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Studying branching ratios of interest to the 26Al(p,gamma) reaction with the Enge Split-Pole Spectrograph at Florida State University[1]
E.C. GOOD, C.M. DEIBEL, B. SUDARSAN, J.C. BLACKMON, K.T. MACON, R. MALECEK, K.H. PHAM, T. RULAND, Louisiana State University, B. ASHER, L.T. BABY, C. BENETTI, N. GERKEN, K. HANSELMAN, K.W. KEMPER, E. LOPEZ SAAVEDRA, G.W. MCCANN, E. TEMANSON, E. RUBINO, J.F. PERELLO, A.B. MORELOCK, J.C. ESPARZA, I. WIEDENHOEVER, Florida State University — First science runs with the Enge Split-Pole Spectrograph (SE-SPS) at Florida State University utilizing the Silicon Array for Branching Ratio Experiments (SABRE) have recently been conducted. The 27Al(3He,t)27Si*(p)26Alg,m reaction was used to measure the branching ratios of states in 27Si of interest to the 26Alg,m(p,gamma)27Si reactions. These reactions are the primary destruction mechanism of 26Al in classical novae, affecting the amount of 26Al in the Galaxy, an important indicator of ongoing nucleosynthesis. SABRE was able to detect decay branching ratios at resonance energies 200-400 keV lower than previously measured. I will discuss this measurement and the calculation of the 26Alg,m(p,gamma)27Si reaction rates based on the results.

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