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Probing anomalous gauge quartic couplings at the Large Hadron Collider with proton tagging

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Content

One of the main goals of the Large Hadron Collider is to find signatures of physics Beyond the Standard Model of particle physics. One way to do this is by studying with high precision the interactions of the Standard Model. In this talk, we address the discovery potential of New Physics in the exclusive channel pp $\to$ p X p which relies on the general purpose detectors at the Large Hadron Collider and their respective forward proton detector stations, located at about $\sim$ 210 m w.r.t. the interaction point. As a proof of concept, we discuss the exclusive diphoton production at high invariant mass. We quote sensitivities on the anomalous $\gamma\gamma\gamma\gamma$ coupling for an integrated luminosity of 300 fb^{-1} at the center-of-mass energy of 14 TeV.

Session

Forward Physics and diffraction

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