

Exclusive photoproduction of quarkonia in ultraperipheral collisions

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We discuss the exclusive photoproduction of ground and excited states of $\psi(1S,2S)$ and $Y(1S,2S)$ in ultraperipheral collisions. Using the potential model in order to obtain the vector meson wave function, we find a good agreement of our calculations with data from the LHC and HERA colliders for $J/\psi(1S,2S)$ and $Y(1S)$ in γp collisions. We extend the calculations to the nuclear target case applying them to AA UPCs with the use of the gluon shadowing and finite coherence length effects fitted to the data. Our results are compared to the recent LHC data for coherent ($J/\Psi(1S)$ at 2.76 and 5.02 TeV) processes.

Auteurs principaux: MELCHIORS TREBIEN, Haimon Otto (UFSC); DE OLIVEIRA, Emmanuel (UFSC)

Orateur: MELCHIORS TREBIEN, Haimon Otto (UFSC)

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