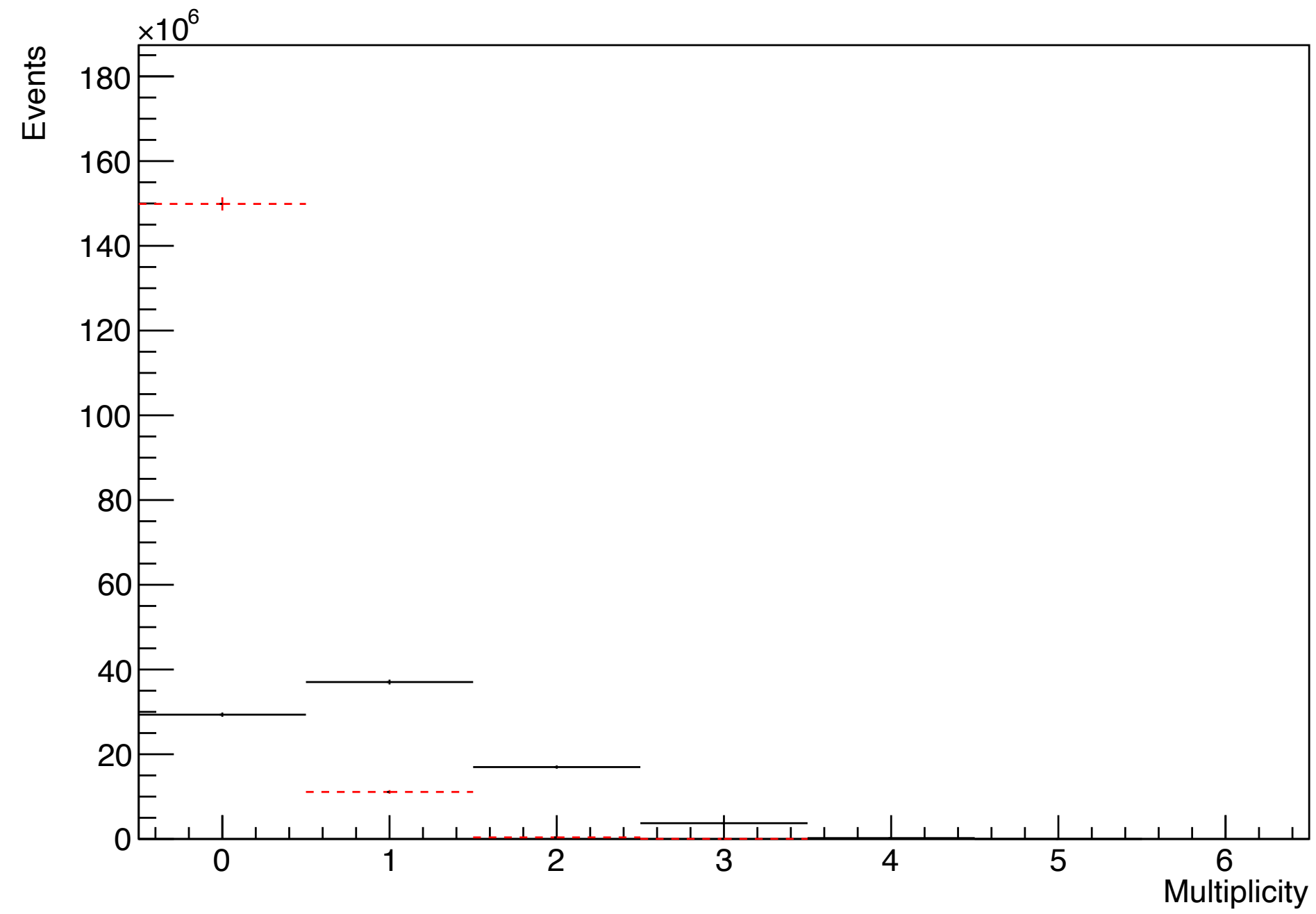
INT+QUAD (black)  
SM (red)



# 30 TeV

Truth data with Reco BRM characterization:  
Eta<2.5 and p>100 GeV (left) or p>sqrt(S)/30 (right)

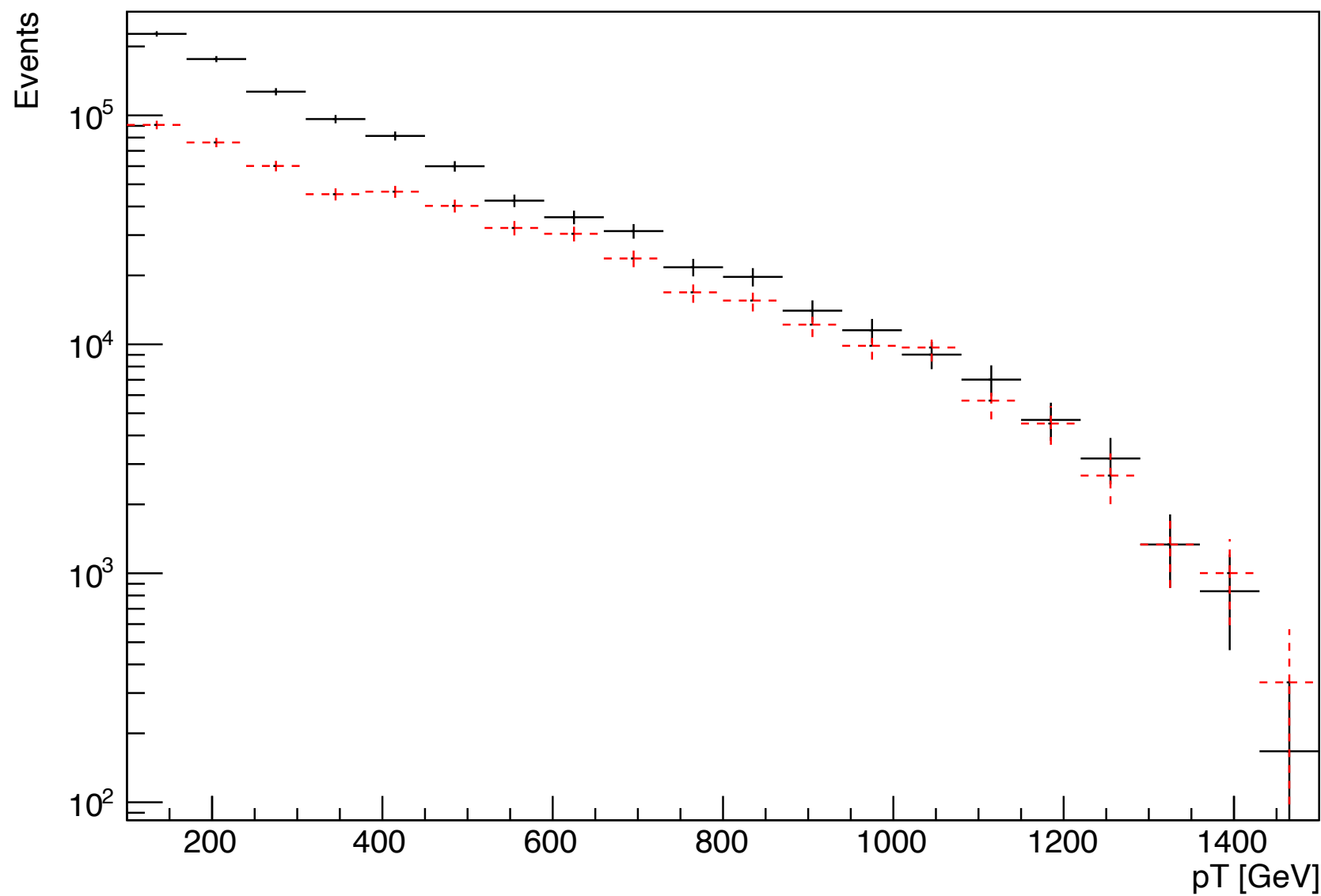
INT+QUAD (black)  
SM (red)



**“Real” beam remnants vs “Fake” beam remnants**

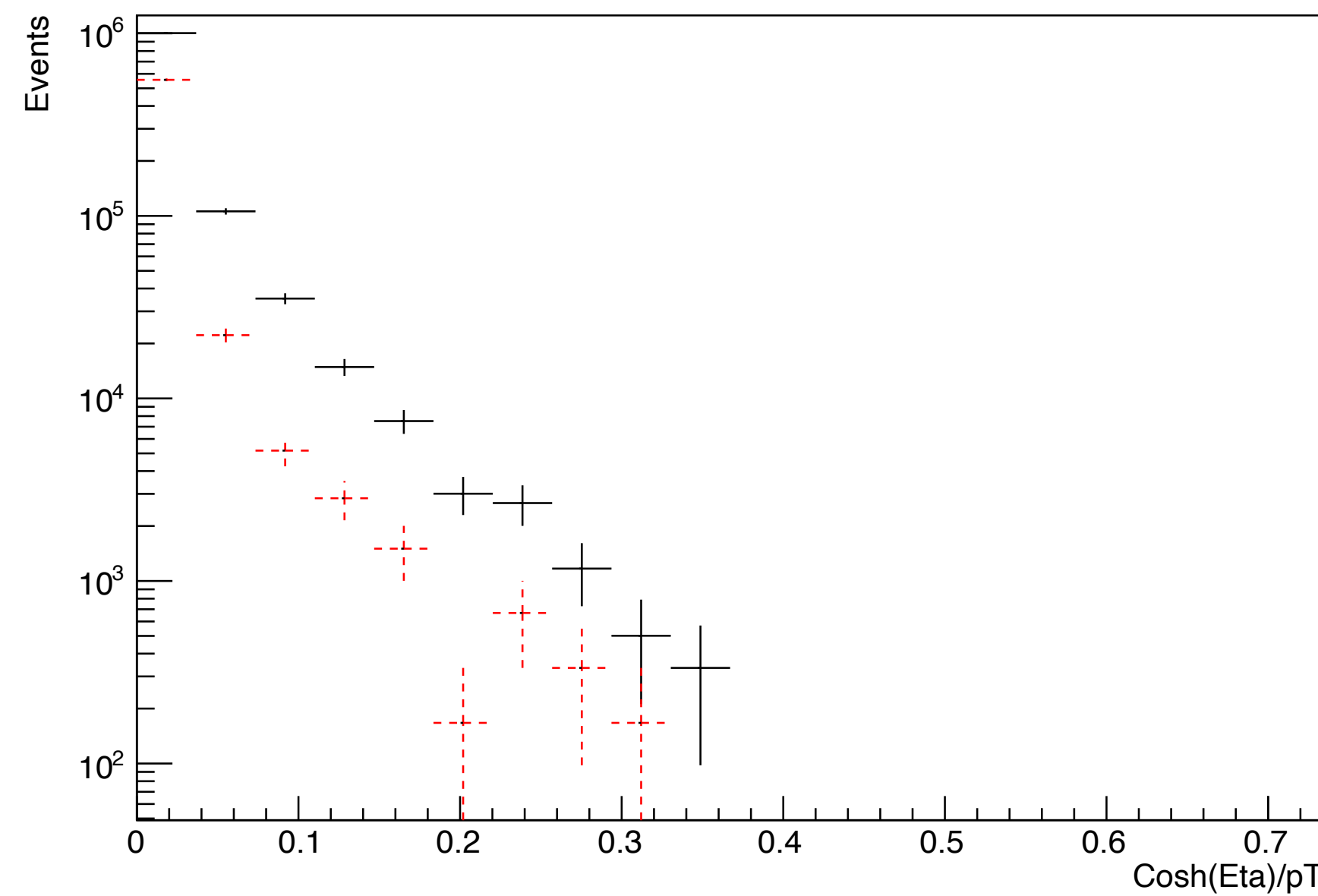
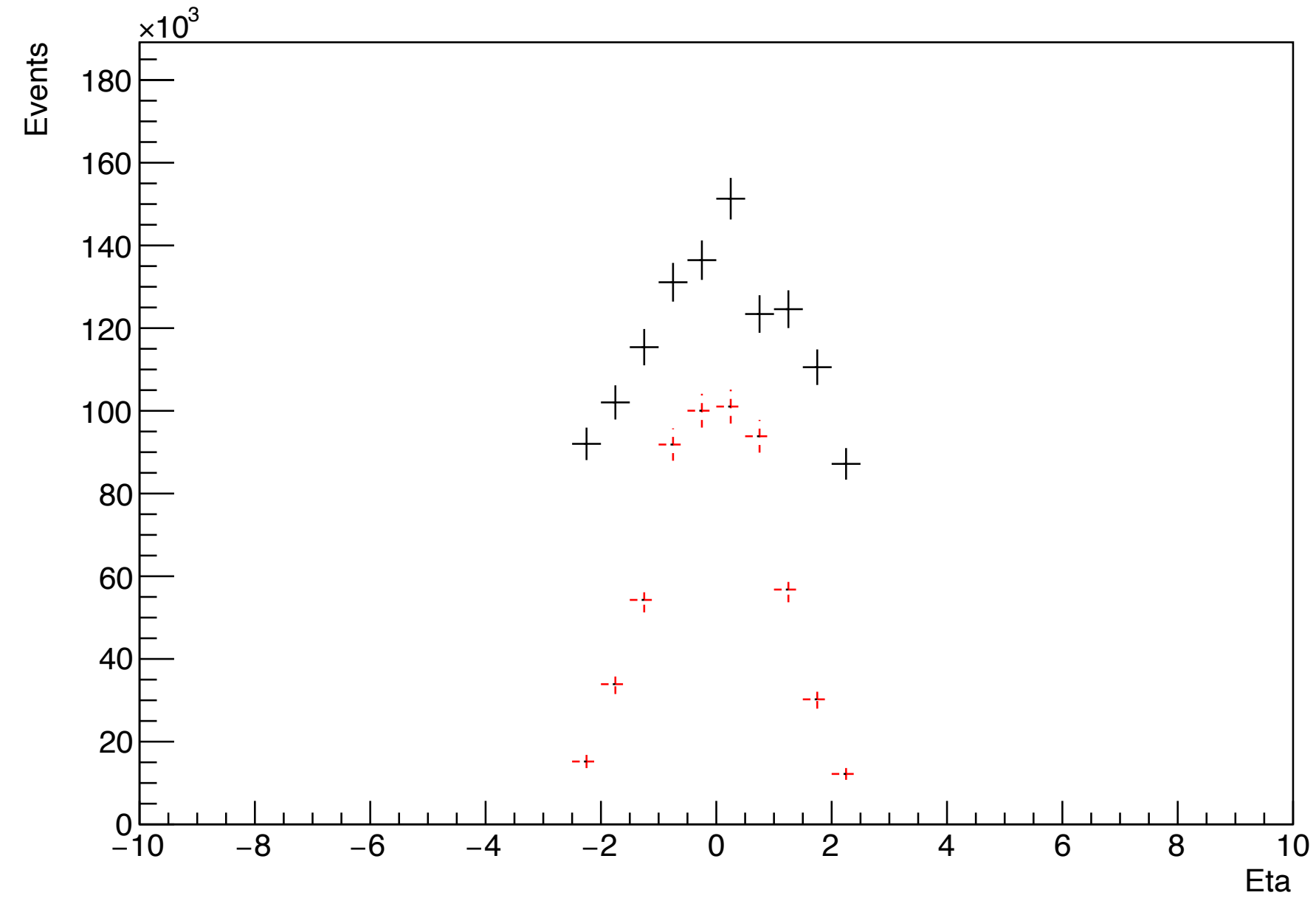
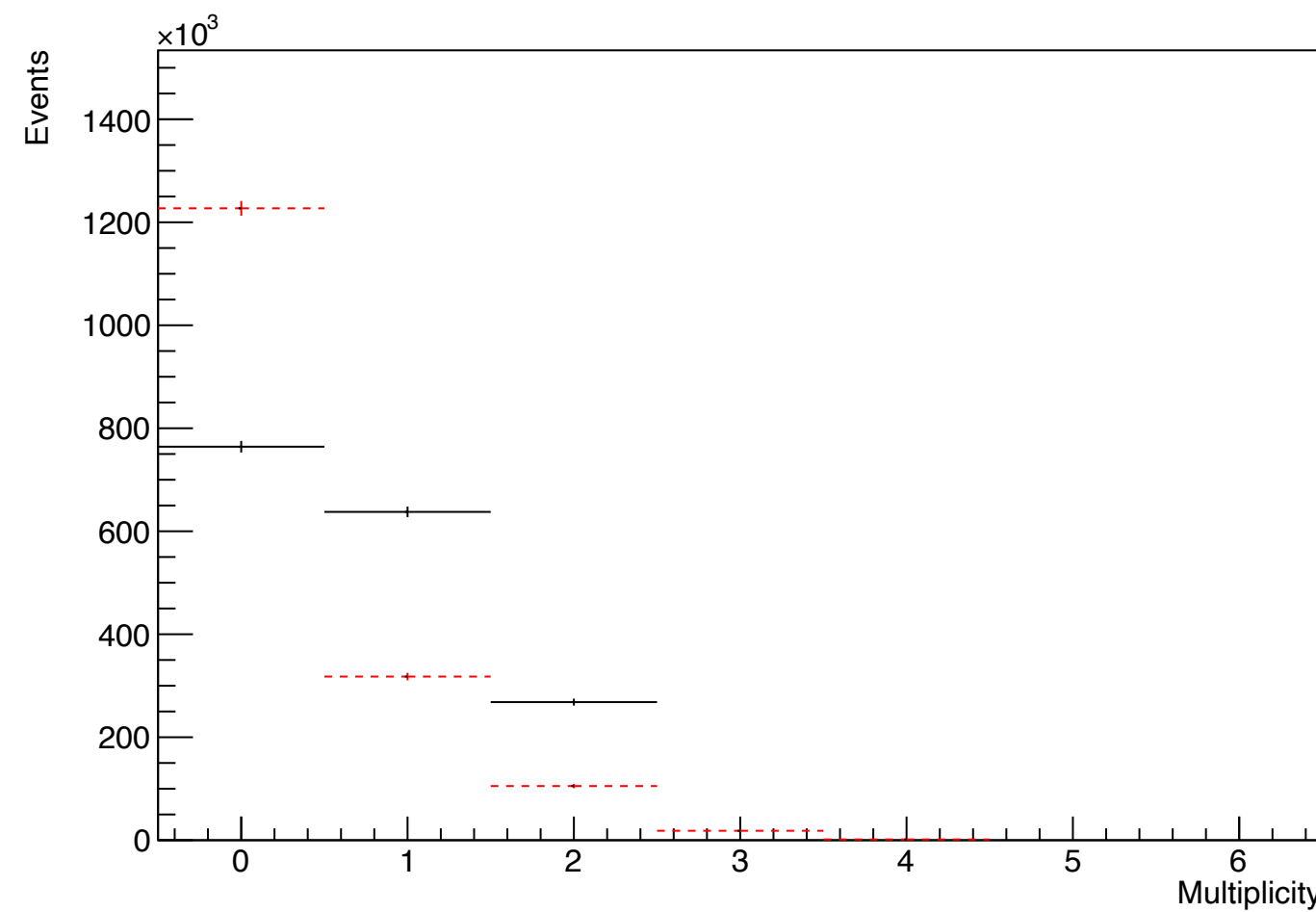
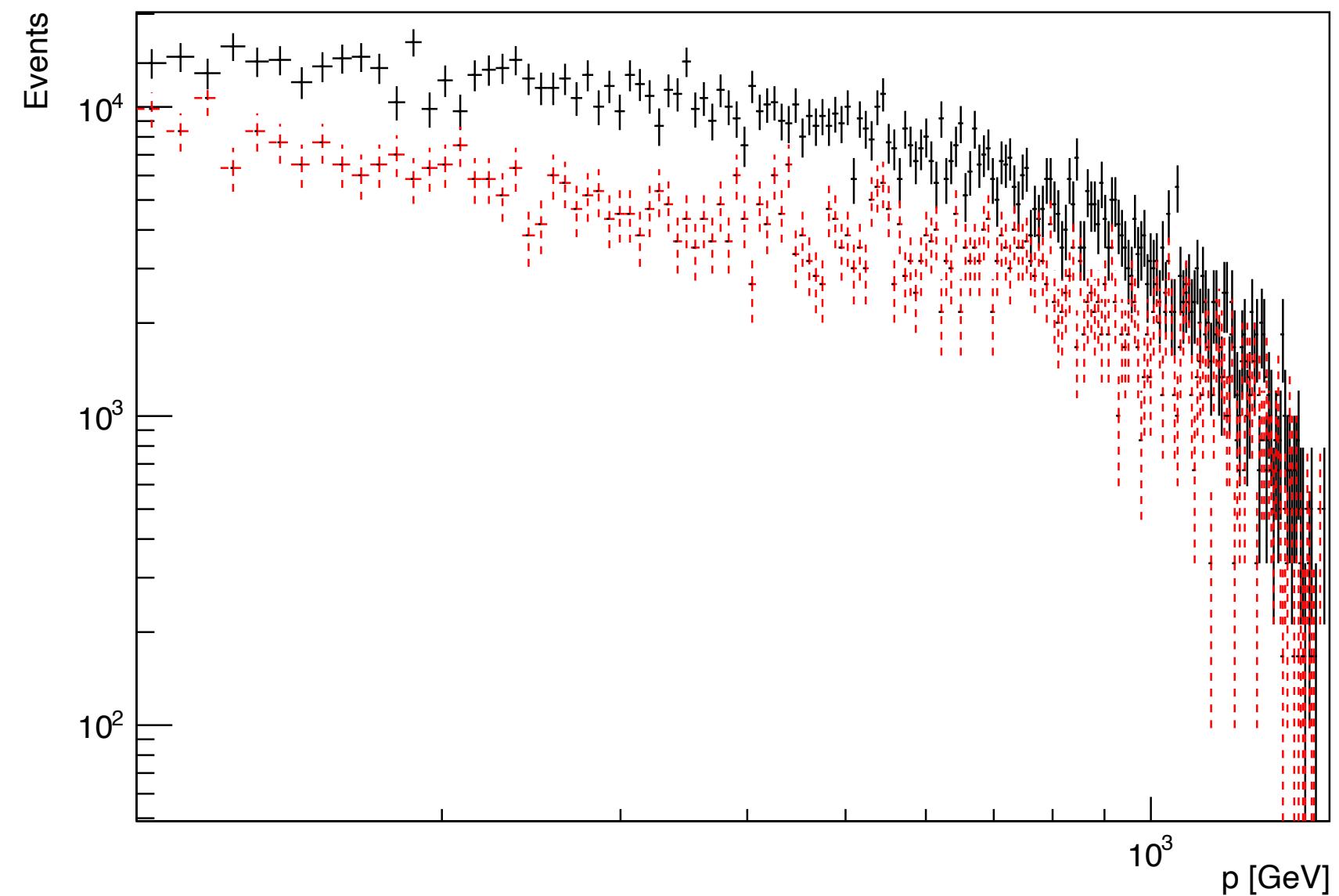


# 3 TeV



INT+QUAD  
Truth data with Reco BRM characterization:  
Eta < 2.5 and p > 100 GeV  
Then classified as either real BRM or fake BRM

Beam Remnants Muons (black)  
Beam Remnant fakes (red)

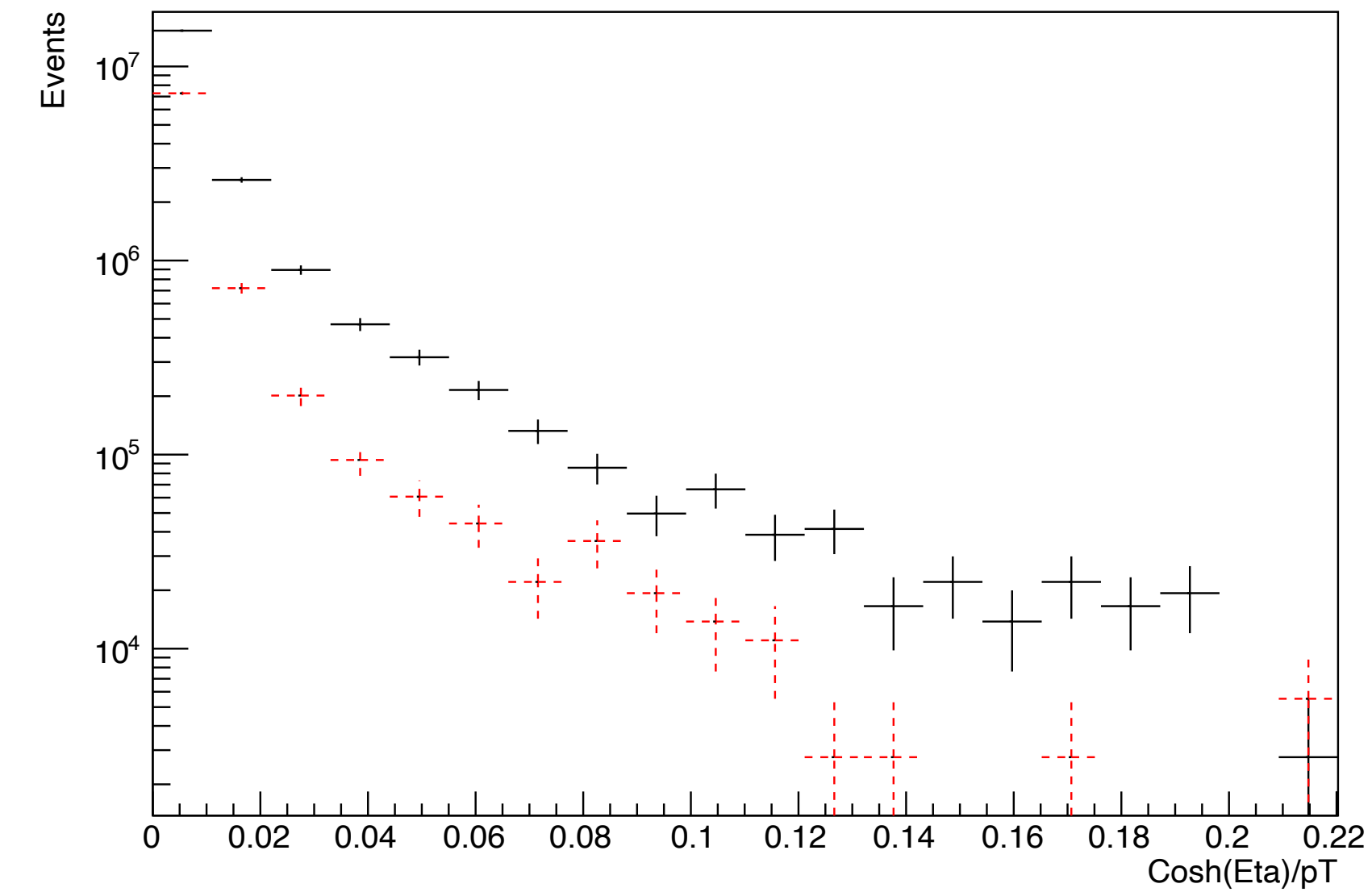
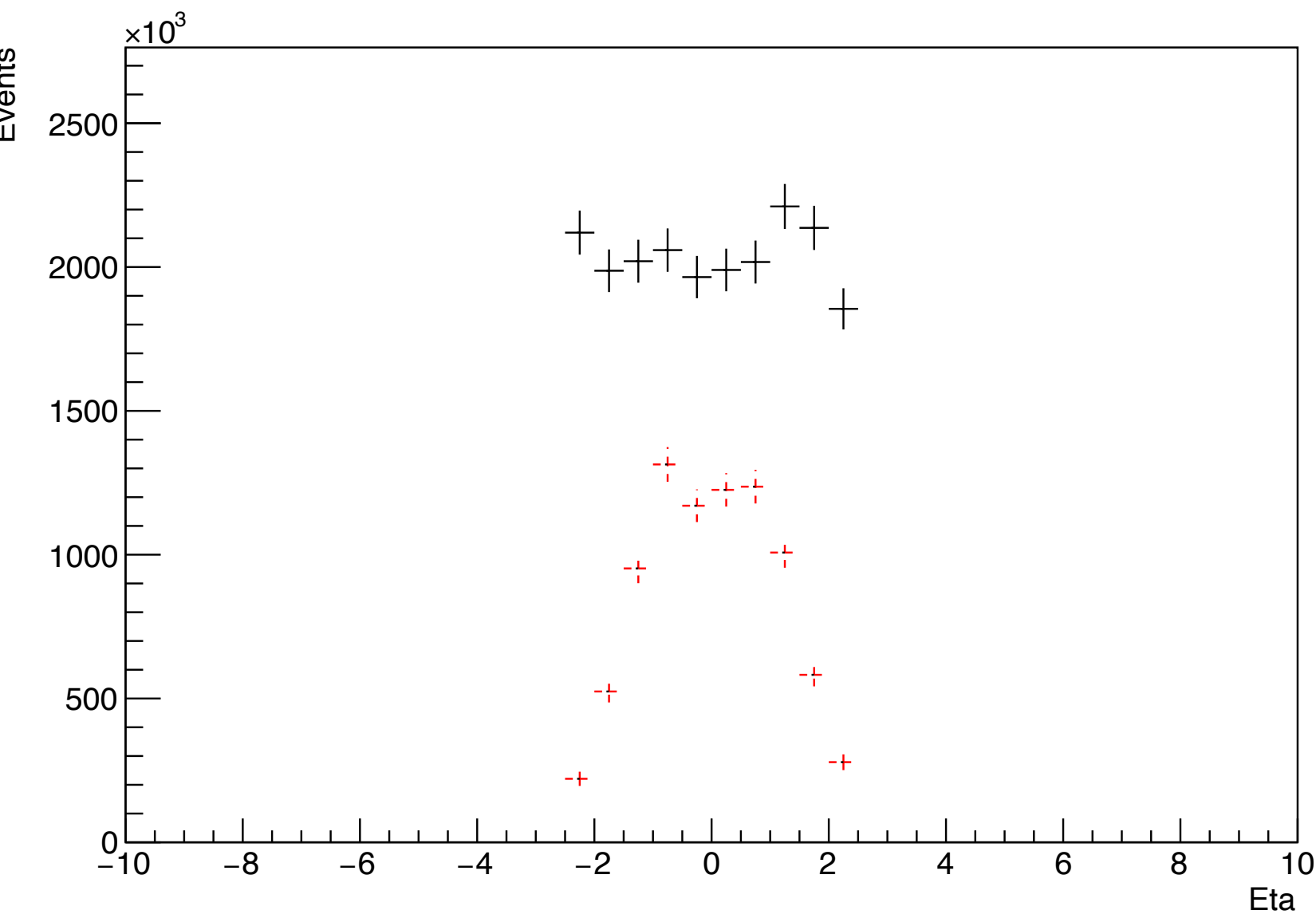
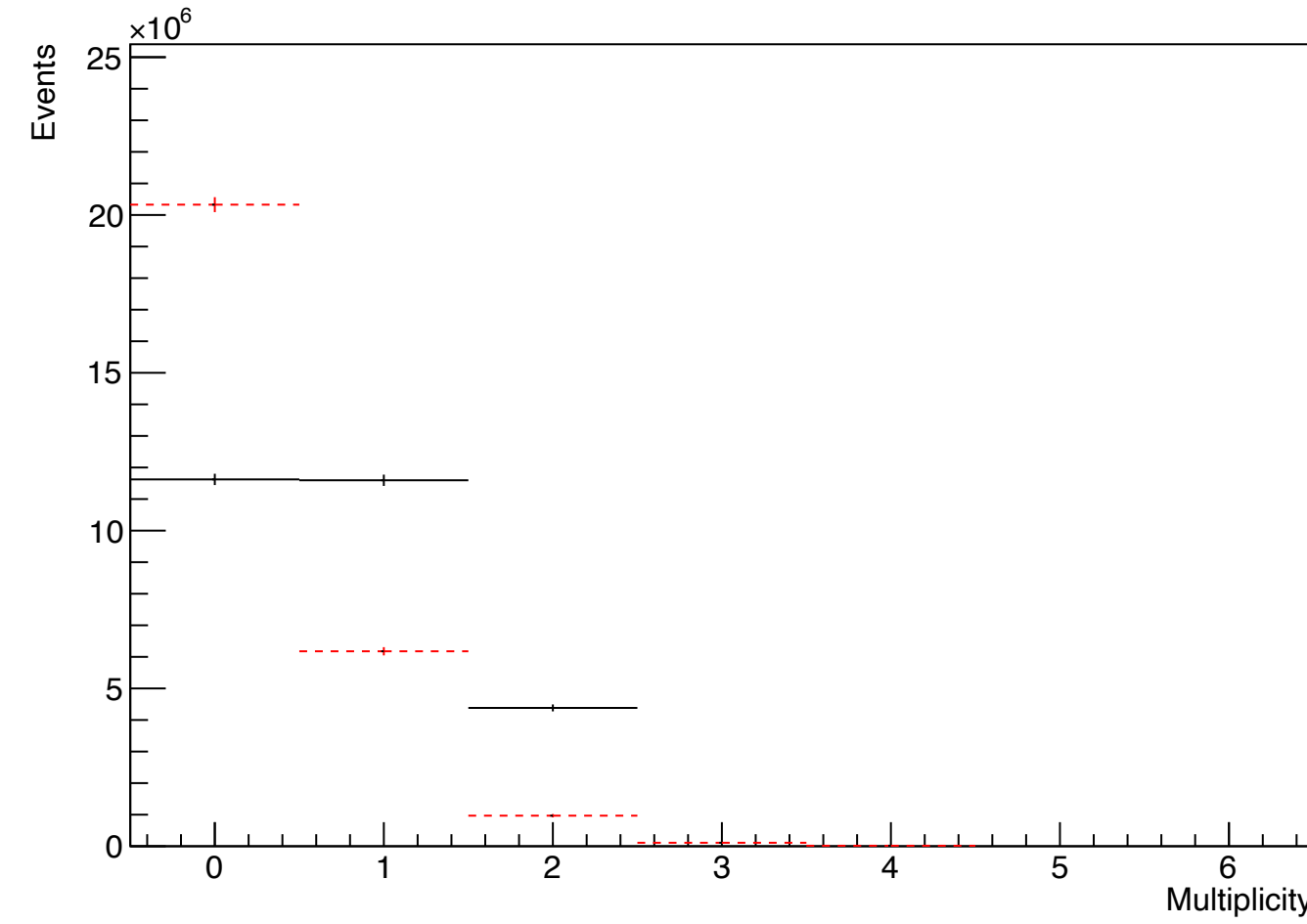
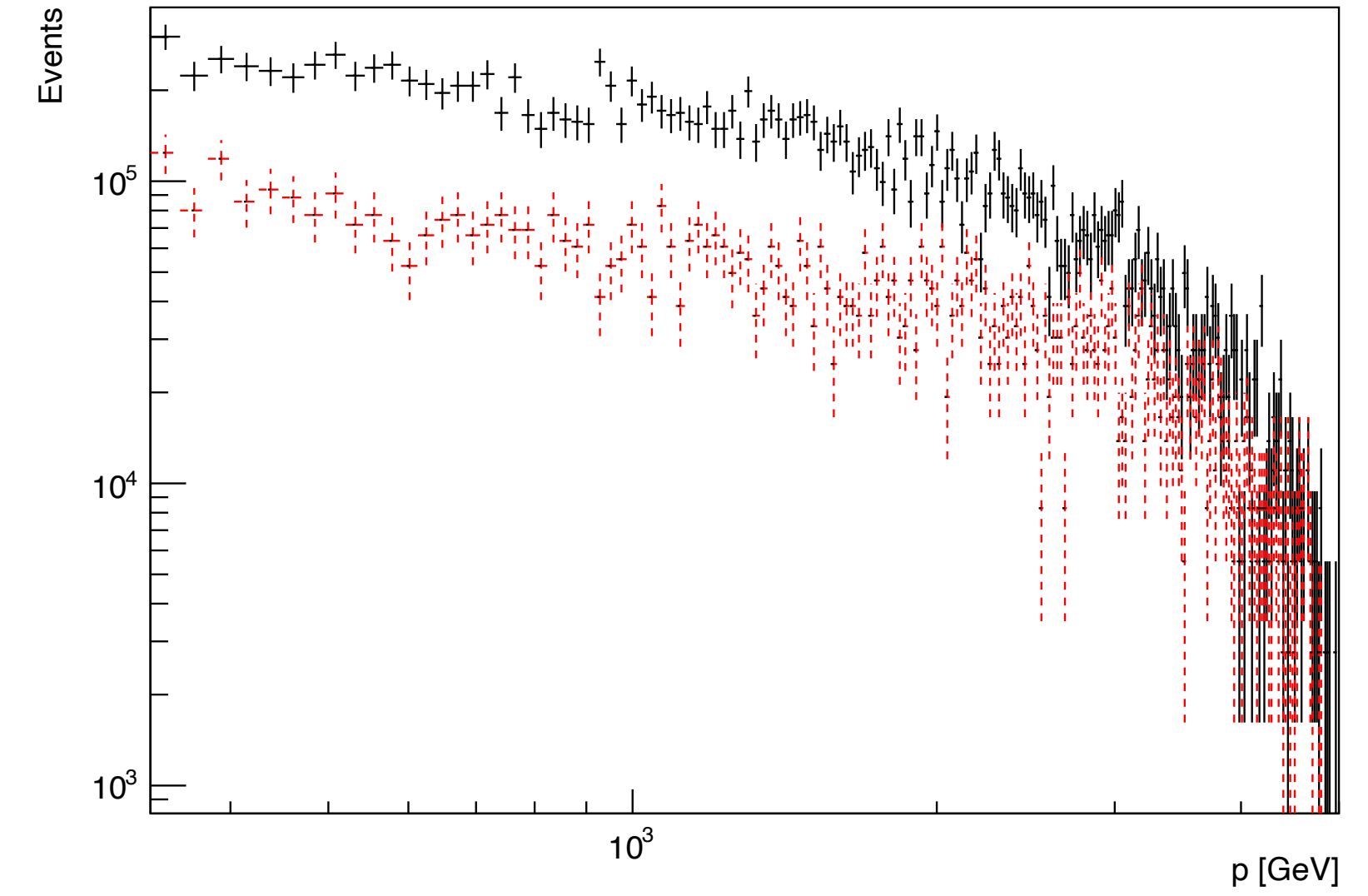
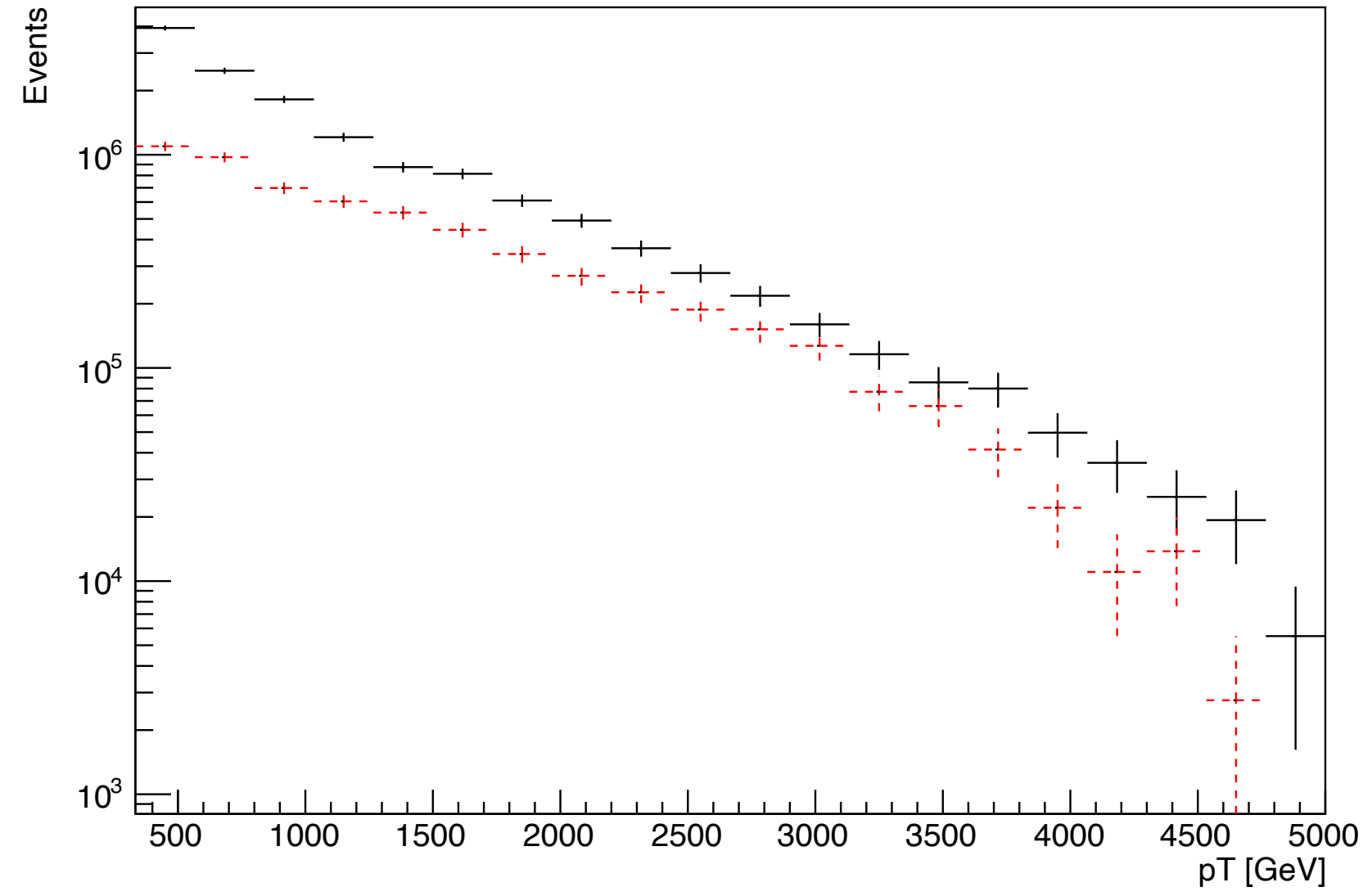


# 10 TeV

INT+QUAD

Truth data with Reco BRM characterization:  
Eta < 2.5 and p > 100 GeV  
Then classified as either real BRM or fake BRM

Beam Remnants Muons (black)  
Beam Remnant fakes (red)



# 30 TeV

INT+QUAD

Truth data with Reco BRM characterization:  
Eta < 2.5 and p > 100 GeV  
Then classified as either real BRM or fake BRM

Beam Remnants Muons (black)  
Beam Remnant fakes (red)

