Contribution ID: **84** Type: **not specified**

Double spin asymmetry for exclusive pi+ production

Wednesday, 18 April 2007 17:20 (20 minutes)

The eg1b run was conducted using CLAS (CEBAF Large Acceptance Spectrometer) at the Thomas Jeã„¦son National Accelerator Facility (TJNAF) in 2000 by the CLAS collaboration. A 1.6 GeV - 5.6 GeV polarized electron beam and polarized nuclear targets (composed of NH3 and ND3) were used, allowing single and double spin asymmetries to be measured.
This analysis is of the double spin asymmetry Ajj in the exclusive production of positive pions from a polarized proton (ep -> e pi+ n). The double spin asymmetry was measured as a function of the four kinematic variables W, Q2, cos Theta* (the angle between the lepton interaction plane and the hadron interaction plane). The value of this asymmetry can be used to help determine the spin structure of the resonances, due to its sensitivity to the spin dependent parts of the cross section. A brief description of the experimental setup will be given, and preliminary results for the asymmetry will be shown.

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Session Classification: Joint: Diffraction and Vector Mesons / Spin Physics

Track Classification: Joint: DIFF / SPIN