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Extracting nuclear shadowing from LHC coherent J/Psi data

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We present a method to extract the photonuclear cross section for the coherent production of J/Psi off lead nuclei using peripheral and ultra-peripheral cross sections measured at the LHC. The method allows to extract the photonuclear cross section up to a centre-of-mass energy of around 500 GeV.(Corresponding to x-Bjorken of 4.5 10ˆ-5.) Using the photonuclear cross section, and the impulse approximation, one can compute a nuclear suppression factor, which can then be compared to the predictions of nuclear shadowing from any model. In particular, we compare it to a leading-twist computation. We find a large contribution of gluon shadowing at the largest energies.

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