

# $\Delta^{++}$ and $\rho^0$ analysis of SRCs with a Real Photon Beam

May 18, 2021

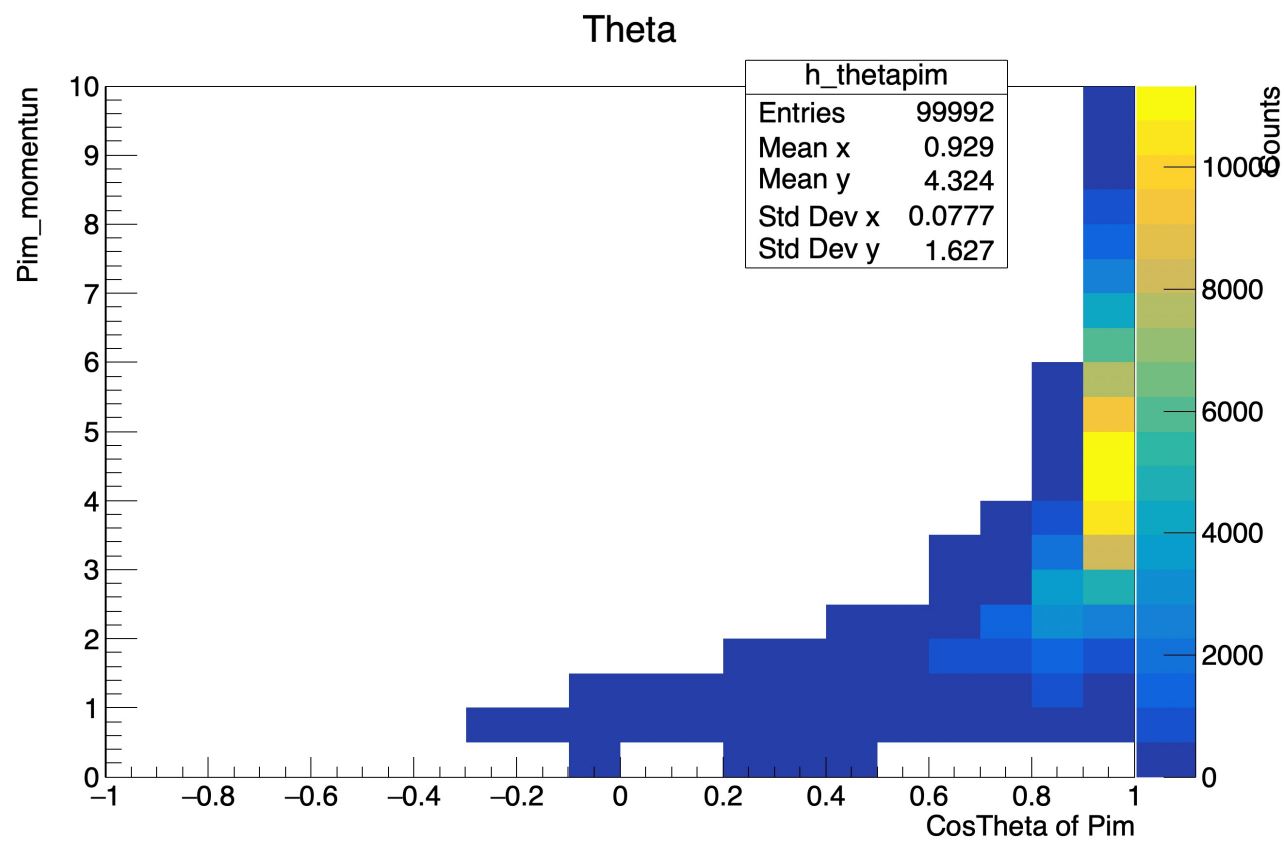
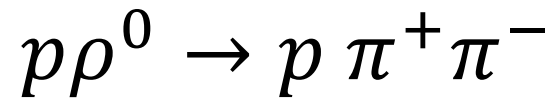
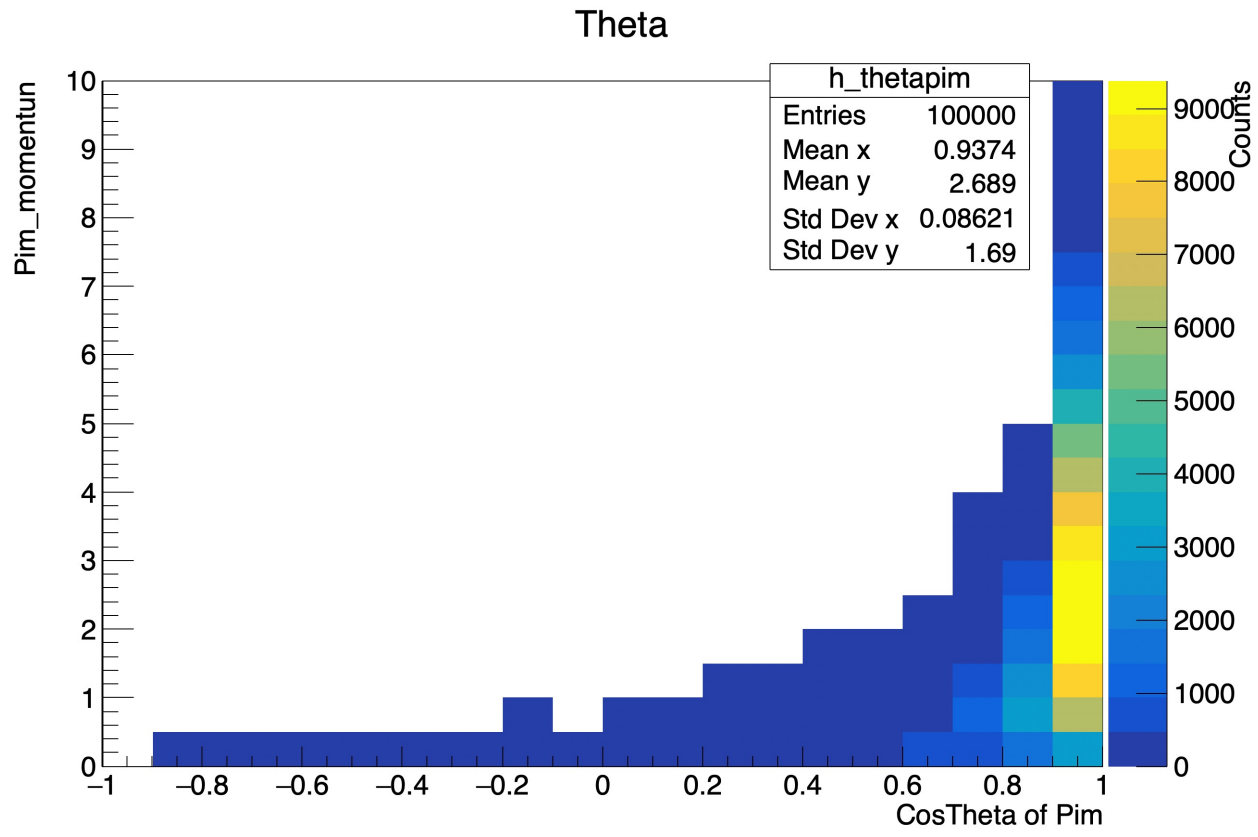
Phoebe Sharp

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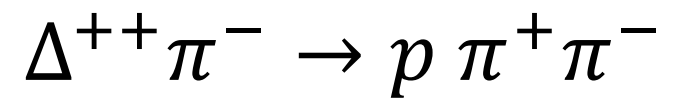
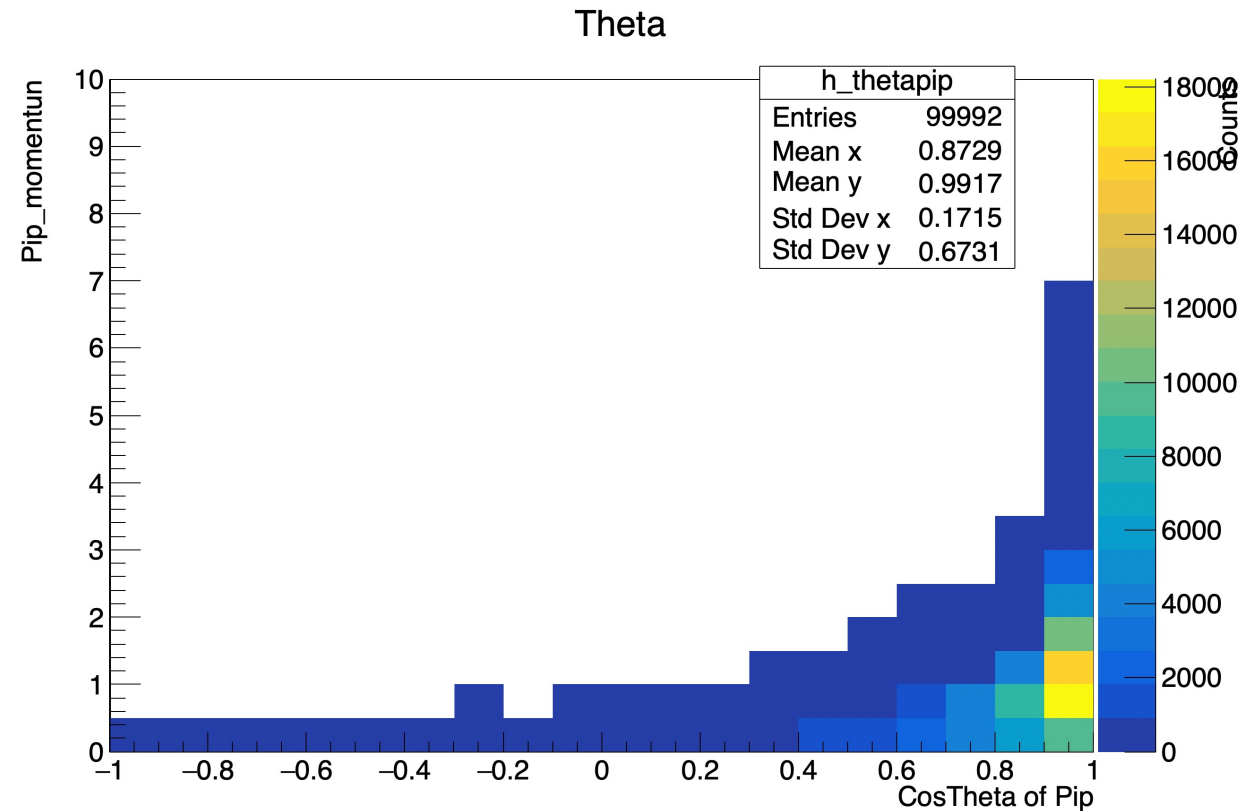
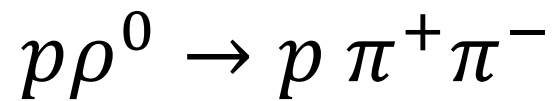
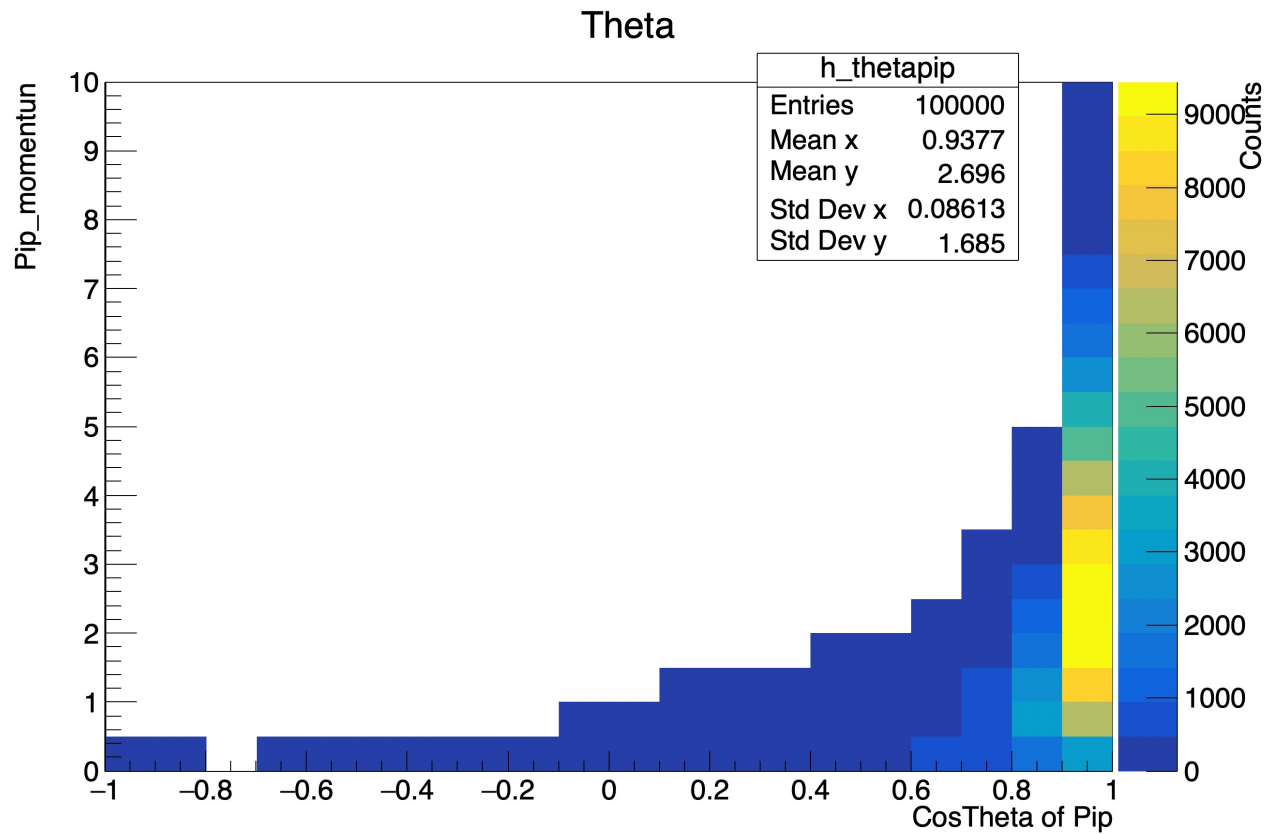
# Methods

- $\gamma p \rightarrow \rho^0 p \rightarrow \pi^- \pi^+ p$
- $\gamma p \rightarrow \Delta^{++} \pi^- \rightarrow \pi^+ p \pi^-$
  
- Simulated 100M events with a Helium target using GCF generator
- Resampled 100K
- $|t|$  and  $|u| > 2\text{GeV}$
- **Not** run through Geant4 yet
  - No smearing or inefficiency
  - Comparing kinematics at the generator level.

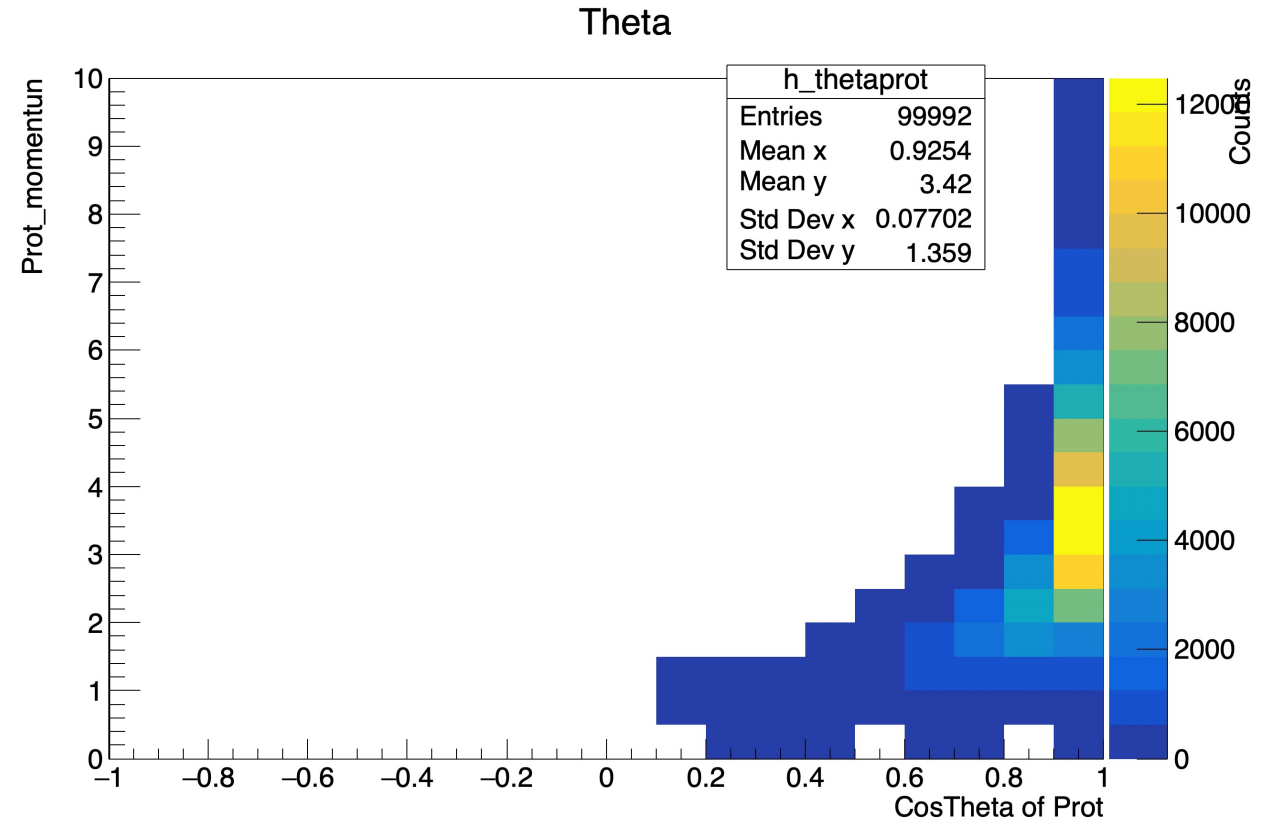
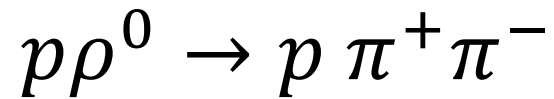
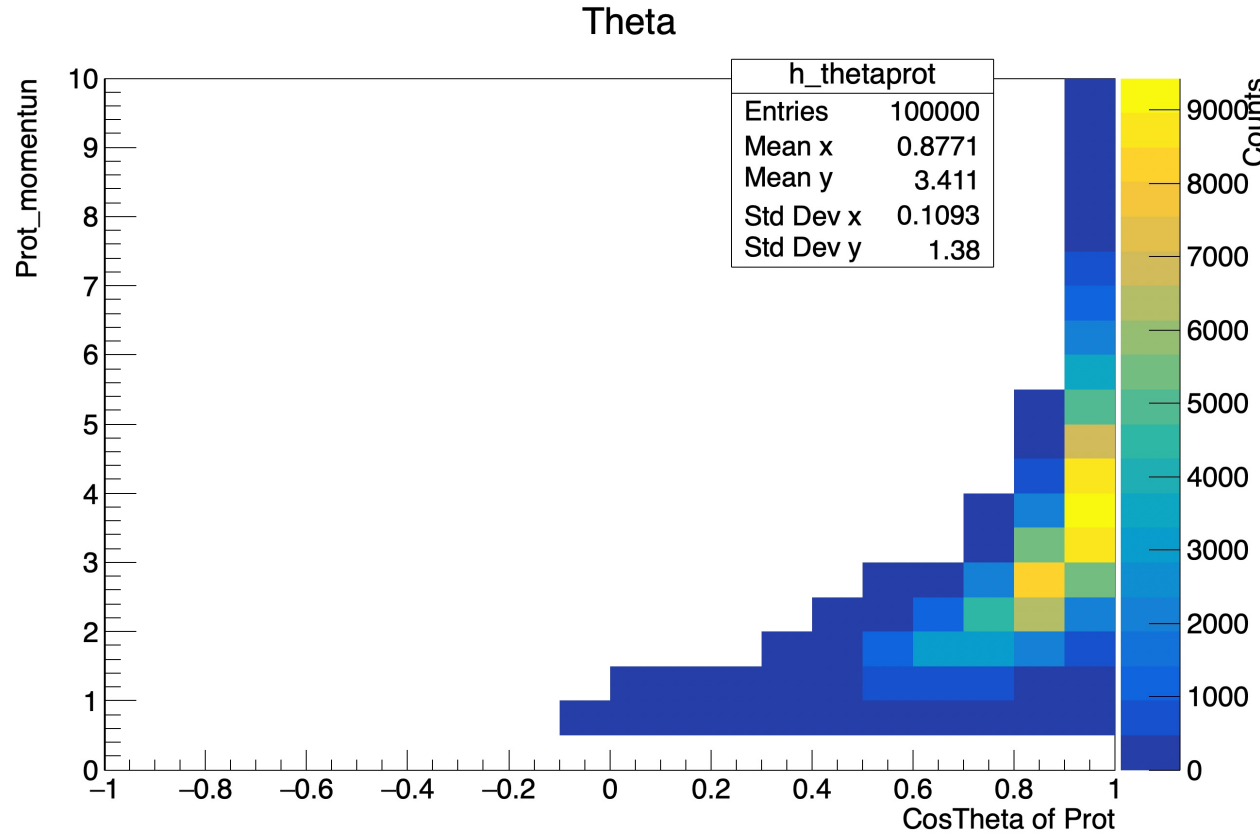
# $\pi^-$ Kinematics



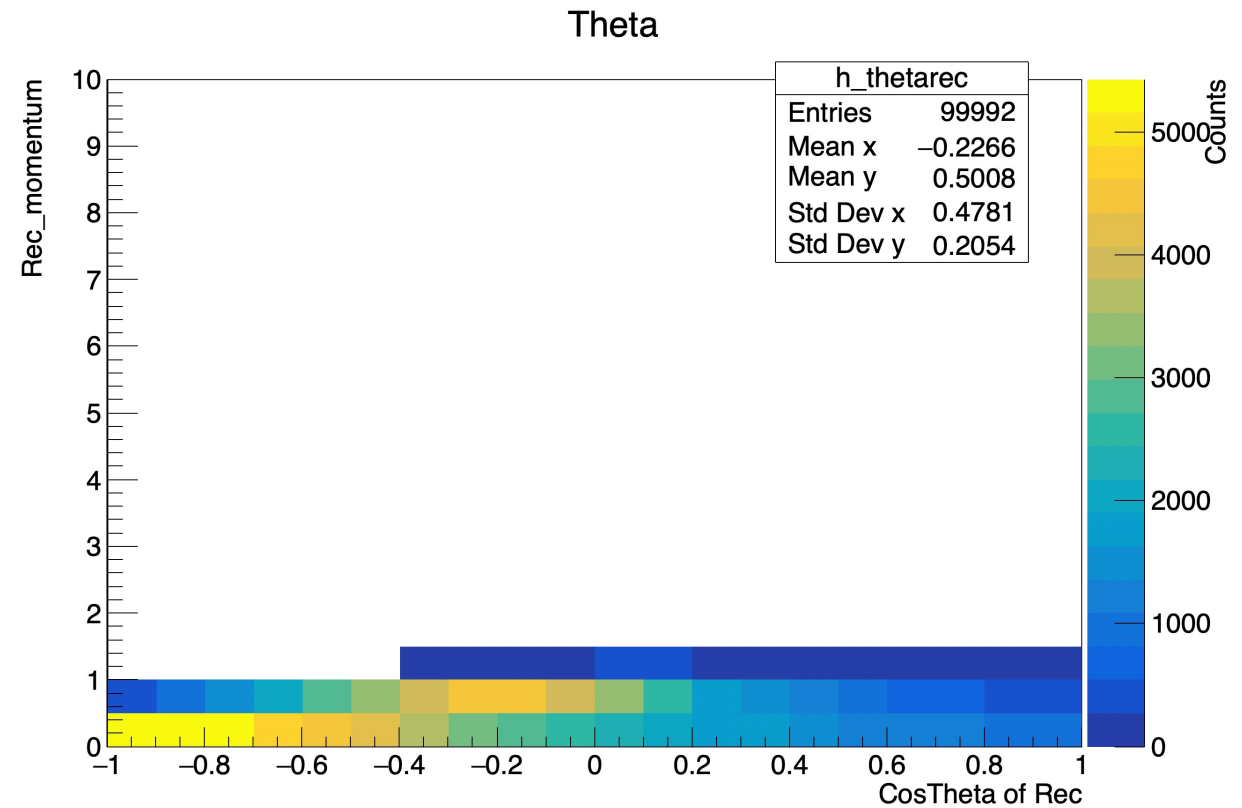
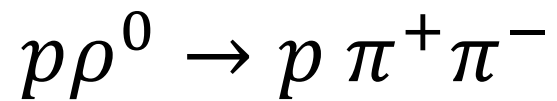
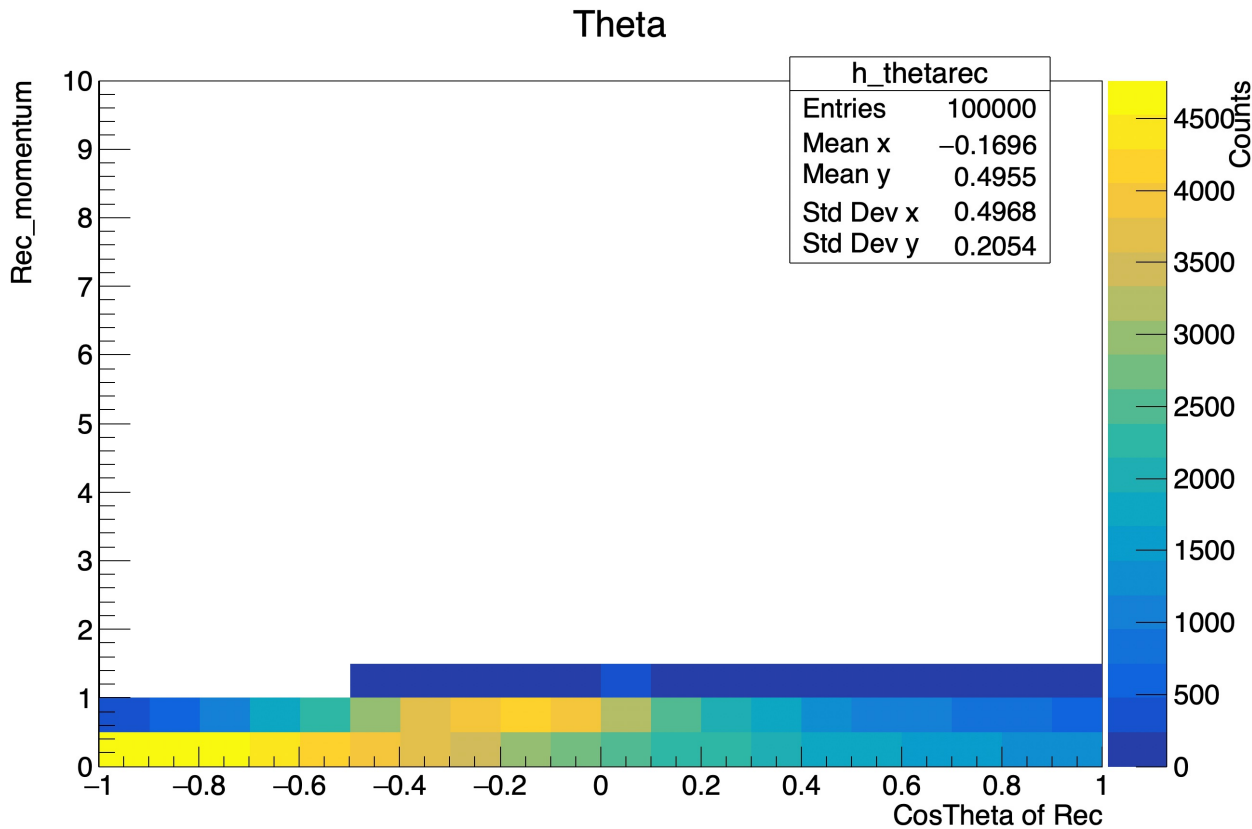
# $\pi^+$ Kinematics



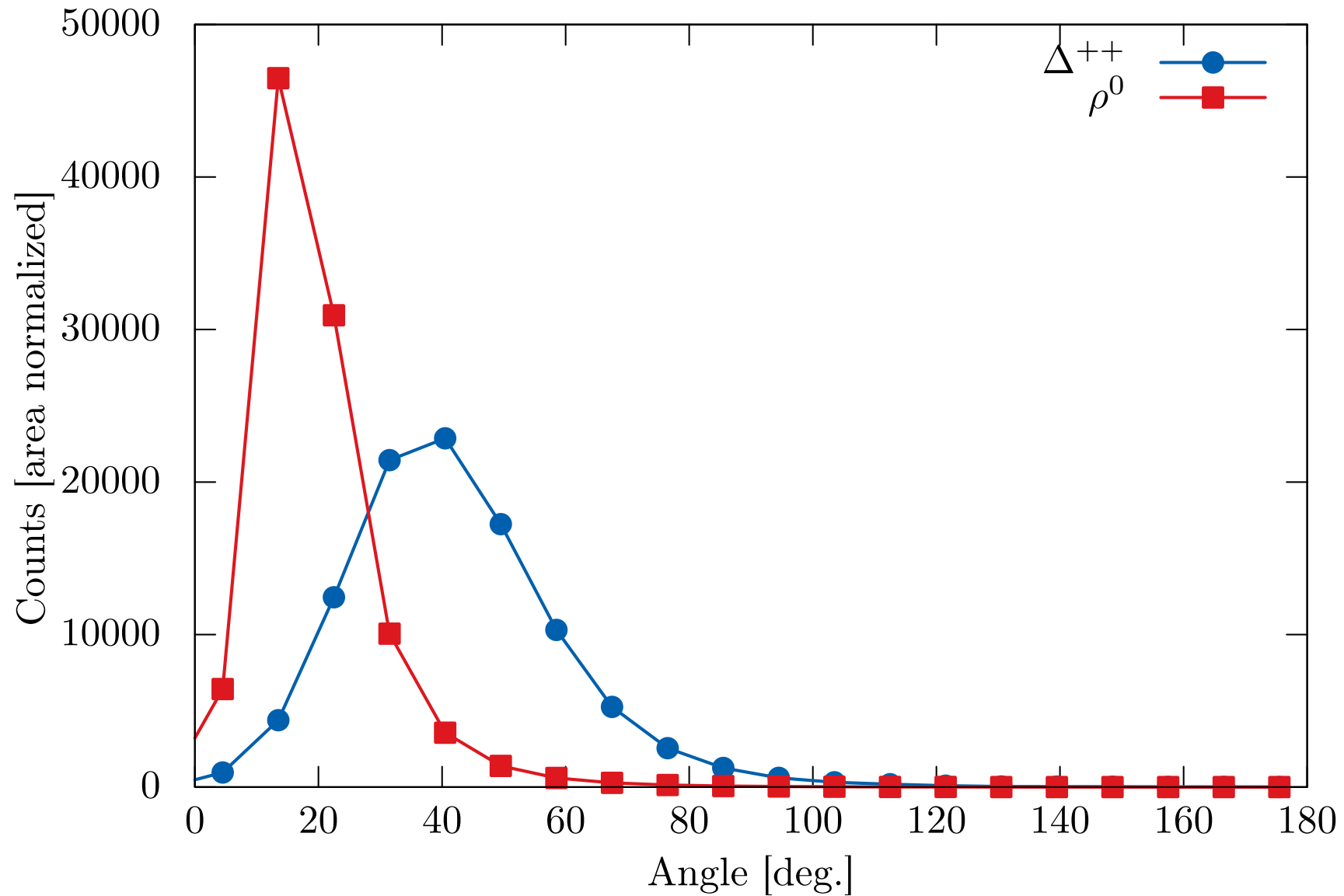
# Proton Kinematics



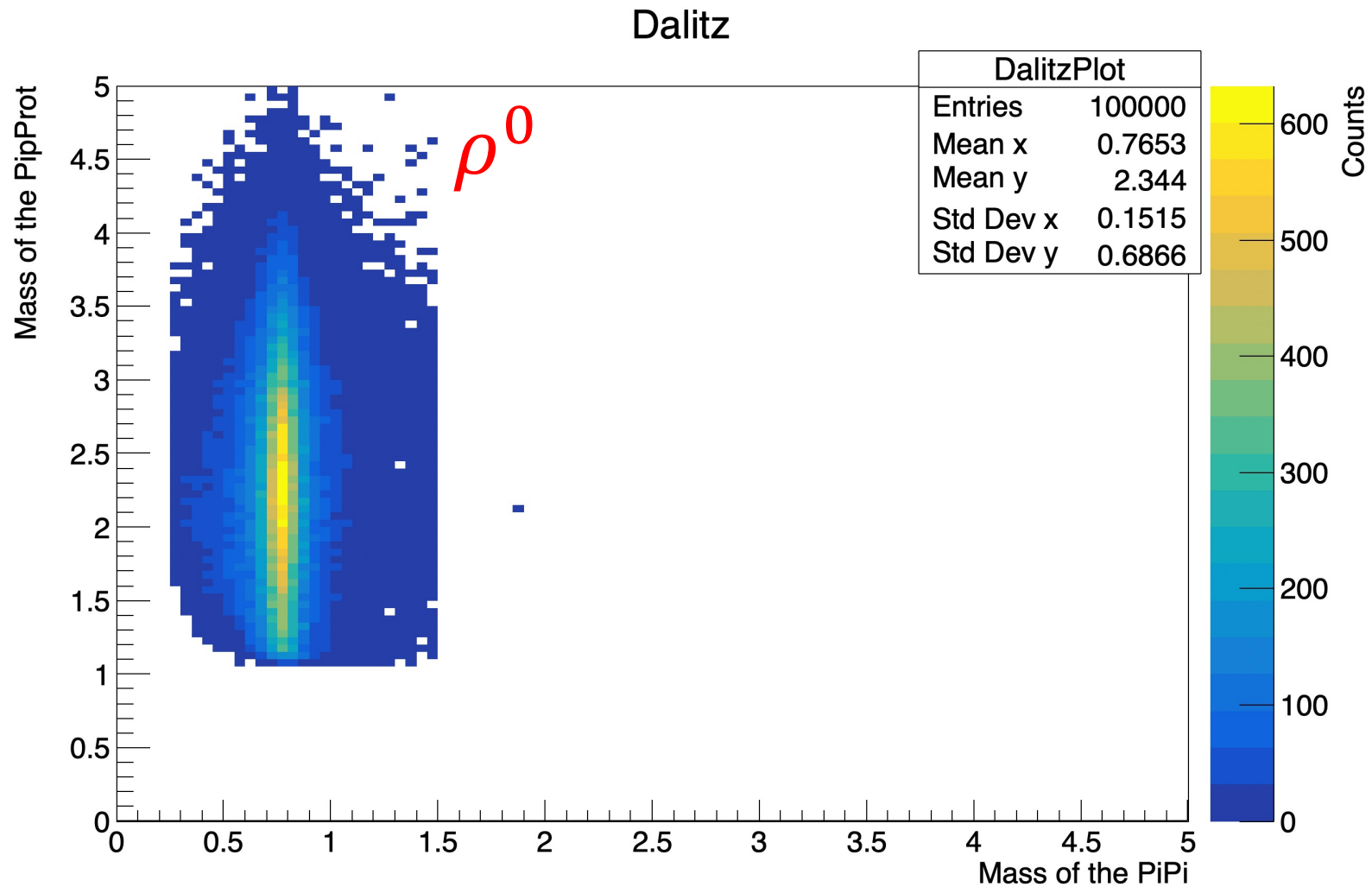
# Recoil Kinematics



# Opening angle between $\pi^-$ and $\pi^+$

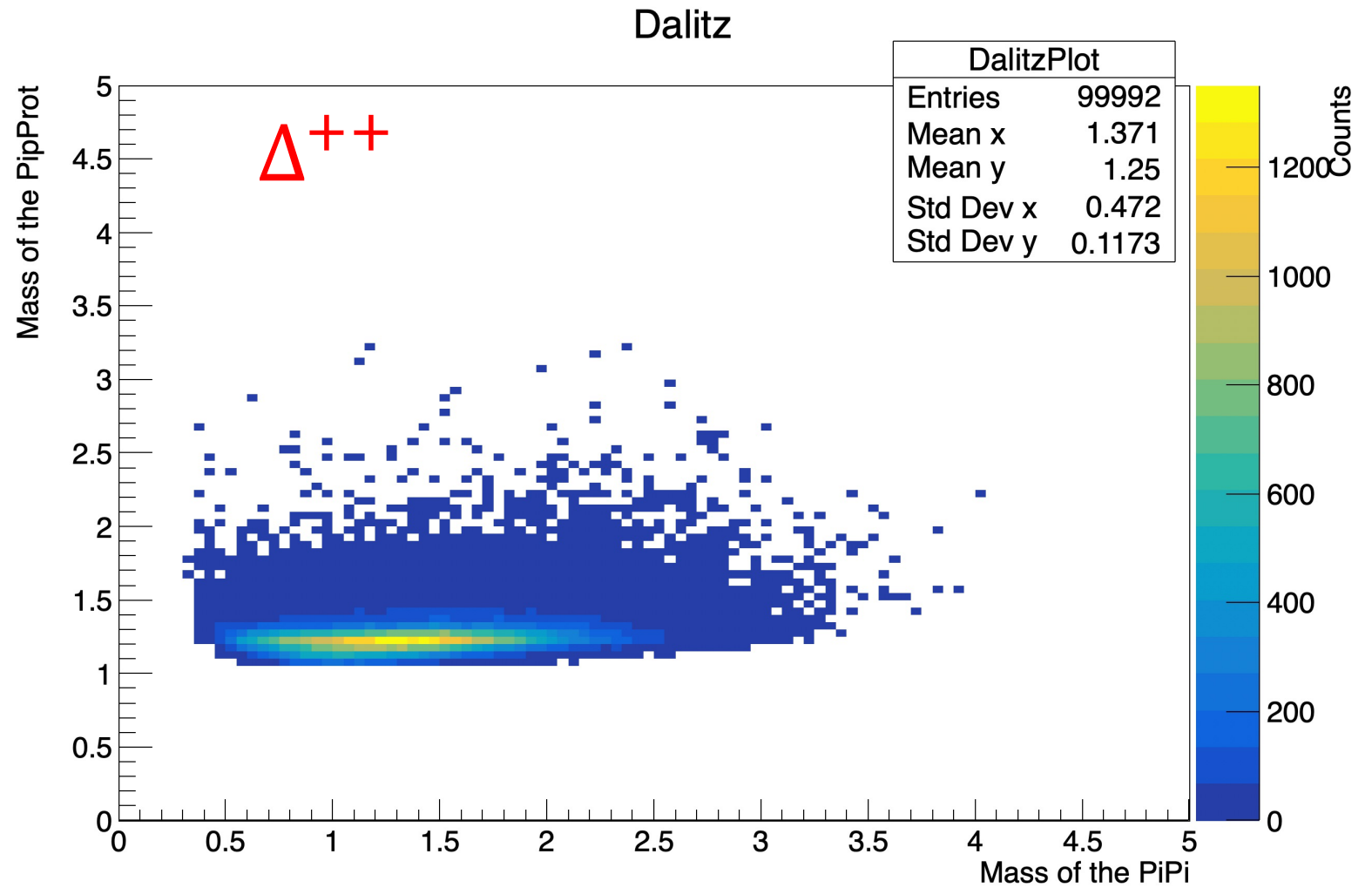
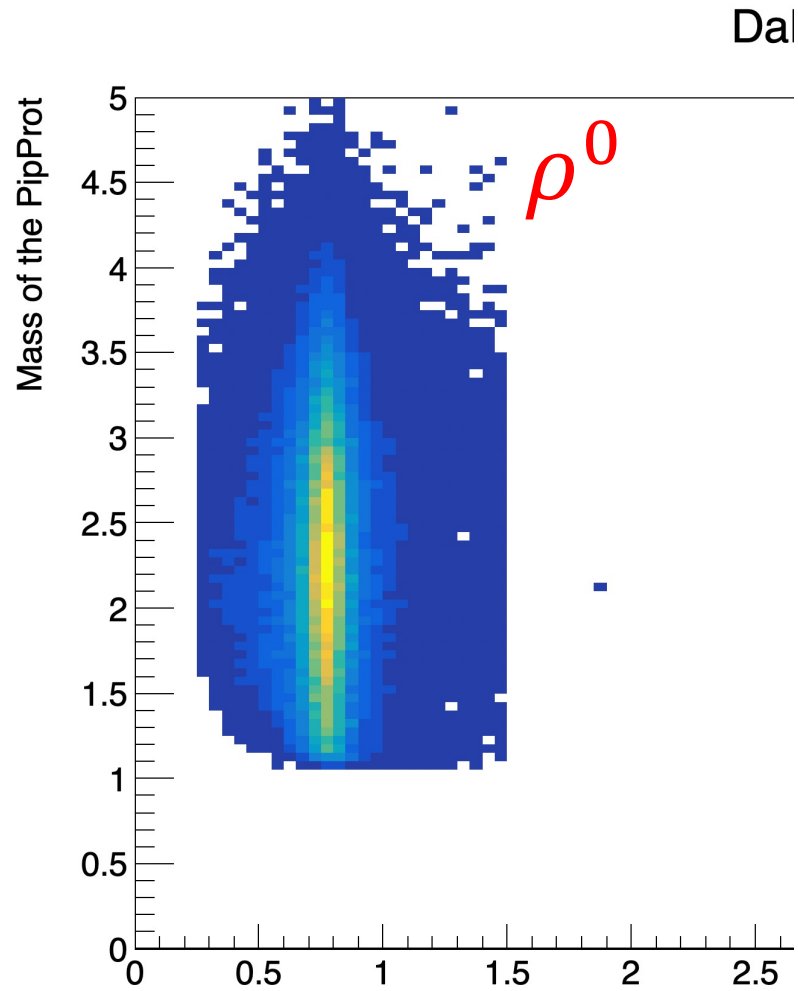


# Dalitz Plot





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