



Contribution ID : 68

Type : Oral talk

Gravitational baryogenesis: problems and possible resolution

Friday, 2 December 2022 18:20 (15)

We have shown that the mechanism of gravitational baryogenesis leads to a strong instability of the curvature scalar, resulting in its boundless exponential rise. This instability appears because the coupling of the curvature to baryonic current leads to the fourth order differential equation of motion for the curvature scalar, instead of the algebraic one in the conventional General Relativity. However, the modification of gravity due to a non-linear curvature dependent term in the classical Hilbert-Einstein action allows to stabilize this rise.

Primary author(s) : Prof. ARBUZOVA, Elena (Dubna State University and Novosibirsk State University)

Presenter(s) : Prof. ARBUZOVA, Elena (Dubna State University and Novosibirsk State University)

Session Classification : Gravitation and Cosmology

Track Classification : Gravitation and cosmology