

UPC 2023: International workshop on the physics of Ultra Peripheral Collisions

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BSM searches in UPCs: recent results and prospects

The experimental study of photon γ -induced interactions in hadronic collisions became a reality in the last years, motivated by the possibility of improving our understanding of the Standard Model as well as by the opportunity to use these processes as an alternative tool to search for New Physics. Recent results provided the first observation of the light γ -by γ -light (LbL) scattering, which is one of the most important predictions of Quantum Electrodynamics (QED), and demonstrated that the experimental analysis of the dilepton production by two-photon interactions is feasible. Moreover, such results also allow us to search for signals of Beyond the Standard Model (BSM) Physics in these final states. In this contribution I will discuss the searching of new particles (Axion-like and Dark photons) and anomalous electromagnetic moments of τ lepton in ultra peripheral collisions (UPCs) and present some prospects.

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