

The Muon Anomalous Magnetic Moment

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Abstract

The anomalous magnetic moment of the muon has become a very topical subject due to the recent high-precision results obtained by the *Muon $g - 2$ Collaboration* at the Brookhaven National Laboratories. The purpose of these lectures is to provide a theoretical introduction to the various aspects of this subject. A general overview of the standard model contributions to the anomalous magnetic moment of charged leptons will be presented and addressed from various points of view and with different tools (QED perturbation theory, renormalization group, effective field theory, large N_C QCD,...).