

The Universal Arrow of Time III-IV:(Part III) Nonquantum gravitation theory (Part IV) Quantum gravitation theory

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The paper consists of the two independent papers - the first one about Nonquantum Gravitation theory, the second one about Quantum Gravitation theory (Part III: Nonquantum Gravitation theory) The first paper is dealing with the analysis of general relativity theory (theory of gravitation) from the point of view of thermodynamic time arrow. Within this framework "informational paradox" for black holes and "paradox with the grandfather" for time travel "wormholes" are resolved. (Part IV: Quantum gravitation theory) The second paper is dealing with the analysis of quantum gravitation theory from the point of view of thermodynamic time arrow. Within this framework "informational paradox" for black holes and "paradox with the grandfather" for time travel "wormholes", black stars, Penrose's project of new quantum gravitation theory, anthropic principle are considered.

Comments: 24 pages, The paper consists of the two independent papers, in English and in Russian

Subjects: **General Physics (physics.gen-ph)**; General Relativity and Quantum Cosmology (gr-qc)

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