

ON NON-CONTRACTIBLE PERIODIC ORBITS OF SYMPLECTOMORPHISMS

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ABSTRACT. We present a result on the existence of infinitely many non-contractible periodic orbits of some symplectomorphisms (on certain closed symplectic manifolds) if they admit at least one hyperbolic periodic orbit.

The main tool used in the proof is Floer-Novikov homology for non-contractible periodic orbits and the proof uses a key feature of the hyperbolic orbit on the energy of the Floer-Novikov connecting trajectories which approach iterations of this orbit.