

Abstract Submitted
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Diffractive Slope Extraction of Exclusive ρ_L^0 and ρ_T^0 at HERMES

BRIAN BALL, U of Michigan, HERMES COLLABORATION — Hard exclusive ρ^0 electroproduction from a ^1H target has been studied at the HERMES experiment. In particular, the meson helicity dependence of the cross-section slope parameter b as a function of the squared four-momentum of the virtual photon Q^2 is presented. The parameter b is related to the meson transverse size, and at higher Q^2 accesses color transparency. While b is well studied for the helicity averaged case, there exists no previous experimental data regarding the ρ^0 helicity dependence. The HERMES data suggests a sizeable difference in the values of b (and thus the transverse size of the ρ^0) for different helicities and a sizeable decrease of b with increasing Q^2 , an effect known as shrinkage.

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