

SOME NEW IDEAS TO STUDY THE COMPLEX BAL PROFILES IN THE SPECTRA OF AGNs

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It is known that in BALQSOs spectra we can detect many absorption lines (like C IV, Si IV) presenting very broad and complex profiles. An idea to explain these profiles is that the dynamical systems of Broad Line Regions are not homogeneous but consist of a number of dense clouds with different physical parameters. A general problem in the study of the origin of these clouds is that there was no solution of the radiative transfer equation through such a complex environment in order to calculate the physical parameters for each one of the clouds such as the radial and rotational velocities, the random motions of the ions, the Full Width at Half Maximum of the considered spectral lines, the optical depth, the corresponding absorption and emission energy for each one of the clouds etc. In this paper we present a new model able to study the complex BAL profiles in the spectra of AGNs and to calculate the physical parameters' values of each one of the AGN clouds that contribute to the construction of the complex BAL profiles in the AGN spectra.