

Non-Leptonic Single Spin Asymmetries with Identified Charged Hadrons at RHIC

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Abstract

The transverse momentum spectra of hadro-produced $K^{+/-}$ particles were measured by the PHENIX experiment at Brookhaven National Laboratory. In the experiment, polarized protons were accelerated up to a CMS energy of $\sqrt{s_{pp}} = 200$ GeV and the subsequent collisions produced a wide array of reaction products. Several channels were identified as possible candidates for kaon production. Consequently, a non-leptonic approach was chosen with respect to the available data and is considered within the framework of single spin transverse asymmetries. Furthermore, possible parity-violating effects will also be explored for the case of longitudinal polarization in the next run.