

# LARGE DEVIATIONS ARISING FROM QUANTUM MARKOV SEMIGROUPS

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ABSTRACT. We consider a class of quantum Markov semigroups acting on the full 2-2 matrix algebra  $M$ , and having an absorbing state. We show that the net of orthogonal measures representing the net of states given by the predual semigroup, satisfies a large deviation principle in the pure state space of  $M$ , with a rate function controlled by a parameter of the generator. This rate function does not depend on the initial state.

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