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Type: **Parallel**

Combination and checks of highly correlated measurements of the muon precession frequency in magnetic field for the final FNAL measurement of the muon magnetic anomaly

We describe how several highly correlated measurements of the muon precession frequency in magnetic field by multiple independent analysis groups were checked for consistency and averaged, for the final measurement of the muon magnetic anomaly by the FNAL muon $g-2$ experiment. With a significant improvement with respect to the past data analyses of the experiment, we planned the use of common data events bootstrap samples in order to obtain reliable and comprehensive estimates of the correlation between alternative measurements, greatly improving the reliability of the consistency checks, which are a critical step of the whole measurement procedure.

Secondary track

T05 - QCD and Hadronic Physics

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