

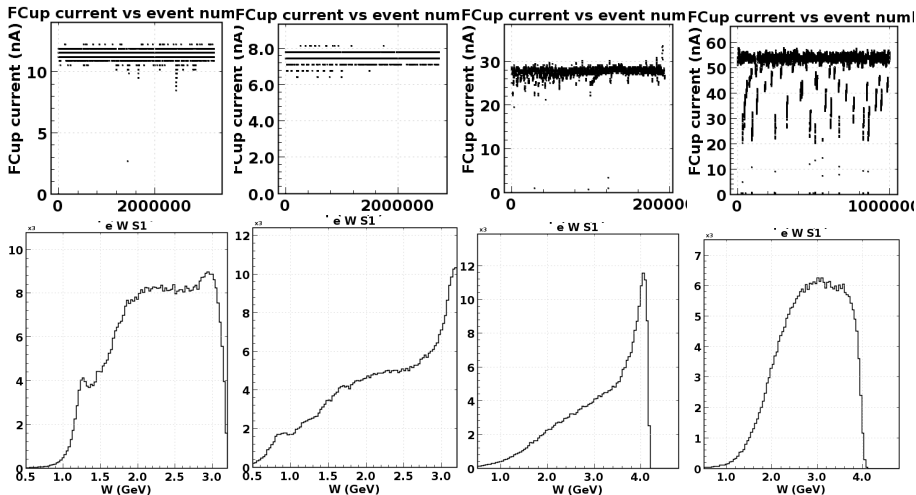
# Highlights from CLAS12 Data

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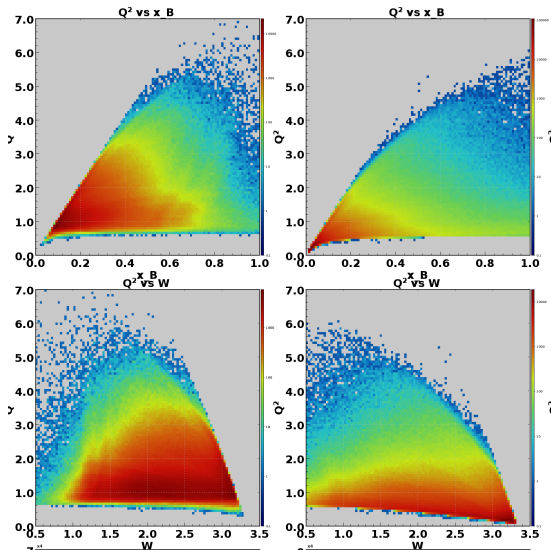
# Sample of runs used in this presentation



Runs 3050, 3105, 3222, and 3432 following the last round of calibration

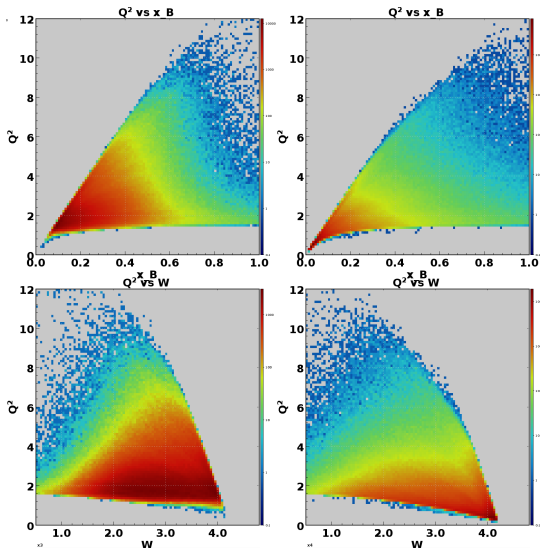


# Kinematic reach $x_B$ $Q^2$ and $W$ at 6 GeV



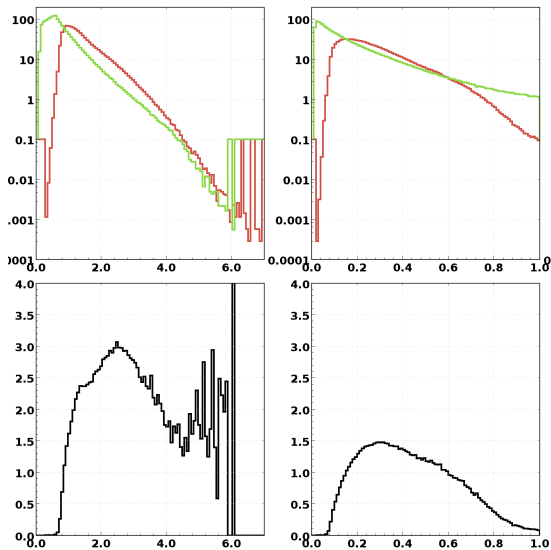
Inbending (3050) vs Outbending (3105)

# Kinematic reach $x_B$ $Q^2$ and $W$ at 12 GeV



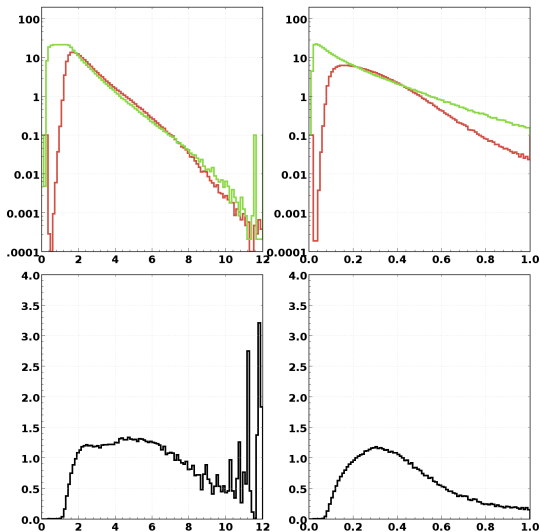
Inbiding (3222) vs Outbending (3432)

# Charge normalized comparison 6 GeV



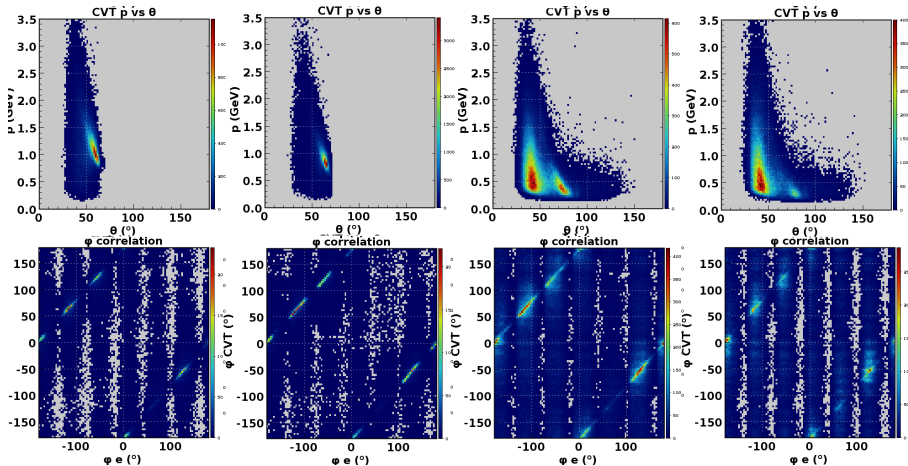
Inbending (3050) vs Outbending (3105)

# Charged normalized comparison 12 GeV



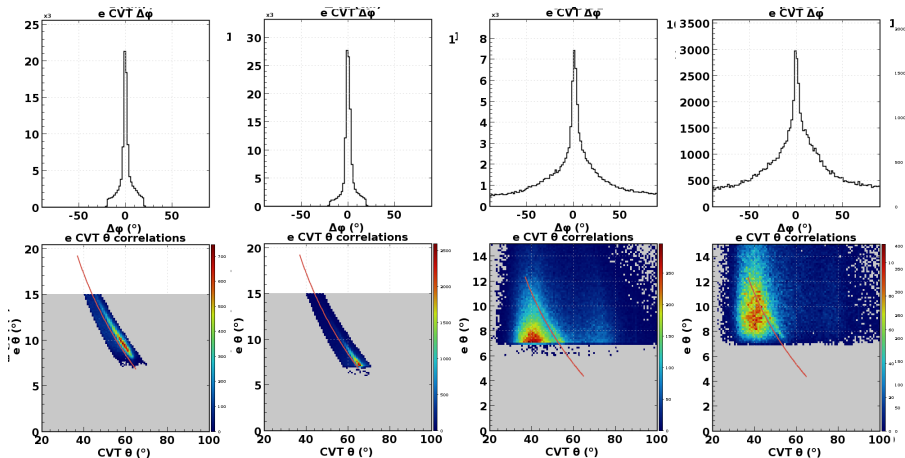
Inbending (3432) vs Outbending (3222)

# CVT elastic correlations



Elastic prominent at 6 GeV (left) visible at 12 GeV (right)

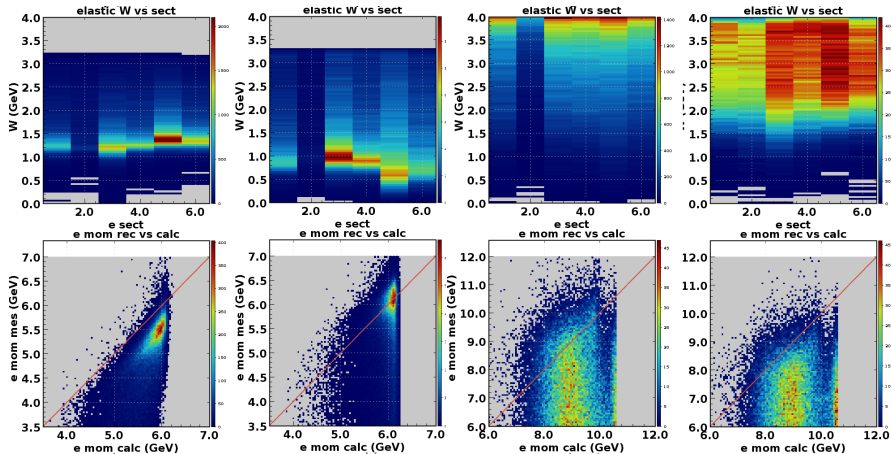
# CVT elastic selection



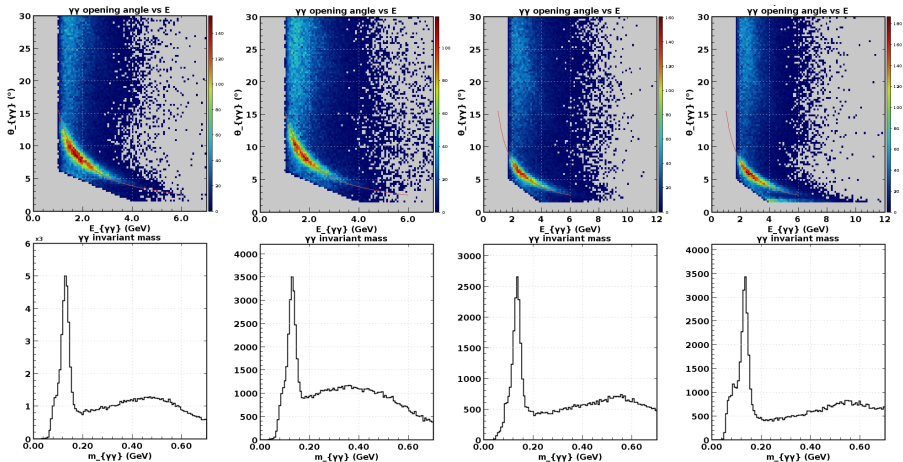
Select elastic using angular correlations



# CVT elastic corrections

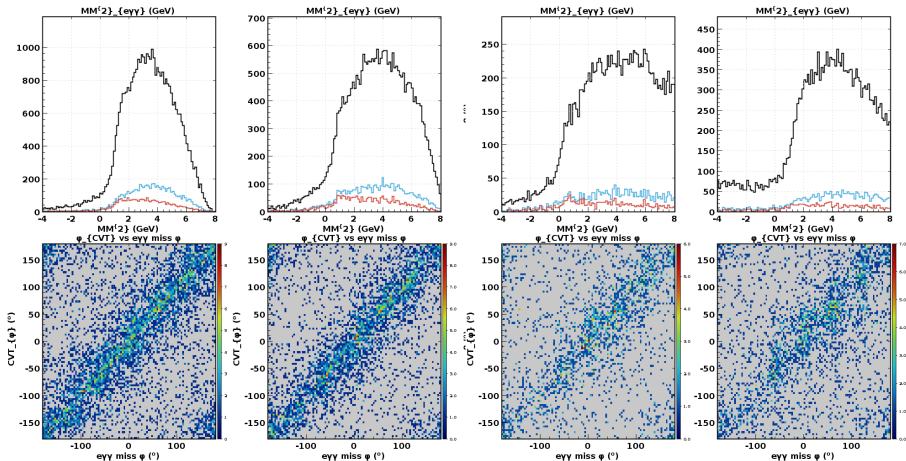


Magnetic field integral independent of beam energy?



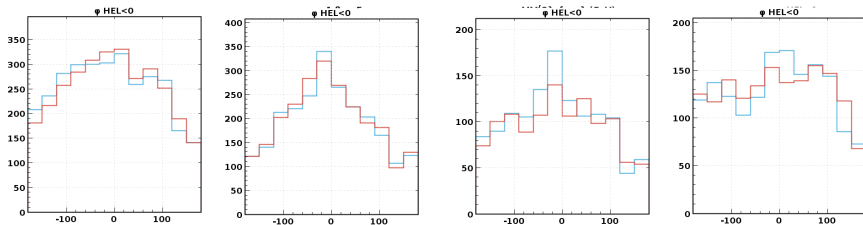
Clear  $\pi^0$  ( $\eta$ ) peak(s) at 6 and 12 GeV

# Exclusive $e\bar{\nu}\gamma\gamma$ events?



Back-to-back correlation but no clean missing mass

# Beam Spin Asymmetry?



$\phi_{\text{Trento}}$  calculated using electron and proton  
Limited statistics and uncontrolled systematics  
Expect small asymmetry (8%) for deep exclusive  $\pi^0$

# Summary

- Runs 3050, 3105, 3222, and 3432 were selected for calibration
- Latest results including DC and TOF calibration from this Monday
- Elastic peak visible at 6 GeV and 12 GeV
- Comparison between Inbending and Outbending reach
- Clear  $\pi^0$  peak in two photon invariant mass ( $\eta$ )
- Hint at exclusive  $\pi^0$  event albeit without clean peak in the missing mass
- Can we get a beam spin asymmetry already?
- Lots of work ahead, exciting times!