APR09-2009-000948

Abstract for an Invited Paper
for the APR09 Meeting of
the American Physical Society

Dissertation Award in Nuclear Physics Talk: Data Analysis and Present Status of the MuCap Experiment

STEVEN CLAYTON[1], University of Illinois

The MuCap experiment measures the rate of muon capture on the proton from a known initial state, providing an unambiguous determination of the pseudoscalar coupling g_P of the proton's weak interaction. In 2007 the MuCap collaboration released their first physics results for g_P with 20% precision, a statistics limited, unambiguous measurement of this coupling constant surpassing all previous efforts. Since that first data collection, several improvements to the experiment were made towards the final precision goal of g_P to 7%. In this talk, the MuCap first physics measurement will be discussed, and the status of the subsequent experimental and analysis effort will be described.

[1]Present address: Los Alamos National Laboratory