

5th International workshop on heavy quark production in heavy-ion collisions



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Exclusive coherent production of heavy vector mesons in nucleus-nucleus collisions

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High energy heavy ions are the source of a flux of Weizsäcker-Williams photons, which can be utilized to study the photoproduction of vector mesons on nuclear targets.

We discuss how information on the small- x gluon distribution in the nucleus can be obtained.

We present our calculations based on a k_{\perp} -factorization approach which allows us to construct the unintegrated glue of a nucleus from the free-nucleon one.

Saturation effects are incorporated by an explicit treatment of the $q\bar{q}g$ -Fock state. If time permits, we also briefly discuss the role of the latter in incoherent diffraction on nuclei.

The presentation will be based on our recent publication

“Exclusive coherent production of heavy vector mesons in nucleus-nucleus collisions at LHC.”

A. Cisek, W. Schafer (Cracow, INP), A. Szczurek (Cracow, INP & Rzeszow U.), Phys.Rev. C86 (2012) 014905.

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