EXPERIMENTAL ELECTRON EXCITATION RATES FOR Ne VII

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Excitation rates for Be-like Ne VII have been measured using a theta-pinch. The absolute intensity of the intercombination line allows the metastable level population density to be determined. The sum of the population densities of the ground and metastable levels is found by solving the time dependent ionisation-recombination rate equations knowing the temperature and density of the discharge as a function of time. The ratio of metastable level to ground level population densities thus obtained is compared to values obtained theoretically.

The experimental rates are compared to theory and the accuracy of using them for line ratios measurements of temperature and density are discussed.

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