

MILLIMETER-WAVE SPECTROSCOPY OF COLD Rb⁸⁵ ATOMS

JIANING HAN, JAMIL YASIR, PAUL J. TANNER, D. V. L. NORUM and THOMAS F. GALLAGHER, *Department of Physics, University of Virginia, McCormick Road, Charlottesville, Virginia 22903.*

Cold Rb⁸⁵ atoms were prepared by magneto-optical trap. Millimeter-wave has been used to drive nd to $(n-2)f$ ($32 \leq n \leq 39$) one-photon and nd to $(n-1)g$ ($31 \leq n \leq 36$) two-photon transitions. Quantum defects of f and g states of Rb⁸⁵ were calculated. Full analyses will be presented. ^a

^aThis work has been supported by Air Force Office of Scientific Research .