



Prirodno-matematički fakultet - Niš
Department za fiziku, Katedra za teorijsku fiziku
Kancelarija SEENET-MTP Mreže u Nišu
Predavanje:



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DECOHERENCE AND TRANSITION FROM QUANTUM TO CLASSICAL IN OPEN QUANTUM SYSTEMS

MESTO: SVEČANA SALA PMF-A (I SPRAT), VIŠEGRADSKA 33

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Apstrakt

In the framework of the theory of open systems based on completely positive quantum dynamical semigroups, we determine the degree of quantum decoherence of a harmonic oscillator interacting with a thermal bath. We calculate the decoherence time and show that it has the same scale as the time after which the statistical fluctuations become comparable with the quantum fluctuations. The transition from quantum to classical behavior of the considered system is analyzed and it is shown that the classicality takes place during a finite interval of time.

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