

Parameters of UX CVn

Shimanskii V.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

We have derived a complete set of parameters for the close binary system UX CVn made up of degenerate objects based on photometric and spectral observations. The total mass of the components is close to one solar mass, so that its further evolution cannot result in a type-I supernova. The spectrum of the binary indicates that the surface temperature of the hot subdwarf may have increased by 2000 K over 40 years. This heating rate is consistent with theoretical estimates for evolutionary tracks of low-luminosity hot subdwarfs. We also determined the abundances for ten elements in the atmosphere of the primary, which are consistent with the hypothesis that the binary is a member of Population II. There are signs of synthesized material ejected onto the surface of the star. © 2002 MAIK "Nauka/Interperiodica".

<http://dx.doi.org/10.1134/1.1451926>
