XXI International Workshop on Deep-Inelastic Scattering and Related Subjects



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Measurement of Collins asymmetries in e+eannihilation at BaBar

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We present a measurement of the azimuthal asymmetries induced by the Collins effect in inclusive production of charged pion pairs, in the e+e--> pi pi X annihilation process, where the two pions are produced in opposite hemispheres. The data collected by the BABAR detector allows the determination of the Collins fragmentation function as a function of hadron fractional energies and transverse momenta, and can be combined with semi-inclusive deep-inelastic-scattering data to extract the transversity distribution function, which is the least known leading-twist component of the QCD description of the partonic structure of the nucleon.

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