SPIN EFFECTS IN HADRON SCATTERING

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The spin dependence of hadronic scattering processes offers various tests for QCD, the accepted theory of the strong interaction. This presentation will focus on transverse single-spin asymmetries (SSA), which measure the dependence of the cross section on the spin of the colliding particles polarized in the transverse direction. The large SSA observed in polarized proton-proton scattering in the production of a pion with high p_T and x_F are inconsistent with the standard description of QCD scattering, in which the hard scale p_T -> infinity while x_F is fixed. I will discuss a possible way to generate these large SSA in a model where p_T -> infinity while (1-x_F)p_T^2 is held fixed. This "BB limit" has been previously used to explain the observed transfer of helicity of the pion to the muon pair in the Drell-Yan scattering process at high x_F [1].