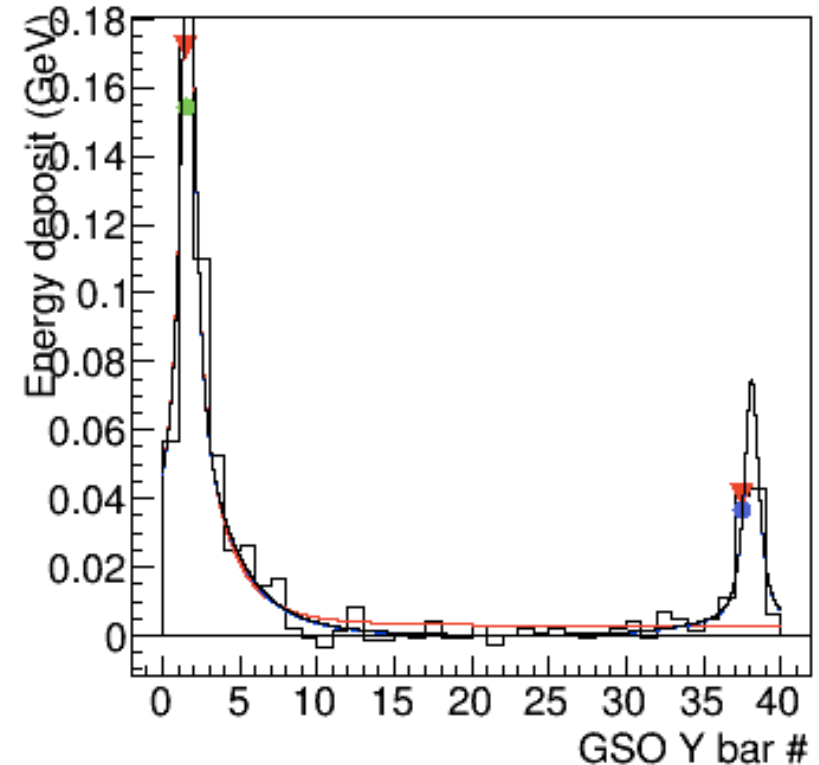
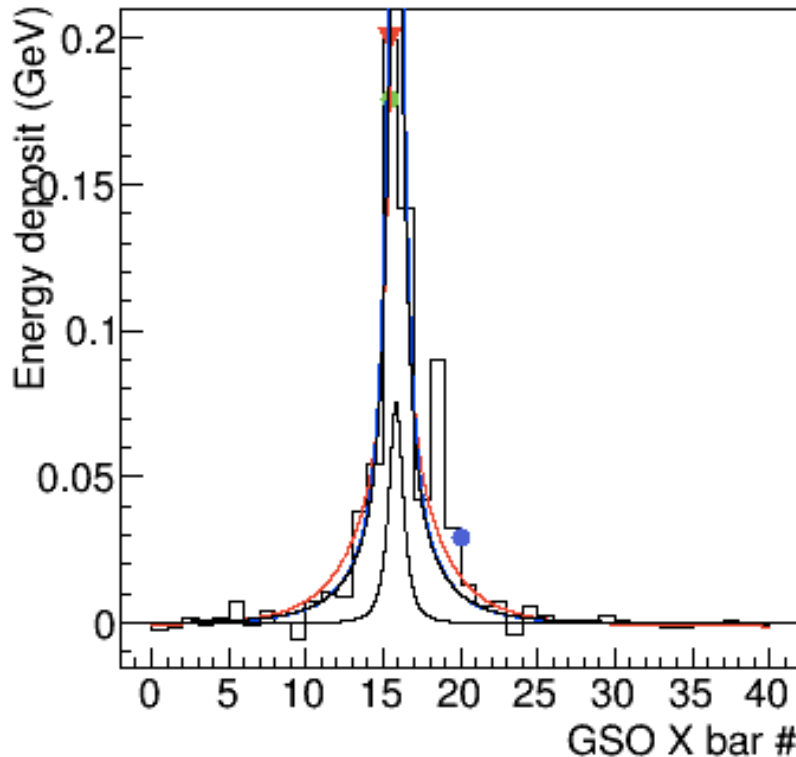


# Reconstruction of Type-II $\pi^0$ overlap event

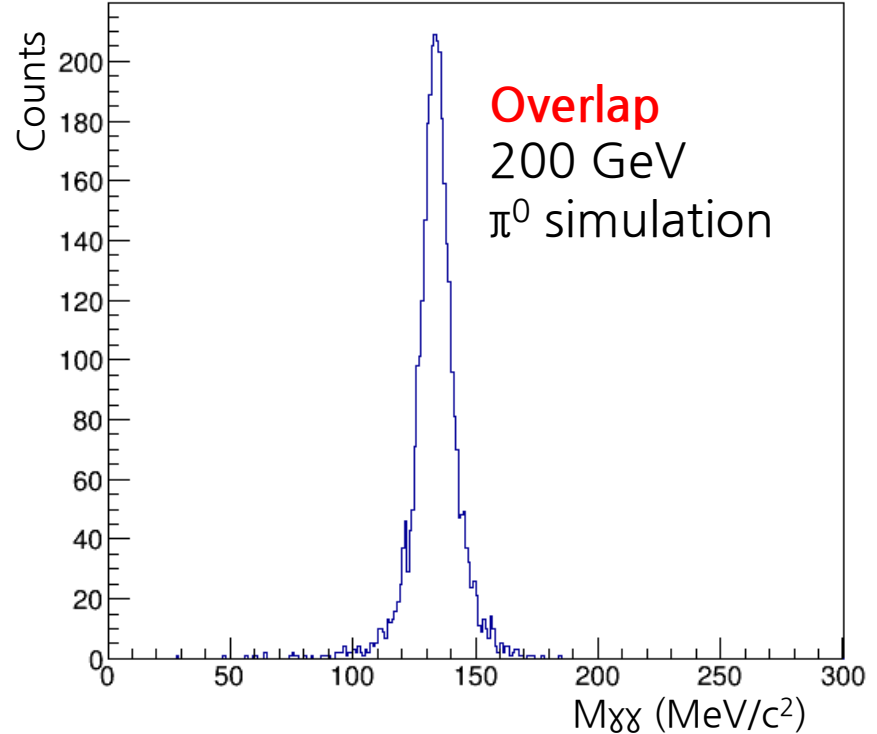
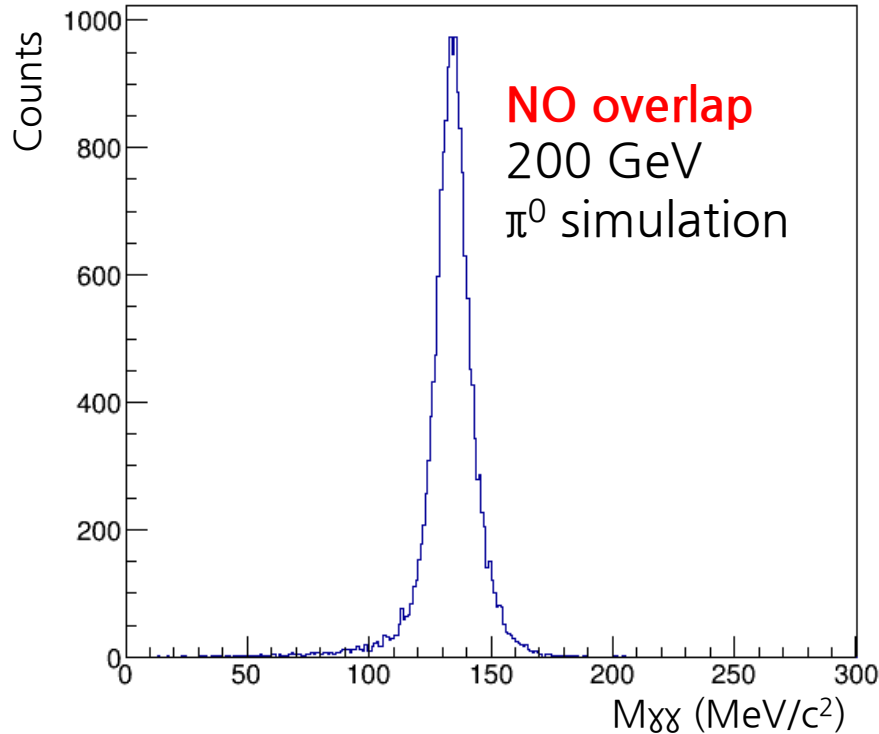
20 Sep. 2018  
Minho Kim

# Type-II $\pi^0$ overlap event



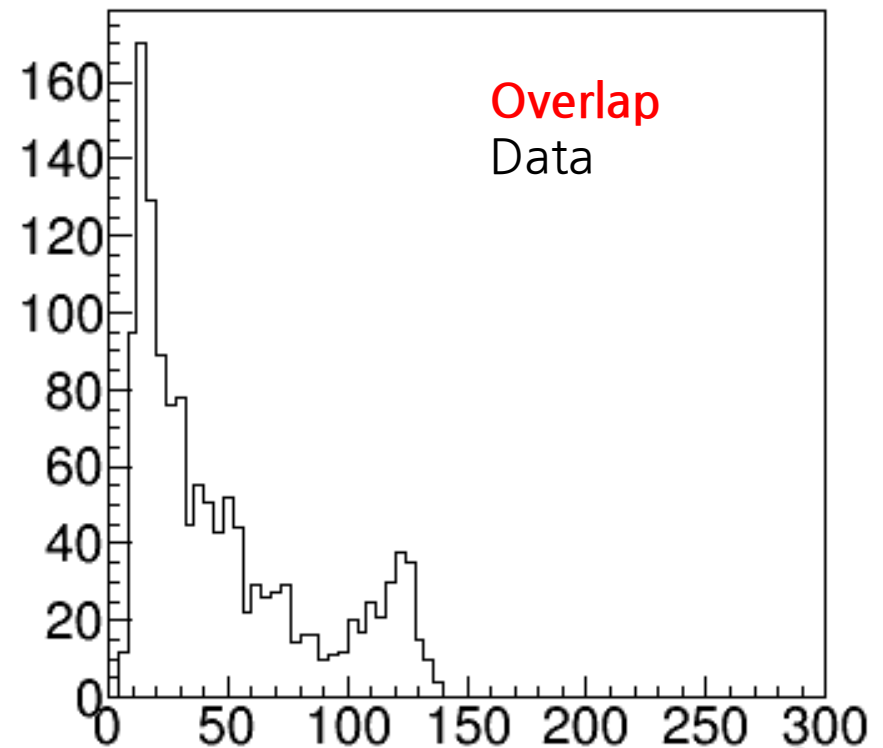
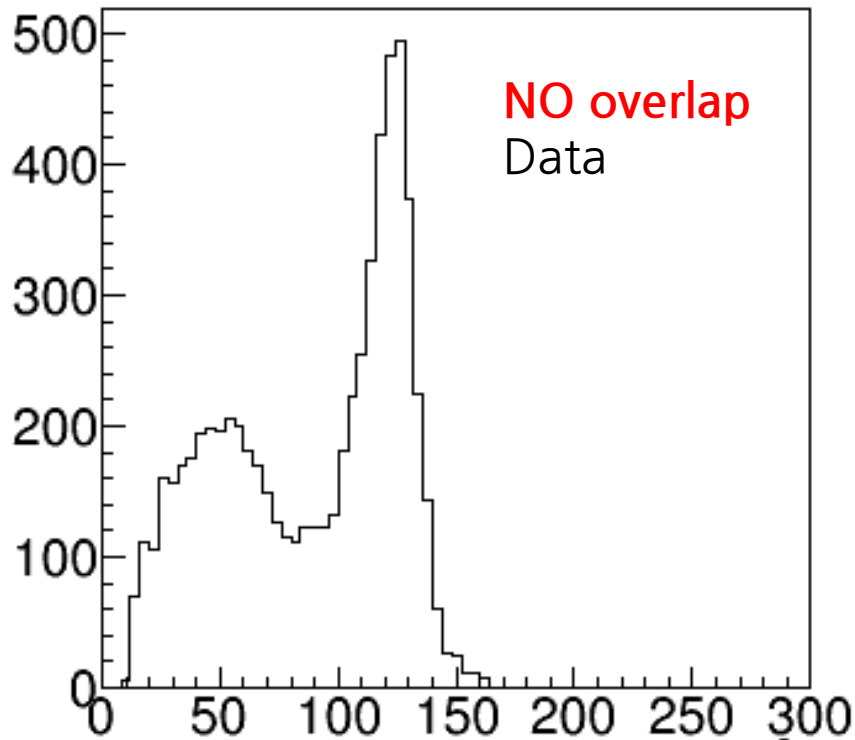
- Same x positions was assigned to two photons.
- Only the peak height of GSO Y bar was used for the energy fraction from  $\pi^0$  to two photons.

# $M_{\gamma\gamma}$ plot



- Reconstruction performance is almost same if the x or y positions is overlaped.
- While handling and testing the reconstruction code, the  $\pi^0$  peak width got wider than before. I'm trying to solve it...

# Overlap event in data



- Simulation expects 10% of Type-II  $\pi^0$  is overlap event.
- Current analysis algorithm looks able to find comparable yield. But the reconstruction performance looks worse than no overlap event. I'm studying if there is better one.