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Initial Condition for Matter in the Fragmentation Region

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The initial conditions for matter produced in the fragmentation region of high energy hadronic collisions can be computed using the theory of the Color Glass Condensate. We consider the scattering of a classical color charge from a large nucleus and compute produced radiation in the fragmentation region of the classical color charge. Our results are to all order in the strength of the color field of the nucleus. We compare our results against first order computation in the strength of the nuclear field. We evaluate the transverse momentum dependence in various transverse momentum ranges.

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