



Creation of Homoclinic Tangencies in Hamiltonians by the Suspension of Poincaré Sections

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In this note we show that for any Hamiltonian defined on a symplectic 4-manifold M and any point p in M , there exists a C^2 -close Hamiltonian whose regular energy surface through p is either Anosov or it contains a homoclinic tangency. Our result is based on a general construction of Hamiltonian suspensions for given symplectomorphisms on Poincaré sections already known to yield similar properties.

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