Progress Report

STARK BROADENING OF Se IV, Sn IV, Sb IV AND Te IV SPECTRAL LINES

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Stark broadening parameters, line width and shift, are needed for investigations, analysis and modelling of astrophysical, laboratory, laser produced and technological plasmas. Especially in astrophysics, due to constantly increasing resolution of satellite borne spectrografs, and large terrestrial telescopes, data on trace elements, insignificant before, now have increasing importance.

Using the modified semiempirical method (Dimitrijević and Konjević, 1980), here have been calculated Stark widths for 1 Se IV, 5 Sn IV, 2 Sb IV and 1 Te IV transitions. Since Sn, Sb, and Te are succesive elements in the periodic system, and Se and Te homologous, the obtained results have been used to discuss systematic trends.

Obtained results will be implemented in the STARK-B database (http://stark-b.obspm.fr) which is also a part of Virtual atomic and molecular data center (VAMDC - http://www.vamdc.org/.

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.