



PHYSICS AND ASTRONOMY COLLOQUIUM

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“Precision Muon Physics: Capturing a Moment in a Lifetime”

Abstract

Low-energy, precision measurements are important to establish the parameters of the Standard Model and to test various predictions in the quest for new physics signatures. I will discuss two of our experiments that were recently completed. Both involve the muon lifetime, leading to the Fermi Constant at sub-ppm precision and the nucleon weak pseudoscalar coupling constant g_P , determined in an unambiguous manner for the first time. Future plans include the approved Fermilab-based next-generation muon anomalous magnetic moment measurement, which follows on our effort that has provided one of the strongest hints of physics beyond the Standard Model today.

Wednesday, February 08, 2012

3:30 p.m.

Bob Wright Centre

Room A104