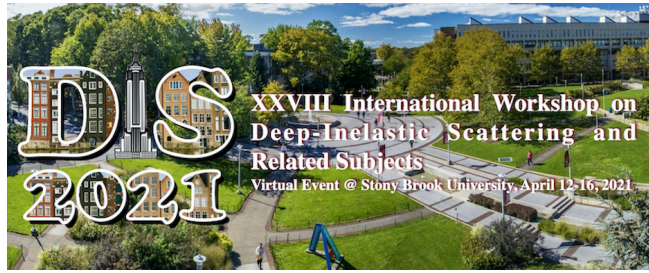


XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



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Latest ALICE results on J/ψ photoproduction in ultra-peripheral collisions at the LHC

Thursday, 15 April 2021 08:18 (18 minutes)

Ultra-peripheral collisions (UPCs) at the LHC, studied using the ALICE detector, allow us to investigate, using photon-induced interactions, processes sensitive to the low x behaviour of the gluon distribution of the colliding particles and provide important constraints on the initial stages of the collision.

The first measurement of the t -dependence of the coherent J/ψ photonuclear cross section is presented. The cross section is obtained at midrapidity from Pb–Pb UPCs at $\sqrt{s_{NN}}=5.02$ TeV. This observable provides a new tool to investigate the transverse gluonic structure at low Bjorken- x .

Moreover, a new rapidity-differential measurement of the coherent photoproduction of J/ψ at midrapidity in Pb–Pb UPCs at $\sqrt{s_{NN}}=5.02$ TeV is reported. This result complements the ALICE measurement of the coherent J/ψ cross section at forward rapidity allowing us to provide stringent constraints on nuclear gluon shadowing and saturation models at small Bjorken- x .

In addition, prospects for heavy vector meson photoproduction measurements in LHC Run 3 and 4 will be presented.

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Session Classification: Small- x , Diffraction and Vector Mesons

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