Abstract Submitted
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Investigation of a Peak-Like Feature Observed in the Triton Energy Spectra from the ^{152,154}Sm(p,t) Reactions[1] P. HUMBY, E. WILSON, C.W. BEAUSANG, A. SIMON, K. GELL, T. TARLOW, G. VYAS, University of Richmond, T.J. ROSS, University of Kentucky, R.O. HUGHES, J.T. BURKE, R.J. CASPERSON, J. KOGLIN, S. OTA, Lawrence Livermore National Laboratory, J.M. ALLMOND, Oak Ridge National Laboratory, M. MCCLESKEY, E. MCCLESKEY, A. SAASTAMOINEN, R. CHYZH, M. DAG, Cyclotron Institute, Texas A&M University — Isotopically enriched ^{152,154}Sm targets were bombarded with 25 MeV protons from the K-150 cyclotron at the Cyclotron Institute of Texas A&M University. The outgoing charged particles and γ rays were detected using the STARLiTeR array, which consists of a highly segmented ΔE-E silicon telescope and six BGO shielded HPGe clover detectors. A peak-like feature was observed in the triton energy spectra from the ^{152,154}Sm(p,t) reactions at excitation energies of approximately 3 MeV for the ^{152}Sm(p,t) reaction and 2.2 MeV for the ^{154}Sm(p,t) reaction. Discrete states with cross sections as large as approximately 9% of the ground state cross section were identified in this feature using particle-γ and particle-γ-γ coincidences. The range of spins populated appears to be unusually large.

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