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Measurement of transverse spin dependent fragmentation of π^0/η mesons in e^+e^- Annihilation at Belle[1] HAIRONG LI, Indiana University, BELLE COLLABORATION — Large transverse single spin asymmetries A_N have been observed in polarized proton-proton collisions over a wide range of energies. The mechanism behind this effect is still not understood. One possible contribution is the so-called Collins effect, which describes the polarization dependent fragmentation of transversely polarized quarks. In addition on shedding light on the mechanism behind A_N in polarized p+p collisions a precise knowledge of the spin dependent fragmentation function is also needed for the extraction of the so-called transversity parton distribution function (PDF), one of the three leading twist PDFs that is needed to describe the proton in a collinear picture. Recently, the Collins effect has been measured for charged pions in e+e- annihilation at the Belle and BaBar experiments. This talk will focus on the measurement of the Collins effect for the neutral π^0 and η mesons in e+e- annihilation near the Y(4S) resonance at the Belle experiment. This channel is of interest to study the flavor dependence of the Collins effect and to investigate the mechanism behind the observed difference of A_N for η and π^0 mesons.

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