

Abstract Submitted
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Neutron Capture from ^{87}Sr ¹ G. RUSEV, Duke University and TUNL, R. RAUT, A.P. TONCHEV, W. TORNOW, Duke U. and TUNL, B. BARAMSAI, J.H. KELLEY, G. MITCHELL, NCSU and TUNL, T. BREDEWEG, A. COULTURE, M. JANDEL, J. O'DONNELL, R. RUNDBERG, J.L. ULLMANN, LANL, A. CHYZH, E. KWAN, LLNL — The neutron-capture resonances of the reaction $^{87}\text{Sr}(n, \gamma)^{88}\text{Sr}$ are significant to nuclear astrophysics to estimate the neutron density during the *s* process, whose path is split by the branching nucleus ^{85}Kr , and for a possible use of the ^{87}Rb - ^{87}Sr chronometric pair to measure the age of our Galaxy. In addition, the γ rays of the product nucleus ^{88}Sr are of importance to nuclear structure and the study of the pygmy resonance observed earlier in (γ, γ') measurements. We report results from a neutron-capture experiment on ^{87}Sr carried out with the 4π BaF₂ array, DANCE, at LANL. Spin values of neutron resonances have been deduced using the multiplicity and angular distributions of the cascade γ rays following the neutron capture.

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