

Photon fusion and tau $g-2$ measurements in ATLAS

Friday, 17 February 2023 14:00 (30 minutes)

High-statistics measurements in peripheral photon-induced scattering using relativistic heavy-ion beams provide a precise and unique opportunity to investigate extensions of the Standard Model. New measurements of exclusive dilepton production (electron, muon, and tau pairs) are discussed. In particular, the tau-pair production measurement is used to constrain tau lepton's anomalous magnetic dipole moment which is experimentally much less constrained compared to the electron or muon magnetic moments. In addition, the measurement of light-by-light scattering and the search for axion-like particles will be discussed.

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Session Classification: Senior Session