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Results from the Muon $g-2$ experiment at Fermilab

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The goal of the Muon $g-2$ experiment at Fermilab is to measure the muon magnetic moment anomaly with a final accuracy of 140 parts per billion (ppb). At present the experiment published two results based on the data collected in 2018 (Run-1) and 2019-2020 (Run-2/3) respectively. These new results confirm the previous measurement performed at Brookhaven National Laboratory and their combination reaches the unprecedented uncertainty of 200 ppb. This talk will summarize the Run-1 and Run-2/3 measurement, detailing the improvements in systematic and statistical uncertainties in the latest result, will present an overview of the comparison with the Standard Model prediction for muon $g-2$ and will discuss the future prospects for the experiment.

session

K. Precision and New Physics

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