

Quantum fate of the BKL scenario

We present the quantum model of the asymptotic dynamics underlying the Belinski-Khalatnikov-Lifshitz (BKL) scenario. The classical BKL scenario concerns generic singularity of general relativity. The quantum BKL scenario shows that gravitational singularity can be replaced by quantum bounce that presents a unitary evolution of considered gravitational system. Our results suggest that quantum general relativity has a good chance to be free from singularities.

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