

#### Inclusive DIS Analysis Cuts

Primary Kinematic Cuts:

• Inelasticity (y): 0.01 < y < 0.95

Lower cut removes the poorly reconstructed events; upper cut removes challenging electron finding

• Photon virtuality:  $Q^2 > 1.0 \text{ GeV}^2$ 

Can start at 2 for better quality

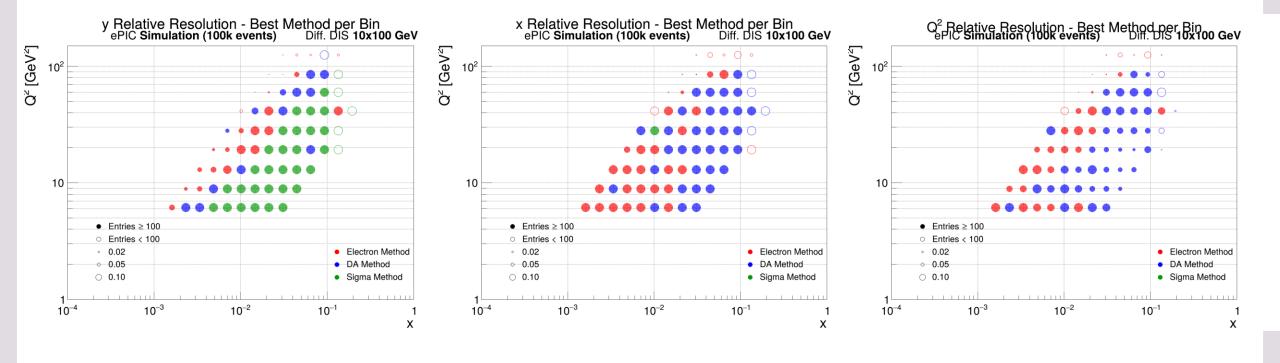
• Light cone energy:  $32 < E - p_z < 40 \text{ GeV}$ 

Lower cut removes ISR; upper cut removes poorly reconstructed

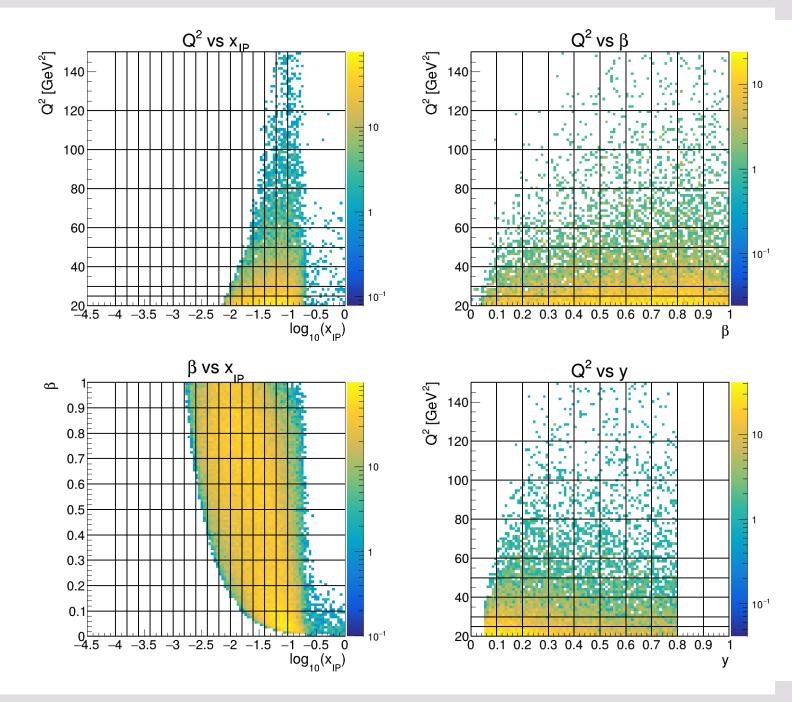
PDF impact studies:  $W^2 > 10~{
m GeV}^2$ Avoids higher-twist effects

$$M_X^2 > 4~{
m GeV}^2$$

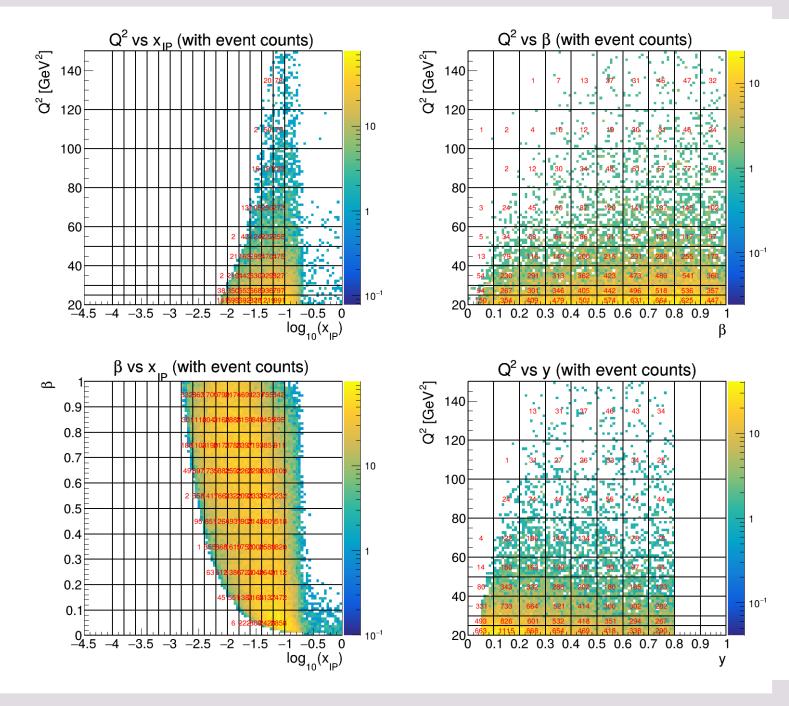
# Update of phase space plot – Inc. Variables



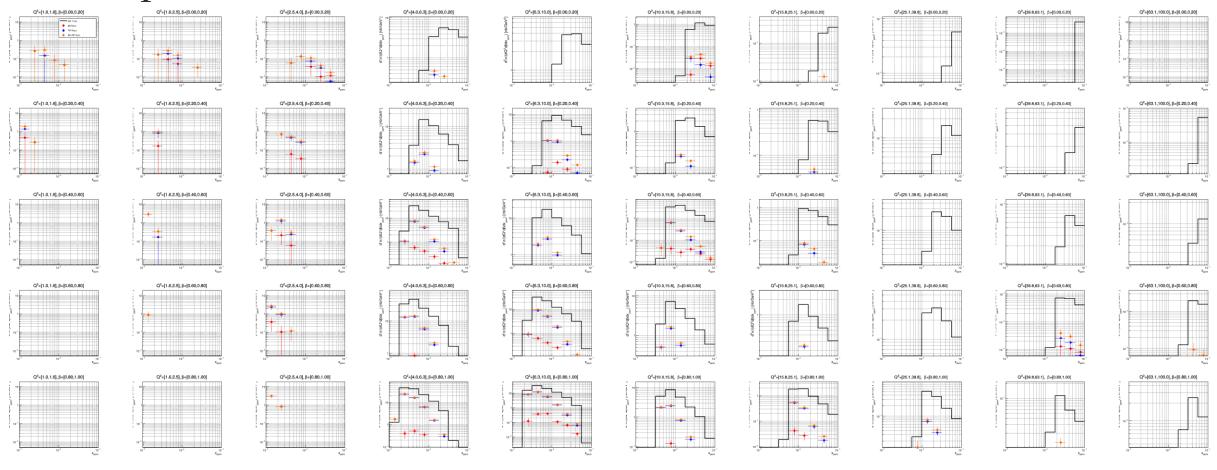
### Binning Scheme



## Binning Scheme



#### Triple differential Corss-section



Kinematic reconstructions	quantity	Reco	Truth	Response (2D)	Purity/bin migration	detector acceptance-only corrected	Unfolding/full correction
(electron,JB, DA,sigma, e-sigma)	Q2						
	х						
	у						
	dQ2/Q2						
	dx/x						
	dy/y						
	e' energy						
	e' theta						
	HFS (E-pz)						
	HFS (pT)						
Event level							
	E-pz (e'+HFS)						
	E/p for calorimeter						
	Calo clusters						
Observable of interest							
	e.g., t,u,etc.						
Detector specific variables	Depends						
PID quantities:	Add when it comes						

#### Next

- Selection cut
- Binning scheme
- Redo the resolution study after selection+binning
- Comments/suggestions welcome

#### Triple differential cross section vs. beta

