

# Charge flip estimation effort

## H<sup>++</sup>H<sup>--</sup> Meeting

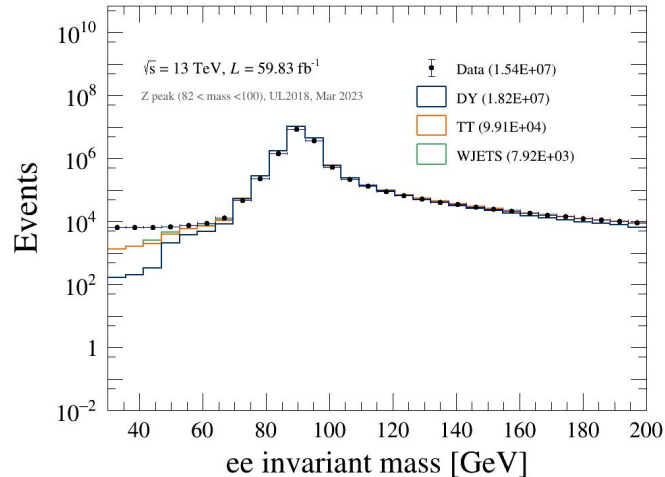
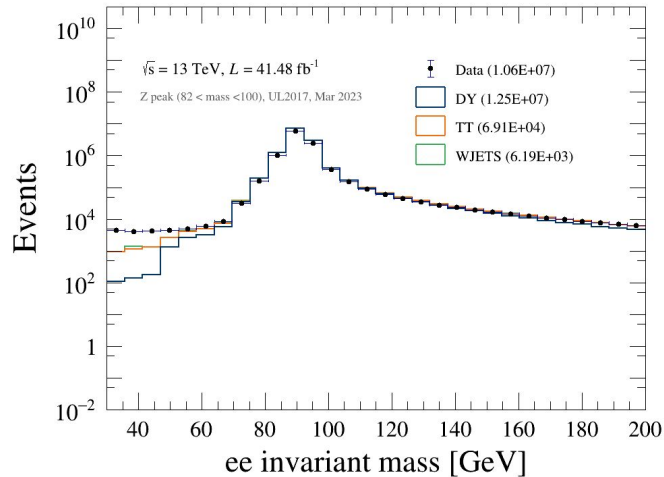
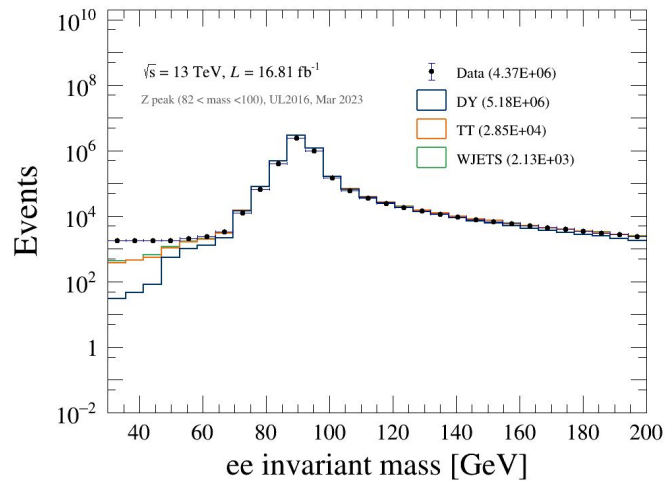
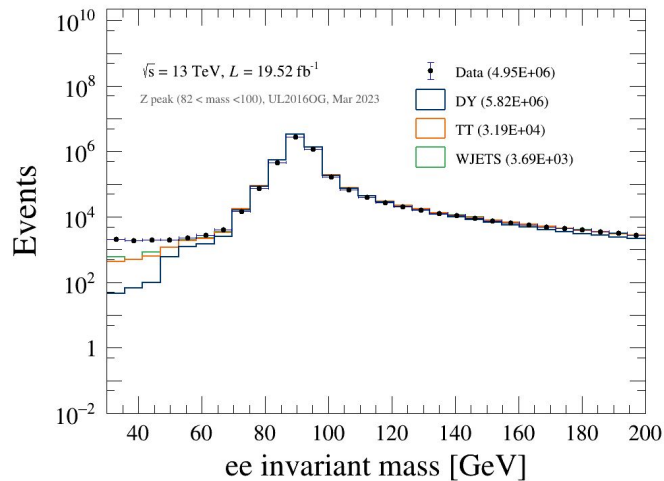
Edgar F. Carrera  
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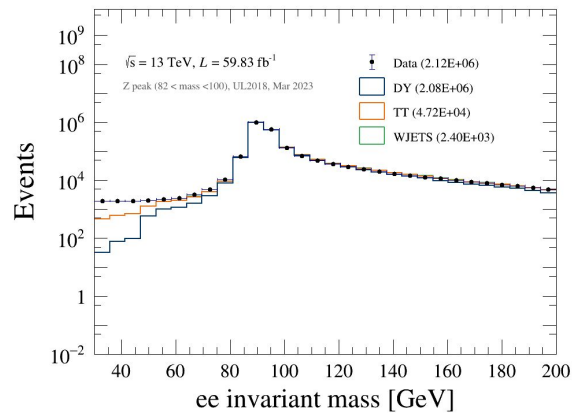
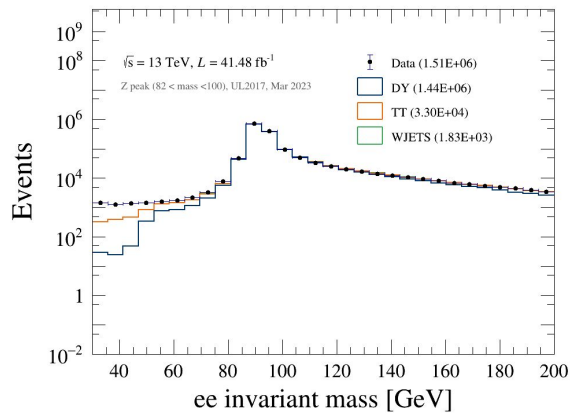
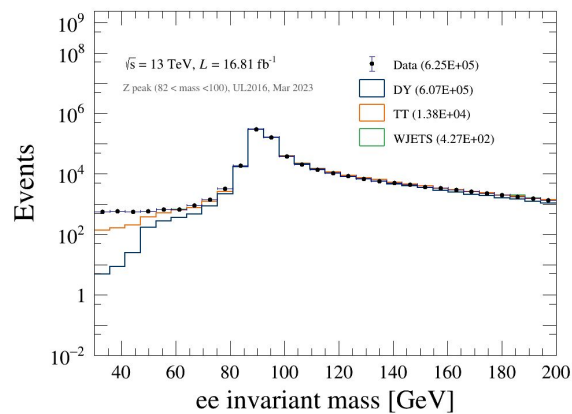
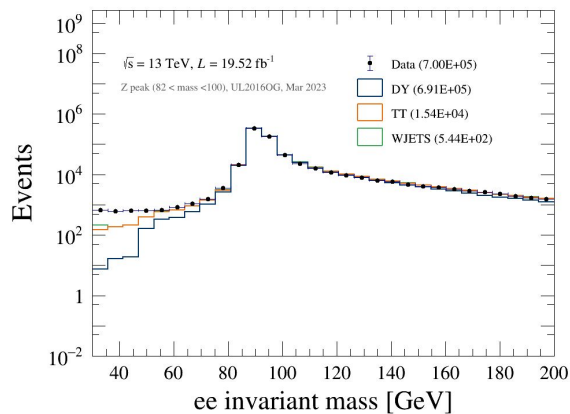
March 23, 2023

# Object Selection

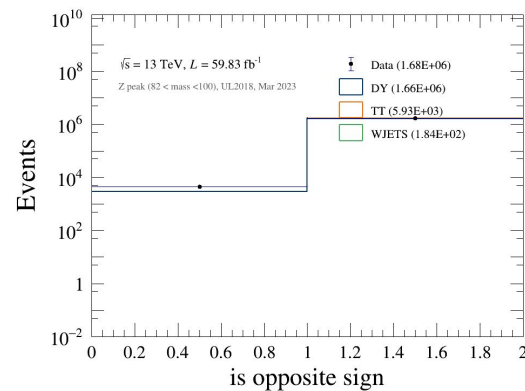
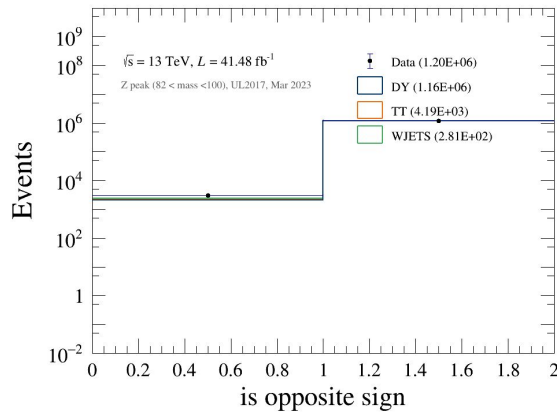
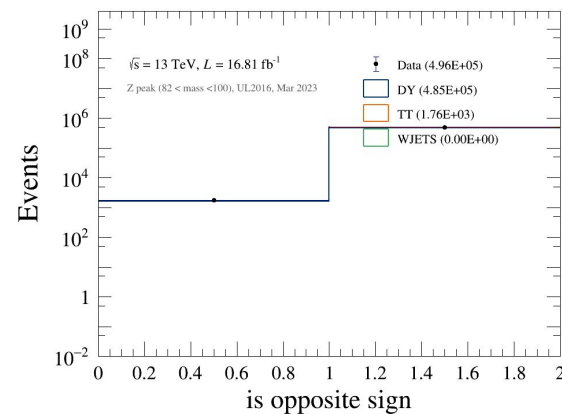
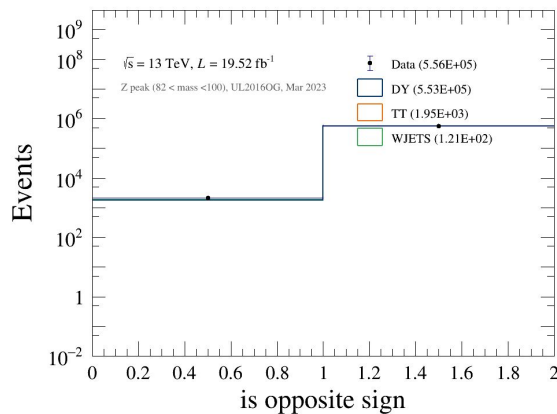
```
electronCuts = {  
    'Electron_pt':>30.0,  
    'abs(Electron_eta)':'<2.5',  
    'Electron_cutBased_HEEP':",  
    'Electron_pfRellso03_all':'<0.4',  
    'abs(Electron_dxy)':'<0.05',  
    'abs(Electron_dz)':'<0.1'  
}
```



# Divide into categories: E.g., $50 \leq p_t < 100$ ; $0 < |\eta| < 0.8$



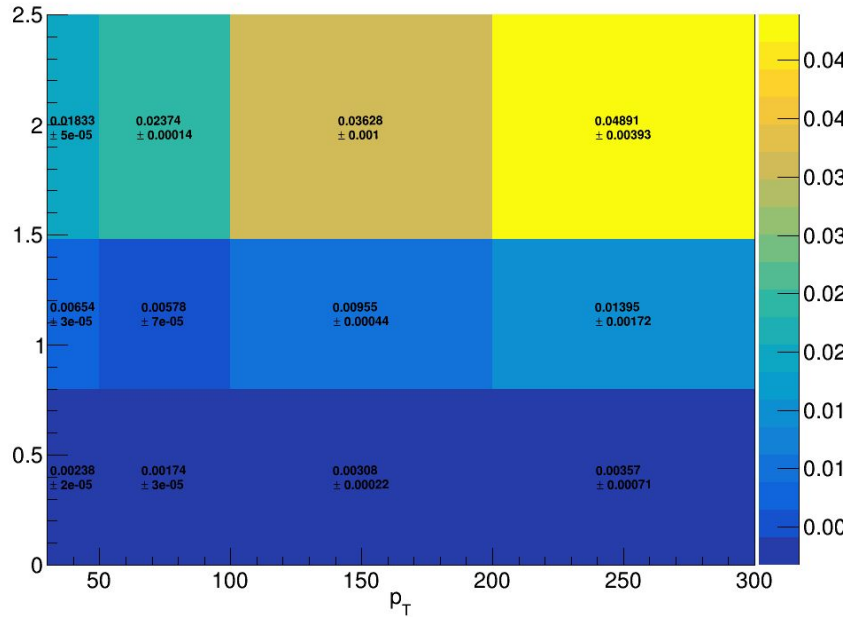
# Count Nos and Nss events for each category (only within Z peak): E.g., $50 \leq pt < 100$ ; $0 < |\eta| < 0.8$



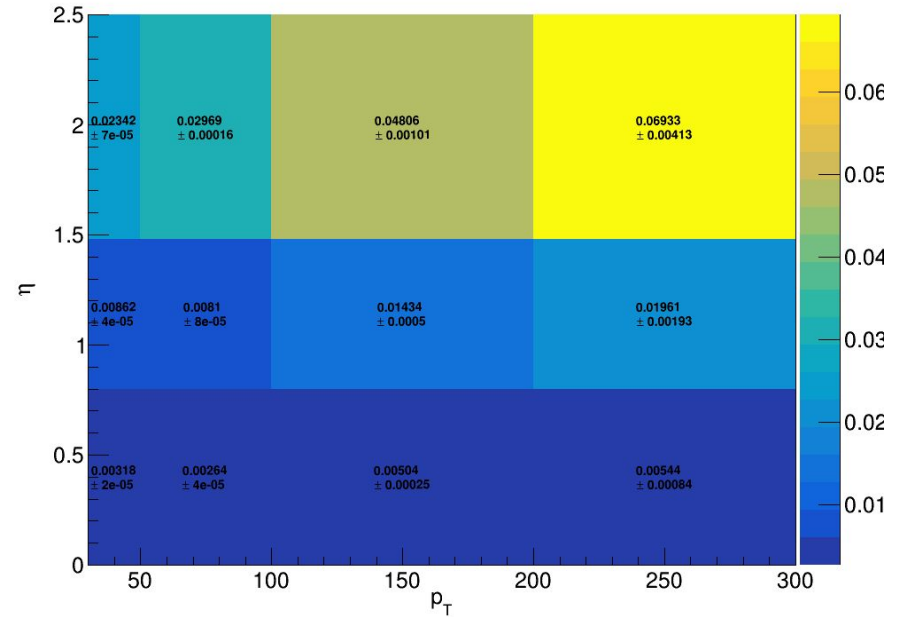
# Calculate charge flip probability

$$P = N_{ss}/(N_{os} + N_{ss})$$

E.g.: 2018



MC



Data

# Data/MC Probability ratios

