

Hard Photo-disintegration of proton pairs in ^3He

Eli Piasetzky, Ishay Pomerantz, Tel Aviv University
Ronald Gilman, Rutgers University
Experiment E03-010 Hall A / Jlab collaboration

Hard deuteron photo-disintegration has been investigated for 20 years, as its cross section follows the constituent counting rule and it provides insight into the interplay between hadronic and quark-gluon degrees of freedom in high-momentum transfer exclusive reactions. We have now measured for the first time hard pp-pair disintegration in the reaction $\gamma \ ^3\text{He} \rightarrow pp + n$, using kinematics corresponding to a spectator neutron. Cross sections were measured for 90° c.m at 8 beam energies, from 0.8 to 4.7 GeV. Preliminary results will be presented and compared to the hard deuteron photo-disintegration data.