

Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Investigation of low/medium spin excited states in $^{150-154}\text{Sm}$ via the (p,d) and (p,t) reactions¹ P. HUMBY, University of Richmond, University of Surrey, A. SIMON, C. BEAUSANG, 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, Lawrence Livermore National Laboratory, S. OTA, Rutgers, J.M. ALLMOND, Oak Ridge National Laboratory, M. MCCLESKEY, E. MCCLESKEY, A. SAASTAMOINEN, R. CHYZH, M. DAG, Texas A&M University — Low/medium spin excited states of $^{151,153}\text{Sm}$ and $^{150,152}\text{Sm}$ were studied via the (p,d) and (p,t) reactions, respectively, utilizing the STARLITER arrays at the Cyclotron Institute of Texas A&M University. In the experiment ^{152}Sm and ^{154}Sm targets were bombarded with 25 MeV protons and the outgoing light charged particles (p, d and t) in the exit channels were detected using the STARS ΔE - E silicon telescope, thus allowing particle identification and a measurement of the nuclear excitation energy. Six BGO shielded HPGe detectors were used to observe the emitted gamma rays in coincidence with the particles. A post-run measurement of gamma rays emitted from the activated target allowed an improved measurement of the half life of the 96 minute $J^\pi = 8^-$ isomer of ^{152}Eu . Preliminary results are presented.

¹This work was partly supported by the US Department of Energy under Grants No. DE-FG52-06NA26206 and No. DE-FG02-05ER41379.

Peter Humby
University of Richmond

Date submitted: 10 Jan 2014

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