

Abstract Submitted  
for the DNP16 Meeting of  
The American Physical Society

**Performance of the St. George Detector System**<sup>1</sup> LUIS MORALES, University of Notre Dame, SUNIL KALKAL<sup>2</sup>, Indiana University South Bend, HYOSUN JUNG, CHRIS SEYMOUR, GWENAELLE GILARDY, MIKE MORAN, ZACHARY MEISEL, University of Notre Dame, JERRY HINNEFELD, Indiana University South Bend, MANOEL COUDER, University of Notre Dame — The St. George recoil mass separator at the University of Notre Dame will be used to study  $(\alpha, \gamma)$  reactions of astrophysical interest. A detection system was developed for the St. George recoil mass separator, in collaboration with Indiana University South Bend, that will utilize energy and time-of-flight to separate reaction products from residual unreacted beam particles. The detection system uses two microchannel plate (MCP) detectors, perpendicular electric and magnetic field are used to bend secondary electrons from the surface of a parylene backed carbon foil to register timing measurements, and a silicon strip detector is used to measure the ions kinetic energy. The performance of the detection system will be presented.

<sup>1</sup>NSF grant (PHY-0959816 PHY-1062819)

<sup>2</sup>Currently: Australian National University, Canberra, Australia.

Luis Morales  
University of Notre Dame

Date submitted: 29 Jun 2016

Electronic form version 1.4