

ON THE SEMICLASSICAL PERTURBATION STARK SHIFTS OF Ar II SPECTRAL LINES

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Using semiclassical perturbation approach in impact approximation, Stark shifts for singly charged argon (Ar II) spectral lines have been calculated as a function of temperature for 300 spectral lines for collisions with electrons, protons, singly charged helium and singly charged argon. Energy levels and oscillator strengths needed for this calculation were determined using Hartree-Fock method with relativistic correction (HFR). We compared our results with experimental values for 175 spectral lines. In this contribution we will present and discuss a part of these results as an example. This work extends our previous one (Hamdi et al. 2018).

References

Hamdi, R., Ben Nessib, N., Sahal-Bréchet, S., Dimitrijević M. S.: 2018, *MNRAS*, **475**, 800.