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Thomas Koberda* (koberda@math.harvard.edu), Department of Mathematics, Harvard University, 1 Oxford St., Cambridge, MA 02138. *Skew products of interval exchange transformations and asymptotic homological detection of pseudo-Anosov dilatations*. Preliminary report.

Let T be an interval exchange transformation which gives rise to a pseudo-Anosov foliation upon suspension. We show how skew products of T with torus automorphisms can be used as a tool to compactify an infinite class of homological representations of the given pseudo-Anosov homeomorphism. We conclude that there are many infinite covers for which the homological dilatation of certain pseudo-Anosov homeomorphisms remains bounded away from the geometric dilatation. (Received January 27, 2010)