



Contribution ID: 57

Type: Poster

Production of exotic states in photo-induced processes at LHC and EIC

Tuesday, March 11, 2025 6:00 PM (2 minutes)

In this work we present a calculation of exotic charmonium production in photo-induced processes, in which the exotic state is explicitly treated as a meson molecule. Our formalism is general but we focus on the lightest possible exotic charmonium state: a D^+D^- molecular bound state. Here we study the production of the open charm pair in the process $\gamma\gamma \rightarrow D^+D^-$. Then we use a prescription to project the free pair $|D^+D^- \rangle$ onto a bound state at the amplitude level and compute the cross section of the process $\gamma\gamma \rightarrow B$ (where B is the bound state). Finally, we convolute this last cross section with the equivalent photon distributions coming from the projectile and target at the LHC and EIC and find the total cross sections.

Authors: Mr CÉSAR, Fernando (University of São Paulo); Prof. NAVARRA, Fernando (University of São Paulo)

Presenter: Mr CÉSAR, Fernando (University of São Paulo)

Session Classification: Poster session