Contribution ID : **940** Type : **Poster**

# Photoproduction of vector mesons in Xe-Xe ultraperipheral collisions at the LHC and the nuclear form factors of Xe isotopes

*Monday, 5 October 2020 18:00 (120)*

Using the Gribov-Glauber model for photon-nucleus scattering and a generalization of the vector meson dominance model for the hadronic structure of the photon, we calculate cross-sections of light and heavy vector meson photoproduction in ultraperipheral Xe–Xe collisions at 5.44 TeV at the Large Hadron Collider. Analyzing the momentum transfer distribution in this process, we examine the feasibility to extract the nuclear form factors of various isotopes of Xe, which are needed in searches for dark matter with Xenon-based detectors.

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**Session Classification :** Poster session

**Track Classification :** Heavy Ion physics