

Halo-independent analysis of direct DM detection through electron scattering

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Sub-GeV DM particles could be revealed through their Scattering with electrons. The analysis of data from direct detection experiments usually requires assuming a local DM halo velocity distribution; however, in the halo-independent analysis method, properties of velocity distribution are instead inferred from the data, which allows comparing different data sets without making any assumption on the uncertain halo characteristics. This method has been applied to DM nuclei scattering, and here we demonstrate how this analysis can be applied to DM electron scattering.

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