

LIGHT CURVE MODELLING AND DOPPLER TOMOGRAPHY OF AY PSC

J. Kára¹, S. Zharikov^{2,3}, M. Wolf¹, A. Amantayeva³, G. Subebekova³, S. Khokhlov³, A. Agishev³ and J. Merc^{1,4}

¹*Astronomical Institute, Faculty of Mathematics and Physics, Charles University, V Holešovičkách 2, 180 00 Praha 8, Czech Republic,*

²*Universidad Nacional Autónoma de México, Instituto de Astronomía, AP 106, Ensenada, 22800, BC, México*

³*Al-Farabi Kazakh National University, Al-Farabi Ave., 71, 050040, Almaty, Kazakhstan*

⁴*Institute of Physics, Faculty of Science, P. J. Šafárik University, Park Angelinum 9, 040 01 Košice, Slovak Republic*

AY Psc is an eclipsing cataclysmic variable of Z Cam-type. We have obtained time-resolved photometric observations in different stages of activity and time-resolved spectroscopic observations during standstill. We applied our light curve modelling techniques and the Doppler tomography method to analyse the obtained data. We determined the fundamental parameters of the system and the structure of the accretion flow therein. We constructed a Doppler map of the system based on the H α emission line, which shows that the line is a superposition of radiation from the irradiated surface of the secondary, from the flux of the outflow zone, and winds which originate in the hot spot and the central part of the accretion disk.