ON ESTIMATION OF THE OPTICAL THICKNESS IN SOLAR PROMINENCES

Ivan Milić[1], Sanda Dejanić[1] and Pavel Kotrč[2]

[1] Faculty of Mathematics, Belgrade, Serbia
[2] Astronomical Observatory CA, Ondrejov, Czech Republic

Abstract

Here we present a method for estimating the optical thickness of prominences from H_α emission line profiles. The method is based on fitting the profile with a theoretically derived function of optical thickness and value of source function. The method is applied on 52 prominences observed in Ondrejov, CR from April 2007. to March 2008. Results have been compared with the values of the optical thickness derived by other methods (by using integral intensity of H_α emission line, and by numerical modeling).