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Muon $g-2$ and dark matter in models with vector-like fermions

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We analyze the phenomenological status of several models of BSM physics explaining the muon $g-2$ anomaly and the relic density of dark matter. We consider scenarios requiring extra vector-like matter, some of which are based on supersymmetry. We confront the models with the latest bounds from the LHC 14 TeV run, direct and indirect searches for dark matter, and precision tests of the electroweak theory, highlighting viable regions of the parameter space and expected signatures in future experiments.

Experimental Collaboration

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