Abstract Submitted
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Measurements with ^{7}Be beams at the HRIBF[1] D.W. BARDAYAN, J.C. BLACKMON, J.J. DAS, C.D. NESARAJA, M.S. SMITH, D.W. STRACENER, ORNL, K.Y. CHAE, Z. MA, U. Tenn., A.E. CHAMPAGNE, R. FITZGERALD, D.W. VISSER, UNC, U. GREIFE, R.J. LIVESAY, Colorado School of Mines, V. GUIMARAES, U. Sao Paulo, J. HOWARD, R.L. KOZUB, Tenn. Tech. U., M.S. JOHNSON, ORAU, K.L. JONES, S.D. PAIN, J.S. THOMAS, Rutgers, P.D. PARKER, Yale — A ^{7}Be beam has been used at the HRIBF to study important reactions in stellar burning. Precise knowledge of the ^{7}Be$(p,\gamma)^8$B rate is important for interpreting solar neutrino flux observations. A direct measurement of the ^{7}Be$(p,\gamma)^8$B cross section is being made by bombarding a H_2 gas target with a ^{7}Be beam and counting ^{8}B recoils at the focal plane of the DRS mass spectrometer. The ^{3}He(^{3}He,2p)^{4}He reaction also occurs in stellar burning, but interpretation of low energy measurements have been hindered by a surprisingly strong low-energy rise in the cross section. This rise could, in part, be due to broad ^{6}Be resonances. We have studied ^{2}H(^{7}Be,t)^{6}Be to search for any such broad ^{6}Be levels. Initial results from these measurements will be presented.

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D.W. Bardayan
ORNL

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