Cosmology in Rastall theory with non-minimal matter coupling

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Abstract

In this paper we will consider cosmological implications of the Rastall theory with a non-minimal coupling with baryonic matter fields. In Rastall theory, the matter energy-momentum tensor is not conserved and the non-conservation is related to the curvature. We will generalize this relation to become dependent on both curvature and matter fields. Cosmology of the model shows more matter abundance compared to the ΛCDM model. We will show that the dynamical system of the model is the same as ΛCDM with an additional degree of freedom.

For full article, refer to the Persian section