

## STARK BROADENING OF Ar I SPECTRAL LINES IN THE VISIBLE PART OF THE SPECTRUM FOR STARK-B DATABASE AND VIRTUAL ATOMIC AND MOLECULAR DATA CENTER (VAMDC)

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Data on the Stark broadening of spectral lines are of interest for diagnostics, modelling and investigations of various plasmas in astrophysics, laboratory, technology and fusion research, as well as for laser designing and laser produced plasma investigations. Argon spectral lines, which are useful not only for laboratory and technological plasmas but also were observed in stellar atmospheres, are of particular interest, especially in the visible. In order to complete data on Stark broadening parameters for Ar I line in the visible, we determined Stark widths and shifts due to electron-, proton-, and ionized helium-impacts, for nine lines ( $\lambda\lambda = 4191.0, 4259.4, 5912.1, 6043.2, 6045.0, 6752.9, 7503.9, 7514.6, 7724.2 \text{ \AA}$ ), using  $jK$  coupling and semiclassical-perturbation theory.

The obtained results will enter in the STARK-B database (<http://stark-b.obspm.fr/>), which is a part of Virtual Atomic and Molecular Data Center (VAMDC - <http://vamdc.org/>, Dubernet et al., 2010), supported by EU in the framework of the FP7 "Research Infrastructures - INFRA-2008-1.2.2 - Scientific Data Infrastructures" initiative, with aim to build an interoperable e-Infrastructure for the exchange of atomic and molecular data.

### References

Dubernet, M. L. et al.: 2010, *J. Quant. Spectrosc. Radiat. Transfer*, **111**, 2151.