

Experimental results on the ionization of calcium atoms following resonant pumping of the $4s^2\ S-1(0)-4s4p\ P-3(1)$ transition with a CW ring dye laser are reported. Absorption profiles of the $4S2\ S-1(0)-4s4p\ P-3(1)$ transition around 6572.78 angstrom are measured under different conditions of temperature (T) and buffer gas pressure (p) where ionization was observed. Voigt profile fits are seen to adequately describe the observed absorption profiles. The results on collisional widths are in agreement with some previously published measurements. At low buffer gas pressures, collisional widths are found to scale as $T^{0.5}$.