

MEASUREMENT OF THE DIFFERENTIAL CROSS SECTION FOR ISOLATED PROMPT PHOTON PRODUCTION IN pp COLLISIONS AT 7 TeV

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A measurement of the differential cross section for the inclusive production of isolated prompt photons in proton-proton collisions at a centre-of-mass energy of 7 TeV is presented. The data sample corresponds to an integrated luminosity of 36 pb^{-1} recorded by the CMS detector at the LHC. The measurement covers the pseudorapidity range $|\eta| < 2.5$ and the transverse energy range $25 < ET < 400 \text{ GeV}$, corresponding to the kinematic region $0.007 < x_T < 0.114$. Photon candidates are identified with two complementary methods, one based on photon conversions in the silicon tracker and the other on isolated energy deposits in the electromagnetic calorimeter. The measured cross section is presented as a function of ET in four pseudorapidity regions. The next-to-leading-order perturbative QCD calculations are consistent with the measured cross section.

Particle
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All interested
persons are
cordially
invited to
attend.