Abstract Submitted
for the DNP16 Meeting of
The American Physical Society

Recoil Detection for the SEparator for CApture Reactions (SECAR)[1] APRIL GARRITY, Francis Marion University, J. C. BLACKMON, C. M. DEIBEL, E. GOOD, A. A. HOOD, LSU, SECAR COLLABORATION — SECAR will be installed at NSCL/FRIB to directly measure (p,γ) and (α,γ) reactions that are important in extreme stellar environments. Highly selective recoil detection is necessary with SECAR to identify the heavy products of these reactions. We have developed a gas ionization chamber that augments a standard $\Delta E - E$ design with position sensitive capability. We will describe this unique design and its advantages. Initial testing experiments that characterize the position, energy and atomic number resolution of the detector will be presented. The new recoil detector will be characterized in further in-beam studies in the near future and will be installed at NSCL/FRIB by early 2018.

[1]Supported by NSF and the U.S. DOE Office of Nuclear Physics.

April Garrity
Francis Marion University

Date submitted: 21 Jul 2016 Electronic form version 1.4