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## Dark matter, muon anomalous magnetic moment, and the XENON1T excess

Recently, the XENON1T detector observed an excess in its electronic recoil events in the low-energy region  $\sim 1 - 5$  keV. We explore a possible dark matter (DM) explanation of the excess by invoking a simple extension of one real and two complex scalar fields comprising the dark sector beyond the Standard Model (SM). The light real scalar, while acting as a mediator between the SM sector and the dark sector, contributes to the magnetic moment of the muon as well. In this study we identify the region of the extended parameter space which simultaneously explains the long-standing muon ( $g-2$ ) anomaly, the requisite relic abundance of dark matter as well as the XENON1T excess via inelastic down-scattering of the dark scalar, while satisfying all relevant experimental, astrophysical and cosmological constraints.

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