

References

- Bhatia, A. K., Landi, E.: 2008, *Atomic Data and Nuclear Data Tables*, **94**, 223.
Dimitrijević, M. S.: 1996, *Zh. Prikl. Spektrosk.*, **63**, 810.
Dimitrijević, M. S., Sahal-Bréchet, S.: 1996, *Physica Scripta*, **54**, 50.
Sahal-Bréchet, S.: 1969a, *A&A*, **1**, 91.
Sahal-Bréchet, S.: 1969b, *A&A*, **2**, 322.
Werner, K., Rauch, T., Kruk, J. W.: 2007, *A&A*, **466**, 317.

Poster

AB INITIO STARK BROADENING CALCULATIONS FOR Ca V SPECTRAL LINES

Rafik Hamdi¹, Nebil Ben Nessib¹, Milan S. Dimitrijević²
and Sylvie Sahal-Bréchet³

¹*Groupe de Recherche en Physique Atomique et Astrophysique,
Institut National des Sciences Appliquées et de Technologie,
Centre Urbain Nord B. P. No. 676, 1080 Tunis Cedex, Tunisia
E-mail: hamdi.rafik@gmail.com, nebil.benessib@planet.tn*

²*Astronomical observatory, Volgina 7, 11060 Belgrade 38, Serbia
E-mail: mdimitrijevic@aob.bg.ac.yu*

³*Laboratoire d'Etude du Rayonnement et de la Matière en Astrophysique,
Observatoire de Paris, Section de Meudon, UMR CNRS 8112,
Bâtiment 18, 5 Place Jules Janssen, F-92195 Meudon Cedex, France
E-mail: Sylvie.Sahal-Brechot@obspm.fr*

Using semiclassical perturbation approach, we have obtained ab initio Stark broadening parameters for 7 Ca V multiplets. Energy levels and oscillator strengths are calculated using SUPERSTRUCTURE code.

Results are obtained as a function of temperature, for perturber density of 10^{17} cm^{-3} . In addition to electron-impact full halfwidths and shifts, Stark broadening parameters due to proton- and ionized helium-impacts have been calculated. Thus, we have provided Stark broadening data for all the important charged perturbers in stellar atmospheres.

This work is a reference for Ca V ion because there is no other previous data. New Stark parameters calculations and measurements for this ion will be interesting to check the validity of our calculations.