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Measurement of exclusive Upsilon photoproduction off protons in pPb collisions at sqrt(s_NN) = 5.02 TeV with CMS

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Exclusive photoproduction of Upsilon(nS) meson states off protons is measured in ultraperipheral pPb collisions at a center-of-mass energy per nucleon pair of 5.02 TeV. The measurement is carried out in the $\Upsilon(nS) \to \mu^+\mu^-$ decay modes, with data collected by the CMS experiment corresponding to an integrated luminosity of 32.6^{+}nb^{-1}. Differential cross sections, as a function of the Υ(nS) transverse momentum squared p_T^2, and rapidity y, are presented. The Υ(1S) photoproduction cross section is extracted as a function of the photon-proton center-of-mass energy over the $91 < W_{\gamma p} < 826^{+}$GeV range. The data are compared to theoretical perturbative quantum chromodynamics predictions and to previous measurements.

Content type

Experiment

Collaboration

CMS

Centralised submission by Collaboration

Presenter name already specified

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