

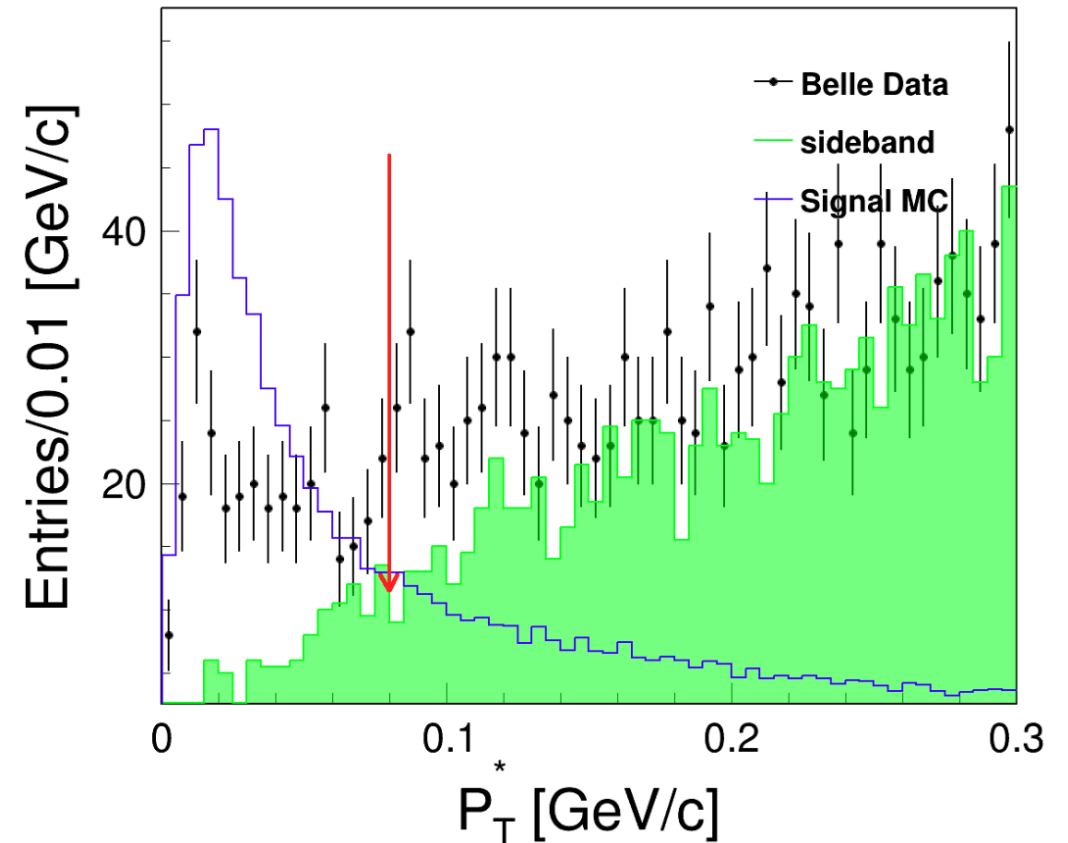
Group meeting

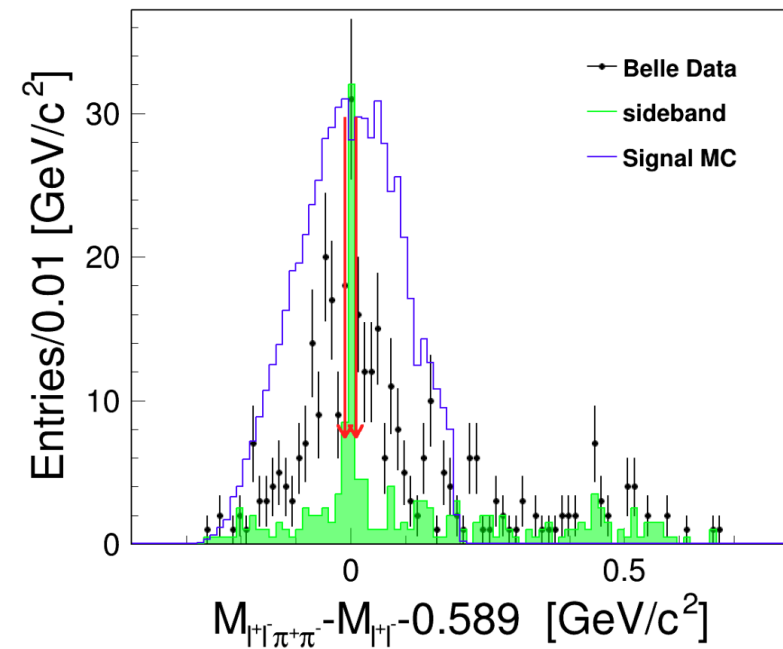
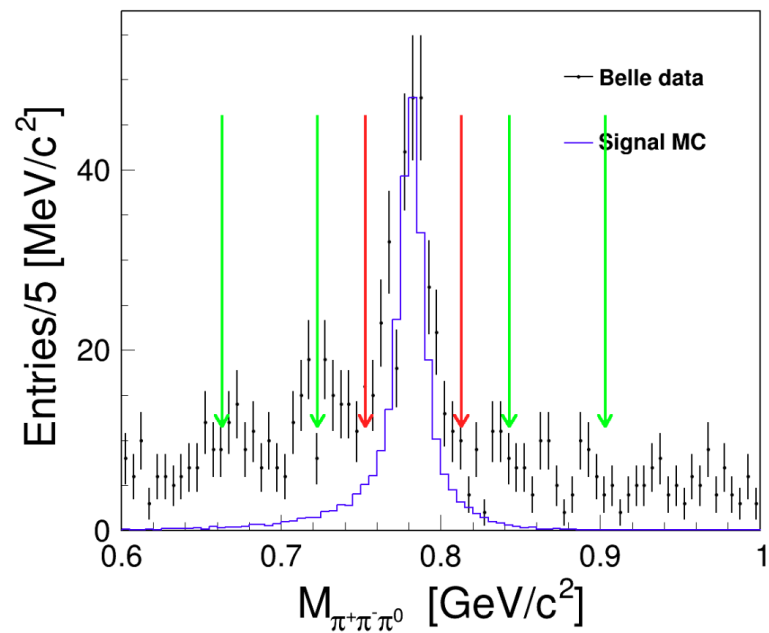
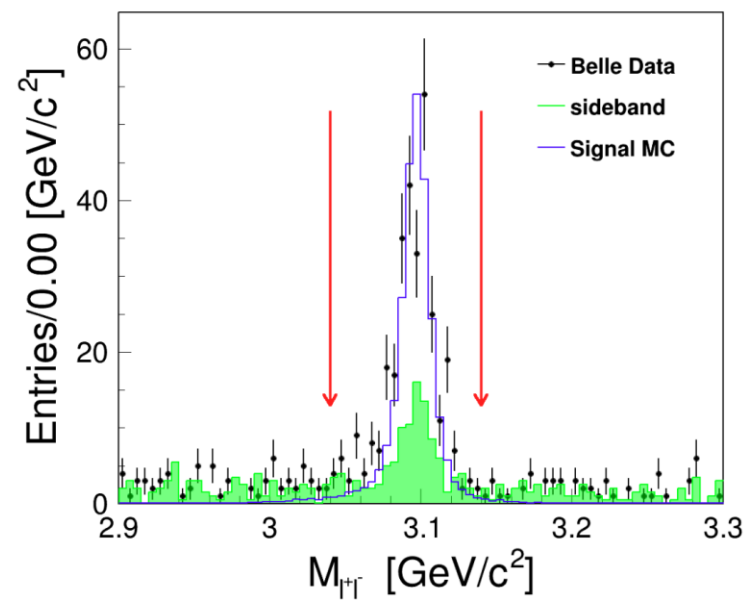
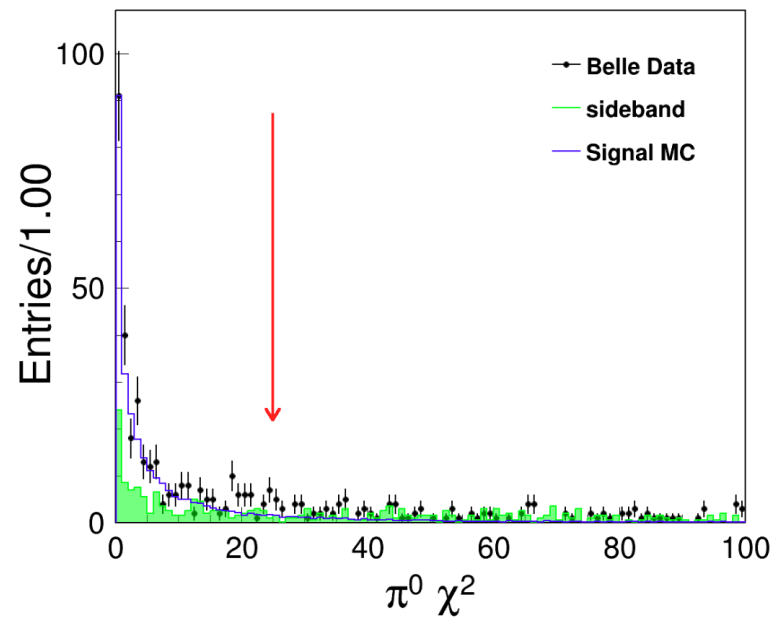
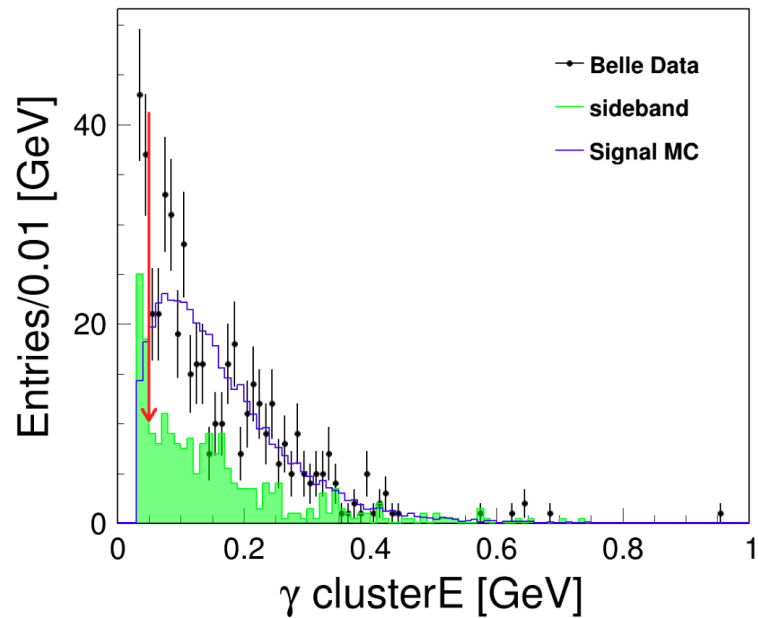
2024/11/22

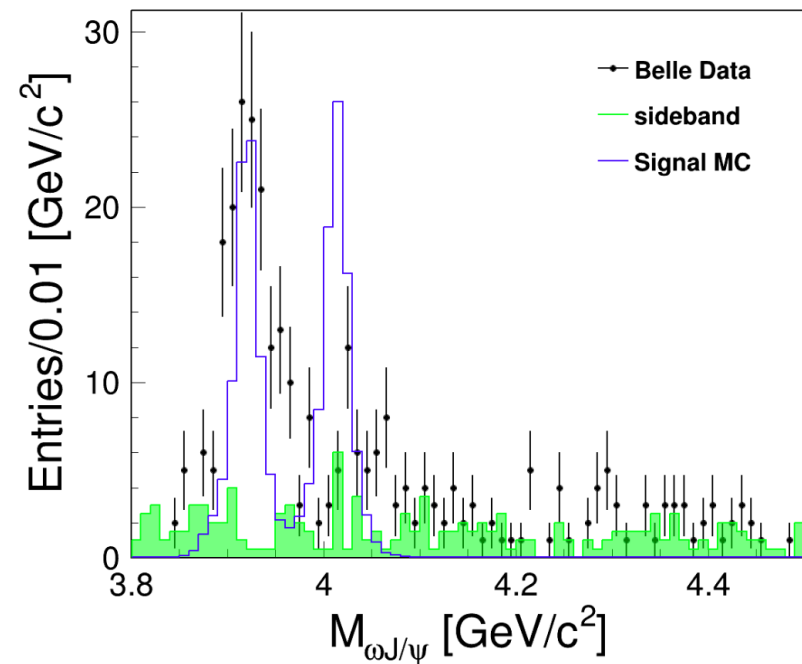
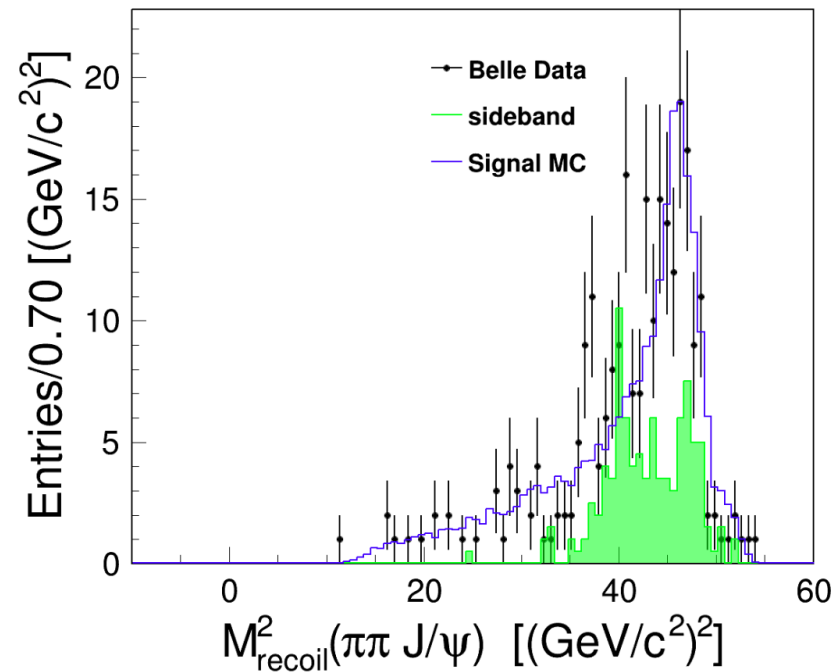
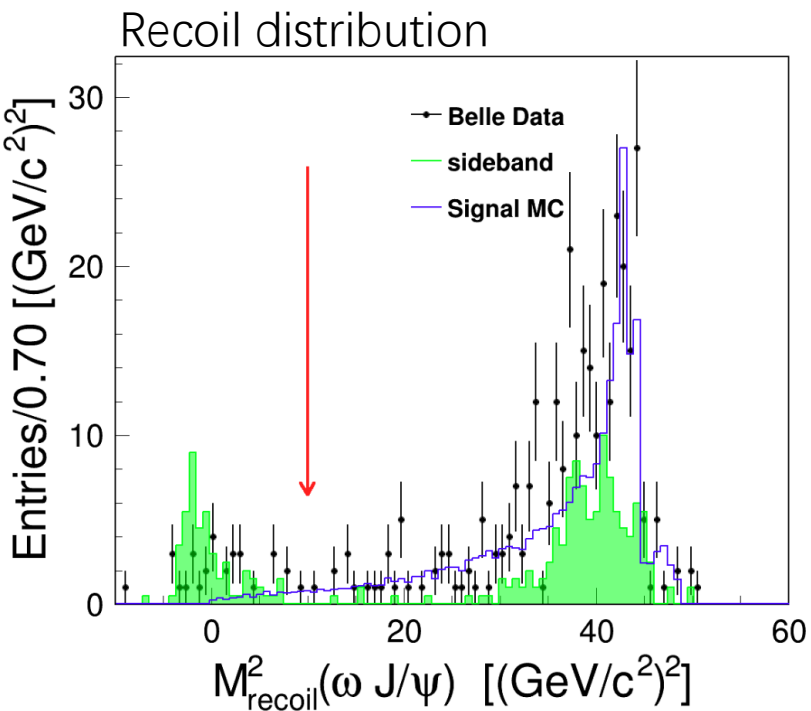
$\omega J/\psi$

- Charged tracks
 - $|dr| < 2 \text{ cm}, |dz| < 5 \text{ cm}$
- Particle Identification
 - $\text{muIDBelle} > 0.7$ for all μ
 - $\text{eIDBelle} > 0.5$ for all e
 - $\text{atcPIDBelle}(2,3) > 0.6$ for all π
 - $\text{atcPIDBelle}(2,3) > 0.2$ for all particle
- Bremsstrahlung photons
 - within 0.05 radians of the original electrons
 - $E > 0.02 \text{ GeV}$.
- π^0
 - $E_\gamma > 50 \text{ MeV}$
 - $\text{ECLtrackmatch} != 1$
 - Mass fit with $\chi^2 < 25$
- ω
 - $753 \text{ MeV}/c^2 < M_{\pi^0\pi^+\pi^-} < 813 \text{ MeV}/c^2$

- Jpsi
 - $3.04 \text{ GeV}/c^2 < M_{l^-l^+\pi^-} < 3.14 \text{ GeV}/c^2$
- $||M_{\ell^+\ell^-} - M_{\ell^+\ell^-\pi^+\pi^-} - 0.589| > 0.01 \text{ GeV}/c^2$.
- $M_{\text{Rec}}^2 > 10 (\text{GeV}/c^2)^2$
- $P_T^* < 0.08 \text{ GeV}/c$ for $\omega J/\psi$ system.



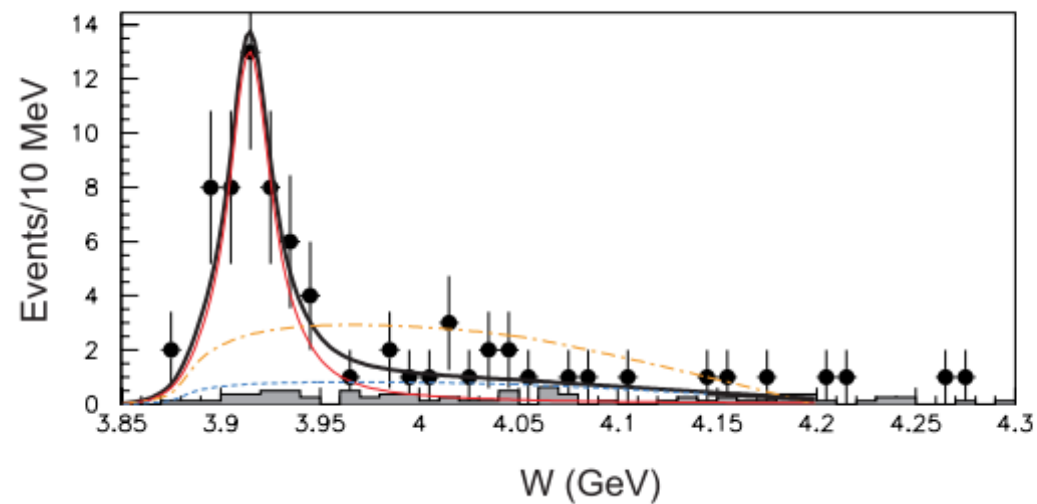
$\omega J/\psi$ 

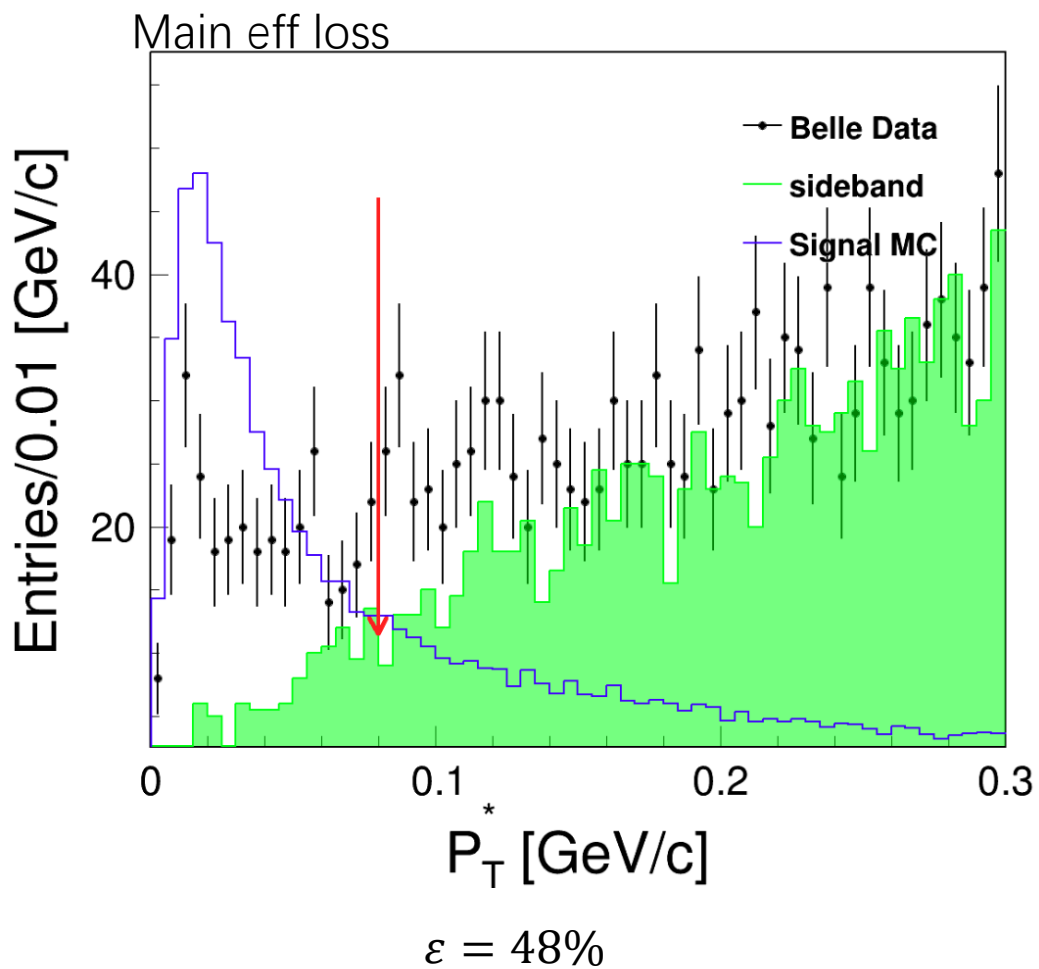


Our result: 980fb

309 events with 105 sideband from M_{ω} , $\varepsilon = 4.7\%$.

Uehara: 694fb ,73 events. $\varepsilon = 1.9\%$.





Next to do

Suppress background from omega (add dalitz var)

To suppress the background using the Dalitz plot, we defined the modified radius of the Dalitz plots as

$$rad \equiv \sqrt{\frac{X^2 + Y^2}{X_b^2 + Y_b^2}}, \quad (2)$$

where X_b, Y_b are the kinematic boundaries of the $\omega \rightarrow \pi^0 \pi^+ \pi^-$ decay Dalitz plot defined as

$$Y_b^2 = \frac{1}{3}(X_b + 1)(X_b + 1 + a)\left(1 + \frac{b}{X_b + 1 - c}\right), \quad (3)$$