

Photometric and Spectroscopic Study of BD-02 873

Monday 24 April 2023 18:20 (5 minutes)

This study, the first light curve analysis of BD-02 873, an spectroscopic binary star system, is presented. We obtained spectroscopic data using the Whoppschel spectrograph attached to the 0.8-meter telescope at Ankara University Kreiken Observatory to derive radial velocity. The light curve from the TESS data was combined with the radial velocity measurements and were analyzed using the PHOEBE light curve analysis program to determine orbital and physical parameters of the system. Simultaneous light and radial curve analysis show that the masses and radii for both components as $M_1 = 1.23M_{\odot}$, $R_1 = 1.66R_{\odot}$ and $M_2 = 1.19M_{\odot}$, $R_2 = 1.22R_{\odot}$ and the system has an eccentric orbit with $e = 0.14$.

Author: Mr AZIZOGLU, Berhan Safa (Ankara University Kreiken Observatory, İncek Bulvarı 06837 Ahlatlıbel, Ankara, Türkiye)

Presenter: Mr AZIZOGLU, Berhan Safa (Ankara University Kreiken Observatory, İncek Bulvarı 06837 Ahlatlıbel, Ankara, Türkiye)

Session Classification: Stellar astrophysics and interstellar medium