ON THE ORIGIN OF NOVA-LIKE BINARY SYSTEMS

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Abstract. Basic physical characteristics of nova-like binary systems are similar to W UMa systems. Externally, however, these systems are different – nova-like systems contain a white dwarf as a component, whereas both components of W UMa systems are near the main sequence. The hypothesis is suggested of the origin of contact W UMa systems by means of the fission of the rapidly rotating isothermal helium core of an evolved giant star. The contraction of the more massive component leads to the formation of a white dwarf and consequently to the transformation of a W UMa type system to a nova-like system.

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