

Exclusive Photoproduction of Vector Mesons in Hadronic and Nuclear Interactions

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Exclusive photoproduction of vector mesons have been studied in electron-proton and electron-nucleus interactions, for example at HERA, and lately also in heavy-ion collisions at the Relativistic Heavy-Ion Collider (RHIC) at BNL[1,2]. Mid-rapidity photoproduction of heavy vector mesons in proton-proton and nucleus-nucleus collisions at RHIC and the Large Hadron Collider at CERN is a sensitive probe of the gluon distribution in protons and nuclei. The results from RHIC will be summarized and the expected cross section for vector meson production at the LHC will be presented. Experimental techniques for identifying photoproduced vector mesons in hadronic and nuclear collisions will be discussed.

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