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Nuclear Physics A
Volume 982, February 2019, Pages 743-746

Beyond nPDFs effects : Prompt J/ψ and ψ(2S) production in pPb and pp collisions (Article) (Open Access)

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Abstract

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A multi-dimensional analysis of prompt charmonia in pp and pPb collisions at s_{NN}=5.02TeV with the CMS detector is presented. The pPb differential cross-sections of prompt J/ψ are shown in a wide kinematic region, for transverse momentum p_T spanning from 2 to 30 GeV/c and a rapidity interval between -2.4 to 1.93 in the center of mass of the collision. The final results on prompt ψ(2S) meson production cross section in pp and pPb collisions at 5.02 TeV are also reported as a function of p_T and rapidity, for p_T from 4 to 30 GeV/c. The nuclear modification factor is found to be smaller than that of prompt J/ψ in all measured bins, especially at low p_T and at backward rapidity. Such a different behaviour between the ground and excited states cannot be reproduced considering nPDF effects alone. © 2018

SciVal Topic Prominence

Topic: collisions | production | nuclear modification

Prominence percentile: 91.697

Author keywords

Charmonia Production Prompt J/ψ Prompt ψ(2S) Quarkonia

ISSN: 03759474
CODEN: NUPAB
Source Type: Journal
Original language: English

DOI: 10.1016/j.nuclphysa.2018.10.028
Document Type: Article
Publisher: Elsevier B.V.

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