

## ON THE STARK BROADENING OF Si III SPECTRAL LINES IN B TYPE STARS

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Stark broadening is the main pressure broadening mechanism in stellar plasma for temperatures of the order of 10000 K or higher, since than the hydrogen, usually main constituent of stellar atmospheres, is ionized. In white dwarfs this is the dominant line broadening mechanism but it should be also often taken into account in A type, as well as in late B type and early F type stellar atmospheres, especially in line wings.

Using semiclassical perturbation approach and impact approximation (see for example Sahal-Bréchet et al. 2014), as well as modified semiempirical method (Dimitrijević and Konjević, 1980) when the semiclassical perturbation method is not applicable in an adequate way we calculated Stark broadening parameters, line widths and shifts, for a number of Si III lines observed in spectra of B type stars. Including obtained results we synthesized the corresponding parts of the spectra in order to investigate the influence of Stark broadening.

### References

- Dimitrijević, M. S., Konjević, N.: 1980, Stark widths of doubly- and triply-ionized atom lines, *Journal of Quantitative Spectroscopy and Radiative Transfer*, **24**, 451.  
Sahal-Bréchet, S., Dimitrijević, M. S., Ben Nessib, N.: 2014, Widths and Shifts of Isolated Lines of Neutral and Ionized Atoms Perturbed by Collisions with Electrons and Ions: An Outline of the Semiclassical Perturbation (SCP) Method and of the Approximations Used for the Calculations, *Atoms*, **2**, 225.