

Abstract Submitted
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Study of the $^{17}\text{F}(p, \alpha)^{14}\text{O}$ reaction at *TwinSol*¹ D.W. BARDAYAN, T. AHN, J.M. ALLEN, M. BRODEUR, B. FRENTZ, Y.K. GUPTA, M.R. HALL, O. HALL, S. HENDERSON, J. HU, J.M. KELLY, J.J. KOLATA, A. LONG, C. NICOLOFF, P.D. O'MALLEY, K. OSTDIEK, M.K. SMITH, S. STRAUSS, U. Notre Dame, F.D. BECCHETTI, J. RIGGINS, R.O. TORRES-ISEA, U. Michigan, J.C. BLACKMON, K. MACON, LSU, S.D. PAIN, ORNL — The $^{14}\text{O}(\alpha, p)^{17}\text{F}$ reaction is an important trigger reaction to the αp process in X-ray bursts. The best experimental constraints on its astrophysical rate come from measurements of the time-inverse reaction, $^{17}\text{F}(p, \alpha)^{14}\text{O}$. Previous studies of this inverse reaction have nicely characterized the high-energy dependence of the cross section but there are still significant uncertainties at lower energies. A new measurement of the $^{17}\text{F}(p, \alpha)^{14}\text{O}$ cross section is underway at the University of Notre Dame *TwinSol* facility using an in-flight secondary ^{17}F beam. Initial tests will be presented along with plans for the completion of the measurement.

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