

# Pure dephasing model in QZE and AQZE under new approach

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Pure dephasing spin boson model is exactly solvable system in open quantum system. This model has the property that its off diagonal density matrix will go to zero as time become large. The quantum Zeno effect(QZE) is the effect that if we measure system rapid enough, the system's state will froze-i.e., the state will not evolve to other state. another contrary effect is anti Zeno effect(QAZE) which describes if observe not frequently, the measurement will lead to transition of quantum state. We do research on quantum Zeno effect and anti Zeno effect on pure dephasing model. New approach assumes that bath state not return to its original bath state after each instantaneous projective measurement. We discuss mainly this approach in pure dephasing spin boson model's decay rate's change for QZE and QAZE.