

ON THE STARK BROADENING OF Co II SPECTRAL LINES

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Spectral lines of singly charged cobalt ion (Co II) are present in stellar spectra. Such lines for example, have been observed in Hg-Mn stars (see e.g. Bolcal and Didelon, 1987), where Stark broadening is the principal pressure broadening mechanism. For Co II lines, needed for cobalt abundance determination, radiative transfer calculation and for analysis and synthesis of stellar spectra, experimental or theoretical data do not exist in literature. We started an extensive analysis of Stark broadening of spectral lines within around 50 Co II multiplets, in order to provide the needed theoretical data for Stark broadening parameters. For calculations, the modified semiempirical method (Dimitrijević and Konjević, 1980) has been used. Here, as an example of obtained results we present Stark widths for five transitions. The obtained results have been also used to demonstrate the importance of Stark broadening mechanism in white dwarfs.

References

- Bolcal, C., Didelon, P.: 1987, *Elemental Abundance Analyses*, Institut d'Astronomie de l'Université de Lausanne, Chavannes-des-Bois, Switzerland, p. 152.
- Dimitrijević, M. S., Konjević, N.: 1980, *J. Quant. Spectrosc. Radiat. Transfer*, **24**, 454.