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A new evaluation of a_μ^{SM} to be deviated from the world averaged $a_\mu by 1.6\sigma$ is achieved by novel approach.

Thursday 6 February 2020 09:30 (30 minutes)

The elaborated Unitary and Analytic models of pseudoscalar meson nonet structure, and to some extent also of nucleons, give more precise theoretical prediction for the hadronic contribution $\Delta\alpha_had^{(5)}(t)$ to the running fine structure constant QED $\alpha(t)$ in space like region, which by the novel approach leads to the following complete SM muon anomalous magnetic moment value $a_\mu^{SM} = (11659196.35 \pm 481) \times 10^{-10}$. This result deviates from the world average experimental value $a_\mu^{exp} = (11659209 \pm 6) \times 10^{-10}$ by 12.65±7.69, i.e. 1.6σ.

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