Title:	Indirect detection of Cosmological Constant from interacting open quantum system
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Abstract:	We study the indirect detection of Cosmological Constant from an open quantum system of interacting spins, weakly interacting with a thermal bath, a massless scalar field minimally coupled with the static de Sitter background, by computing the spectroscopic shifts. By assuming pairwise interaction between spins, we construct states using a generalization of the superposition principle. The corresponding spectroscopic shifts, caused by the effective Hamiltonian of the system due to Casimir Polder interaction, are seen to play a crucial role in predicting a very tiny value of the Cosmological Constant, in the static patch of de Sitter space, which is consistent with the observed value from the Planck measurements of the cosmic microwave background (CMB) anisotropies.
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