

# **Adiabatic Lindbladian Evolution with Small Dissipators**

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## **Abstract**

We consider a time-dependent small quantum system weakly coupled to an environment, whose effective dynamics we address by means of a Lindblad equation. We assume the Hamiltonian part of the Lindbladian is slowly varying in time and the dissipator part has small amplitude. We study the properties of the evolved state of the small system as the adiabatic parameter and coupling constant both go to zero, in various asymptotic regimes.