

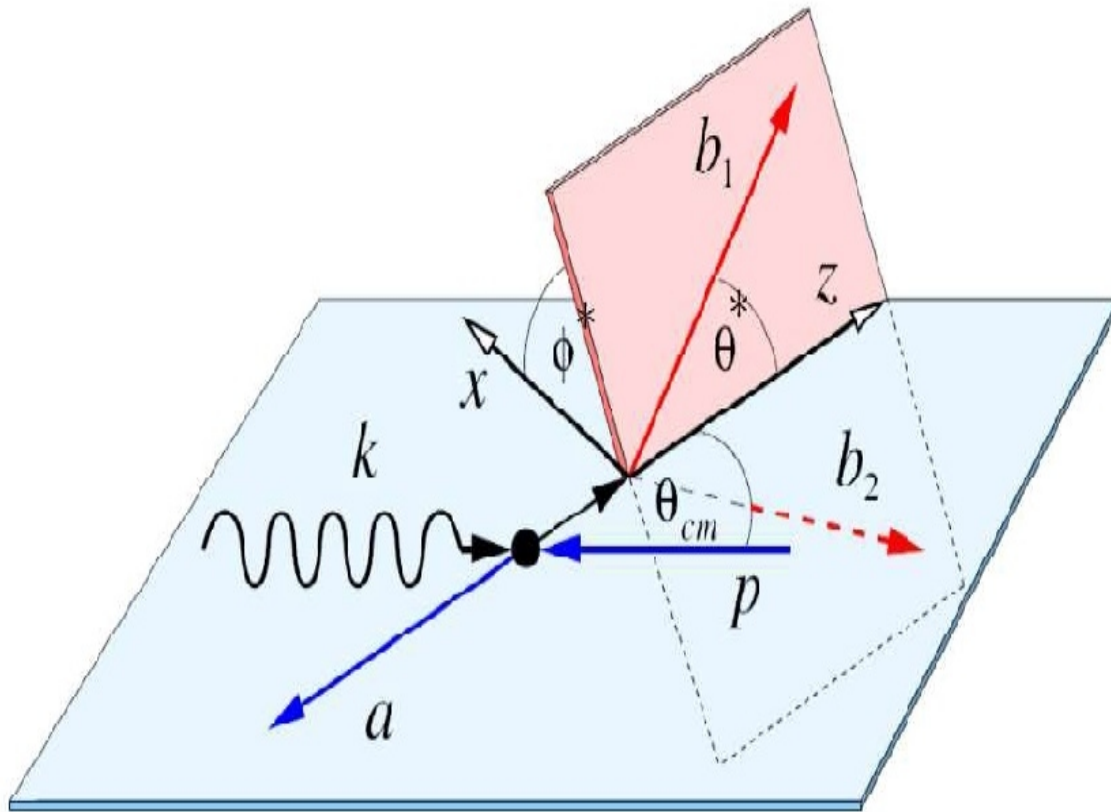
Beam Helicity Asymmetry in Double Charged Pion Photoproduction (preliminary)

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The Data

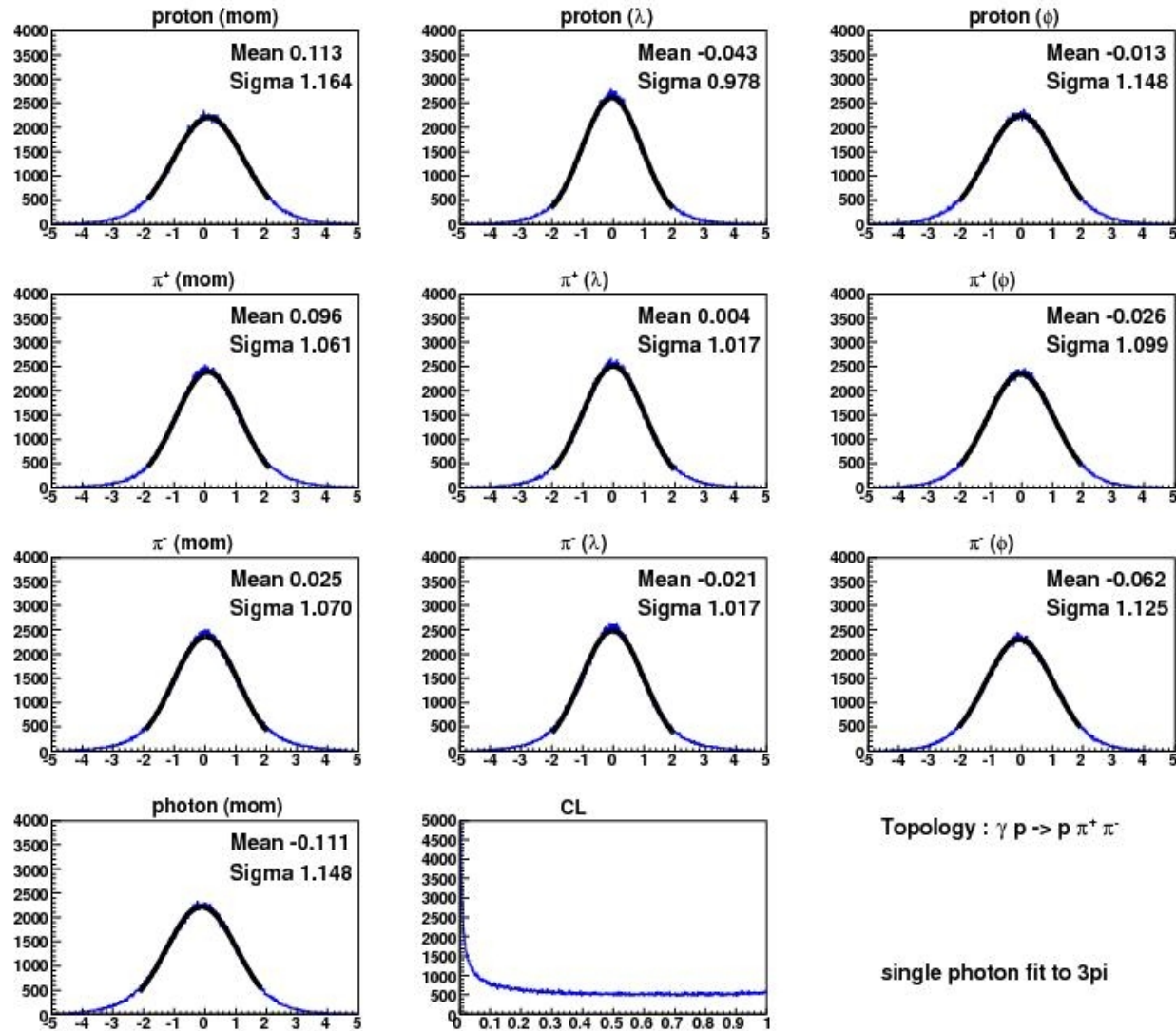
- G12 Run :
56521-56572,
56573-56594,
56608-56644
- Around 28 M of two pion events were collected
- The First measurement from CLAS is G1C from $W = 1.35$ GeV to 2.30 GeV using unpolarized Hydrogen target

Kinematics and Formula



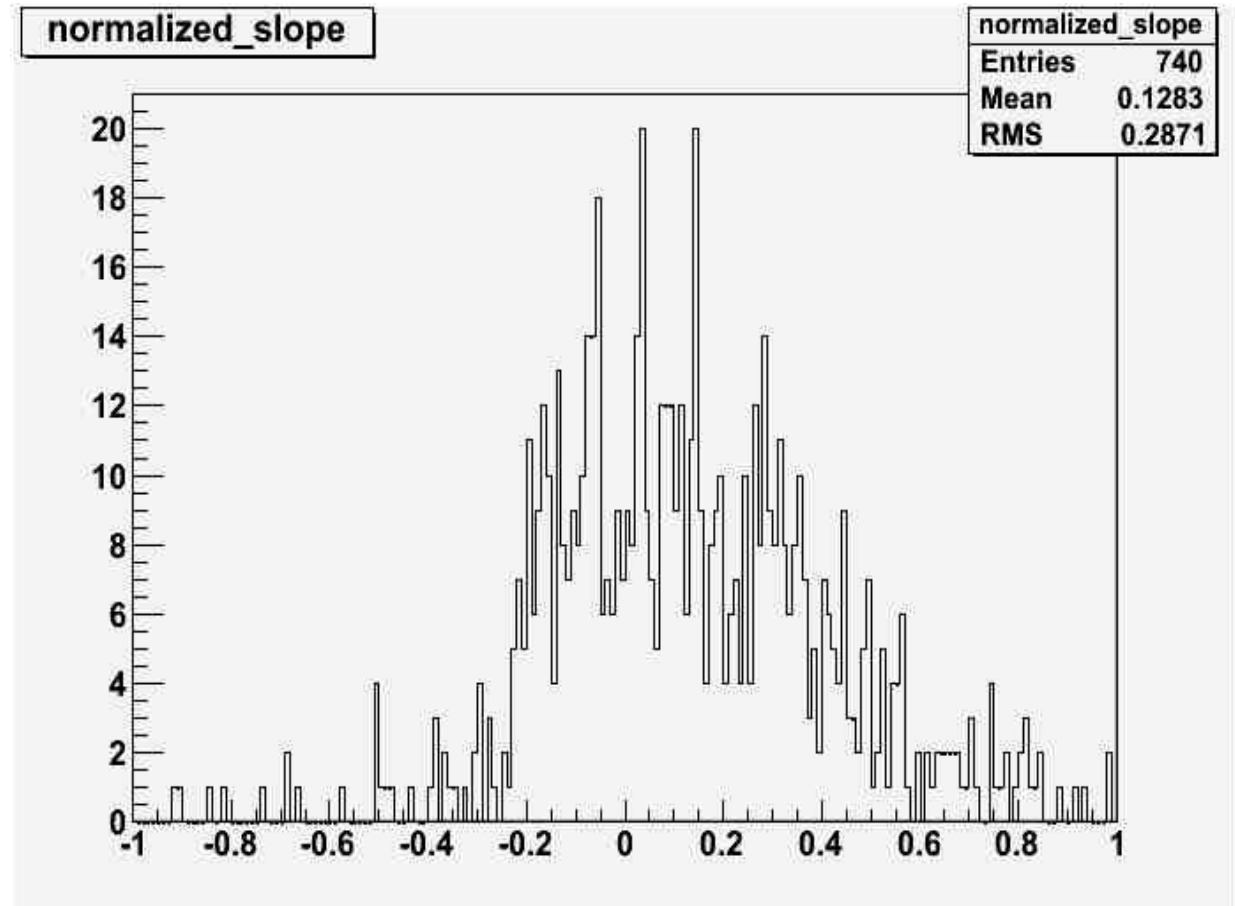
$$\frac{N(\phi^*, \sigma(\rightarrow)) - N(\phi^*, \sigma(\leftarrow))}{N(\phi^*, \sigma(\rightarrow)) + N(\phi^*, \sigma(\leftarrow))} = \bar{\delta}_{\ominus} \mathbf{I}^{\ominus}$$

Pull/CL Distribution

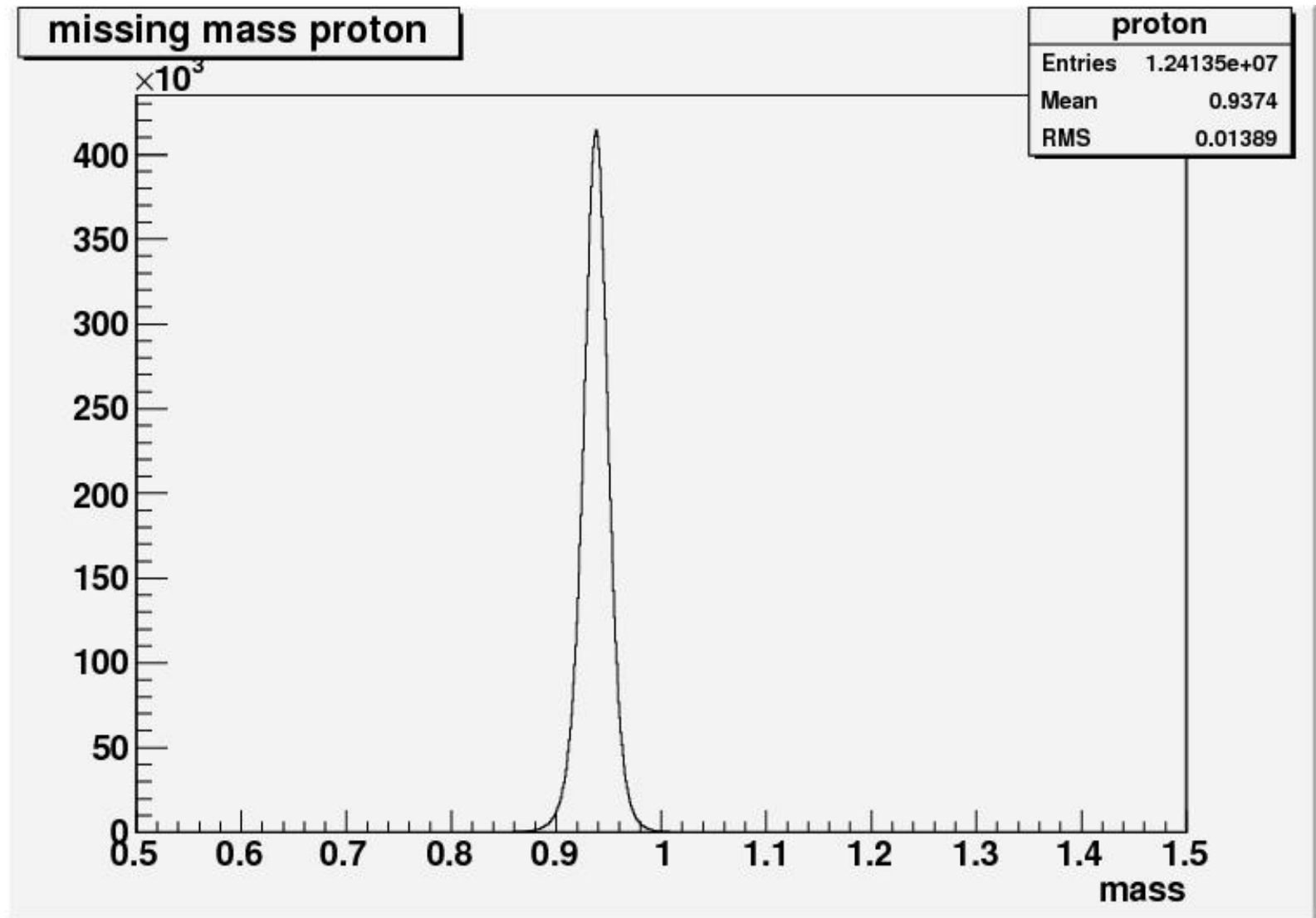


Normalized Slope

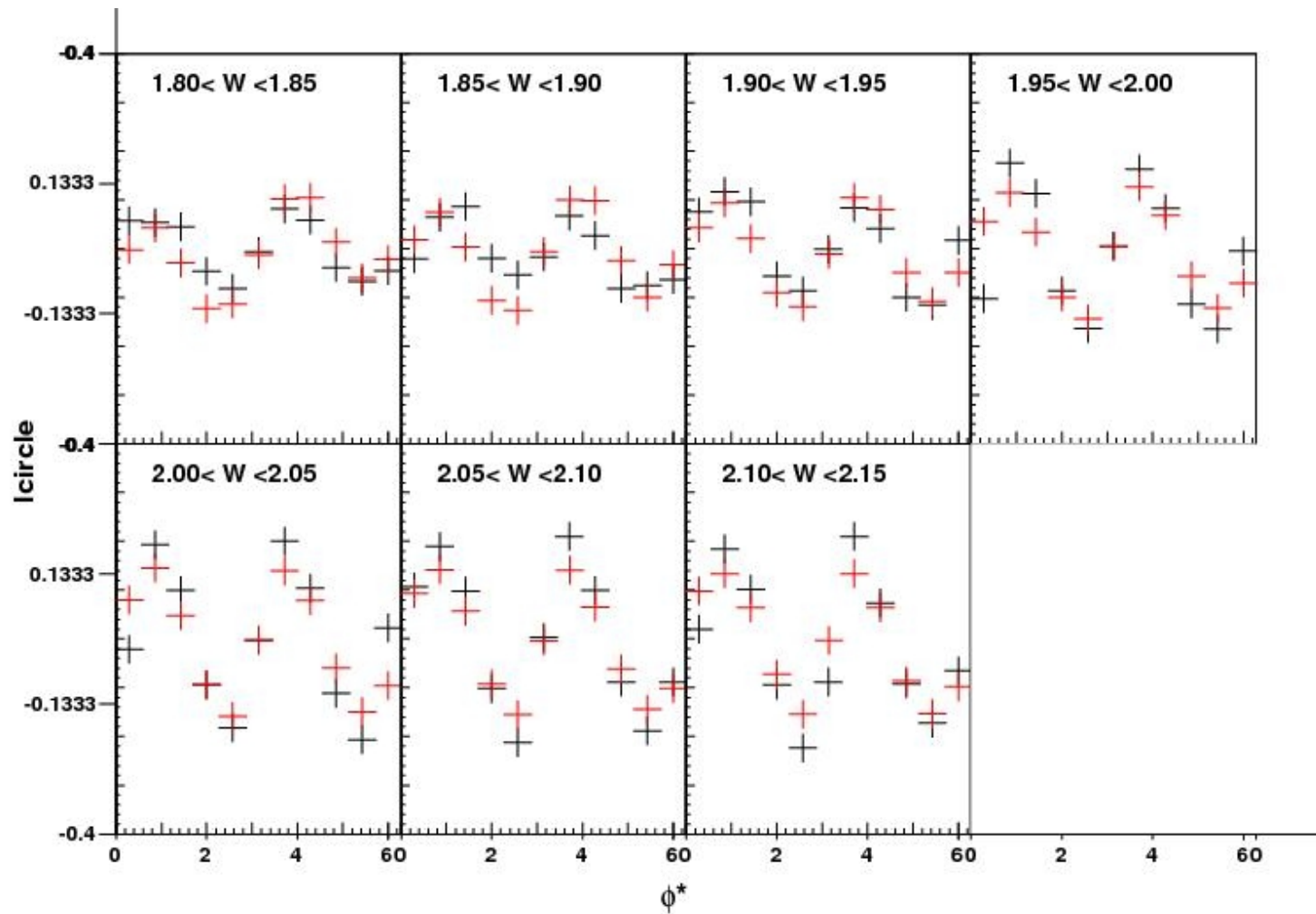
$$\bar{a} = \frac{a}{a/2 + b}$$



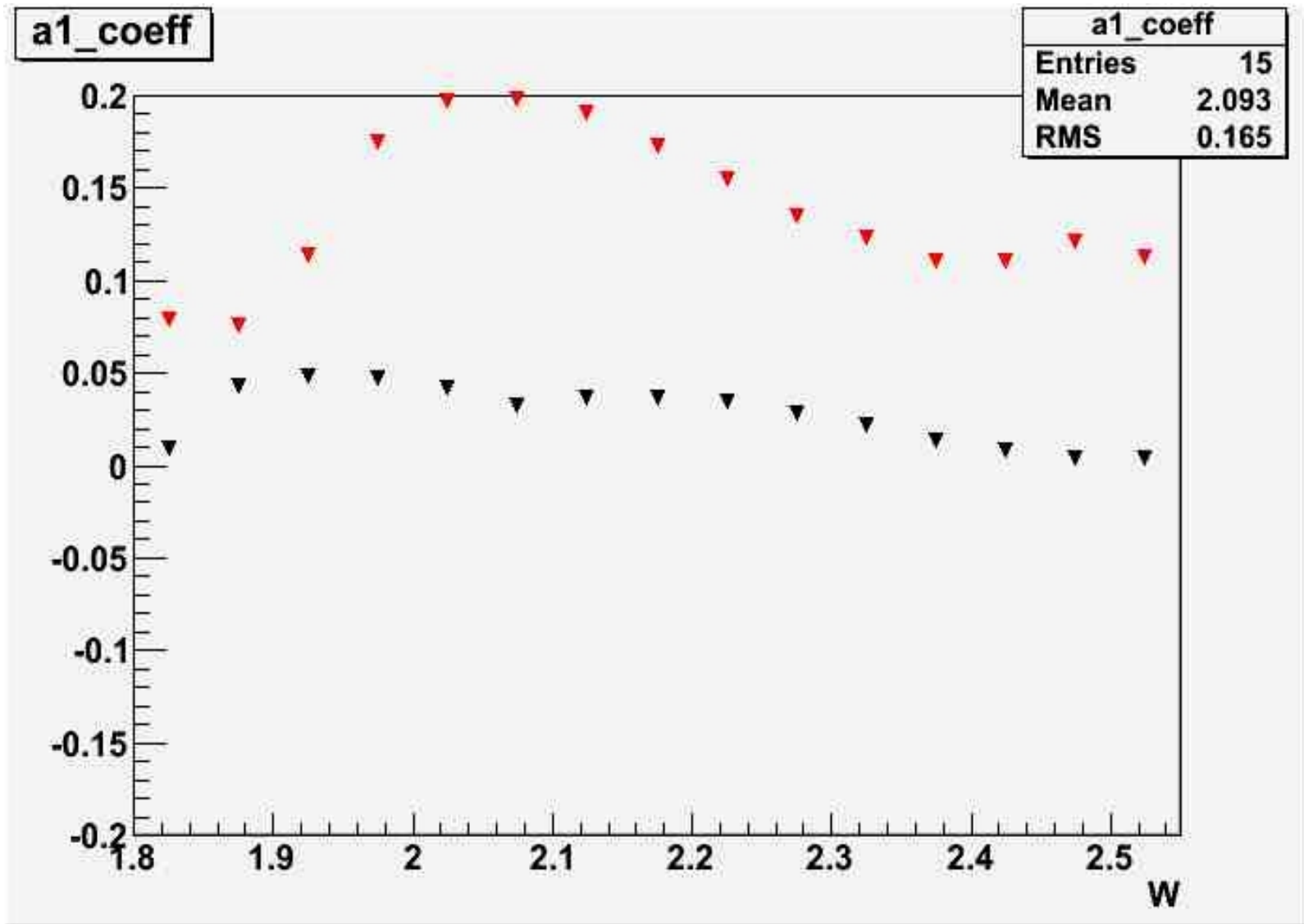
Treat Proton as “missing” particle



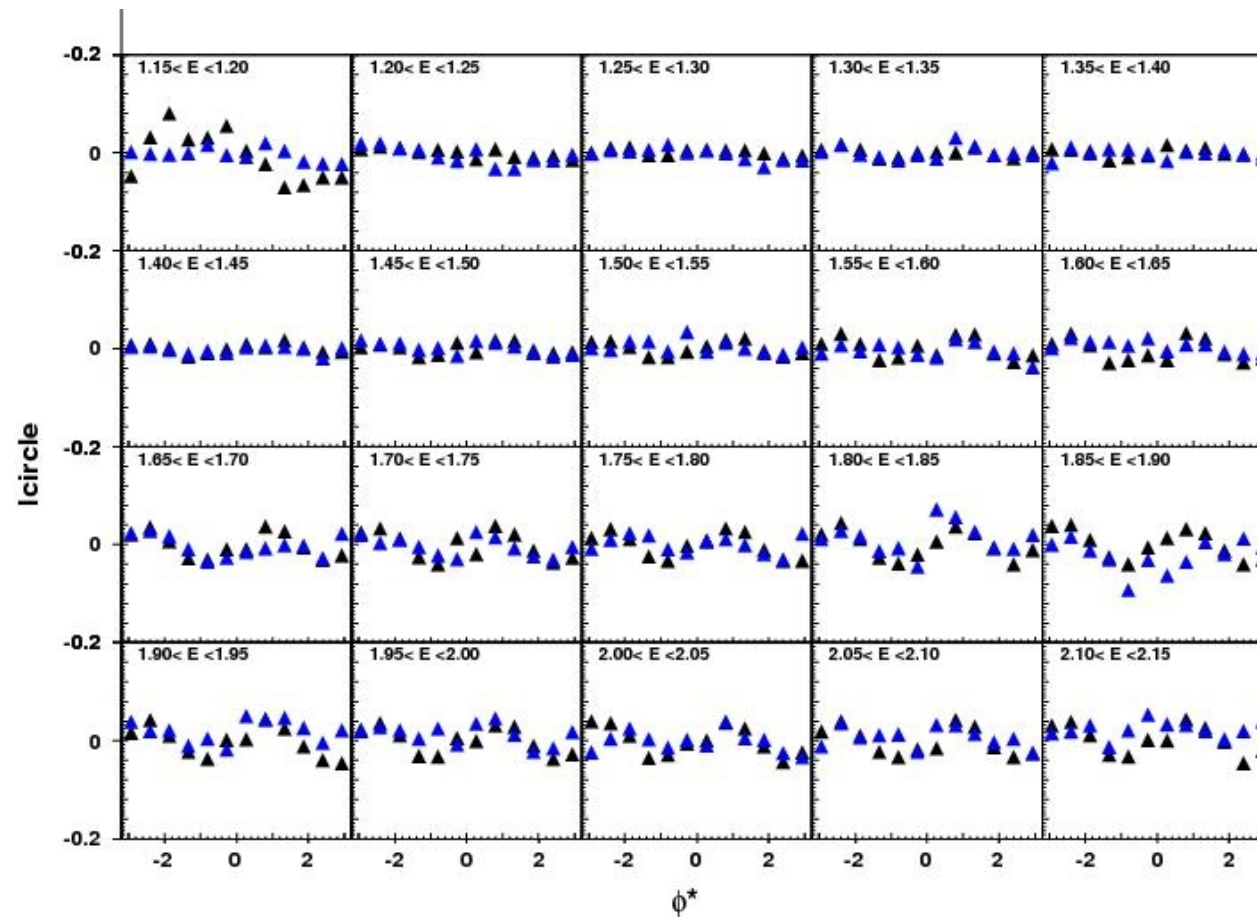
G12 (Black) vs G1C (Red)



Fourier coefficient : A1(Black) & A2 (Red)



Asymmetry of G12 (Black) & FROST (Blue)



Preliminary Conclusion and Future Plan

- Overall, this preliminary result agree with g1c
→ Imply disagreement with model (A.fix et al and Mookev et al).
- Plan : make more plot (Asymmetry and Fourier coefficient) as a function of other variables (invariant mass for example), and compare directly with other G1C plot and also models.
- Thank you

THANK YOU