



Precision Muon Physics

Capturing a Moment in a Lifetime

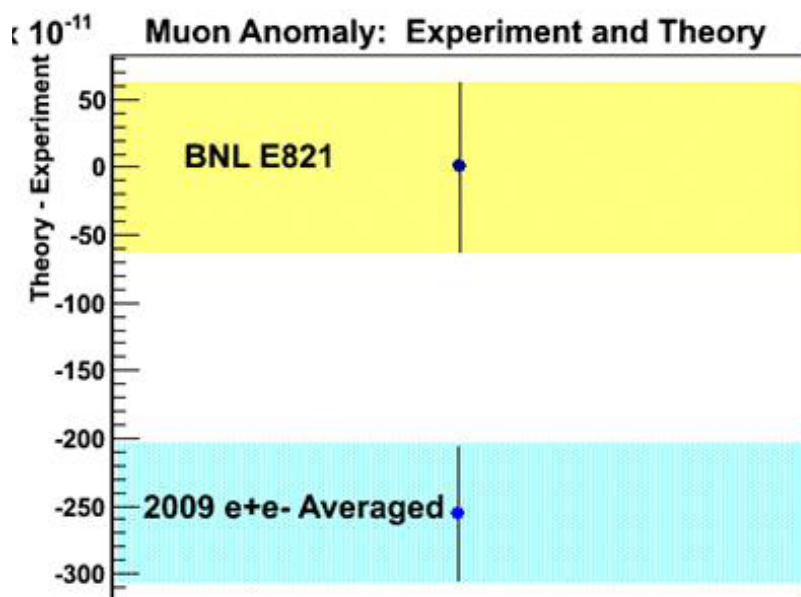
Low-energy, precision measurements are important to establish the parameters of the Standard Model and to test various predictions in the quest for new physics signatures. I will discuss two of our experiments that recently reported first physics results. Both involve the muon lifetime, leading to the Fermi Constant at a new level of precision and the nucleon weak pseudoscalar coupling constant g_P , determined in an unambiguous manner for the first time. Future plans include a Fermilab-



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based next-generation muon anomalous magnetic moment measurement, which follows on the our effort that has provided one of the strongest hints of physics beyond the Standard Model today.