PASCOS 2016: 22nd International Symposium on Particles, Strings and Cosmology



Contribution ID: 215

Type: not specified

Recent Progress on Muon g-2 Experiment at Fermilab

Tuesday 12 July 2016 14:05 (20 minutes)

The muon anomalous magnetic moment is a fundamental quantity that has played an important role in the development of the Standard Model.It can be both measured and computed to very high precision, providing a sharp tool in testing the robustness of the SM and predictions by the theories of BSM physics. The previous measurement by the Brookhaven E821 experiment found a 3.6 standard deviation discrepancy from the predicted value. The Muon g-2 Experiment at Fermilab aims to achieve a factor of four improvement in measured precision with an upgraded apparatus, a reduced systematic uncertainty and about 20 times more data. The experiment is well on schedule to take first data in 2017.

Summary

The muon anomalous magnetic moment is a fundamental quantity that has played an important role in the development of the Standard Model.It can be both measured and computed to very high precision, providing a sharp tool in testing the robustness of the SM and predictions by

the theories of BSM physics. The previous measurement by the Brookhaven E821 experiment found a 3.6 standard deviation discrepancy from the predicted value. The Muon g-2 Experiment at Fermilab aims to achieve a factor of four improvement in measured precision with an upgraded apparatus, a reduced systematic uncertainty and about 20 times more data. The experiment is well on schedule to take first data in 2017.

Primary author: Prof. LI, Liang (Shanghai Jiao Tong University)

Presenter: Prof. LI, Liang (Shanghai Jiao Tong University)

Session Classification: Parallel IV

Track Classification: Precision Experiments and "Lowenergy" Probes of Physics Beyond the Standard Model