



Contribution ID: 2

Type: **not specified**

## Dark matter-electron interactions in a $L_{\mu} - L_{\tau}$ symmetry model

*Wednesday 24 July 2024 10:30 (25 minutes)*

We consider an  $L_{\mu} - L_{\tau}$  abelian symmetry extension of the Standard Model to derive spin-independent and spin-dependent interactions of fermion dark matter and electrons through the new gauge boson. We explore prospects with XLZD and OSCURA experiments to close the constraints in the parameter space able to explain simultaneously the recent measurement on the anomalous magnetic moment of the muon and the observed relic density of dark matter.

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**Track Classification:** Dark Matter