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DSAM lifetime measurements in ^{7,8}Li C. MORSE, LBNL, E.A. MCCUTCHAN, BNL, C.J. LISTER, G.L. WILSON, UML, G. HACKMAN, M. BOWRY, R. CABALLERO-FOLCH, L.J. EVITTS, A.B. GARNSWORTHY, J. HENDERSON, A. KURKJIAN, J.P. MEASURES, M. MOUKADDAM, P. RUOTSALAINEN, J. SMALLCOMBE, J.K. SMITH, D. SOUTHALL, M. WILLIAMS, TRIUMF, A.J. MITCHELL, ANU, C.Y. WU, LLNL — The lithium isotopic chain is an ideal laboratory for studying magnetic properties of nuclei. Recently, *ab initio* theoretical calculations have investigated charge current distributions in light nuclei, which give rise to $M1$ transition rates and magnetic moments, and have achieved precision comparable to available experimental data. Therefore, new experimental efforts are necessary to provide input for the further development of nuclear models. We have performed new lifetime measurements of the bound excited states of ^{7,8}Li in order to precisely determine the $M1$ transition strengths in these nuclei. The experiment was performed at TRIUMF using the TIGRESS array, populating excited states through (d, p) reactions in inverse kinematics. The lifetimes were determined using the Doppler Shift Attenuation Method, and the results of these measurements will be discussed.

Chris Morse
Lawrence Berkeley National Laboratory

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