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New Results with TECSA B.T. ROEDER, M. MCCLESKEY, L. TRACHE, A.A. ALHARBI, A. BANU, V.Z. GOLDBERG, E. SIMMONS, A. SPIRIDON, R.E. TRIBBLE, Texas A&M University, S. CHERUBINI, M. GULINO, R.G. PIZZONE, R. SPARTA, C. SPITALERI, INFN-LNS, T. DAVINSON, J. WALLACE, P.J. WOODS, Univ. of Edinburgh — The Texas A&M-Edinburgh-Catania Silicon detector Array (TECSA) is a collaborative effort to build a high-efficiency detector Si array useful for measuring reactions of interest for nuclear astrophysics and nuclear structure. The array consists of up to 16 Micron Semiconductor YY1 detectors that are each 300 μm thick. Each detector has 16 annular ring sectors to measure the energy and the scattering angle of the detected particles. So far, we have conducted two experiments with TECSA at Cyclotron Institute at Texas A&M Univ. In the first, we measured the d(^{14}C,p)^{15}C reaction at 11.7 MeV/u. In the second, we measured d(^{26}Al,p)^{27}Al with an ^{26}Al secondary beam prepared in-flight with MARS. Angular distributions were obtained for both reactions at backward angles. The protons were measured both as singles events and in coincidence with timing signals from the cyclotron RF and a scintillator to measure coincidence between the protons and the beam. Results of the data analysis for the d(^{14}C,p)^{15}C run and preliminary results from the d(^{26}Al,p)^{27}Al run will be presented. Also, prospects for the future use of this detector array will be discussed.
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