

Invited lecture

INTERPRETING THE COMPLEX LINE PROFILES IN THE STELLAR SPECTRA

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One of the most important phenomena in the spectra of hot emission stars and some quasars is the appearance of Discrete Absorption Components (DACs) and Satellite Absorption Components (SACs). In order to explain the complex structure of the density regions of hot stars, where the spectral lines that present SACs or DACs are created, our team proposed a new model, named GR model (Gauss-Rotation model). The main hypothesis of this model was that in the stellar envelop, we can detect a number of independent and successive absorbing or emitting spherical density regions of matter. In this study we present a new approach of the GR model that supposes a number of independent but not successive absorbing or emitting spherical density regions of matter. Finally, we present an explanation of the very large line broadening that we detect in the spectra of hot emission stars (Be and Oe stars), which is not possible to explain with the classical theory.