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Search for New Physics through the Reconstruction of Challenging and Long-Lived Signatures with the ATLAS detector $\sqrt{s} = 13$ TeV

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Many theories of beyond the Standard Model (BSM) physics predict unique signatures which are difficult to reconstruct and the background rates are also a challenge. Signatures from displaced vertices anywhere from the inner detector to the muon spectrometer as well as those of new particles with fractional or multiple value of the charge of the electron or high mass stable charged particles are experimentally demanding signatures. The results of searches using data collected by the ATLAS detector of $\sqrt{s} = 13$ TeV pp collision is presented.

Experimental Collaboration

ATLAS

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