

## Group meeting

2025/03/14

# Update for ISR

## Update: Trigger efficiency

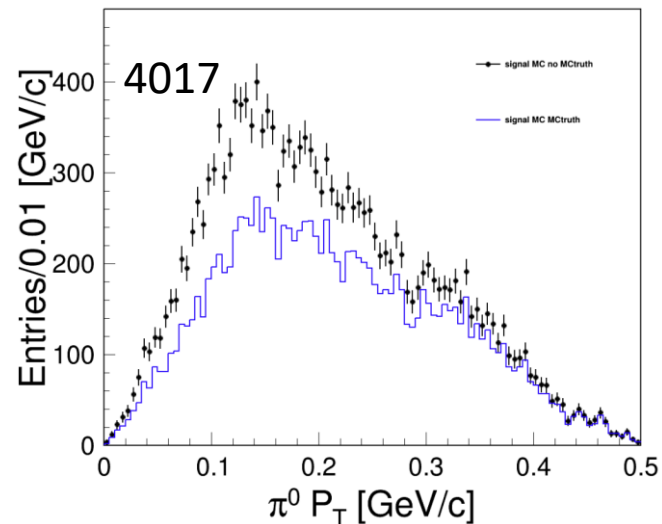
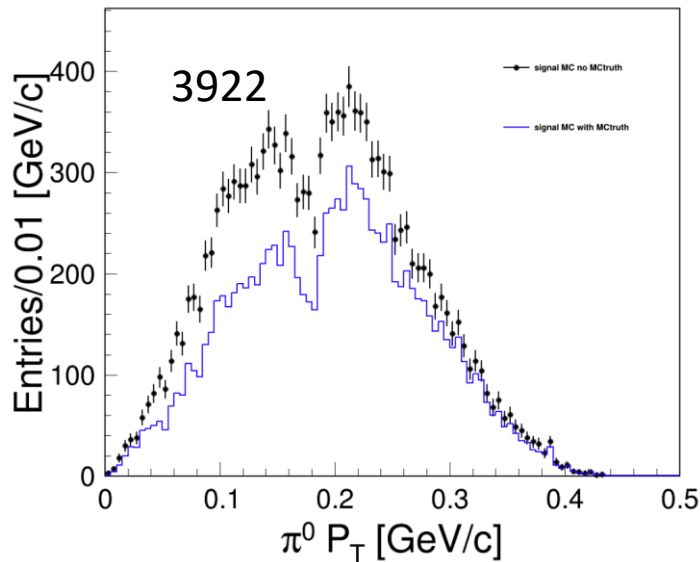
- $\pi^+\pi^- J/\psi$  **mode in Belle:** 98.7% for  $\pi^+\pi^- J/\psi$  channel, 1.0% was taken to be a conservative estimate of the systematic error on the  $\pi^+\pi^- J/\psi$  mode.
- $\mu^+\mu^-$  **mode in Belle:** 91.4% for  $\mu^+\mu^-$  channel, 1.5% was taken to be a reasonable systematic error for the  $\mu^+\mu^-$  mode.
- $\pi^+\pi^- J/\psi$  **mode in Belle II:** 96.1% for  $\pi^+\pi^- J/\psi$  channel, 1.0% was taken to be a conservative estimate of the systematic error.
- $\mu^+\mu^-$  **mode in Belle II:** 95.9% for  $\pi^+\pi^- J/\psi$  channel, 1.0% was taken to be a conservative estimate of the systematic error.

# Update for two photon

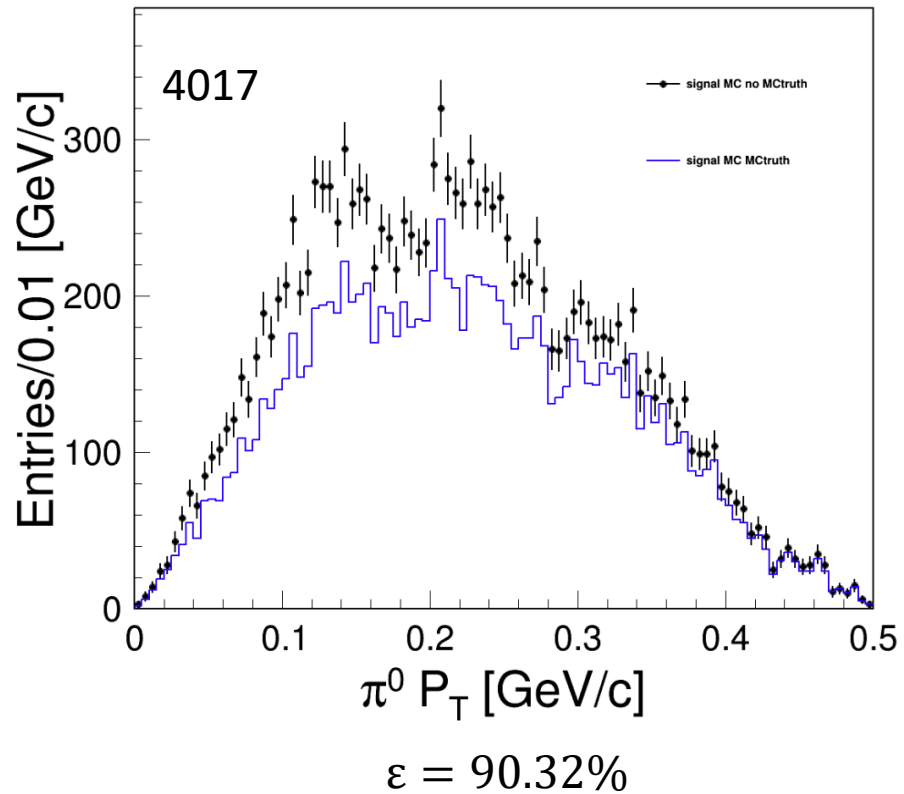
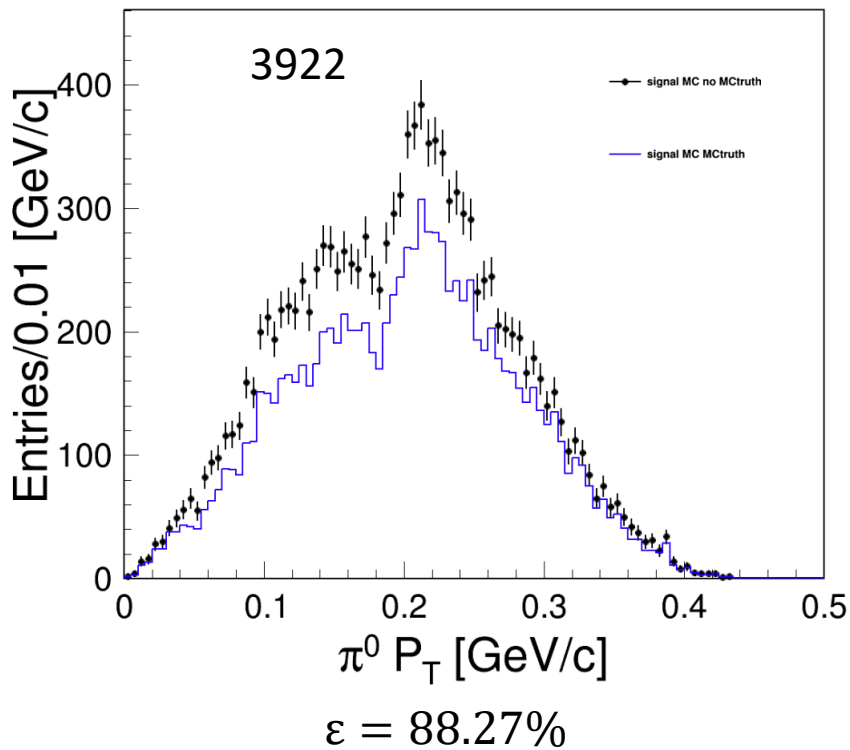
## $\pi^0$ selection for Belle

- photons were categorized into two categories ( $\gamma_{high}$ ,  $\gamma_{low}$ ) based on clusterE.
- clusterE  $> 30$  MeV for  $\gamma_{low}$  in barrel, clusterE  $> 40$  MeV for  $\gamma_{low}$  in endcaps.
- For  $\pi^0$  candidates with transverse momentum  $P_t < 0.2$  GeV/c, only the best one with the smallest  $\chi^2$  of the mass fit was selected to suppress the backgrounds

Why and effi?



# Update for two photon

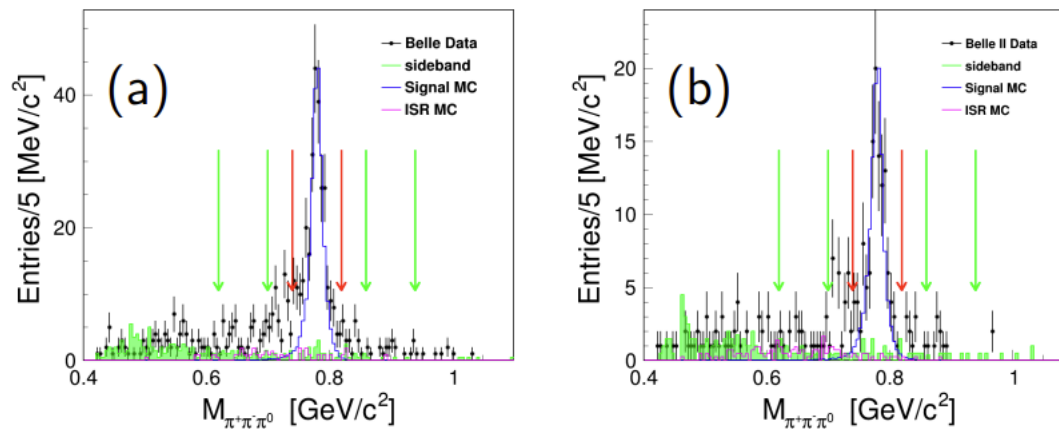


When to do BCS?

# Update for two photon

## $\omega$ selection

- $\omega$  mass window:  $0.72 \text{ GeV}/c^2 < M_{\pi^+\pi^-\pi^0} < 0.84 \text{ GeV}/c^2$ .
- $\omega$  sideband:  $0.62 \text{ GeV}/c^2 < M_{\pi^+\pi^-\pi^0} < 0.70 \text{ GeV}/c^2$ ,  
 $0.86 \text{ GeV}/c^2 < M_{\pi^+\pi^-\pi^0} < 0.94 \text{ GeV}/c^2$ .



Add dalitz check and cut flow