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EINSTEIN EQUATIONS: PHYSICAL AND MATHEMATICAL ASPECTS OF GENERAL RELATIVITY

SHORT TALKS

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Investigating Exact Solutions in $f(R,\varphi,X)$ Gravity

Abstract

The aim of current work is to investigate modified $f(R,\varphi,X)$ theory of gravity, where *R*, *φ* and *X* represent the Ricci scalar, scalar potential and kinetic term respectively. Specifically, we take the Friedmann-Robertson-Walker space time for finding some exact solutions. We study the acceleration expansion of universe by taking Klein-Gordon equation. Furthermore, power law and exponential law techniques are used during the discussion of solutions. It is concluded that expansion of universe can be justified in $f(R,\varphi,X)$ gravity.