

# EIC Diff . DIS Analysis Summary

Campaign 25.12.0 (126K events)

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# Dataset and Scope

- Campaign: **25.12.0**
- Statistics: **126K events** (processed)
- Inclusive DIS kinematics (EM/DA/Sigma), diffractive variables ( $-t-$ ,  $x_L$ )

# Key Equations

$$Q^2 = -q^2, \quad q = k - k'$$

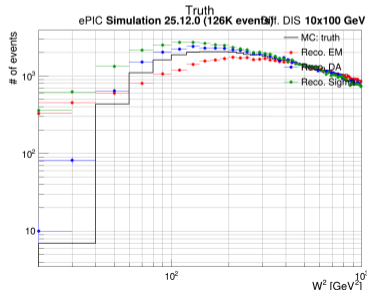
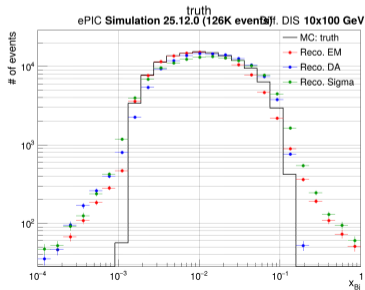
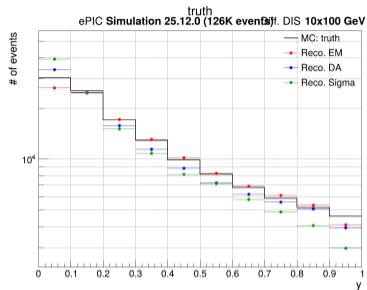
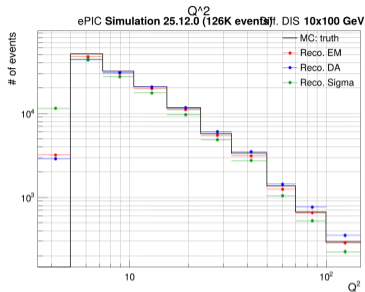
$$x_{Bj} = \frac{Q^2}{2p \cdot q}$$

$$y = \frac{p \cdot q}{p \cdot k}$$

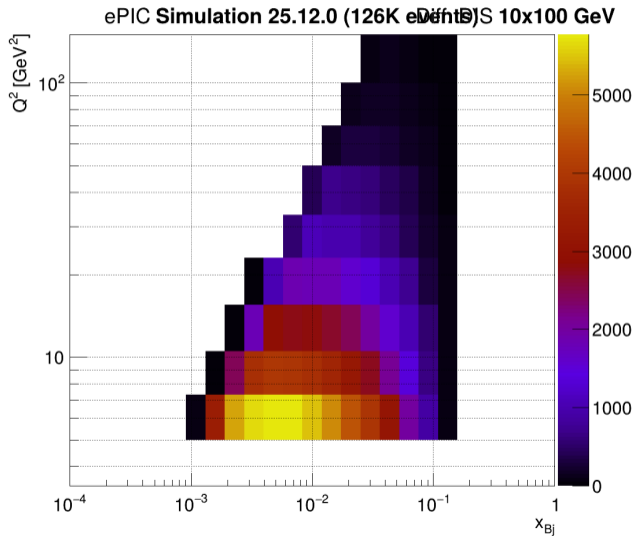
$$W^2 = (p + q)^2$$

$$|t| = |(p - p')^2|$$

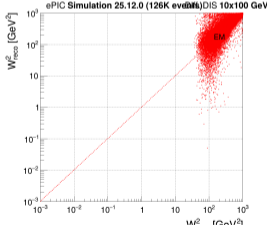
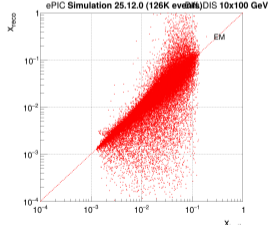
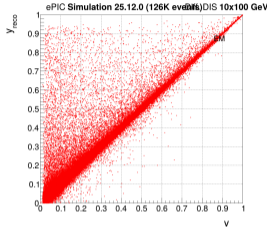
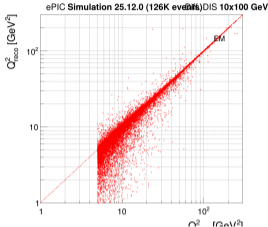
# Inclusive Kinematics: Distributions



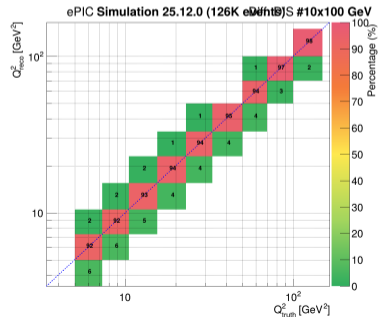
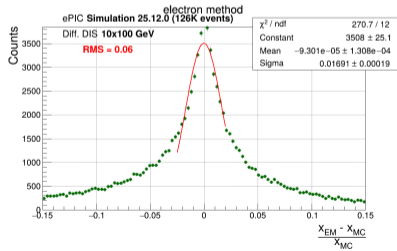
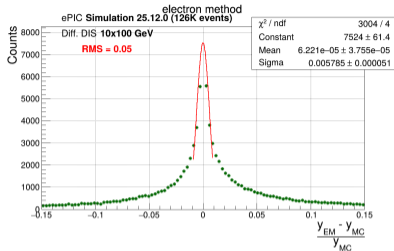
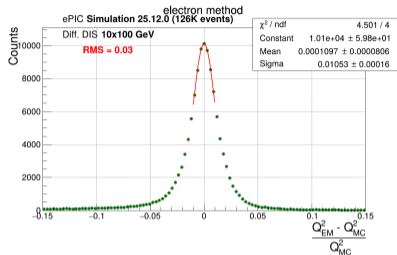
# Event Density in $x_{Bj}-Q^2$



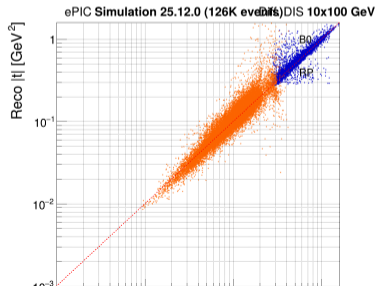
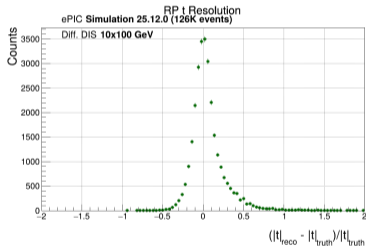
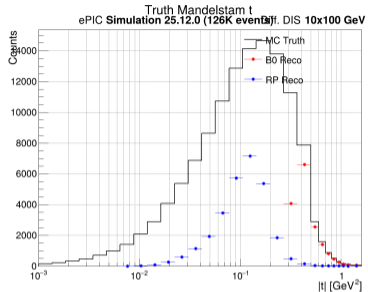
# Inclusive Correlations (Unbinned)



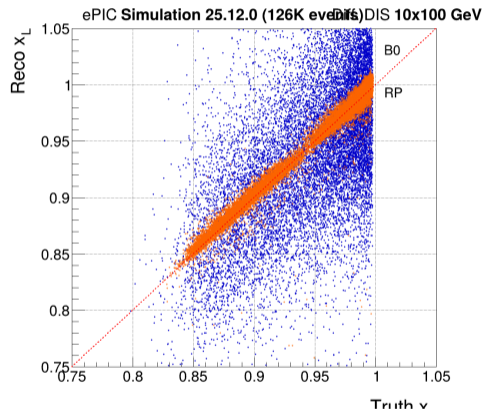
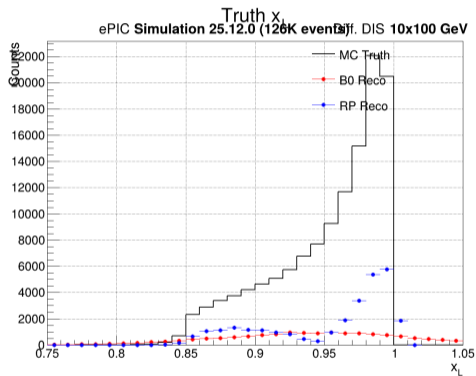
# Inclusive Resolutions



# Diffraction —t—



# $x_L$ Observables



## Next Steps

- Rest of the plots  $\beta$ ,  $x_{\text{Pom}}$ , cross section
- Systematic checks and unfolding studies
- still filling the AN
- Shorten the AN