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The TECSA Commissioning Run¹ 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. SPARTÀ, C. SPITALERI, INFN-Catania, T. DAVINSON, J. WALLACE, P.J. WOODS, University of Edinburgh — The Texas A&M-Edinburgh-Catania Silicon detector Array (TECSA) is a collaborative effort to build a highefficiency 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. Each detector has 16 annular ring sectors to measure the energy and the scattering angle of the detected particles. TECSA was commissioned in a recent experiment at Texas A&M University which measured the $d({}^{14}C,p){}^{15}C$ reaction at 11.7 MeV/u. The recoil protons from the reaction were measured with TECSA at backward angles and angular distributions were obtained for the ${}^{15}C$ ground and 0.740 MeV excited state. The protons were measured both as singles events and in coincidence with timing signals from the cyclotron RF and a scintillator before the reaction target. The data are useful for obtaining the ANCs for the ¹⁵C states. Preliminary results of the data analysis from the commissioning run and prospects for the future use of this detector array will be presented.

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B.T. Roeder Texas A&M University

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