

Search for dark matter particle candidates production in association with a Z boson in pp collisions at center-of-mass energy of 13 TeV with the ATLAS detector

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A search for dark matter particle candidates produced in association with a Z boson in proton-proton collisions at the total center-of-mass energy of 13 TeV is presented. The search uses 36.1 inverse femtobarn of data collected by the ATLAS experiment at the Large Hadron Collider in 2015 and 2016. Events with large missing transverse momentum and consistent with the decay of a Z boson into oppositely charged electron or muon pairs were selected in the analysis. Background estimates and corresponding systematic uncertainties are shown. Exclusion limits on the dark matter candidate and mediator masses are reported.

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