Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

The PRad Experiment at JLab[1] DIPANGKAR DUTTA, Mississippi State University, FOR THE PRAD COLLABORATION — Recent measurements of the proton charge radius in muonic hydrogen, have found a large ($> 7\ \sigma$) discrepancy compared to the charge radius extracted from regular hydrogen, using either atomic spectroscopy or electron scattering. We are preparing a new high precision measurement of the proton charge radius using electron scattering (PRad) at JLab. This experiment will be the first magnetic spectrometer free measurement of the proton charge radius, using a novel window-less gas flow target and a high resolution calorimeter (HyCal). The systematic uncertainties will be controlled by detecting the elastic and the Möller scattered electrons simultaneously within the same geometric acceptance. The experiment will cover a Q^2 range of $10^{-4} - 10^{-2}$ GeV^2, reaching the lowest Q^2 of any previous electron-proton scattering experiment. We will discuss the status of this experiment as it is being prepared to run in Hall-B, as soon as beam is available at the upgraded JLab.

[1]This work is supported by the U.S. Department of Energy under contract number DE-FG02-07ER41528 and by the National Science Foundation under contract number PHY-1229153.

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Date submitted: 28 Jun 2013 Electronic form version 1.4