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Test of QCD Dynamics at Small Parton Momenta x at HERA

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The production of high transverse momentum π^0's and charged particles is studied in deep inelastic positron-proton scattering data taken with the H1 detector at the ep collider HERA. The rate of particles observed at small angles with respect to the initial proton direction is strongly correlated to the underlying parton dynamics. Results are presented as a function of Bjorken-x and x_i, the fraction of the incident proton's energy carried by the particle. The data are analysed in a region of low Bjorken-x and large x_i and are compared with the predictions of BFKL calculations at leading order and with QCD based Monte Carlo models including one which makes use of the structure of virtual photons.