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

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The high flux of quasi-real photons from fast moving lead ions at the LHC allows us to study photon-induced reactions in ultra-peripheral collisions (UPC) of Pb-Pb nuclei in a new kinematic regime. In addition, this flux makes it possible to study J/Ψ exclusive photoproduction off protons in p-Pb collisions at the LHC. Measuring the scattering angle of the produced vector meson one can compute the centre-of-mass energy of the photon-proton or photon-Pb scattering. This allows us to use these collisions to study the energy evolution of the gluon content of the target.

The newest ALICE results on vector meson photoproduction in UPC Pb-Pb in the forward and central rapidity region, and p-Pb collisions from LHC Run 2 are presented. These results provide new stringent tests for models of saturation and shadowing at small-x. The measurements are compared to the newest models of this process. In addition, prospects for heavy vector meson photoproduction measurements in LHC Run 3 and 4 will be presented.

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