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# Two-Photon Exclusive Production of Fully-Charmed Tetraquarks at the LHC

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We present a leading-order NRQCD factorization analysis of the exclusive two-photon production of spin-0 and spin-2 fully-charmed tetraquarks,  $\gamma\gamma \rightarrow T_{4c} (0^{++}, 2^{++})$ . The respective short-distance coefficients are collected, enabling predictions for the two-photon decay widths  $\Gamma(T_{4c} \rightarrow \gamma\gamma)$  in terms of non-relativistic long-distance matrix elements. Using these results, we provide estimates for the production cross sections of  $T_{4c}$  states via photon-photon fusion in ultra-peripheral collisions at the LHC. Our work provides crucial theoretical input for ongoing experimental searches and establishes a quantitative framework to discriminate between different structural configurations of the of the  $X(6900)$ .

## Collaboration

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