

# EFFECTS OF PARTON INTRINSIC TRANSVERSE MOMENTUM ON PHOTON PRODUCTION IN HARD-SCATTERING PROCESSES<sup>1</sup>

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The photon production cross section arising from the hard scattering of partons in nuclear collisions is calculated by taking into account the intrinsic parton transverse momentum distribution and the next-to-leading-order contributions. As first pointed out by Owens, the inclusion of the intrinsic transverse momentum distribution of partons leads to an enhancement of photon production cross section in the region of intermediate photon transverse momenta of a few GeV/c. Such an enhancement is an important consideration in the region of photon momenta under investigation in high-energy heavy-ion collisions.

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