

FOREWORD

The story about the stars is contained in their radiation which is reaching us and one of the important methods allowing us to disclose those secrets from their radiation involves the study of the spectral line shapes. In this way we are able to determine the temperature on the stellar surfaces, their gravity and the abundance of particular chemical elements. The study of the spectral line shapes represents a multidisciplinary approach, furnishing results of importance for the modeling, diagnostics and for spectral analysis, as well as for quite a number of research fields in physics, astronomy and technology, where plasma and the need for its diagnostics, modeling and examination, come, into play.

The first papers relating to this field to appear in Yugoslavia were published in 1962 and 1964, the former by V. Vujnoviĉ Zagreb and latter by M. D. Marinkoviĉ in Serbia. According to three bibliographies with citation indexes issued by me, covering the period 1962-1993, the number of bibliographic units pertaining to this field, published in this country, is 869 (689 of which on the part of Serbian authors) by 128 Yugoslav authors (100 of whom are from Serbia, 26 from Croatia and 1 from Macedonia, working in Paris). Succesfully defended were 11 doctoral disserations and 20 master's theses. In 1993 for example, 69 bibliographic units were published by 20 authors – a testimony to the swing this research field has acquired in our country.

Intensive growth such as this, having led to the emergence of separate groups devoted to the researching in the spectral line profiles at the Institute of Physics in Zemun, Faculty of Physics and Astronomical Observatory in Belgrade and the Faculty of Sciences and Mathematics in Novi Sad, as well as the number of individuals engaged in this field or making use of the results achivied, fully warrant the organisation of a conference like this one. It will contribute to better mutual connections, provide opportunity for exchanging ideas and for critical evaluation and discussion of the results obtained. It is my hope that this Conference, which already has met with the notable interest by our friends from abroad, will grow into regular manifestation, thus becoming a forum, possessing critical mass, for scrutinizing and evaluating our scientific creativity, for developing and advanced training of the young as well as for getting astronomers together which stimulates the spirit of community and cooperation.

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