MILLIMETER WAVE SPECTROSCOPY OF HIGH RYDBERG STATES OF Kr

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A phase-stabilized backward wave oscillator (BWO) in the 260–380 GHz range was combined with an XUV laser system to record high-resolution spectra of high Rydberg states of krypton. The millimeter wave transitions between high n Rydberg states were detected by pulsed field-ionization, at sub-MHz resolution. Results are presented on the hyperfine structure of high n Rydberg states of ^{83}Kr.