

OBSERVATIONS AND MODELS FOR H LINES IN TTAURI STARS .

Antonio Pedrosa , *Center for Astrophysics of Oporto, Navegar Foundation* .

There is an extensive list of published spectroscopic studies related to the emission lines in T Tauri stars [1, 2, among others]. In one, an atlas of high resolution spectra of the H α lines of the most prominent T Tauri stars in the Southern hemisphere was presented [3], where each star exhibits a different line profile. In this work a line classification scheme was proposed, based on the line shape, was proposed with four different classes, involving two subclasses. Models that compute the different line profiles have also been put forward in order to understand the mechanisms underneath the line formation [4, 5, among others]. Recently a model that incorporated different components has been presented, with a circumstellar structure that includes both magnetospheric accretion and a disc wind, was able to reproduce the wide range of profile types seen in

observations [6]. In this poster we would like to present a similar spectroscopic study to the one presented by Reipurth et al [3] that has been recently conducted, and interpret the results in face of the previous referenced model. We will also extend this interpretation to the issue related to the time variability of the H α profiles, further testing the model by relating those variations with the expected changes in physical conditions. [1] Hamann F., Persson S. E., 1992, *ApJS*, 82, 247 [2] Muzerolle J., Hartmann L., Calvet N., 1998, *AJ*, 116, 455 [3] Reipurth B., Pedrosa A., Lago, M.T.V.T., 1996, *A&AS*, 120, 229 [4] Hartmann L., Hewett R., Calvet, N., 1994, *ApJ*, 426, 669 [5] Pedrosa, A., 1996, PhDT [6] Kurosawa R., Harries T. J., Symington N. H., 2006, *MNRAS*, 370, 580