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GENERALIZED HEISENBERG UNCERTAINTY PRINCIPLE IN QUANTUM GEOMETRODYNAMICS AND GENERAL RELATIVITY

Thursday, 8 July 2021 17:30 (20 minutes)

We focus on the energy flows in the Universe as a simple quantum system and are concentrating on the nonlinear Hamilton–Jacobi equation, which appears in the standard quantum formalism based on the Schrodinger equation. The cases of the domination of radiation, barotropic fluid, and the quantum matter-energy are considered too. As a result, the generalized Heisenberg uncertainty principle (GHUP) is formulated for a metric tensor. We also use the Kuzmichev–Kuzmichev geometrodynamics as a way to quantify the interrelationship between the GHUP for a metric tensor and conditions postulated as to a barotropic fluid, i.e. a dust for the early Universe conditions

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