Poster paper

LIGHT CURVE SOLUTIONS OF THE ECCENTRIC *KEPLER* BINARIES KIC 4281895 AND KIC 5115178 WITH TIDALLY INDUCED HUMPS

Doroteya Vasileva and Diana Kjurkchieva

Department of Physics, University of Shumen, 115 Universitetska Str., Shumen, Bulgaria
E-mail: d.vasileva@shu.bg, d.kyurkchieva@shu-bg.net

We carried out light curve solutions of two eclipsing detached binaries on eccen-tric orbits observed by *Kepler*. The orbits and stellar parameters of KIC 4281895 and KIC 5115178 were determined with a high accuracy by modeling of their photometric data. We found also tidally induced brightening (hump) around the periastron phase of our targets.

Poster paper

OBSERVATIONS OF NGC185 GALAXY – STUDY OF SUPERNOVA REMNANT IN A DWARF ELLIPTICAL GALAXY

M. M. Vučetić[1], B. Arbutina[1], M. Z. Pavlović[1], A. Ćiprijanović[1], D. Urošević[1], N. Petrov[2], D. Onić[1] and A. Trčka[1]

[1]*Department of Astronomy, Faculty of Mathematics, University of Belgrade, Studentski trg 16, 11000 Belgrade, Serbia*
[2]*National Astronomical Observatory Rozhen, Institute of Astronomy, Bulgarian Academy of Sciences, 72 Tsarigradsko Shosse Blvd, BG-1784 Sofia, Bulgaria*
E-mail: mandjelic@matf.bg.ac.rs

Due to the lack of interstellar matter, supernova remnants (SNRs) are rarely observed in elliptical galaxies. In this paper we discuss the previously known optical supernova remnant (SNR) in NGC185 galaxy, a dwarf elliptical companion of the Andromeda galaxy. We observed a central portion of NGC185, through the narrowband Hα and [SII] filters, on a 2m RCC-telescope at National astronomical observatory Rozhen, Bulgaria. Finally, we performed MHD simulation using the Pluto code and compared standard evolution models with the case of low environmental density and high pressure, in order to determine properties and parameters of the SNR and its host galaxy.