

Abstract Submitted
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Analysis of Systematic Errors in the MuCap Experiment¹

THOMAS BANKS, MUCAP COLLABORATION — The MuCap experiment seeks to measure the rate of ordinary muon capture by the proton to 1% precision, thereby determining the nucleon's weak induced pseudoscalar form factor, g_P , to 7%. To achieve this goal, we must confront a multitude of systematic effects. We recently completed analysis of our 2004 data set and obtained a capture rate measurement precise to 2.5%; analysis of data recorded in 2005–2006 is currently under way and should ultimately yield results within the design goal. In this talk I will discuss the methods used to study, quantify, and reduce the systematic errors in the analysis of the 2004 data, and I will examine anticipated improvements for future analysis.

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