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Title: Generic properties of magnetic flows

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Abstract: We obtain Kupka-Smale's theorem and Frank's lemma for magnetic flows on manifolds with any dimension. This improves Miranda's result [2, 3] on surfaces. However our methods relies on geometric control theory, like in Rifford and Ruggiero articles [1, 4].

References

- [1] A. Lazrag, L. Rifford, R. Ruggiero. Franks' lemma for C^2 -Mañe perturbations of Riemannian metrics and applications to persistence. Preprint, 2014.
- [2] J. A. Miranda. Generic properties for magnetic flows on surface. *Nonlinearity* 19(2006) 1849-1874.
- [3] J. A. Miranda. Positive topological entropy for magnetic flows on surfaces. *Nonlinearity* 20(2007) 2007-2031.
- [4] L. Rifford, R. Ruggiero. Generic properties of closed orbits of Hamiltonian flows from Mañe's viewpoint. *International Math. Research Notices* 22 (2012) 5246-5265.