

**Multiplicidade de soluções periódicas de sistemas
hamiltonianos planos assintoticamente lineares**

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Maslov index, Poincaré-Birkhoff Theorem and Periodic Solutions of Asymptotically Linear Planar Hamiltonian Systems

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Abstract. We study the relationship between the twist condition in the Poincaré-Birkhoff fixed point theorem and the assumptions on the Maslov index for asymptotically linear planar Hamiltonian systems. For this aim, we develop a variant of the Poincaré-Birkhoff theorem which, together with its classical version, allows to obtain a lower bound for the number of nontrivial periodic solutions in terms of the gap between the Maslov indexes associated to the linearizations of the planar system at zero and at infinity.