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Flots d'Anosov sur les 3-variétés fibrées en cercles. (French. English summary) [Anosov flows on circle bundle 3-manifolds]

Ergodic Theory Dynam. Systems **4** (1984), *no. 1*, 67–80.

The author shows that a C^2 Anosov flow [D. V. Anosov , Geodesic flows on closed Riemann manifolds with negative curvature, *Trudy Mat. Inst. Steklov.* 90 (1967); [MR0224110 \(36 #7157\)](#); English translation, Amer. Math. Soc., Providence, R.I., 1969; [MR0242194 \(39 #3527\)](#); the reviewer, *Bol. Soc. Mat. Mexicana* (2) 19 (1974), no. 2, 49–77; [MR0431281 \(55 #4282\)](#)] on a circle bundle over a closed orientable surface is, up to a finite covering, topologically conjugate to the geodesic flow defined in the unit tangent bundle of a Riemannian surface with constant negative curvature. Using similar techniques, the author shows that on a compact hyperbolic manifold all geodesic flows which are Anosov are topologically conjugate. Therefore, the Anosov flow considered can be described as a flow in an infrahomogeneous space [see P. Tomter , *Global analysis* (Berkeley, Calif., 1968), 299–327, *Proc. Sympos. Pure Math.*, XIV, Amer. Math. Soc., Providence, R.I., 1970; [MR0279831 \(43 #5552\)](#)]. The proof is ingenious and contains many ideas that could be used in other contexts.

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