RevMexAA (Serie de Conferencias), **00**, 1–1 (2007)

ABSTRACT ORAL CONTRIBUTION

INFLUENCE OF GALAXY ROTATION AND OUTFLOWS ON THE LYMAN ALPHA SPECTRAL LINE

M. C. Remolina-Gutiérrez[1], J. E. Forero-Romero[1] and J. N. Garavito-Camargo[2]

Galaxies detected through its Lyα emission are known as Lyman Alpha Emitters (LAEs). Typical LAEs are star-forming and have a low dust content. Additional dynamical characteristics of a LAEs' insterstellar medium can be derived by studying its Lyα line morphology and comparing it against theoretical models. In this work we model the joint effect of bulk rotation and outflows. We include these two effects into a Monte Carlo radiative transfer code to study their impact into the the Lyα line morphology. We find that rotation alone does have an impact on the Lyα morphology. Together with the outflows, the new model can reproduce LAEs' main observed features with physically motivated parameters for the rotational and outflow velocities. We present fits of this model to some observationa spectra to argue that both rotation and outflows have to be taken into account for a proper estimation of a LAE's physical parameters.

[1] Departamento de Física, Universidad de los Andes, Cra 1 18A-10, Bloque Ip, Bogotá, Colombia. (mc.remolina197 @uniandes.edu.co).
[2] Department of Astronomy, The University of Arizona, 933 North Cherry Ave Tucson, AZ 85721, Arizona, United States of America.