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Topological Changes of Wave Functions Associated with Hamiltonian Monodromy[1] CHEN CHEN, JOHN DELOS, William and Mary — Almost everything that happens in classical mechanics also shows up in quantum mechanics when we know where to look for it. A recently discovered phenomenon in classical mechanics involves topological changes in the loops that define action and angle variables as a result of a passage around a "monodromy circuit". This phenomenon is known by the short name "Hamiltonian monodromy" (or, more ponderously, "nontrivial monodromy of action and angle variables in integrable Hamiltonian systems"). In this paper, we show a corresponding change in quantum wave functions: these wave functions change their topological structure in the same way that the action and angle loops change.

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john delos‘
William and Mary

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