

Consequences of correspondence between Modified Chaplygin gas and extended holographic Ricci dark energy in the framework of bulk viscosity

The present paper reports a study on modified Chaplygin gas (MCG) based reconstruction scheme for extended holographic Ricci dark energy (EHRDE) in the presence of viscous type dissipative term. The dissipative effect has been described by using Eckart approach. Under the assumption that the universe is filled with MCG-EHRDE under the influence of bulk viscosity we have studied the cosmological dynamics, where the bulk viscosity coefficient has been chosen in a particular time varying form $\xi = \xi_0 + \xi_1 H + \xi_2 (\dot{H} + H^2)$, where ξ_0, ξ_1 and ξ_2 are constant coefficients and H is the Hubble parameter. Furthermore, we have reconstructed the potential and dynamics of viscous MCG-EHRDE as scalar field. Thereafter we have studied the statefinder trajectories to discern its departure from Λ CDM and finally investigated validity of the generalized second law of thermodynamics (GSL) considering event horizon as the enveloping horizon of the universe.

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