

Toward an improved measurement of the muon EDM

We present the current status of the first phase of the muon EDM experiment, which aims to directly measure the electric dipole moment (EDM) of muons using the frozen-spin technique. A non-zero EDM value for muons would indicate an excess of CP violation beyond what the Standard Model predicts, potentially shedding light on the observed matter-antimatter asymmetry in the universe. The first phase of this experiment proposes a sensitivity of 10^{-21} ecm, with the second phase targeting an enhanced sensitivity of 10^{-23} ecm, which is four orders of magnitude improvement over previous direct measurements.

Authors: SANZ BECERRA, Diego Alejandro (ETH Zurich (CH)); SANZ BECERRA, Diego Alejandro

Presenter: SANZ BECERRA, Diego Alejandro