



Contribution ID: 126

Type: not specified

The growth with energy of exclusive J/Psi and Upsilon photo-production cross-sections and BFKL evolution

Sunday, 4 September 2016 17:50 (20 minutes)

We investigate whether NLO BFKL evolution is capable to describe the energy dependence of the exclusive photo-production cross-section of vector mesons J/Psi and Upsilon on protons. Our description is based on available NLO BFKL fits of the proton impact factor in inclusive DIS, which allow us to construct the necessary scattering amplitude at zero momentum transfer $t=0$. Assuming an exponential drop-off with t , this result allows us to calculate the exclusive photoproduction cross-section. Comparing our results with both HERA data (measured by H1 and ZEUS collaborations in ep collision) and LHC data (measured by ALICE, CMS and LHCb collaborations in ultra-peripheral pp and pPb collision) we find that our framework provides a very good description of the energy dependence of the J/Psi and Upsilon photoproduction cross-section, providing therefore further evidence for BFKL evolution at the LHC. The available fits of the proton impact factor require on the other hand an adjustment in the overall normalization.

Primary author: HENTSCHINSKI, Martin (Benemérita Universidad Autónoma de Puebla & ICN UNAM)

Co-authors: FERNANDEZ TELLEZ, Arturo (Universidad Autonoma de Puebla); BAUTISTA, Irais (Benemérita Universidad Autónoma de Puebla)

Presenter: HENTSCHINSKI, Martin (Benemérita Universidad Autónoma de Puebla & ICN UNAM)

Session Classification: Diffraction in ep collisions (V)

Track Classification: Diffraction in e-p collisions (experiment/phenomenology/theory)