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Inclusive photoproduction of neutral pions in the photon hemisphere at HERA

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The inclusive photoproduction of π^0's is studied at a mean γp centre-of-mass energy, $\langle W \rangle = 200\,\mathrm{GeV}$. The mesons are detected in the backward calorimeter (SpaCal) of the H1 detector at HERA via their decays to photons. The double differential π^0 cross section, measured as a function of the pion's transverse momentum and rapidity is presented and compared with next-to-leading order pQCD calculations and predictions of different QCD Monte Carlo models. The invariant transverse momentum spectrum exhibits a power-law tail for $p_T > 1.6$ GeV/c, suggesting the onset of hard parton-parton scattering processes.