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Kantowski-Sachs viscous fluid cosmological model with a varying Λ

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Abstract: We study the Kantowski-Sachs cosmological model filled with viscous fluid in the presence of cosmological term Λ. To get a deterministic solution, a condition between metric potentials is used. The viscous coefficient of bulk viscous fluid is assumed to be a power function of mass density, whereas coefficient of shear viscosity is considered proportional to scale of expansion in the model. It is found that the cosmological constant Λ is positive and is a decreasing function of time, which is supported by results from recent supernova observations. Some physical and geometrical properties of the models are also discussed.

Key Words: Kantowski-Sachs viscous fluid model, cosmology, variable cosmological constant

Keywords
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