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^{26}Si and ^{30}S studied via (p,t) reactions using the Silicon Detector Array (SIDAR)[1] D.W. BARDAYAN, J.C. BLACKMON, J.F. LIANG, M.S. SMITH, ORNL, C.R. BRUNE, Ohio U., K.Y. CHAE, Z. MA, U. Tenn., J.A. HOWARD, R.L. KOZUB, Tenn. Tech. U., M.S. JOHNSON, ORAU, K.L. JONES, S.D. PAIN, J.S. THOMAS, Rutgers, R.J. LIVESAY, Col. School of Mines, D.W. VISSER, U. North Carolina — Spectroscopic studies of proton-rich nuclei are critical to evaluating thermonuclear reaction rates of importance to Hot- CNO and *rp*-process nucleosynthesis. One powerful method is to measure the energy and angular distributions of tritons produced in the (p,t) reaction on stable targets. We have recently implemented such studies at ORNL using ∼40 MeV proton beams. Tritons were identified and detected in the SIDAR array, which allows data to be acquired over a large solid angle and at 16 angles simultaneously. Our first studies are of the ^{26}Si and ^{30}S nuclei, which are produced by the ^{25}Al $(p,\gamma)^{26}$Si and ^{29}P$(p,\gamma)^{30}$S reactions in novae, respectively. Details of the method and results will be presented.

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