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On Mathematical Analysis LRS Bianchi Type II String Cosmological Models with Viscosity Distribution in Modified General Relativity

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Abstract

We consider locally rotationally symmetric Bianchi type II string cosmological model in the presence of viscous fluid. To solve the Einstein's field equations for LRS Bianchi type II space time has been obtained under the assumption $\rho = K_{m_1}\eta$ *, here* ρ *is the energy density,* η *is the string tension density and* K_{m_1} *is a constant. We have also used a condition that, the scalar expansion is proportional to the shear, to get determinate solution in terms of cosmic time t. Some physical and model geometric behavior of the models is discussed.*

Keywords: LRS Bianchi type II, massive string, viscous fluid.

MSC2010 CLASSIFICATIONS: 83C05, 83C15.

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