Quantum tunneling in deep potential wells and strong magnetic field

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**Abstract:** Inspired by a recent paper by Charles Fefferman, Jakob Shapiro and Michael Weinstein (2022), we investigate quantum tunneling for a Hamiltonian with a symmetric double well and a uniform magnetic field. In the simultaneous limit of strong magnetic field and deep potential wells with disjoint supports, tunneling occurs and we derive accurate estimates of its magnitude. This is a joint work with A. Kachmar (2023) recently improved by L. Morin (2023).