

# Detector effects - kinematic distributions

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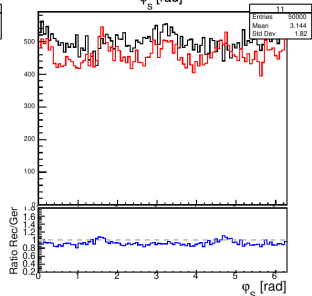
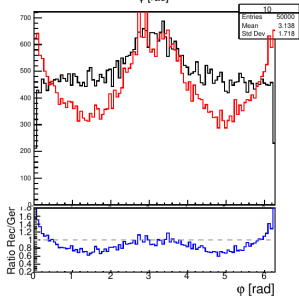
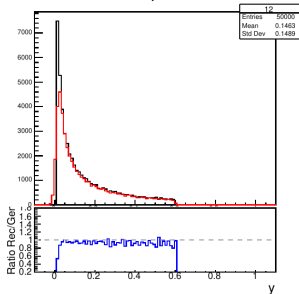
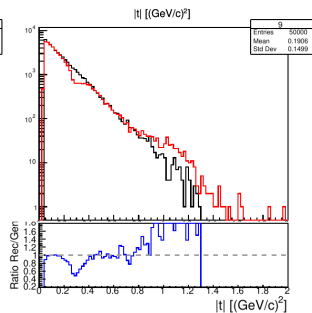
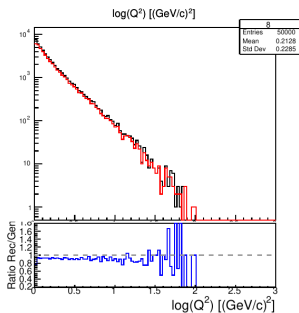
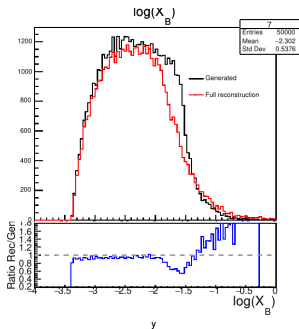
GPDs at EIC meeting  
30 November 2022

# Generated/Reconstructed samples

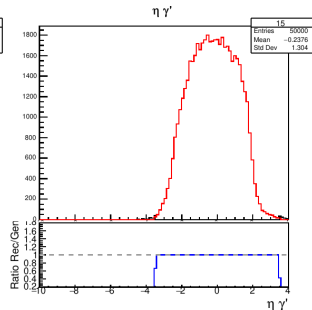
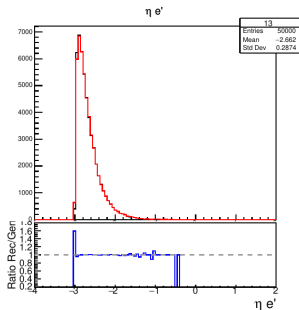
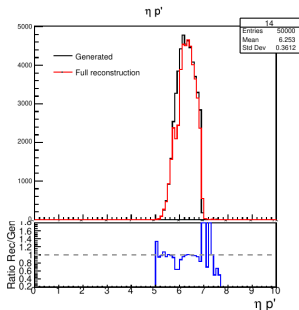
- **Generated** sample:
  - Use EpIC package
  - Protons: full simulation
  - Photons/electrons: fast simulation
  - Radiative corrections took into account for these tests
- **Reconstructed** sample:
  - Protons: true reconstruction
  - Photons/electrons: "Faux" reconstruction
    - only energy reconstruction from calorimeter and general acceptance cuts
- **Tested settings:**
  - Pure DVCS with  $10 \times 100$  GeV
  - $\epsilon_{RC} = 10^{-2}$

Particle	$N_{\text{gen}}$	$N_{\text{rec}}$	Global acceptance
$p'$	$5 \cdot 10^4$	46139	0.92278
$e'$	$5 \cdot 10^4$	$5 \cdot 10^4$	1
$\gamma'$	$5 \cdot 10^4$	49834	0.99668
All	$5 \cdot 10^4$	46006	0.92012

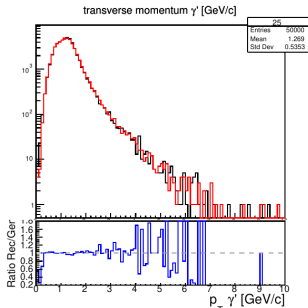
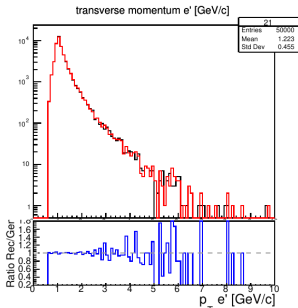
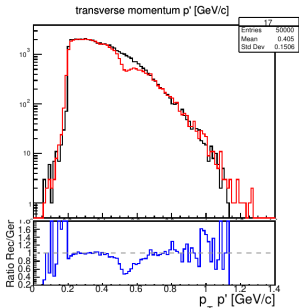
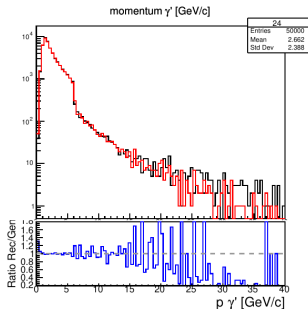
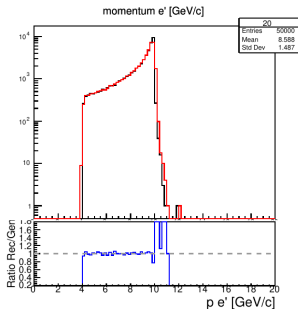
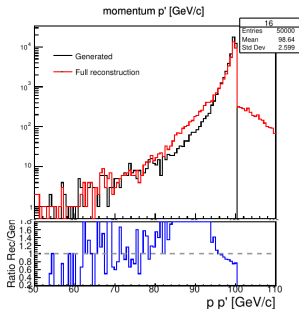
# Different kinematic variables



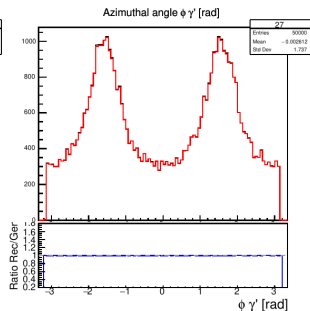
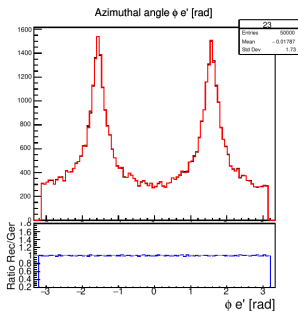
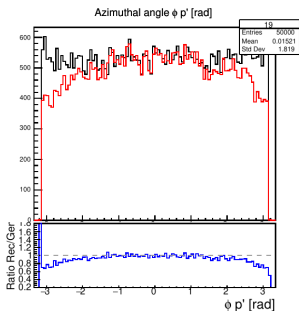
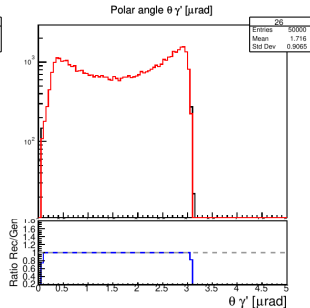
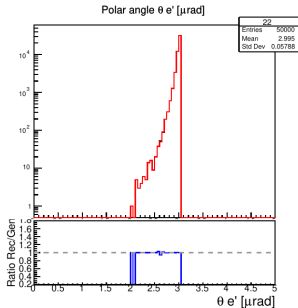
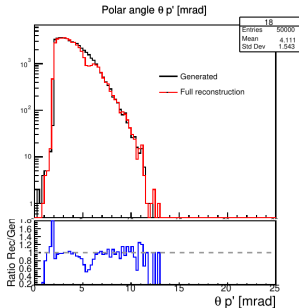
# Pseudorapidity



# Momentum / Transverse momentum



# Angular variables



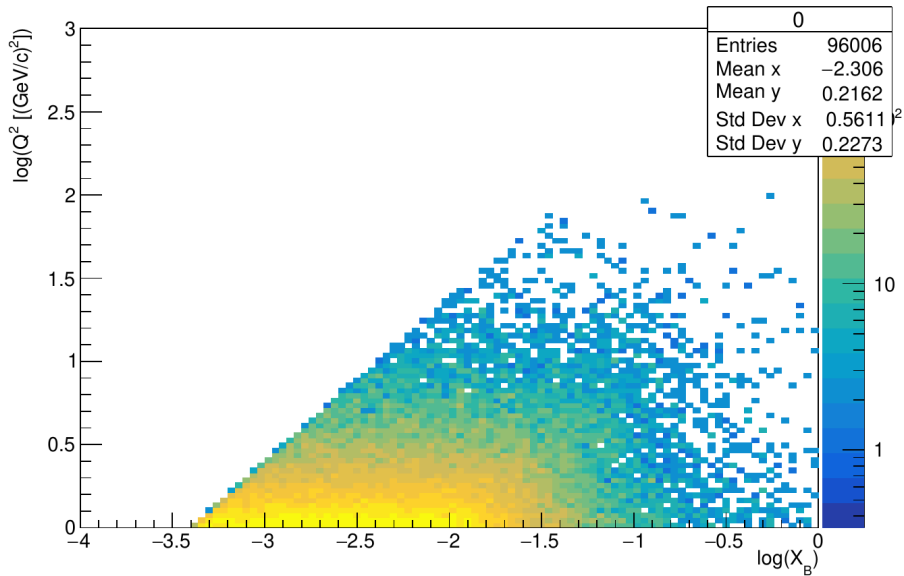
# Backups



**“You caught a virus from your computer and we had to erase your brain. I hope you’ve got a back-up copy!”**

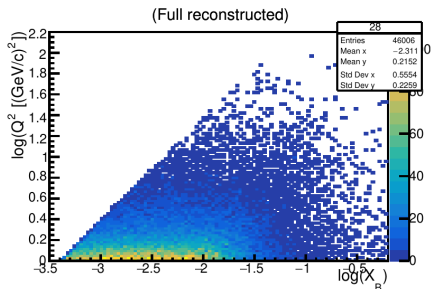
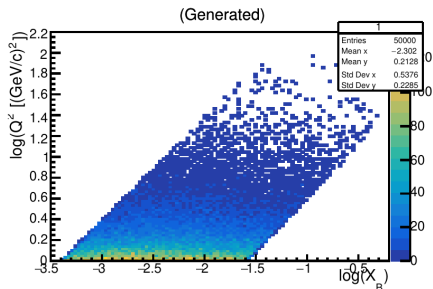
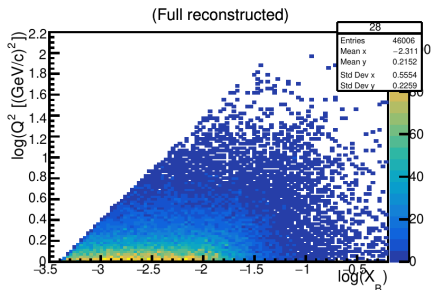
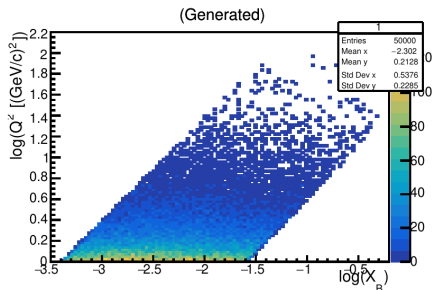
$x_B$  vs  $Q^2$

xB vs. Q2

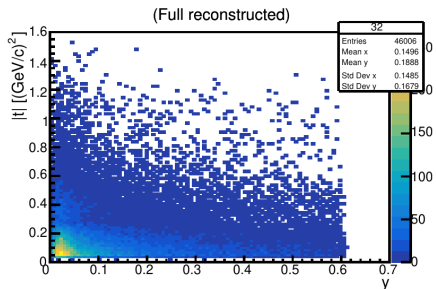
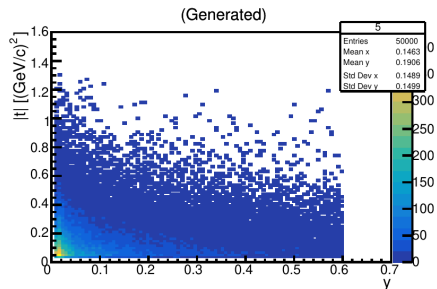
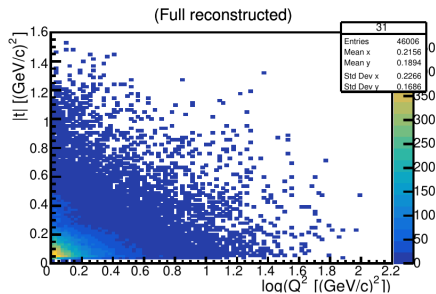
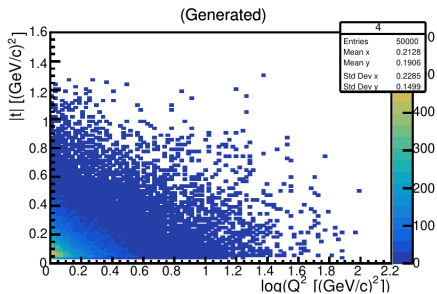




## 2D distributions: $x_B$ vs $Q^2$ , $x_B$ vs $t$



# 2D distributions: $Q^2$ vs $t$ , $y$ vs $t$



# 2D distributions: $Q^2$ vs $y$ , $x_B$ vs $y$

