

The first result from the Muon $g-2$ experiment at Fermilab

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The result of first run (Run-1) of the Muon $g-2$ experiment at Fermilab has been officially announced on April 7th, drawing a lot of attention of the particle physics communities around the world with its exciting result confirming the previous measurement performed in Brookhaven National Laboratory nearly 20 years ago. The new experimental average of the magnetic anomaly of the muon has a discrepancy of 4.2 standard deviation with the Standard Model expectation. We present from the brief experimental overview and the measurement principle of the Muon $g-2$ experiment at Fermilab to the detailed Run-1 analysis method and result, followed by the current status and prospects of the experiment.

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