

中國科學院高能物理研究所  
*Institute of High Energy Physics*  
*Chinese Academy of Sciences*



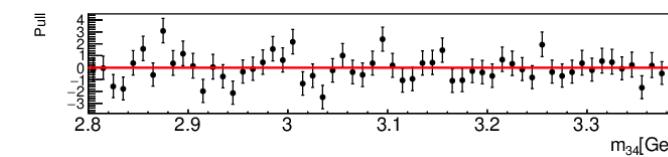
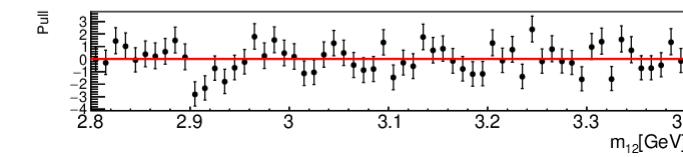
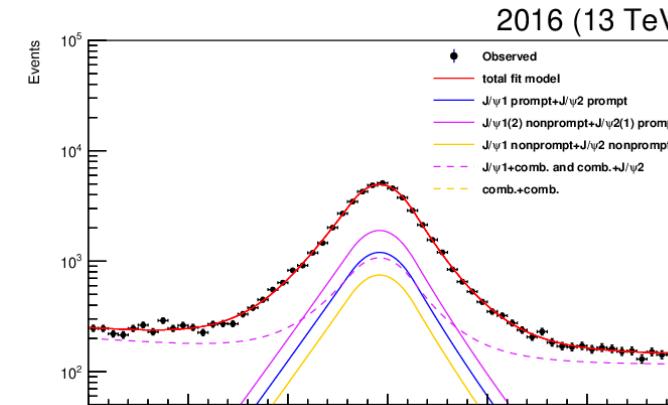
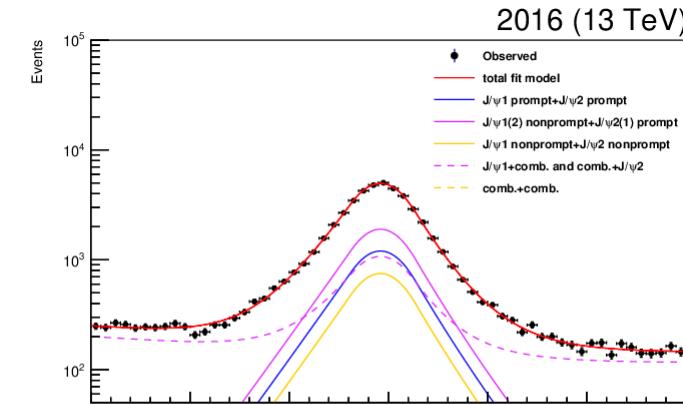
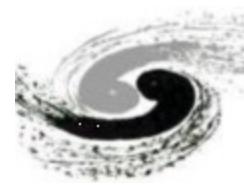
# Double Jpsi

Taozhe YU

2023.3.9



2016

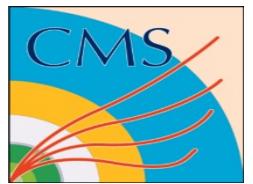


Double Jpsi fraction is  $0.647 \pm 0.007$

Double prompt fraction is  $0.340 \pm 0.002$

Prompt Jpsi pair fraction is  $0.220 \pm 0.003$

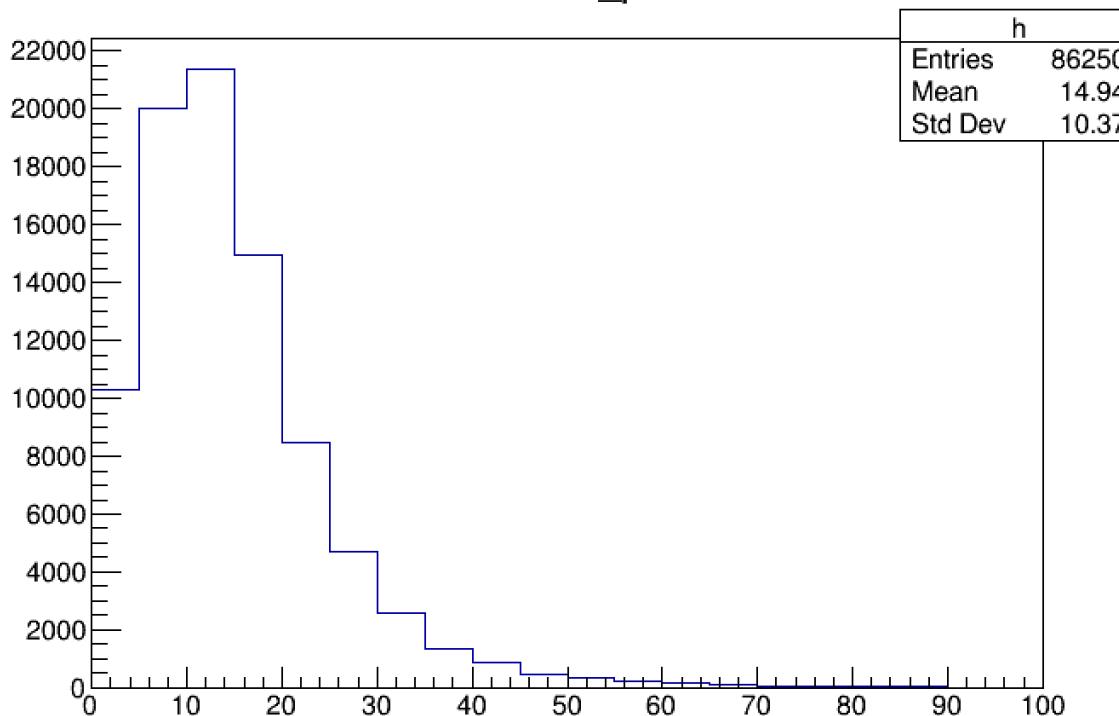
Prompt Jpsi pair events number is  $10957 \pm 127$



# Four muon pt

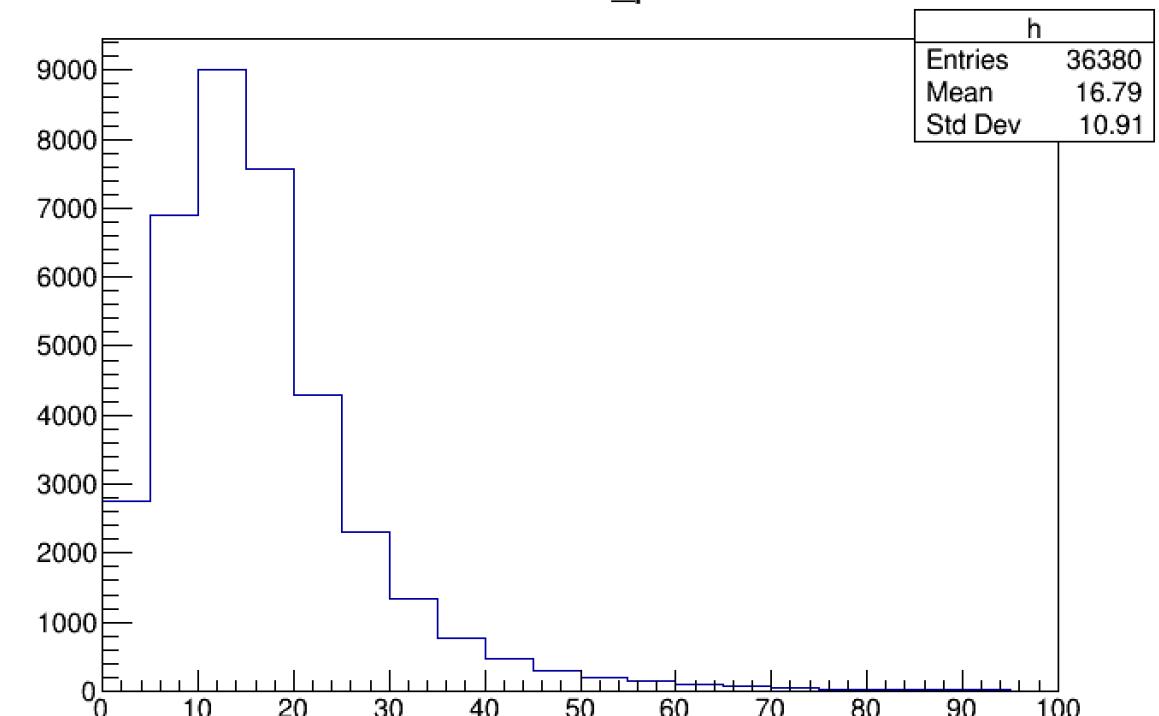


fourMu\_pt



2016

fourMu\_pt



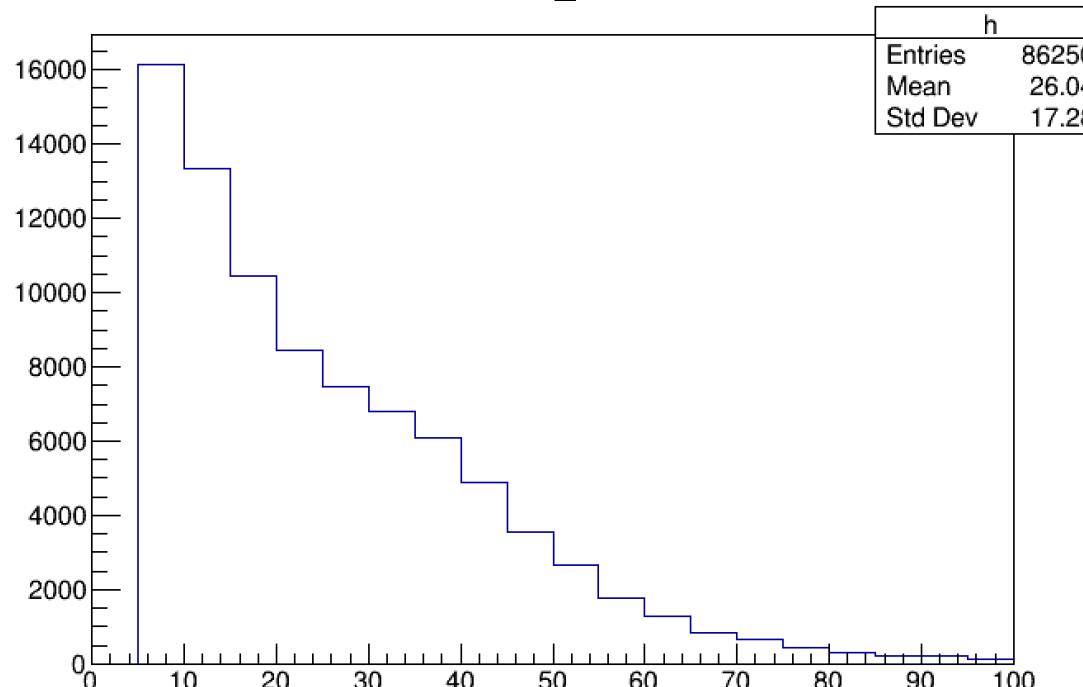
2018



# Four muon mass

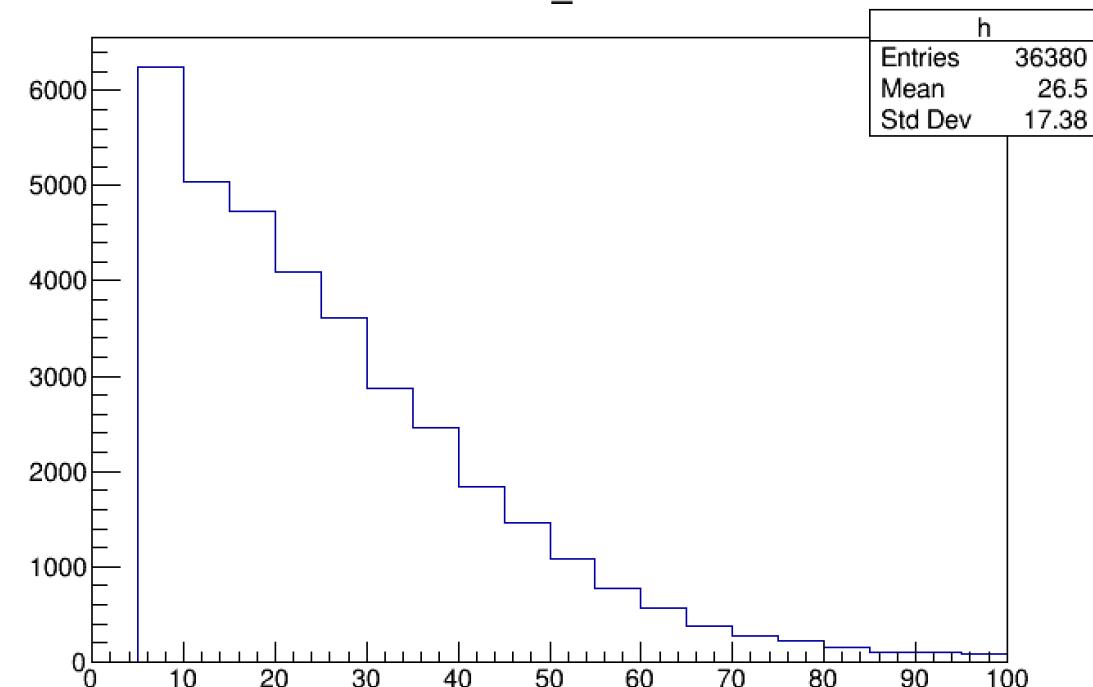


fourMu\_mass



2016

fourMu\_mass



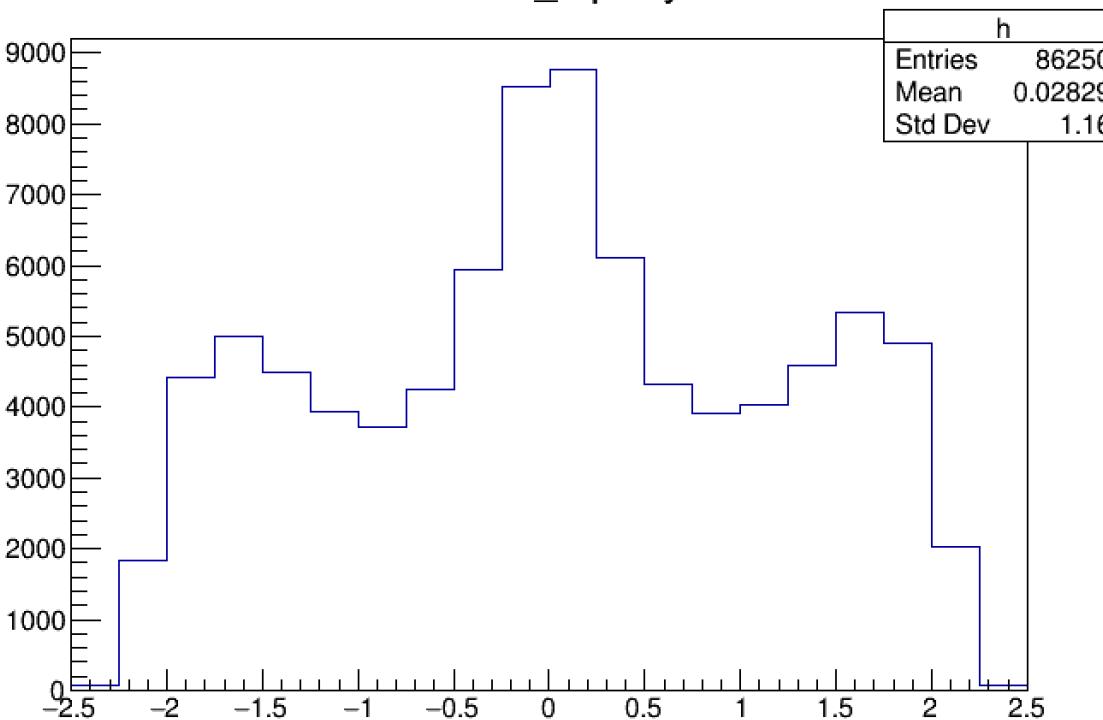
2018



# Four muon rapidity

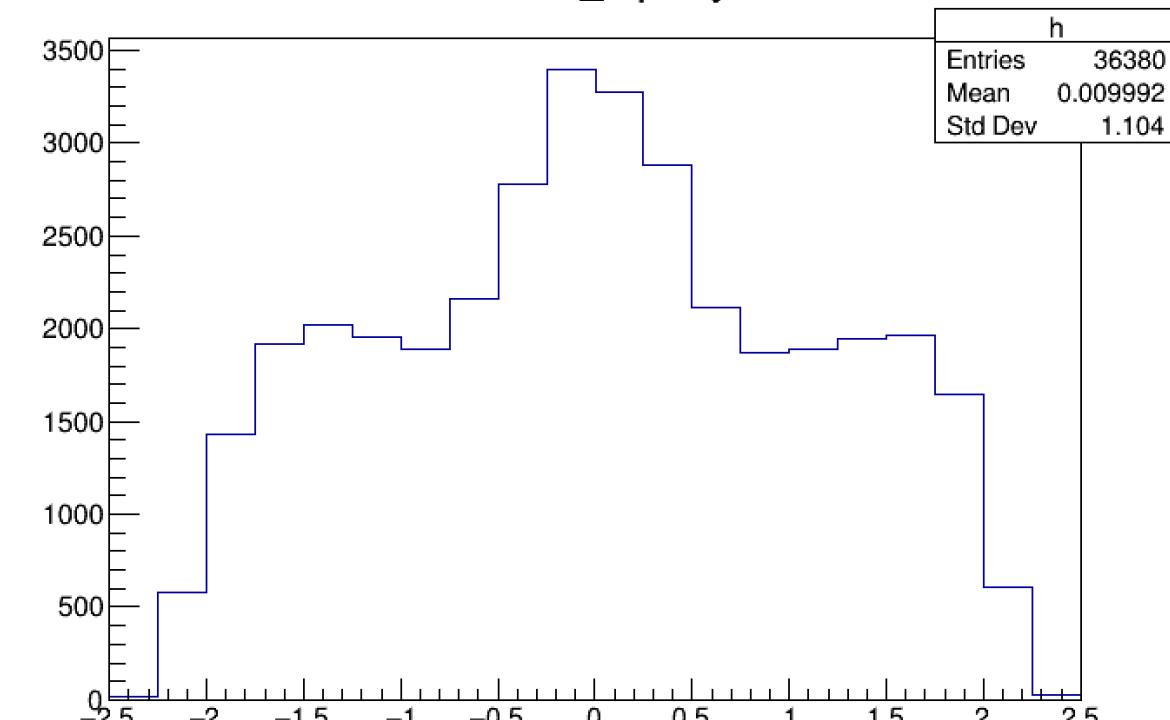


fourMu\_rapidity



2016

fourMu\_rapidity



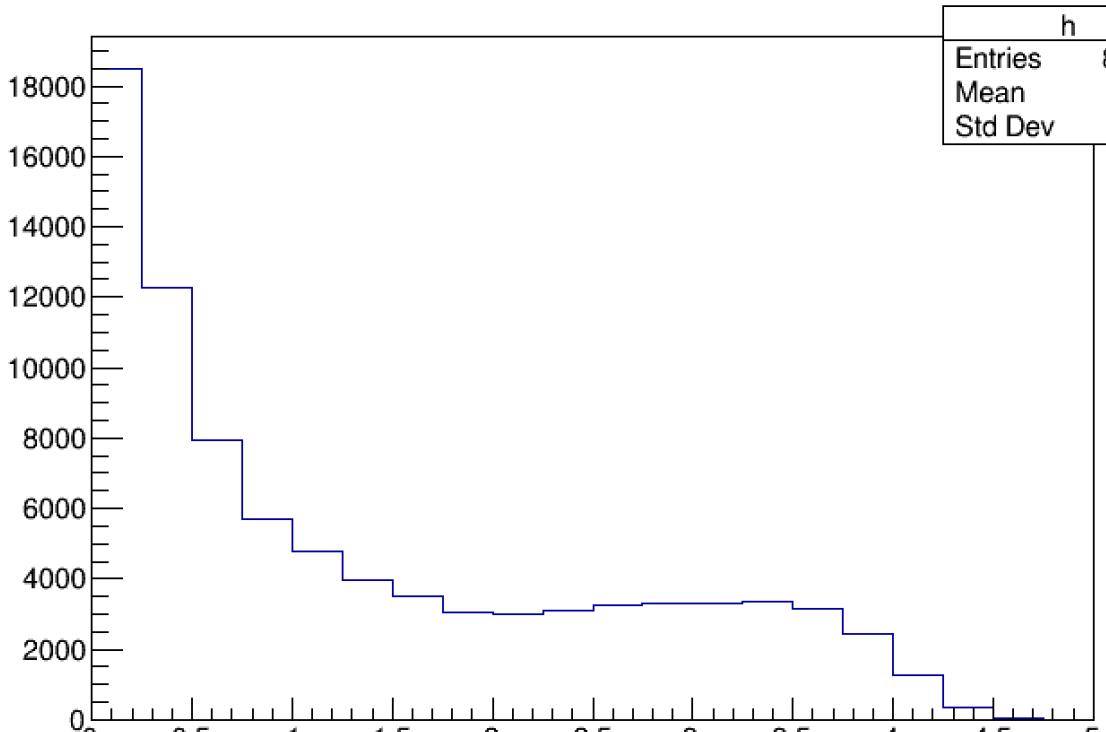
2018



# Two muon pairs absolute delta rapidity

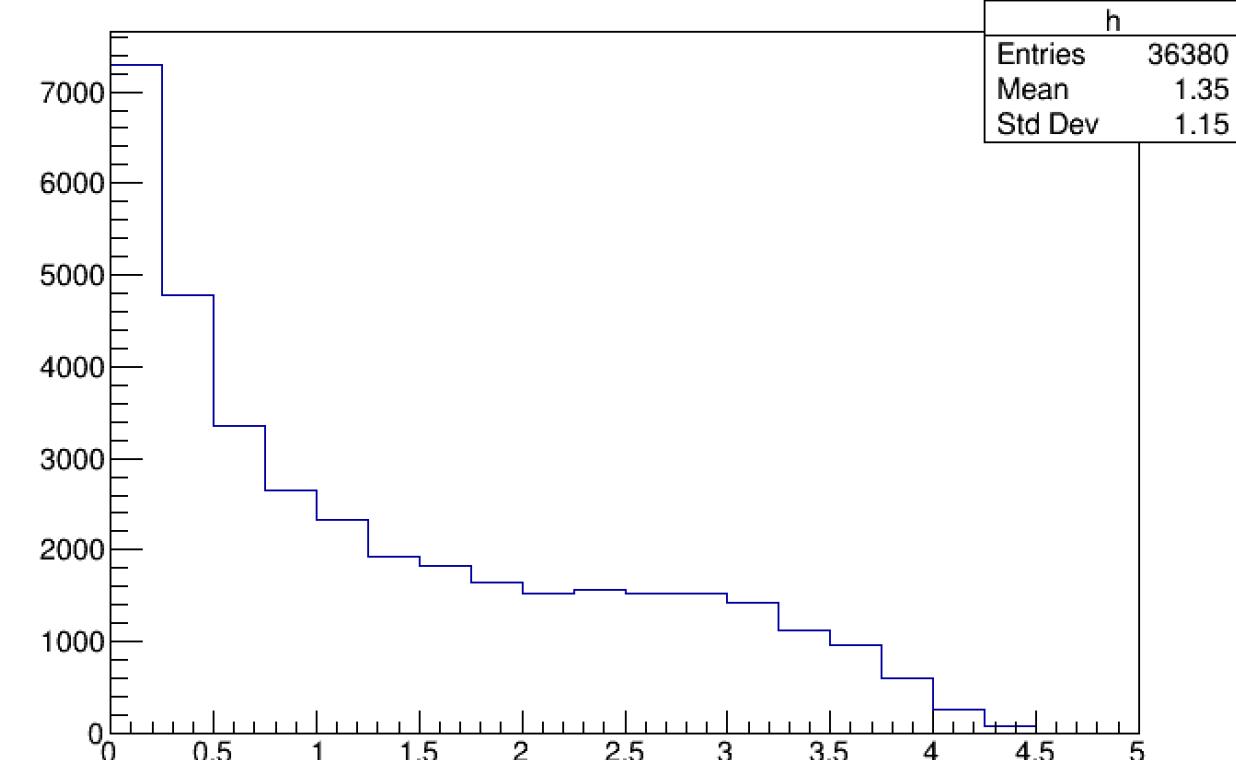


fourMu\_Delta\_rapidity



2016

fourMu\_Delta\_rapidity



2018



# Differential bins



Four muon pt [0, 10, 20, 30, 90]

Four muon mass [0, 10, 20, 40, 60, 100]

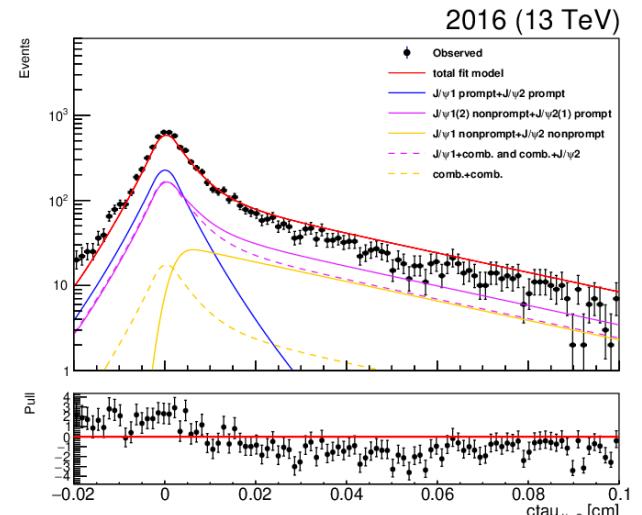
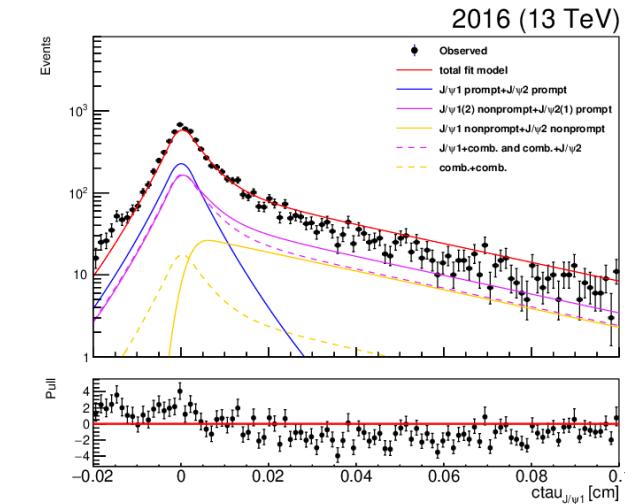
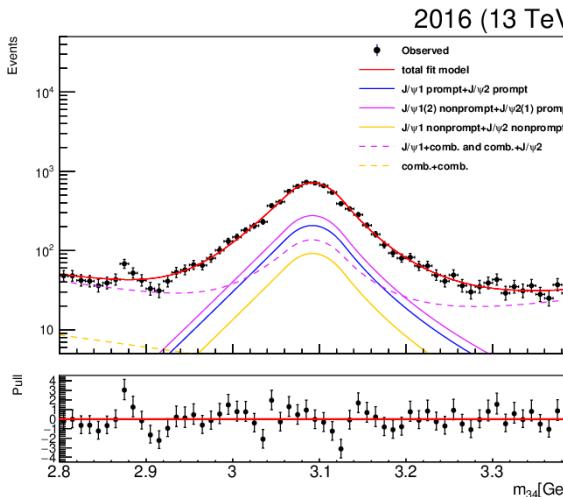
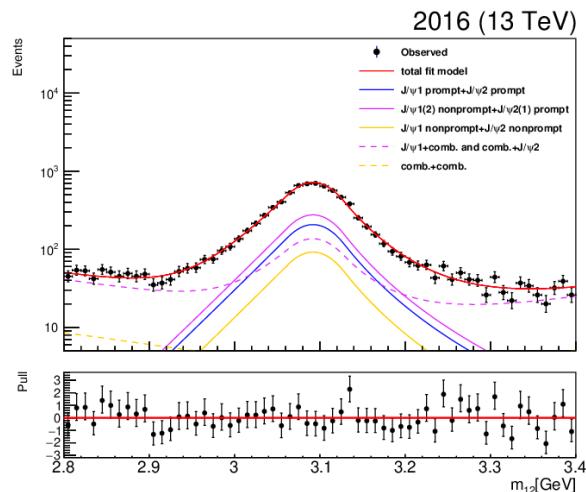
Four muon rapidity [-2.5, -1.5, -0.5, 0.5, 1.5, 2.5]

Two muon pair absolute delta rapidity[0, 0.5, 1.5, 2.5, 3.5, 5]

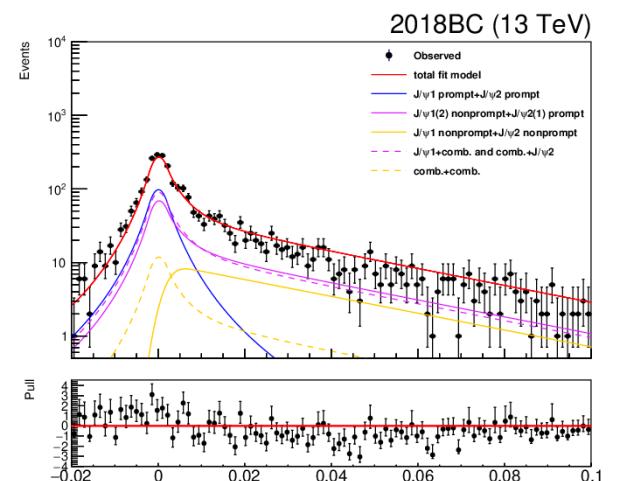
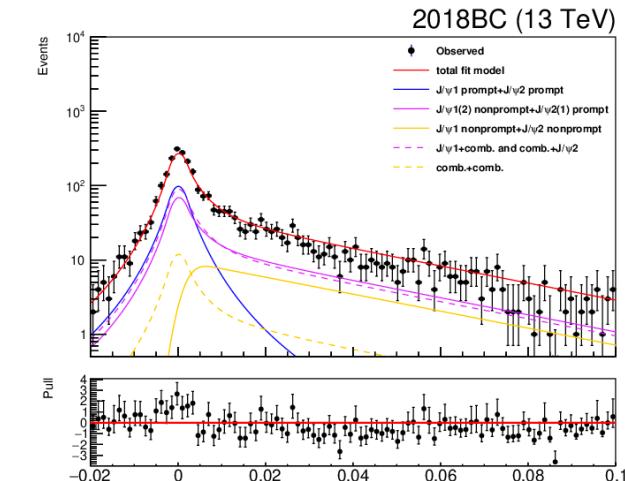
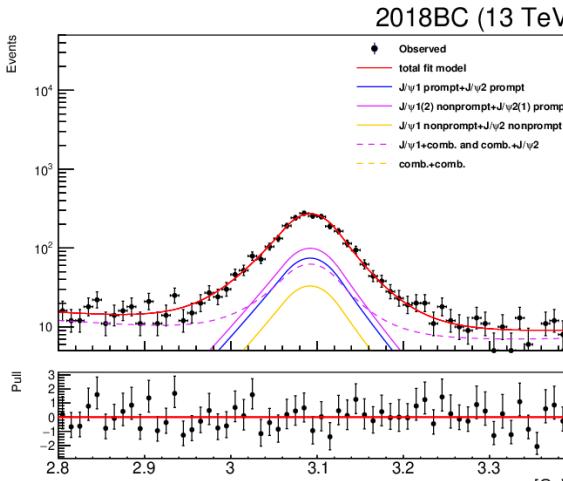
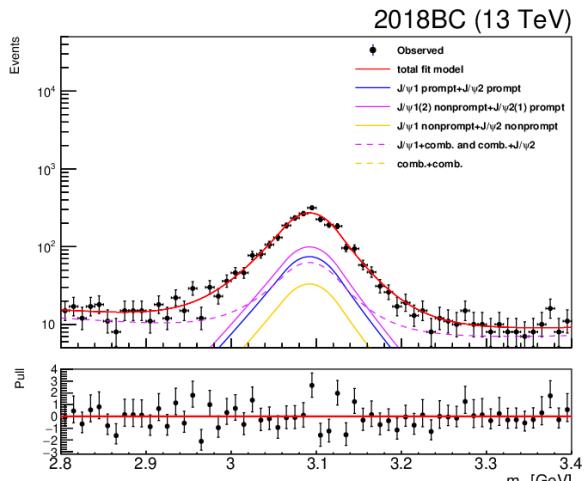


# Four muon mass [0, 10]

➤ 2016

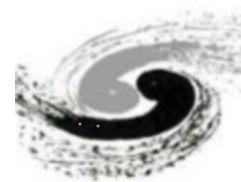


➤ 2018

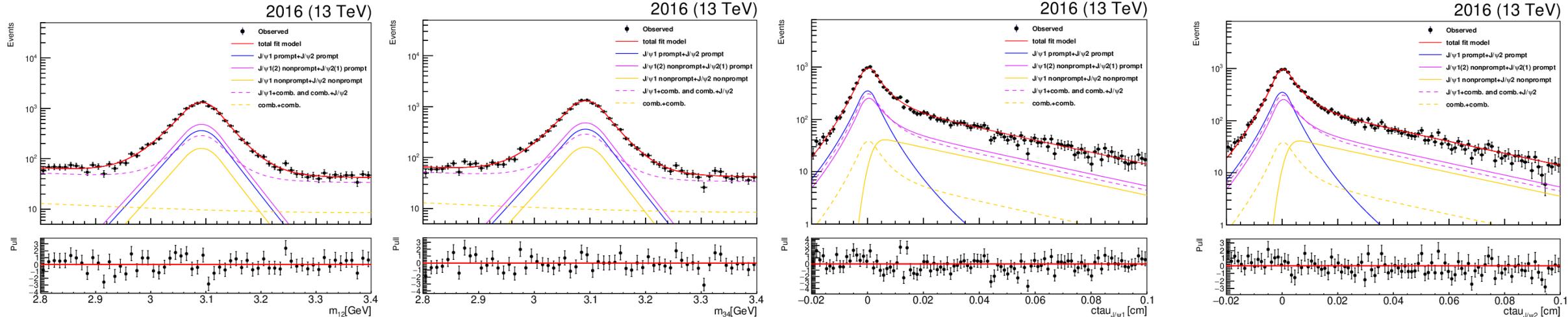




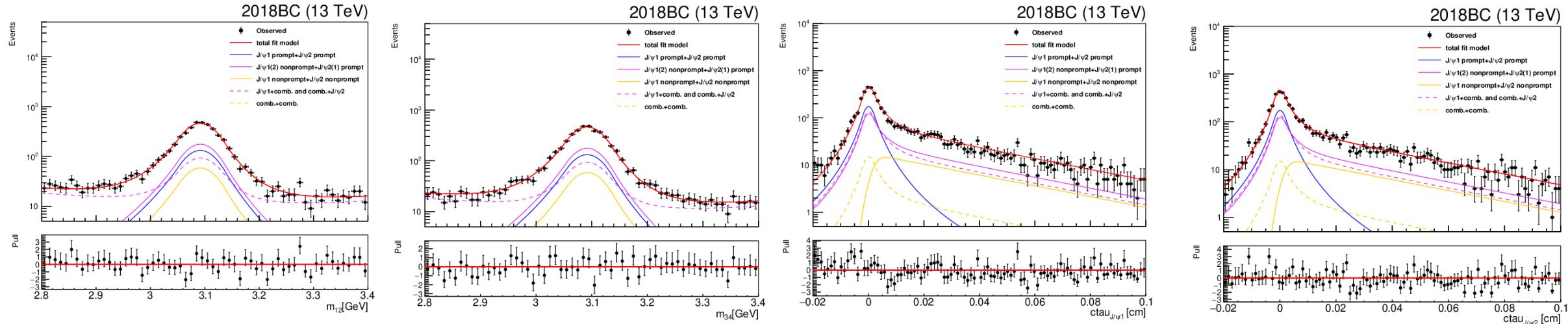
# Four muon mass [10, 20]



➤ 2016



➤ 2018

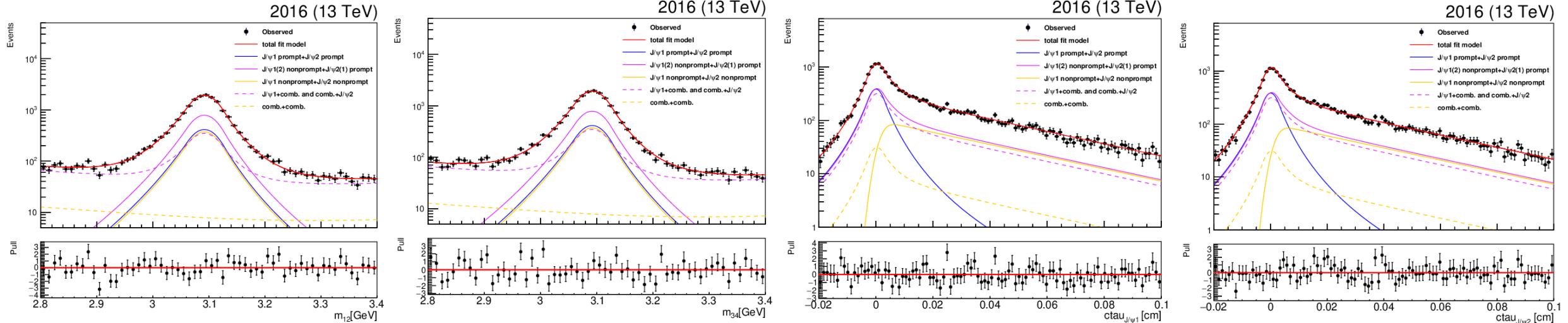




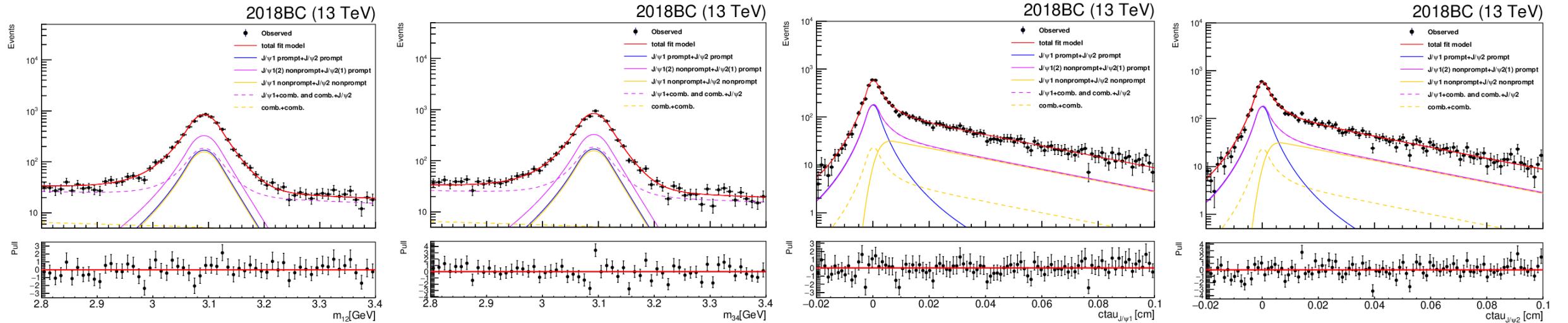
# Four muon mass [20, 40]



➤ 2016



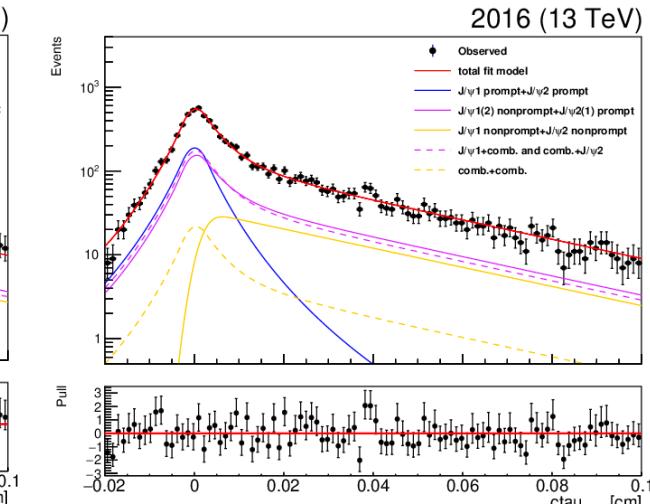
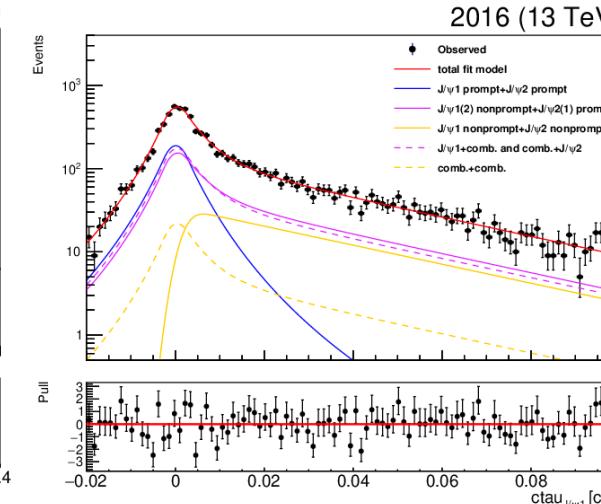
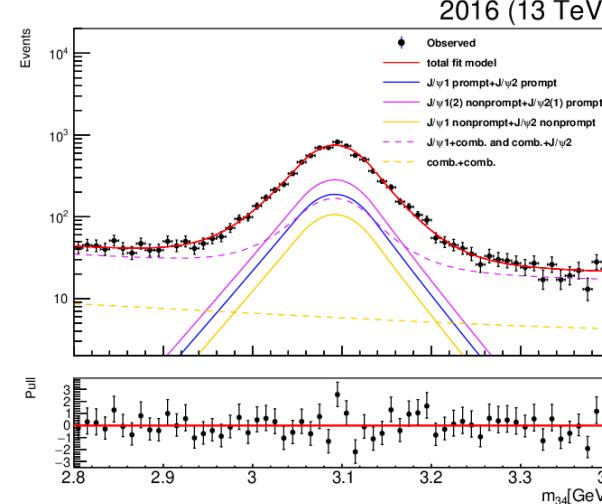
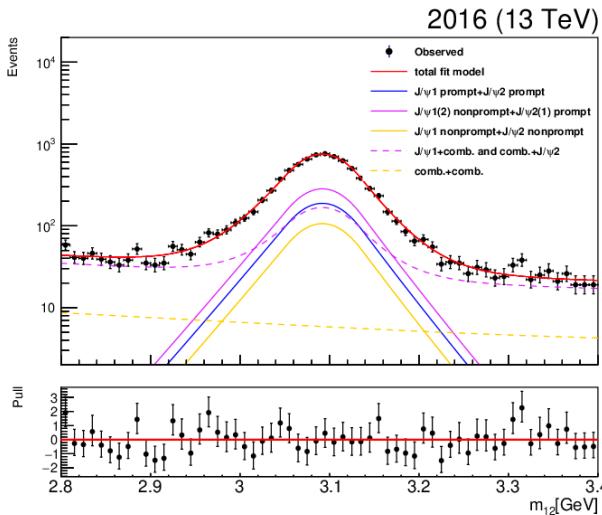
➤ 2018



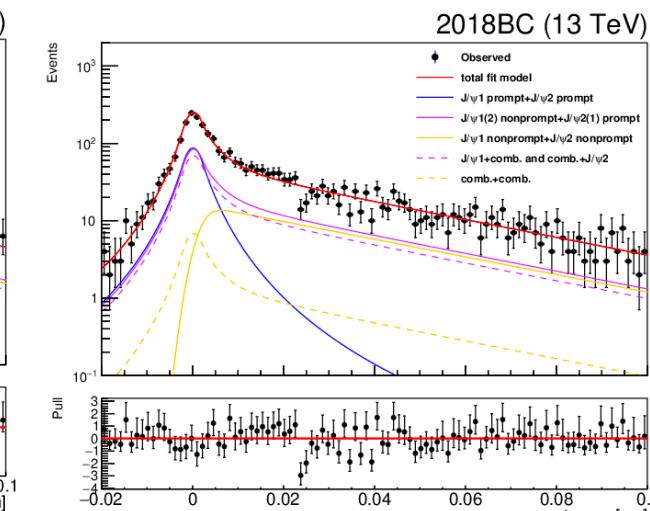
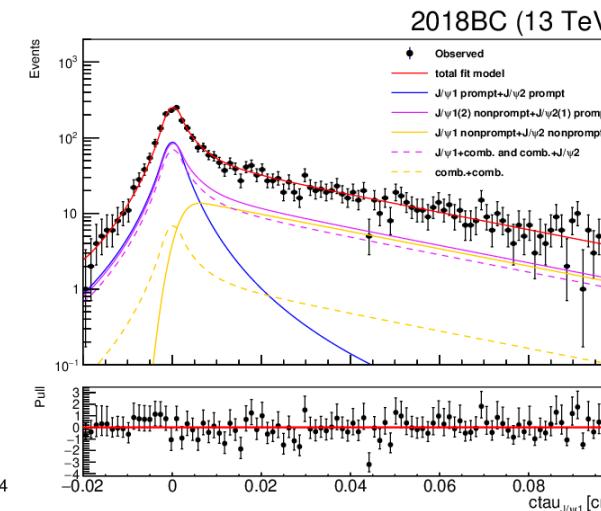
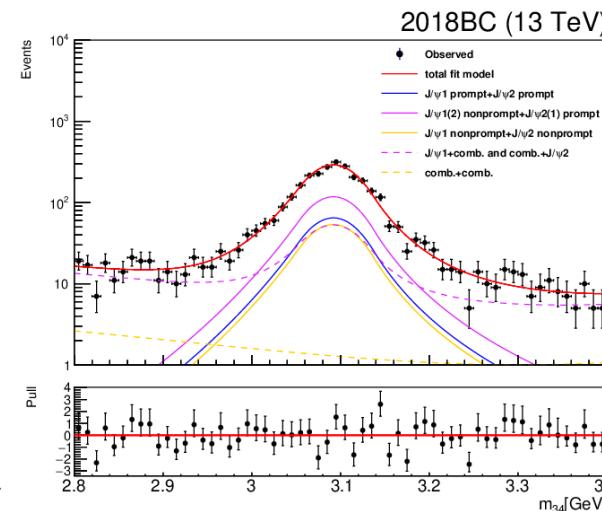
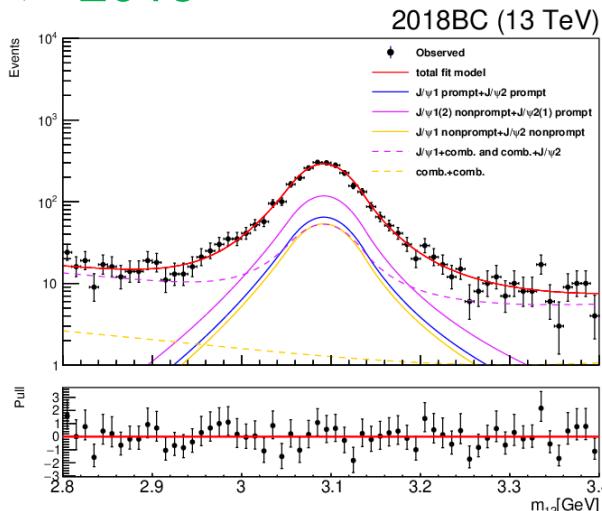


# Four muon mass [40, 60]

➤ 2016



➤ 2018

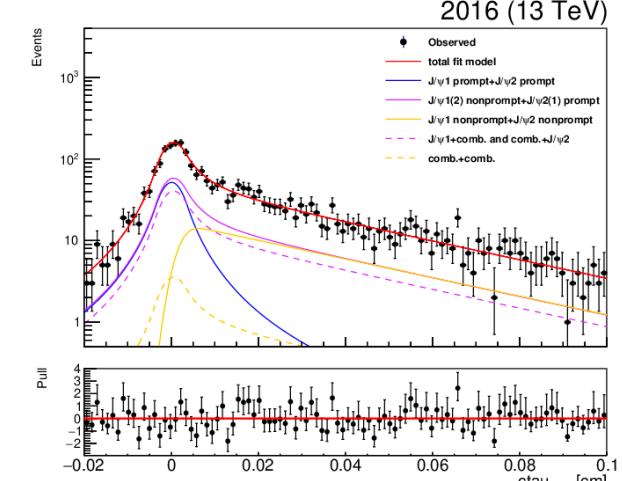
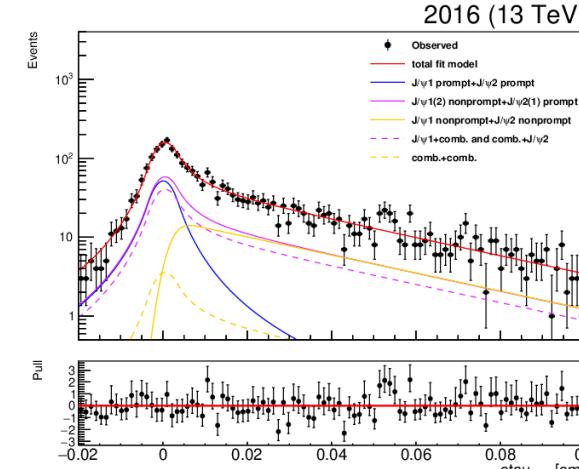
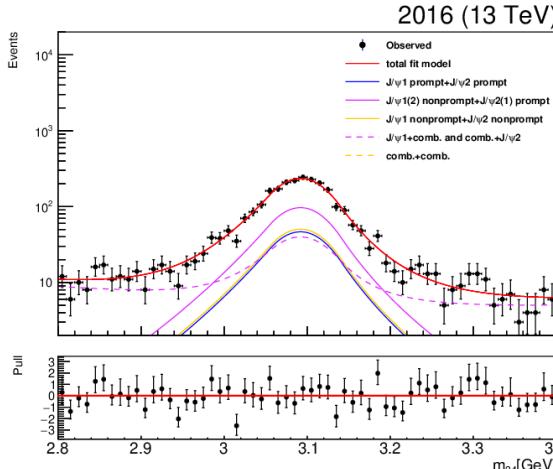
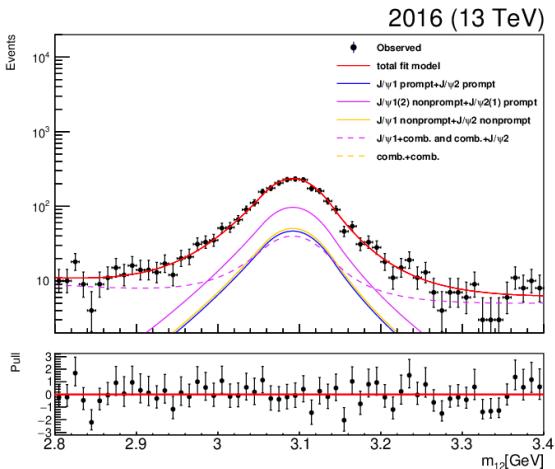




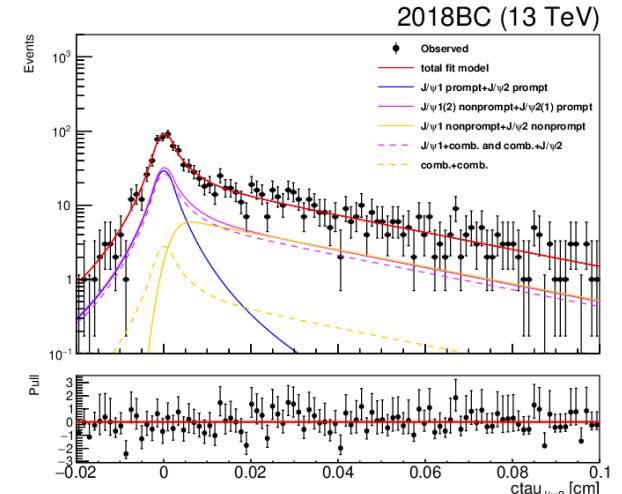
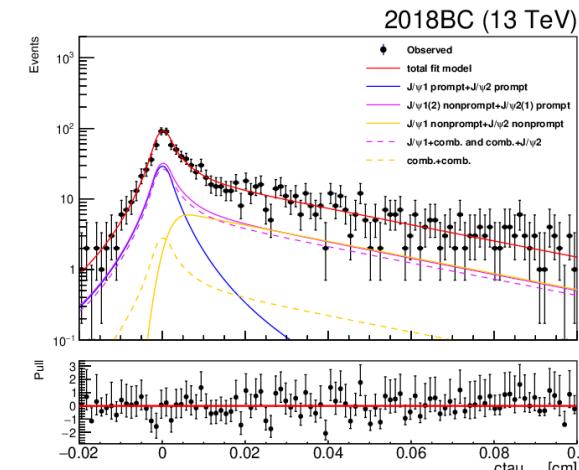
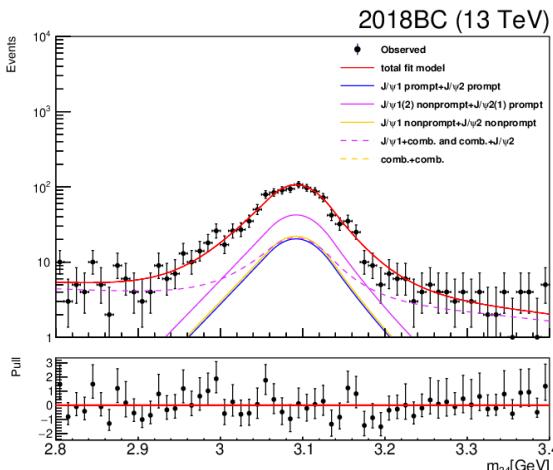
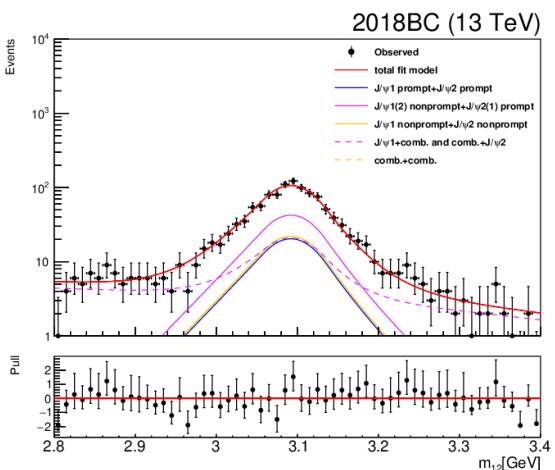
# Four muon mass [60, 100]



➤ 2016

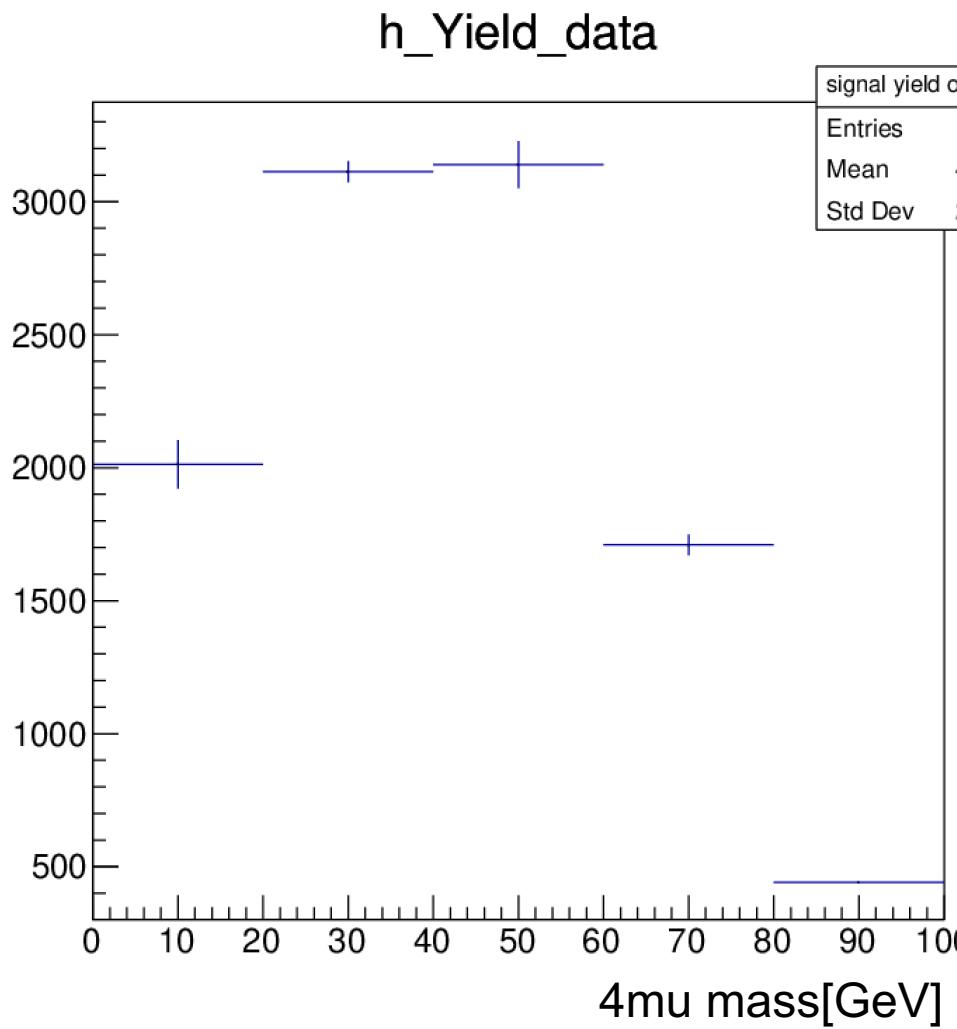


➤ 2018

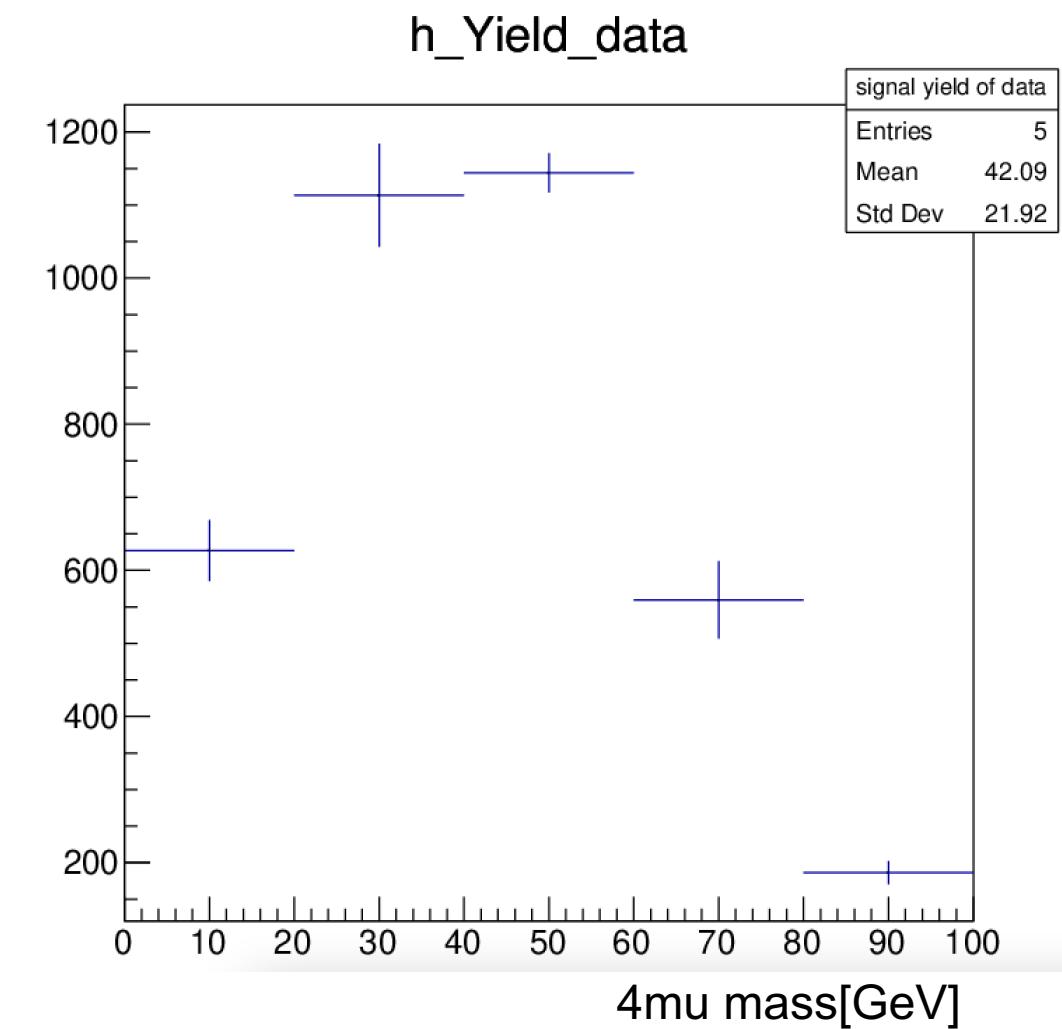




# Signal yield in four muon bins



2016



2018