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Soft photon radiation in hadronic collisions: color dipole description

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The Low theorem, proven only for diffractive photon radiation, cannot be extended to inelastic hadronic collisions with multi-particle production. Comparison with incorrect calculations led to the so-called soft-photon puzzle. We describe soft photon production within the color-dipole approach. The required quark distribution in the colliding hadrons at a soft scale is calculated employing the popular quark-gluon string model (QGSM). The dipole cross section is parametrized and fitted to HERA DIS data at low Q^2 . Our results are in good accord with data on low- k_T photon yield in pp inelastic collisions.

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