

Abstract Submitted
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Study of the β -decay of ^{11}Li at ISAC/TRIUMF¹ CALEB MATTOON, Colorado School of Mines, F. SARAZIN, C. ANDREOIU, A. ANDREYEV, R.A.E. AUSTIN, G.C. BALL, R.S. CHAKRAWARTHY, D. CROSS, E.S. CUNNINGHAM, J. DAOUD, P.E. GARRETT, G.F. GRINYER, G. HACKMAN, D. MELCONIAN, C. MORTON, C. PEARSON, J. RESSLER, J. SCHWARTZENBERG, M.B. SMITH, C.E. SVENSSON — The β -decay of ^{11}Li was investigated using the 8π β -decay spectrometer, an array of 20 Compton-suppressed HPGe detectors and 20 plastic scintillators for β -particle detection. Doppler-broadened line shapes appear in the experimental spectrum, resulting from the decay of excited states of ^{10}Be populated by β -delayed neutron emission. Using a Monte Carlo simulation, we have simulated the β -delayed neutron decay and subsequent γ -ray emission, in order to explore the excited states in ^{10}Be and the neutron-emitting states in ^{11}Be . Overall agreement is observed with the two most recent studies [F. Sarazin et al, PRC70 (2004) and Y.Hirayama et al, PLB611 (2005)]. Analysis however also suggests the existence of small contributions from previously unobserved neutron branches.

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