Abstract Submitted
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Establishing the Acceptance of St. George[1] CHRISTOPHER SEYMOUR, GEORGE BERG, MANOEL COUDER, WILLIAM FELTMAN, University of Notre Dame, GWENAELLE GILARDY, University of Bordeaux, ZACHARY MEISEL, Ohio University, LUIS MORALES, MICHAEL MORAN, SHANE MOYLAN, DANIEL ROBERTSON, EDWARD STECH, MICHAEL WIESCHER, University of Notre Dame — The St George recoil separator will be used to measure alpha capture reaction cross sections in order to enhance our understanding of the astrophysical sites and processes in which the reactions occur. Measurements will be carried out in the Nuclear Science Laboratory of Notre Dame at relatively low energies and over a broad energy range. Performing measurements over a large energy range, and at as low an energy as possible, will help improve the S-factor extrapolations necessary to calculate the reaction rate at actual stellar energies; where the reaction cross section is too low to measure directly in the lab. However, before cross section measurements can be carried out, the separator must be commissioned. The objective of commissioning St George is to establish angular and energy acceptance characteristics while simultaneously optimizing the ion optics of the system. A summary of recent angular and energy acceptance results along with the techniques used to achieve them will be presented.

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