

Muon g-2 experiments

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We review the status and the prospects of the experimental measurement of the muon magnetic moment anomaly, $a_\mu = (g_\mu - 2)/2$. The most precise measurement has been done by the BNL E821 experiment and has an uncertainty of 0.54 ppm. The Muon g-2 Fermilab experiment is approaching data-taking and has the goal to reduce the uncertainty by a factor 4. A second experimental effort is on-going at J-PARC with the aim to measure a_μ with an uncertainty of about the same size of the BNL experiment in a first stage, with a subsequent upgrade to reduce the uncertainty at the same level as the Fermilab experiment.

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