

Group meeting

2024/11/22

ISR

Clean track distribution
 $dr < 2, dz < 4, pt < 0.1$
same as HadronB

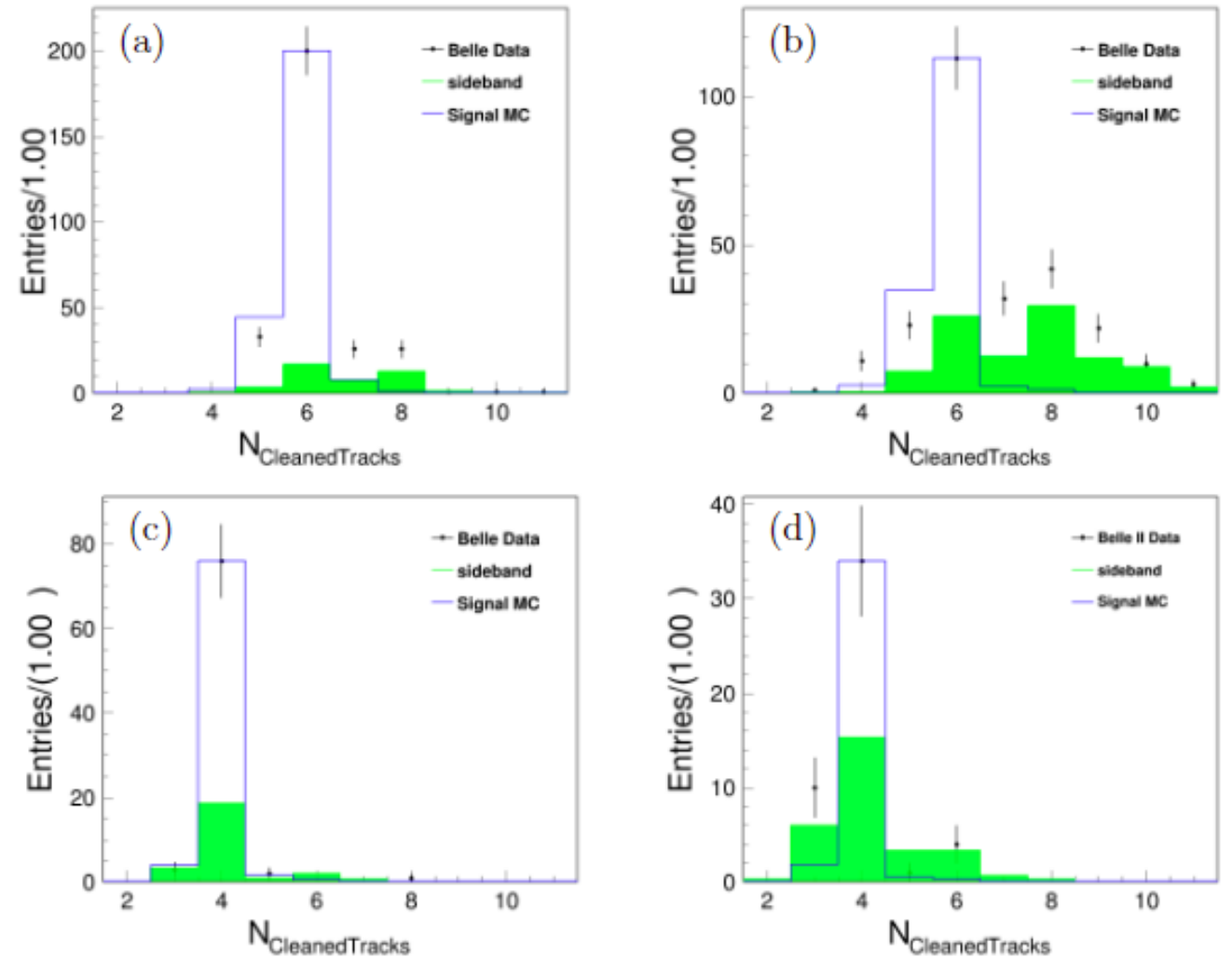
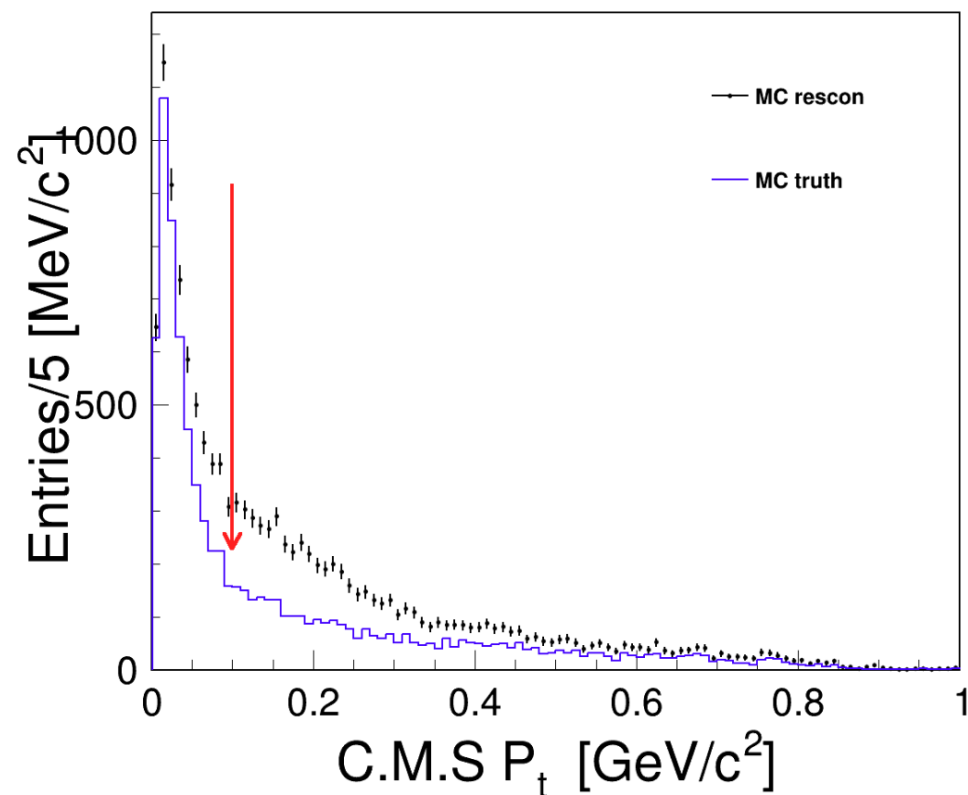


FIG. 9: Distributions of number of clean tracks with all other selection criteria required. Red arrows denote the selection criteria. (a) is from Belle data and MC in $\psi(2S) \rightarrow \pi^+\pi^- J/\psi$ channel; (b) is from Belle II data and MC in $\psi(2S) \rightarrow \pi^+\pi^- J/\psi$ channel; (c) is from Belle data and MC in $\psi(2S) \rightarrow \mu^+\mu^-$ channel; (d) is from Belle II data and MC in $\psi(2S) \rightarrow \mu^+\mu^-$ channel.

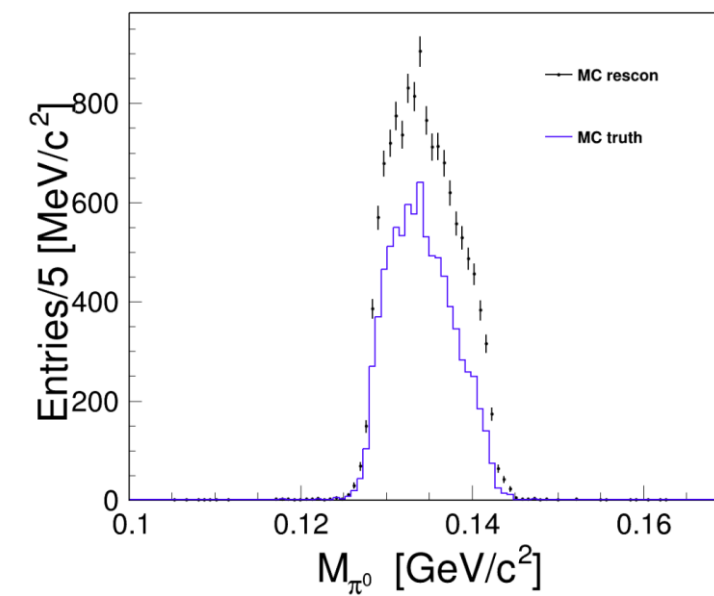
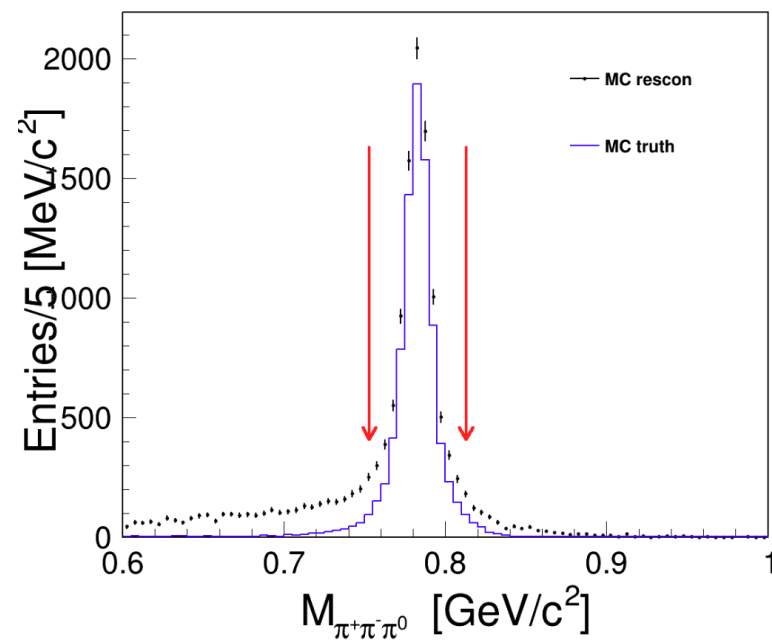
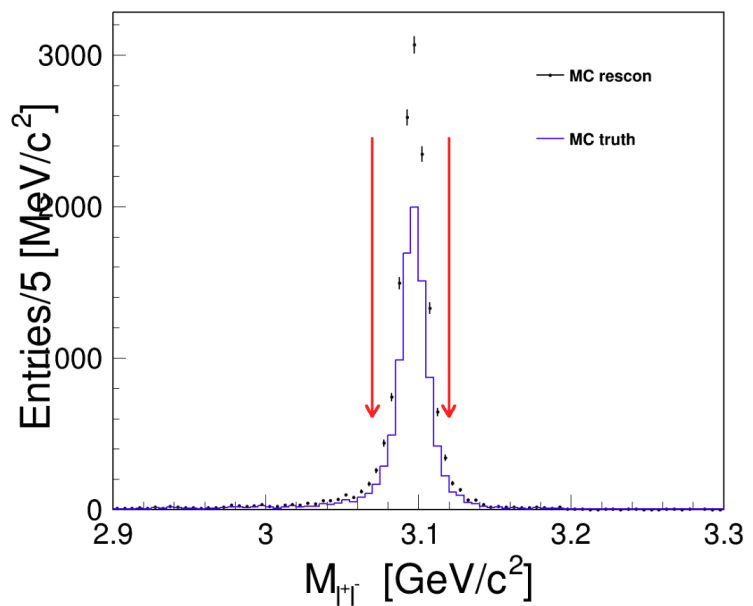
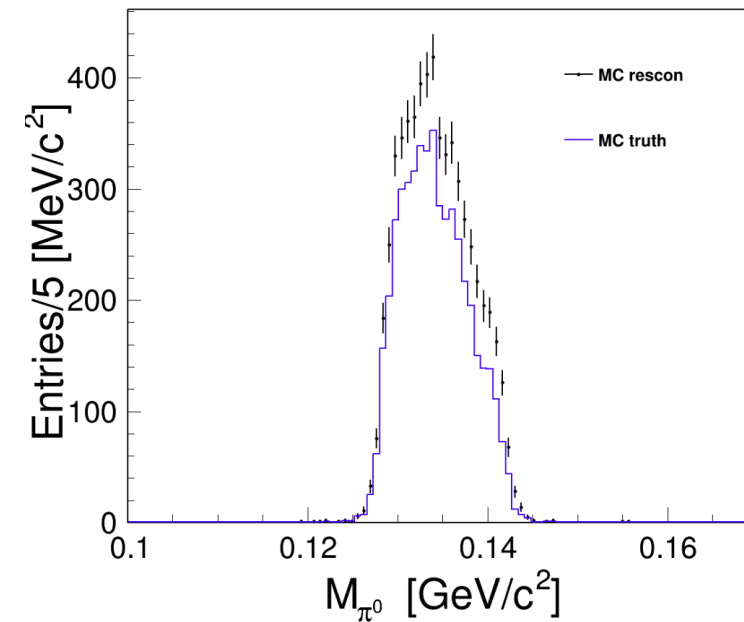
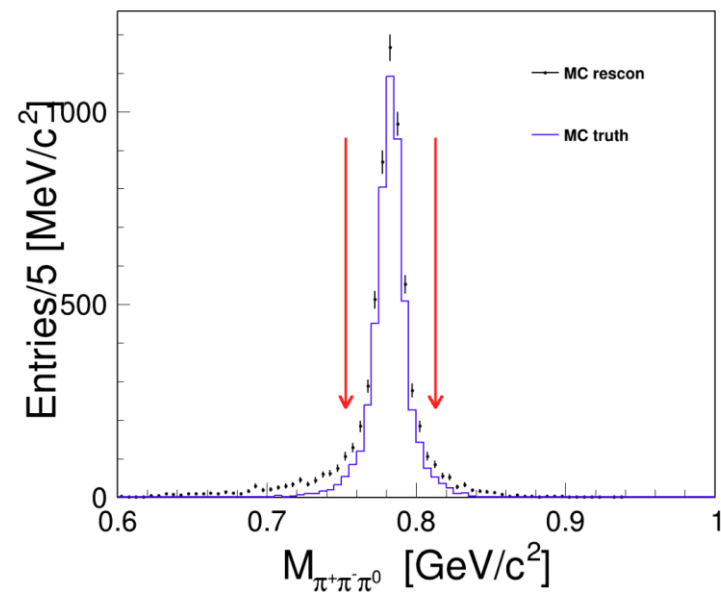
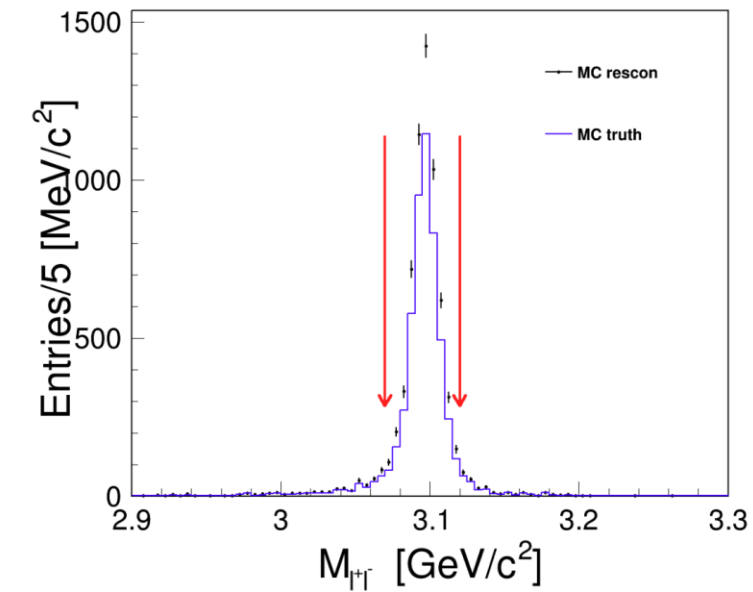
$\omega J/\psi$

- Charged tracks
 - $|dr| < 1 \text{ cm}, |dz| < 5 \text{ cm}$ and $p_t > 0.1$
- Particle Identification
 - $\text{muIDBelle} > 0.2$ for one μ
 - $\text{eIDBelle} > 0.7$ for one 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
 - $E_\gamma > 50 \text{ MeV}$
 - $\text{ECLtrackmatch} != 1$
- ω
 - $573 \text{ MeV}/c^2 < M_{\pi^0\pi^+\pi^-} < 813 \text{ MeV}/c^2$
 - 4+1C fit (kinematic+pi0 mass)

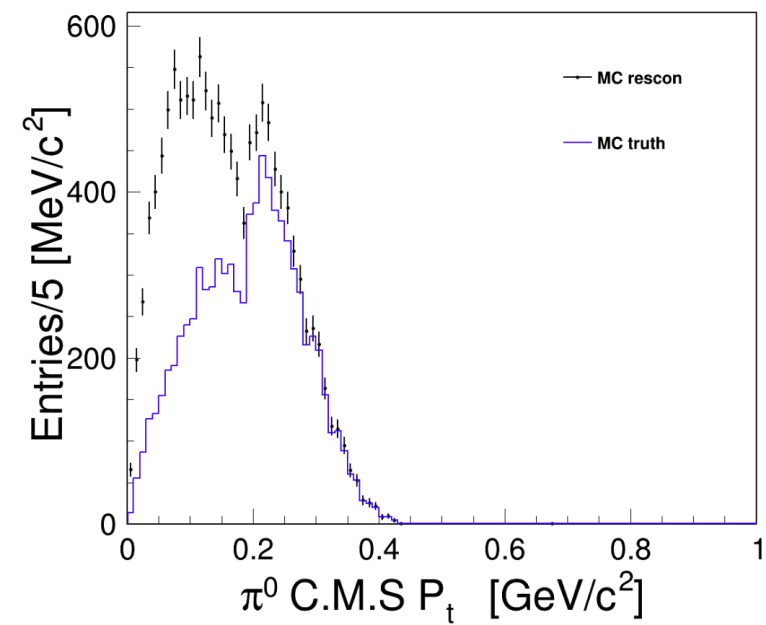
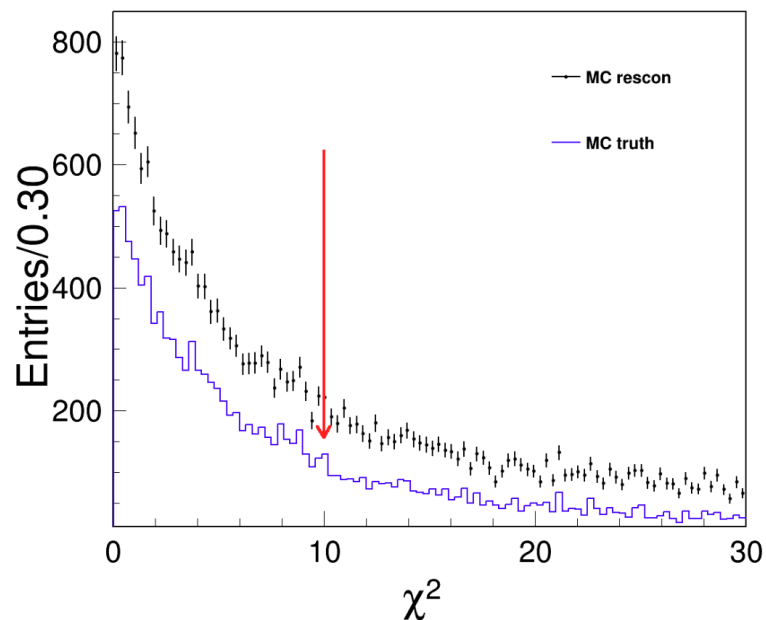
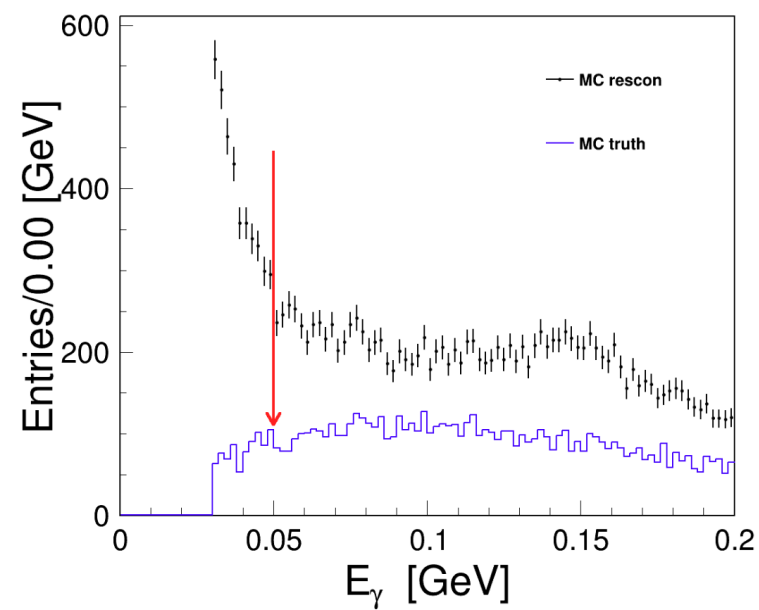
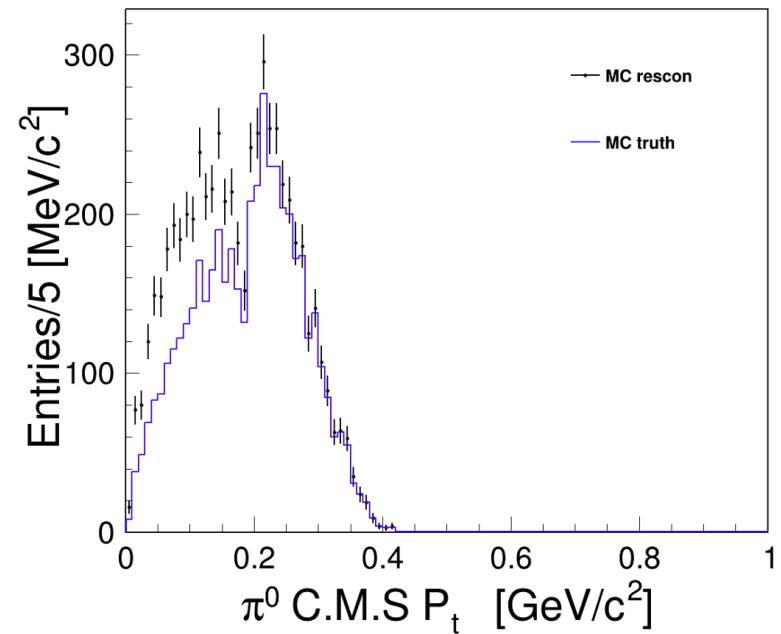
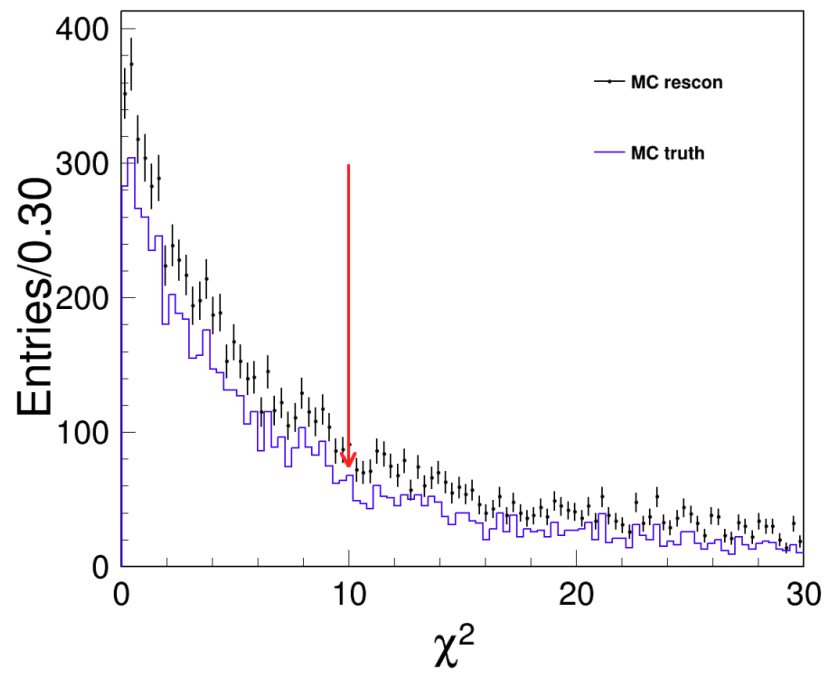
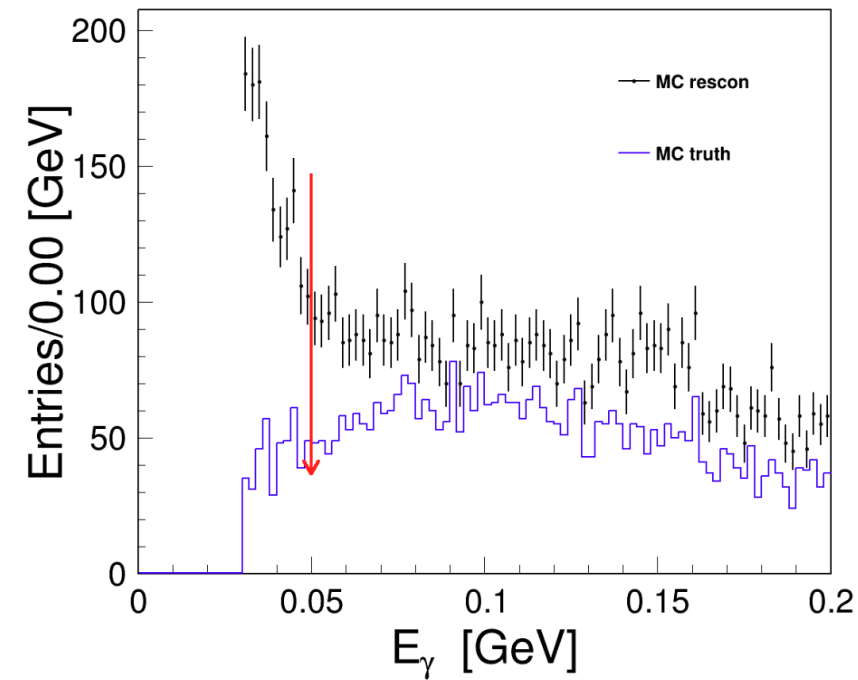
- Jpsi
 - $3.07 \text{ GeV}/c^2 < M_{l-l^+\pi^-} < 3.12 \text{ GeV}/c^2$
- $||M_{\ell^+\ell^-} - M_{\ell^+\ell^-\pi^+\pi^-} - 0.589| > 0.01 \text{ GeV}/c^2$.
- $M_{Rec}^2 > 10 (\text{GeV}/c^2)^2$
- $P_T^* < 0.1 \text{ GeV}/c$ for $\omega J/\psi$ system.



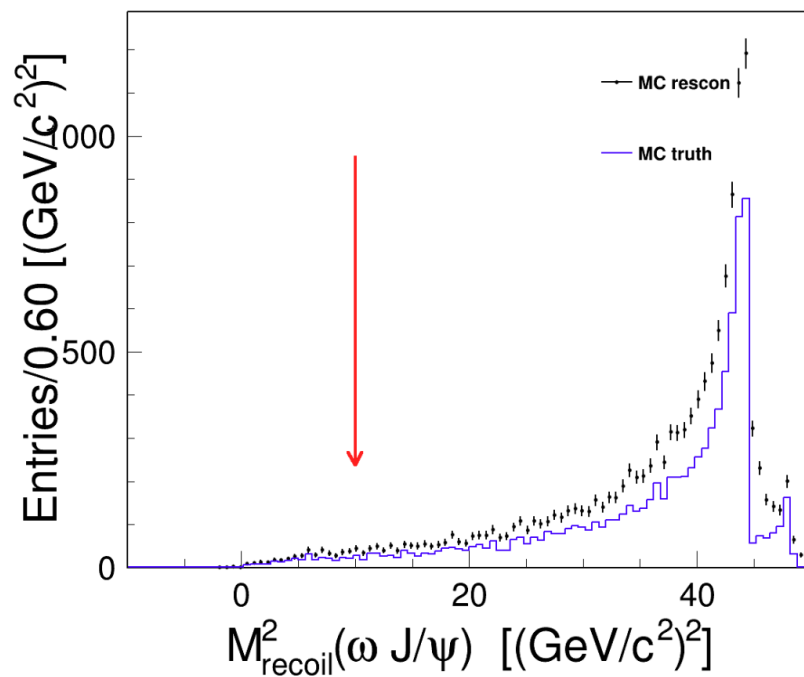
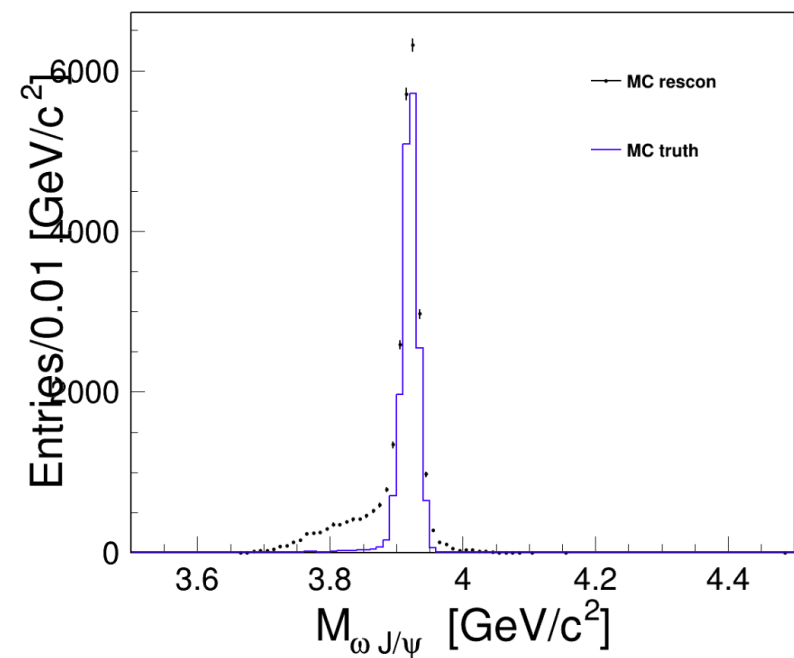
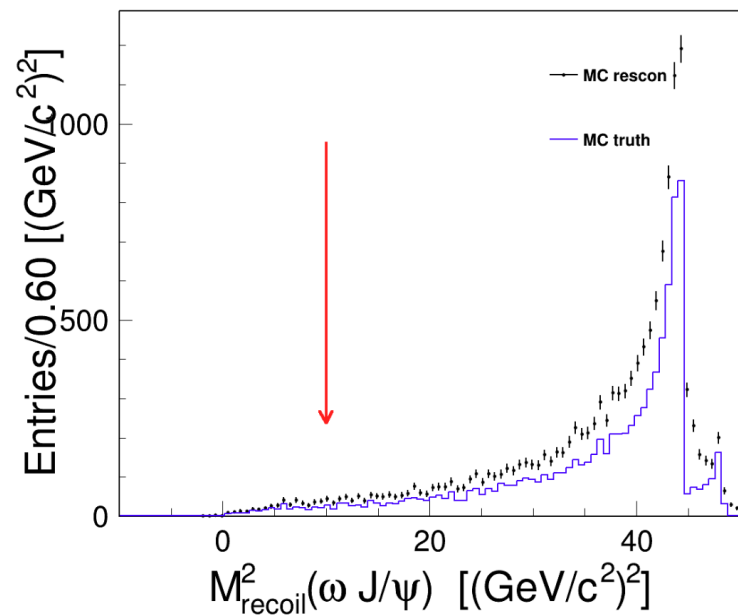
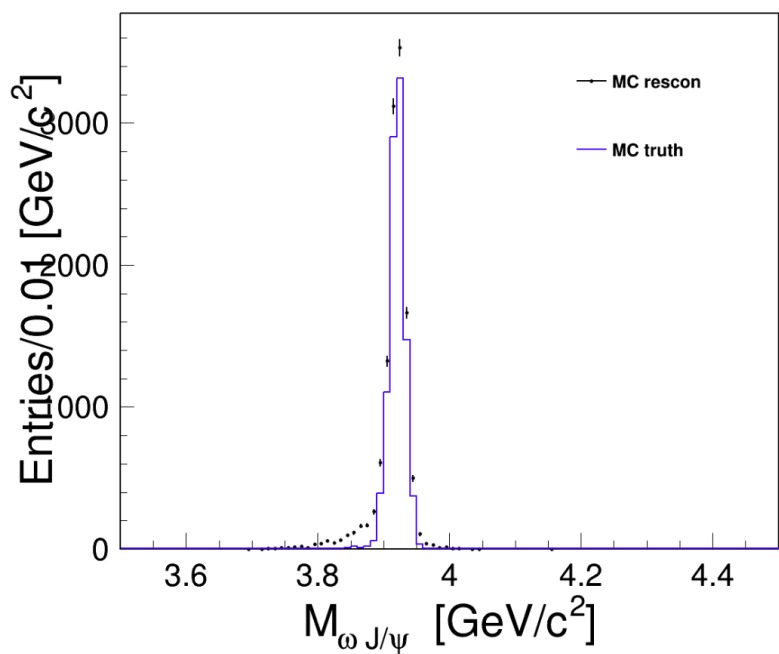
$\omega J/\psi$ first row with Pt cut second without Pt cut



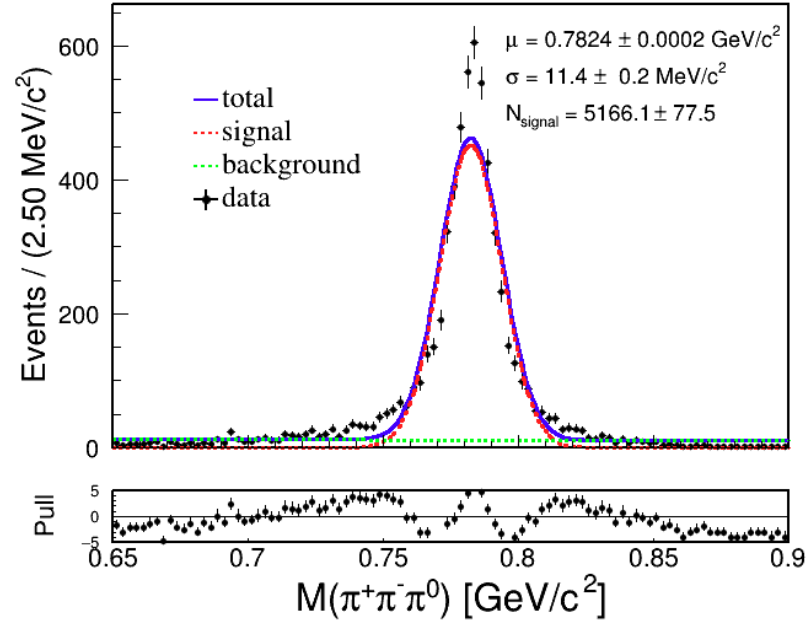
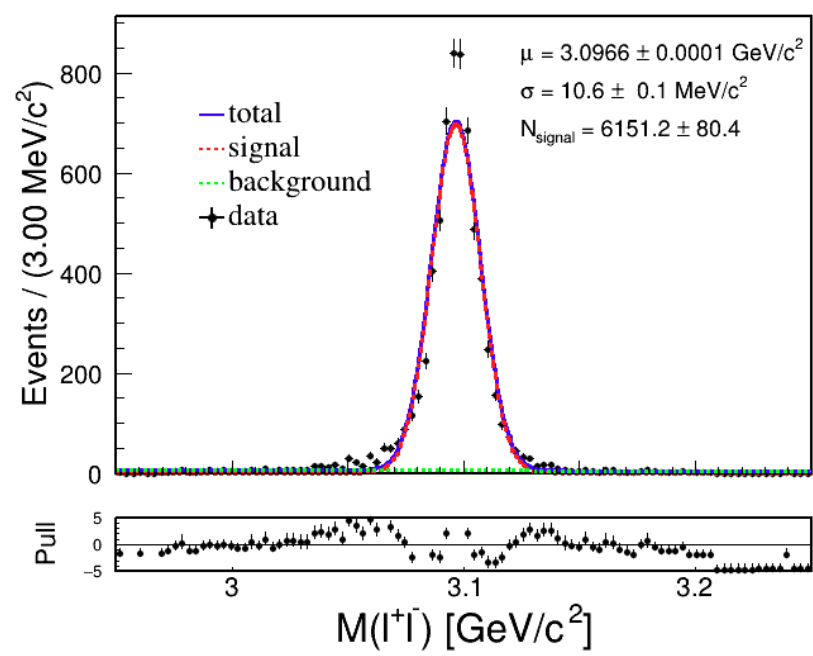
$\omega J/\psi$ first row with Pt cut second without Pt cut



$\omega J/\psi$ first row with Pt cut second without Pt cut



Massfit



$\omega J/\psi$ first row with Pt cut second without

ε : @3922

Add Pt cut truth: 5.4%

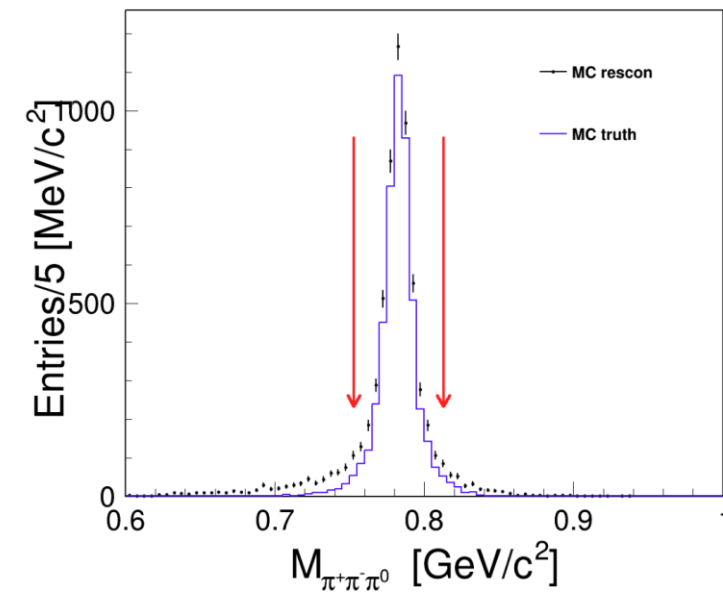
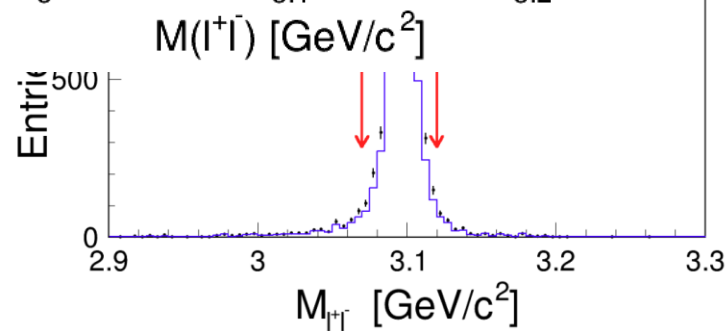
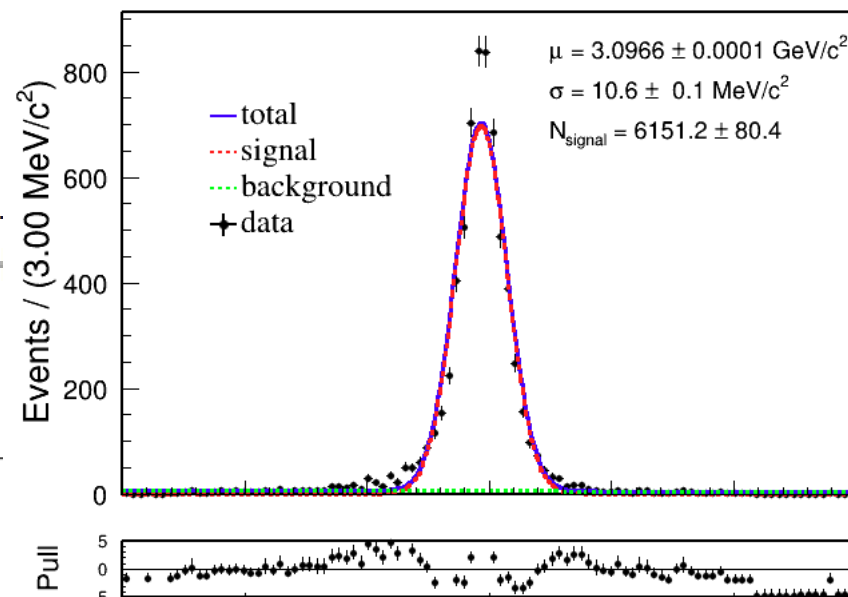
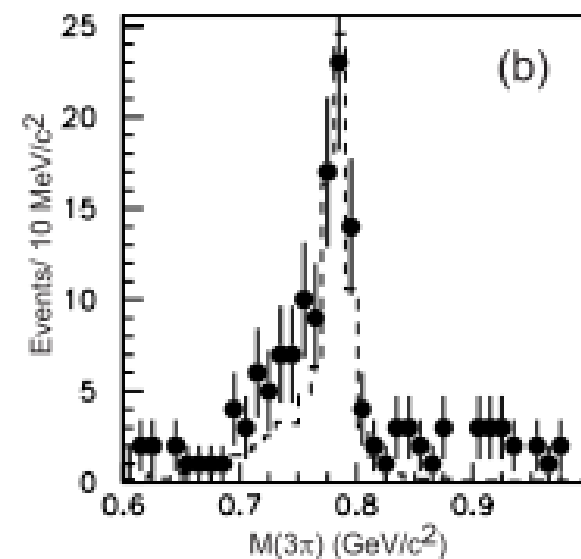
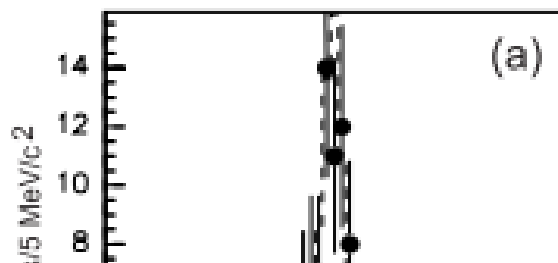
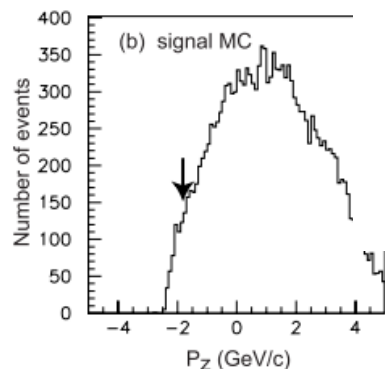
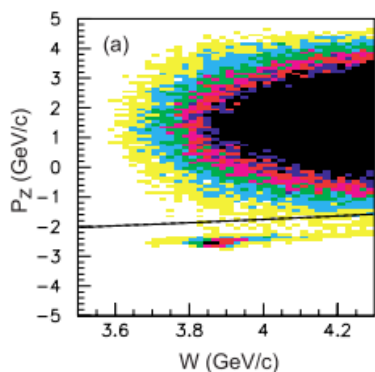
Add Pt cut MC: 6.7%

No Pt cut truth: 9.6%

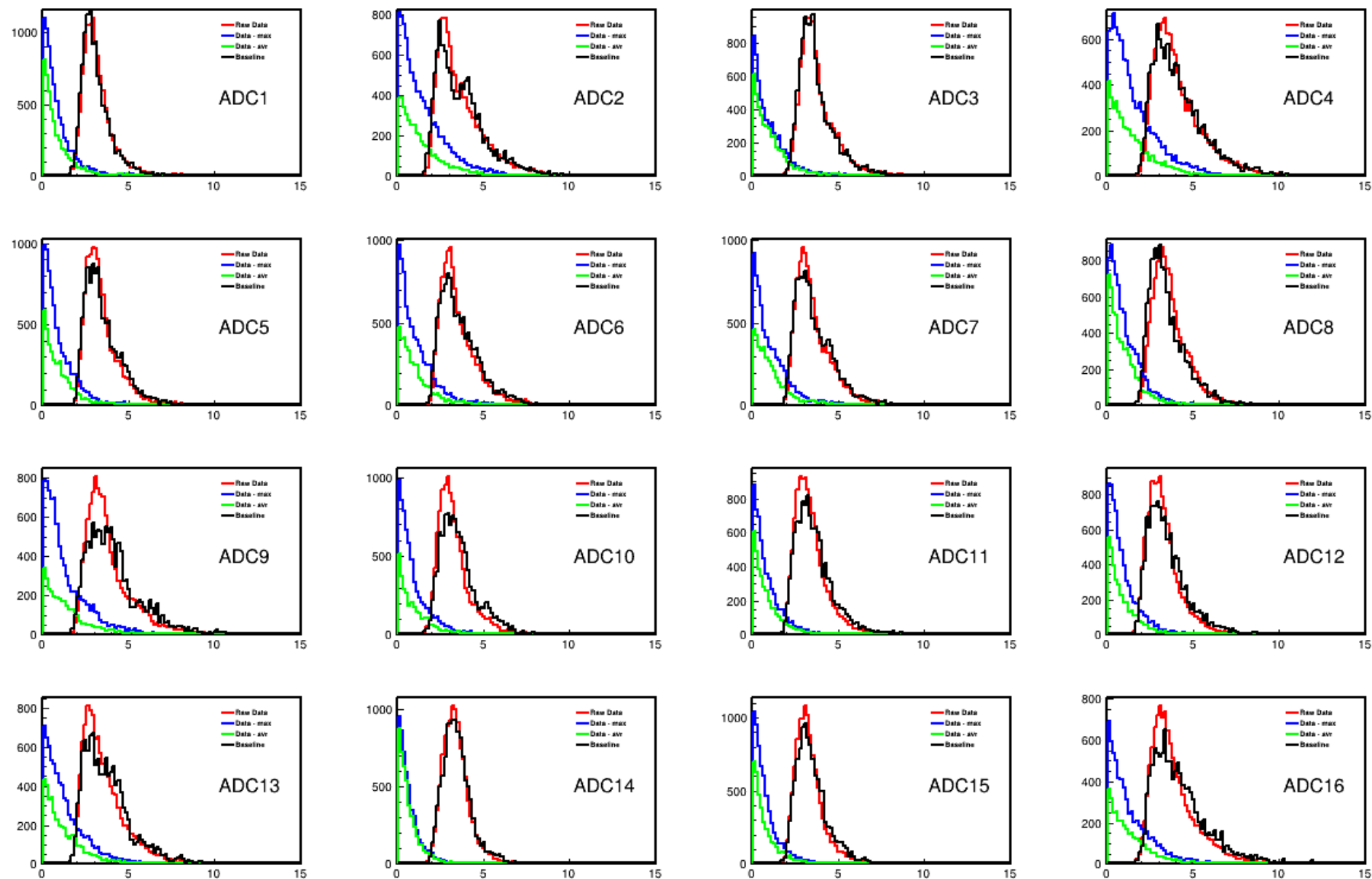
No Pt cut MC: 14.8%

Previous : 1.85%

$$P_z < (M_5^2 - 49.0 \text{ GeV}^2)/14.0 \text{ GeV}$$



Aerogel cosmic ray test



Aerogel cosmic ray test

