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Masayuki Asaoka* (asaoka@math.kyoto-u.ac.jp), Department of Mathematics, Kyoto University, Kita-shirakawa Oiwake-cho, Sakyo, Kyoto, 606-8502, Japan. *On invariant volumes of codimension-one Anosov flows.*

The main topic of this talk is the following simple question:

Which Anosov flow is topologically equivalent to a volume-preserving one?

One of the well-known necessary condition is topological transitivity. It seems that no other necessary conditions are known. In this talk, I will discuss on my recent solution to the question for codimension-one case, that is, any topologically transitive codimension-one Anosov flow on a closed manifold is topologically equivalent to a volume-preserving Anosov flow.

The result has an important consequence in higher dimensional case. Any higher dimensional codimension-one Anosov flow is topologically transitive by a classical theorem due to Verjovsky. Simić recently showed that any higher dimensional codimension-one Anosov flow that preserves a smooth volume is topologically equivalent to the suspension of an Anosov diffeomorphism. Therefore, my result gives a complete classification of codimension-one Anosov flow up to topological equivalence in higher dimensions. (Received September 03, 2007)