

INITIAL STARK WIDTH INVESTIGATION OF Te II SPECTRAL LINES AND THEIR IMPORTANCE IN ASTROPHYSICAL APPLICATIONS

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Set of 39 spectral lines of Te II have been prepared for a purpose of pressure broadening parameter determination. For some of these lines, Stark widths were calculated using modified semiempirical (MSE) approach (Dimitrijević and Konjević, 1980). Line and multiplet factors were taken from Shore and Menzel (1965), while matrix elements were determined by using of oscillator strengths (Zhang et al, 2013) whenever it was possible similarly as it is done, for example, in the analysis of Stark broadening of Lu III (Majlinger et al, 2015). These results will be compared with the results obtained by classical use of Bates-Damgaard method within MSE formalism (Bates and Damgaard, 1949). Stark widths of Te II can be helpful in analysis of astrophysical spectra, where MSE method has been already used successfully in the previous researches concerning the Stark broadening calculations of spectral lines.

References

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