Black Holes, Neutron Stars, and Gravitational Waves @ Black Sea



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Bianchi Type-V Universe in Fractal Gravity with Observational Constraints

The aim of the current investigation is to determine the evolution characteristics of anisotropic and homogeneous universe within the context of fractal theory of gravitation. The Bianchi type-V space-time has been employed to derive the field equations of fractal theory. Based on the signature flip property of the deceleration parameter, we have derived the scale factor and the Hubble parameter We have obtained the approximate best-fit values of the model parameters using the least squares method, incorporating observational constraints from available datasets such as Hubble H(z) and Pantheon, by applying the root mean square error (RMSE) formula. In addition, we discuss various physical parameters, including pressure, energy density, and energy conditions. Also we discuss some cosmographic parameters jerk, snap and lerk.

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