

Seminarium Grawitacyjne

27 marca (środa), godz. 12:15

NCBJ, Pasteura 7, sala 404

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Classical models of the multiverse and their quantum entanglement

Abstract: The idea of varying constants is explored to form the cyclic models of the parallel universes (the multiverse) with different evolution of the fundamental constants and same geometry under the condition that the total entropy of the system does not decrease. Then, using the formalism of third quantization (quantization of the Wheeler-DeWitt wave function) similar systems of these classically separated universes are studied in the context of their possible quantum entanglement. By the application of the quantum entanglement quantities such as the entropy and the temperature of entanglement it is possible to measure the “quantumness” of some classical regimes of the universe evolution such as neighborhoods of classical singularities and the maximum of expansion. The entanglement can also be the tool to observationally measure the multiverse signals.

Serdecznie zapraszamy

Przemysław Małkiewicz, Włodzimierz Piechocki