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Precision excited-state lifetime measurements of 7,8Li[1] C MORSE, CJ LISTER, GL WILSON, UML, EA MCCUTCHAN, BNL, G HACKMAN, M BOWRY, R CABALLERO-FOLCH, LJ EVITTS, AB GARNSWORTHY, J HENDERSON, A KURKJIAN, JP MEASURES, M MOUKADDAM, P RUOTSALAINEN, J SMALLCOMBE, JK SMITH, D SOUTHALL, M WILLIAMS, TRIUMF, AJ MITCHELL, ANU, CY WU, LLNL — Advancing computational capabilities are providing increasingly detailed insights into light nuclear systems through *ab initio* models such as Green's Function Monte Carlo and No-Core Shell Model calculations. Recently, efforts have been directed towards investigating charge currents in these systems, which give rise to magnetic moments and $M1$ transition rates. In order to help guide such investigations, precise experimental data are required in order to differentiate between different theoretical predictions. We have performed a new measurement to precisely determine the excited-state lifetimes of ^{7,8}Li in order to constrain the $B(M1)$ transition rates in these nuclei. The experiment was performed at TRIUMF using TIGRESS, populating excited states through (d,p) reactions in inverse kinematics. The lifetimes were determined using the Doppler Shift Attenuation Method. Preliminary results will be presented.

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