

A possibility of a violation of a thermodynamic equilibrium in the early universe

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Abstract

The evolution of superheated particles in the Friedmann universe is considered under the assumption of the asymptotic behavior of the scattering cross sections in the high-energy region. We show that there is no local thermodynamic equilibrium at early stages and conclude that the nature of cosmic rays can be explained on cosmological grounds. © 1986 Plenum Publishing Corporation.

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