

Abstract Submitted
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A search for long-lived neutral particles that decay into a pair of muons in proton-proton collisions at $\sqrt{s}=13$ TeV in the CMS detector¹ WILLIAM NASH, University of California, Los Angeles — A search for long lived neutral particles that decay into a pair of muons is performed using proton-proton collisions at $\sqrt{s}=13$ TeV recorded within the CMS detector at the LHC. An integrated luminosity of 97.6 fb⁻¹ is used to perform the search, collected during 2016 and 2018 data taking runs. The search is intended to be model independent and is sensitive to displacements ranging from several hundred microns to several meters and masses above 10 GeV. Results are interpreted in the context of the Hidden Abelian Higgs Model, where a Higgs boson decays into a pair of dark photons, and a model in which the displaced particle is a neutral scalar.

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