

The MUonE experiment proposal, status and plans

Thursday, 4 August 2022 11:50 (30 minutes)

The MUonE experiment aims at an independent and competitive determination of the leading hadronic contribution to the muon anomalous magnetic moment $a_\mu = (g_\mu - 2)/2$, based on an alternative method, complementary to the existing ones. It relies on the measurement of the shape of the μe elastic scattering cross section, with unprecedented precision, which can be obtained at CERN by exploiting the available 160 GeV muon beam in fixed target collisions.

MUonE could have a crucial role to clarify the comparison of the a_μ measurement with the Standard Model, given the recent Fermilab result, and the tension between the accepted theory prediction and a new Lattice QCD calculation.

A Test Run with a reduced detector is planned to validate the proposal. The status of the experiment and the future plans will be presented.

Attendance type

In-person presentation

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Session Classification: WG4: Muon Physics

Track Classification: WG4: Muon Physics