

5th Serbian Conference on Spectral Line Shapes in Astrophysics

Vršac, June 6-10, 2005

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FOREWORD

The line strengths, their widths, and shapes, are powerful tools for emitting/absorbing gas diagnostics in different astrophysical objects (from the Solar system to the most distant objects in the Universe - quasars). The emission/absorption lines of astrophysical objects are produced over a wide range of distances from an observer and under a wide range of physical and kinematical conditions. Therefore in astrophysical objects the lines from X-ray ($\text{Fe K}\alpha$) to the radio (radio recombination lines) have been observed. On the other hand, the experimental and theoretical investigations of laboratory plasma have been applied in spectroscopic astrophysical research, especially atomic data needed for line shape calculations. This series of conferences will bring together astronomers (observers and theoreticians) and physicists to review the present stage of investigations, with the aim to improve our knowledge in this field, and to better understand the possibilities of emission/absorption lines analysis for future astrophysical investigations.

We started with this series of conferences with an idea to have a possibility to meet with our colleagues in the years when there is no ICSLS (International Conference on Spectral Line Shape) meeting, to give possibility to young people to participate and to exchange ideas and discuss results with colleagues working in this field in Serbia and elsewhere. The first Yugoslav Conference on Spectral Line Shapes, was held in Krivaja near Bačka Topola, 11-14 September 1995, the second in Bela Crkva, 29 September - 2 October 1997, and the third in Brankovac on Fruška Gora, 4-6 September 1999. The next one in 2001 was not organized, so we took again organization and with a change of the name, organized in Arandjelovac, 10 - 15 October 2003, IV Serbian Conference on Spectral Line Shapes. Since previous meetings proved that the principal interest for them was from astrophysicists, this conference is organized from 6 to 10 June 2005 in Vršac as V Serbian Conference on Spectral Line Shapes in Astrophysics.

We hope that this series of meetings will be useful and interesting for our colleagues interested in spectral line shapes research and will provide an additional possibility for exchange of ideas, development of collaboration and friendship and will contribute to the education of young collaborators.

L. Č. Popović and M. S. Dimitrijević