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GRAVITATIONAL SCALE FACTOR AND QUANTUM GRAVITATIONAL EFFECTS IN EVOLUTIONARY EXPANSION OF COMPONENTS OF DETACHED DOUBLE-LINED ECLIPSING SYSTEMS (DDLES)

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It is found that the gravitational scale factor $(_1/_2)$ can act in the absolute evolutionary expansion of the DDLES component. is the mass of the DDLES component. For any DDLES indexes 1 and 2 indicate the first and second DDLES components, respectively.Namely, for the radii of these components it is true that $R_1 \propto 1/(_1/_2)^{\omega}$ and $R_2 \propto (_1/_2)^{\omega}$, where ω is 0, 1, 3/2 and $(_1/_2) \geq 1$. It is found that the distributions of the DDLESes along the coordinate axes $\log(R_1/R_2)$ and $\log((GM/R)_1/(GM/R)_2)$ have six and three peaks, the positions of which are defined by the steps of 0.0085 and 0.0248, respectively. The peaks are created by the populated areas of the temporal coordinated relative evolutionary expansion of the first and second DDLES components. Thus, in any DDLES the relative evolutionary expansion of the first and second DDLES components is, in particular, their transitions along the coordinate axes $\log(R_1/R_2)$ and $\log((GM/R)_1/(GM/R)_2)$ between these areas with their temporary localization in the latter. In this case, the gravitational scale factor can additionally compress and expand, respectively, the first and second DDLES components. Therefore, the evolutionary expansion of any DDLES component is complicated, although orderly.

Primary author(s) : SINITSYN, Sergei

Presenter(s) : SINITSYN, Sergei

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