

Abstract Submitted
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Isotope Shifts and Fine Structures of $^{6,7}\text{Li}$ D Lines and Determination of Relative Nuclear Charge Radius.¹ GEORGE NOBLE, WILLIAM VAN WIJNGAARDEN, York University — The $^{6,7}\text{Li}$ D lines were excited using an electro-optically modulated CW dye laser that intersected an atomic beam. Fluorescence was recorded as the laser was scanned across the resonance. Hence, each transition was multiply excited allowing for calibration of the frequency scan. The $^{6,7}\text{Li}$ 2P fine structures were found to be 10052.964 ± 0.050 and 10053.119 ± 0.058 MHz. The D1 and D2 isotope shifts were determined to be 10534.039 ± 0.070 and 10534.194 ± 0.104 MHz. The latter imply values for the $^{6,7}\text{Li}$ relative nuclear charge radius that are within 20 millifermi of each other which is consistent with the estimated uncertainties.

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