

Dark Matter search in the Muon g-2 experiment at Fermilab

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Dark matter is one of the most interesting research topics in physics. Many particle physicists are trying to identify it because we know that dark matter could be a major component of a complete fundamental description of nature. The Muon g-2 Experiment at Fermilab measures the anomalous precession frequency of the muon. Oscillations of this precession frequency could be produced by dark matter coupling to muons. This talk will describe how we could observe DM signals in the Muon g-2 data. I will explain how we determine the Muon g-2 DM mass range sensitivity, and analysis strategies throughout the mass range. Finally, I will present the expected Muon g-2 experiment discovery/exclusion reach in selected DM model-dependent scenarios.

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