

Abstract Submitted
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Measurement of Collins Asymmetries in inclusive production of pion pairs in e^+e^- collisions at BABAR ISABELLA GARZIA, Universita' di Ferrara, BABAR COLLABORATION — The transversity distribution function, which describes the quark transverse polarization inside a transversely polarized nucleon, is the least known leading-twist component of the QCD description of the partonic structure of the nucleon. Transversity can be extracted from semi-inclusive deep inelastic scattering data, where, however, it couples to a new, unknown fragmentation function, called the Collins function. We present a measurement of the azimuthal asymmetries in the process $e^+e^- \rightarrow q\bar{q} \rightarrow \pi\pi X$, where the two pions are produced in opposite hemispheres, based on a data sample collected by the BABAR experiment at a center-of-mass energy of about 10 GeV. The Collins function is extracted from the measured asymmetries.

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