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The New Muon $g-2$ Experiment at Fermilab

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There is a long standing discrepancy between the Standard Model prediction for the muon $g-2$ and the value measured by the Brookhaven E821 Experiment. At present the discrepancy stands at about three standard deviations, with comparable accuracy between experiment and theory. Two new proposals at Fermilab and J-PARC plan to improve the experimental uncertainty of a factor 4, and there is good motivation to expect a further reduction of the error from the theoretical side. I will review the status of the proposal to Fermilab, E989, and discuss how the goal of 0.14 ppm on the muon anomaly can be achieved, by collecting more than 21 times the statistics of the BNL measurement, and obtaining a factor of 3 reduction in the overall systematic error.

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