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The current status of the Fermilab Muon g-2 Experiment

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The anomalous magnetic moment of the muon can be both measured and computed to a very high precision, making it a powerful probe to test the standard model and search for new physics. The previous measurement by the Brookhaven E821 experiment found about three standard deviation discrepancy from the predicted value. The Muon g-2 experiment at Fermilab will improve the precision to 140 parts per billion compared to 540 parts per million of E821 by increasing statistics and using upgraded apparatus. The first run of data taking has been accomplished in Fermilab, where we already attained the statistics of E821. In this talk, I will summarize the current experimental status and briefly describe the data quality of the first run. I will compare this run data with the previous E821 experiment and investigate the scope for further improvement.

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