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New agegraphic in modified teleparallel gravity with viscosity fluid

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Abstract

In this paper, the model of the new agegraphic is considered as an alternative to the teleparallel modified gravity model. First, we obtain the Friedman equations by taking dark matter and dark energy based on the existence of the bulk viscosity in the flat Friedmann–Robertson–Walker metric. So, we obtain the cosmological parameters and the function $f(T)$ by using the power law of the scale factor and the correspondence between the agegraphic model and teleparallel gravity. By plotting the variety of the dark energy equation of state versus the redshift parameter, we describe the accelerated expansion of the universe. Finally, we investigate the stability condition by using the function of sound speed, finding the energy-weak constraints for free parameters.

Keywords: new agegraphic, teleparallel gravity, equation of state, dark energy

For full article, refer to the Persian section