



Contribution ID: 162

Type: not specified

Exclusive photoproduction of J/ψ and $\psi(2S)$ in pp and AA collisions

Monday, 15 September 2014 11:50 (20 minutes)

The amplitude for $\gamma p \rightarrow J/\psi p$ ($\gamma p \rightarrow \psi' p$) is calculated in a pQCD k_T -factorization approach. The total cross section for this process is calculated for different unintegrated gluon distributions and compared with the HERA data and the data extracted recently by the LHCb collaboration. The amplitude for $\gamma p \rightarrow J/\psi p$ ($\gamma p \rightarrow \psi' p$) is used to predict the cross section for exclusive photoproduction of J/ψ (ψ') meson in proton-proton and nucleus-nucleus collisions. In the pp case, compared to earlier calculations we include both Dirac and Pauli electromagnetic form factors. We also discuss the dependence of nuclear shadowing on the charmonium state.

Primary author: Dr SCHAEFER, Wolfgang (Institute of Nuclear Physics PAN)

Co-authors: Dr CISEK, Anna (Rzeszow University); Prof. SZCZUREK, antoni (Institute of Nuclear Physics, Krakow and Rzeszow University, Rzeszow)

Presenter: Dr SCHAEFER, Wolfgang (Institute of Nuclear Physics PAN)

Session Classification: Diffraction in Nuclear Physics (I)

Track Classification: Diffraction in nuclear physics