Measurement of muon g-2 and EDM with ultra-cold muon beam at J-PARC

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Abstract
The J-PARC E34 experiment aims to measure the anomalous magnetic moment (g-2) and electric dipole moment (EDM) of the positive muon with a novel technique utilizing an ultra-cold muons accelerated to 300 MeV/c and a 66 cm-diameter compact muon storage ring without focusing electric field. This measurement will be complementary to the previous BNL E821 experiment and upcoming FNAL E989 experiment with the muon beam at the magic momentum 3.1GeV/c in a 14 m-diameter storage ring. In this talk, I'd like to discuss the present status and prospects.

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