

**Cherbal, Omar; Drir, Mahrez**

**Dissipative two-level spin system and geometrical phase.** (English) [Zbl 1098.81043](#)

Mladenov, Ivaïlo (ed.) et al., Proceedings of the 7th international conference on geometry, integrability and quantization, Sts. Constantine and Elena, Bulgaria, June 2–10, 2005. Sofia: Bulgarian Academy of Sciences (ISBN 954-8495-30-9/pbk). 79-88 (2006).

Summary: We propose to extend the concept of geometric phase to quantum dissipative systems, in the case of meta-stable spin states in magnetic resonance. We use the generalized version of Lewis-Riesenfeld invariant theory to study the dissipative systems described by non-hermitian time-dependent Hamiltonian.

For the entire collection see [\[Zbl 1089.53004\]](#).

**MSC:**

- 81Q70** Differential geometric methods, including holonomy, Berry and Hannay phases, Aharonov-Bohm effect, etc. in quantum theory
- 81S25** Quantum stochastic calculus