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Viscous cosmological model and the validity of near equilibrium condition in the context of f(R,T) gravity.

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Recent studies on viscous cosmology show that, while explaining the recent accelerated expansion of the universe in the context of Einstein's gravity, the near-equilibrium condition for the viscous fluid could not be maintained unless a cosmological constant is included in the theory. This, however, denies the ability to explain the recent acceleration of the universe as caused by the viscous matter alone. In this article, we show that, in the context of f(R, T) gravity, it is possible to achieve the late accelerated expansion of the universe, which is caused by the bulk viscous matter, by satisfying the near equilibrium condition for viscous fluid, even without including a cosmological constant. We also describe the various cosmological features of this model.

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